UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number 001-36146

CommScope Holding Company, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**27-4332098**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

1100 CommScope Place, SE
Hickory, North Carolina
(Address of principal executive offices)
28602
(Zip Code)
(828) 324-2200
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	COMM	The NASDAQ Stock Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of October 22, 2021 there were 204,498,997 shares of Common Stock outstanding.

CommScope Holding Company, Inc.
Form 10-Q
September 30, 2021
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PART 1 -- FINANCIAL INFORMATION (UNAUDITED)
ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

CommScope Holding Company, Inc.
Condensed Consolidated Statements of Operations
(Unaudited – In millions, except per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Net sales	$ 2,105.3	$ 2,168.1	$ 6,362.6	$ 6,304.1
Cost of sales	1,452.3	1,432.6	4,364.1	4,271.3
Gross profit	653.0	735.5	1,998.5	2,032.8
Operating expenses:				
Selling, general and administrative	314.3	296.7	909.3	898.7
Research and development	167.8	184.6	515.6	541.1
Amortization of purchased intangible assets	153.0	158.1	461.9	473.5
Restructuring costs (credits), net	(3.1)	40.3	100.2	83.6
Asset impairments	—	—	—	206.7
Total operating expenses	632.0	679.7	1,987.0	2,203.6
Operating income (loss)	21.0	55.8	11.5	(170.8)
Other expense, net	(32.3)	(16.9)	(29.8)	(30.2)
Interest expense	(148.6)	(147.2)	(424.1)	(437.7)
Interest income	0.5	1.3	1.5	4.2
Loss before income taxes	(159.4)	(107.0)	(440.9)	(634.5)
Income tax (expense) benefit	35.2	(9.3)	65.3	37.2
Net loss	(124.2)	(116.3)	(375.6)	(597.3)
Series A convertible preferred stock dividend	(14.3)	(14.1)	(43.0)	(41.8)
Net loss attributable to common stockholders	$ (138.5)	$ (130.4)	$ (418.6)	$ (639.1)
Loss per share:				
Basic	$ (0.68)	$ (0.66)	$ (2.06)	$ (3.26)
Diluted	$ (0.68)	$ (0.66)	$ (2.06)	$ (3.26)
Weighted average shares outstanding:				
Basic	204.2	196.9	203.3	195.9
Diluted	204.2	196.9	203.3	195.9

See notes to unaudited condensed consolidated financial statements.

CommScope Holding Company, Inc.
Condensed Consolidated Statements of Comprehensive Loss
(Unaudited – In millions)

	Three Months Ended September 30, 2021	Three Months Ended September 30, 2020	Nine Months Ended September 30, 2021	Nine Months Ended September 30, 2020
Comprehensive loss:				
Net loss	$ (124.2)	$ (116.3)	$ (375.6)	$ (597.3)
Other comprehensive income (loss), net of tax:				
Foreign currency translation gain (loss)	(40.9)	63.7	(70.7)	(1.3)
Pension and other postretirement benefit activity	0.3	(0.1)	0.9	(0.6)
Gain (loss) on hedging instruments	4.3	(9.0)	8.2	(21.9)
Total other comprehensive income (loss), net of tax	(36.3)	54.6	(61.6)	(23.8)
Total comprehensive loss	$ (160.5)	$ (61.7)	$ (437.2)	$ (621.1)

See notes to unaudited condensed consolidated financial statements.

CommScope Holding Company, Inc.
Condensed Consolidated Balance Sheets
(In millions, except share amounts)

	Unaudited September 30, 2021	December 31, 2020
Assets		
Cash and cash equivalents	$ 411.5	$ 521.9
Accounts receivable, less allowance for doubtful accounts of $45.6 and $40.3, respectively	1,506.2	1,487.4
Inventories, net	1,252.2	1,088.9
Prepaid expenses and other current assets	268.6	256.3
Total current assets	3,438.5	3,354.5
Property, plant and equipment, net of accumulated depreciation of $775.1 and $705.7, respectively	664.6	684.5
Goodwill	5,253.7	5,286.5
Other intangible assets, net	3,179.9	3,650.4
Other noncurrent assets	715.3	600.9
Total assets	$ 13,252.0	$ 13,576.8
Liabilities and Stockholders' Equity (Deficit)		
Accounts payable	$ 1,170.1	$ 1,010.8
Accrued and other liabilities	884.6	910.6
Current portion of long-term debt	32.0	32.0
Total current liabilities	2,086.7	1,953.4
Long-term debt	9,481.0	9,488.6
Deferred income taxes	199.1	206.2
Other noncurrent liabilities	526.8	531.8
Total liabilities	12,293.6	12,180.0
Commitments and contingencies		
Series A convertible preferred stock, $0.01 par value	1,041.8	1,041.8
Stockholders' equity (deficit):		
Preferred stock, $0.01 par value: Authorized shares: 200,000,000; Issued and outstanding shares: 1,041,819 Series A convertible preferred stock	—	—
Common stock, $0.01 par value: Authorized shares: 1,300,000,000; issued and outstanding shares: 204,247,592 and 200,095,232, respectively	2.2	2.1
Additional paid-in capital	2,536.3	2,512.9
Accumulated deficit	(2,128.3)	(1,752.7)
Accumulated other comprehensive loss	(217.5)	(155.9)
Treasury stock, at cost: 10,838,972 shares and 9,223,081 shares, respectively	(276.1)	(251.4)
Total stockholders' equity (deficit)	(83.4)	355.0
Total liabilities and stockholders' equity (deficit)	$ 13,252.0	$ 13,576.8

See notes to unaudited condensed consolidated financial statements.

CommScope Holding Company, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited - In millions)

	Nine Months Ended September 30,	
	2021	2020
Operating Activities:		
Net loss	$ (375.6)	$ (597.3)
Adjustments to reconcile net loss to net cash generated by operating activities:		
Depreciation and amortization	595.8	618.8
Equity-based compensation	61.0	90.0
Deferred income taxes	(158.1)	(96.6)
Asset impairments	—	206.7
Changes in assets and liabilities:		
Accounts receivable	(36.2)	200.9
Inventories	(173.5)	(130.3)
Prepaid expenses and other assets	11.0	32.2
Accounts payable and other liabilities	170.5	(25.0)
Other	39.8	39.1
Net cash generated by operating activities	134.7	338.5
Investing Activities:		
Additions to property, plant and equipment	(96.2)	(73.5)
Proceeds from sale of property, plant and equipment	2.6	0.2
Cash paid for Cable Exchange acquisition	—	(3.5)
Payments upon settlement of net investment hedge	(18.0)	—
Net cash used in investing activities	(111.6)	(76.8)
Financing Activities:		
Long-term debt repaid	(1,274.0)	(1,174.0)
Long-term debt proceeds	1,250.0	950.0
Debt issuance costs	(9.6)	(11.6)
Debt extinguishment costs	(34.4)	(14.9)
Dividends paid on Series A convertible preferred stock	(43.0)	—
Proceeds from the issuance of common shares under equity-based compensation plans	5.5	1.0
Tax withholding payments for vested equity-based compensation awards	(24.7)	(10.3)
Other	2.5	—
Net cash used in financing activities	(127.7)	(259.8)
Effect of exchange rate changes on cash and cash equivalents	(5.8)	(17.3)
Change in cash and cash equivalents	(110.4)	(15.4)
Cash and cash equivalent at beginning of period	521.9	598.2
Cash and cash equivalents at end of period	$ 411.5	$ 582.8

See notes to unaudited condensed consolidated financial statements.

CommScope Holding Company, Inc.
Condensed Consolidated Statements of Stockholders' Equity (Deficit)
(Unaudited - In millions, except share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Number of common shares outstanding:				
Balance at beginning of period	204,154,201	195,997,230	200,095,232	194,563,530
Issuance of shares under equity-based compensation plans	97,750	1,469,968	5,768,251	3,513,837
Shares surrendered under equity-based compensation plans	(4,359)	(476,531)	(1,615,891)	(1,086,700)
Balance at end of period	204,247,592	196,990,667	204,247,592	196,990,667
Common stock:				
Balance at beginning and end of period	$ 2.1	$ 2.0	$ 2.1	$ 2.0
Issuance of shares under equity-based compensation plans	0.1	0.1	0.1	0.1
Balance at end of period	$ 2.2	$ 2.1	$ 2.2	$ 2.1
Additional paid-in capital:				
Balance at beginning of period	$ 2,528.1	$ 2,474.3	$ 2,512.9	$ 2,445.1
Issuance of shares under equity-based compensation plans	1.5	—	5.4	0.9
Equity-based compensation	21.0	34.0	61.0	90.0
Dividend on Series A convertible preferred stock	(14.3)	(14.1)	(43.0)	(41.8)
Balance at end of period	$ 2,536.3	$ 2,494.2	$ 2,536.3	$ 2,494.2
Accumulated deficit:				
Balance at beginning of period	$ (2,004.1)	$ (1,660.3)	$ (1,752.7)	$ (1,179.3)
Net loss	(124.2)	(116.3)	(375.6)	(597.3)
Balance at end of period	$ (2,128.3)	$ (1,776.6)	$ (2,128.3)	$ (1,776.6)
Accumulated other comprehensive loss:				
Balance at beginning of period	$ (181.2)	$ (275.4)	$ (155.9)	$ (197.0)
Other comprehensive income (loss), net of tax	(36.3)	54.6	(61.6)	(23.8)
Balance at end of period	$ (217.5)	$ (220.8)	$ (217.5)	$ (220.8)
Treasury stock, at cost:				
Balance at beginning of period	$ (276.0)	$ (240.8)	$ (251.4)	$ (234.5)
Net shares surrendered under equity-based compensation plans	(0.1)	(4.0)	(24.7)	(10.3)
Balance at end of period	$ (276.1)	$ (244.8)	$ (276.1)	$ (244.8)
Total stockholders' equity (deficit)	$ (83.4)	$ 254.1	$ (83.4)	$ 254.1

See notes to unaudited condensed consolidated financial statements.

1. BACKGROUND AND BASIS OF PRESENTATION

Background

CommScope Holding Company, Inc., along with its direct and indirect subsidiaries (CommScope or the Company), is a global provider of infrastructure solutions for communication and entertainment networks. The Company's solutions for wired and wireless networks enable service providers including cable, telephone and digital broadcast satellite operators and media programmers to deliver media, voice, Internet Protocol (IP) data services and Wi-Fi to their subscribers and allow enterprises to experience constant, wireless and wired connectivity across complex and varied networking environments. The Company's solutions are complemented by a broad array of services including technical support, systems design and integration. CommScope is a leader in digital video and IP television distribution systems, broadband access infrastructure platforms and equipment that delivers data and voice networks to homes. CommScope's global leadership position is built upon innovative technology, broad solution offerings, high-quality and cost-effective customer solutions, and global manufacturing and distribution scale.

Basis of Presentation

The accompanying condensed consolidated financial statements are unaudited and reflect all adjustments of a normal, recurring nature that are, in the opinion of management, necessary for a fair presentation of the interim period financial statements. The results of operations for these interim periods are not necessarily indicative of the results of operations to be expected for any future period or the full fiscal year. Certain prior year amounts have been reclassified to conform to the current year presentation.

In the second quarter of 2021, management shifted certain product lines from the Company's Broadband Networks (Broadband) segment to its Home Networks (Home) segment to better align with how the business is being managed in light of the planned spin-off of the Home Networks business. All prior period amounts in these condensed consolidated financial statements have been recast to reflect these operating segment changes.

The unaudited interim condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) for interim financial information and are presented in accordance with the applicable requirements of Regulation S-X. Accordingly, these financial statements do not include all of the information and notes required by U.S. GAAP for complete financial statements. These unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements in the Company's Annual Report on Form 10-K for the year ended December 31, 2020 (the 2020 Annual Report). The significant accounting policies followed by the Company are set forth in Note 2 within the Company's audited consolidated financial statements included in the 2020 Annual Report. There were no material changes in the Company's significant accounting policies during the three or nine months ended September 30, 2021.

Concentrations of Risk and Related Party Transactions

No direct customer accounted for 10% or more of the Company's total net sales during the three or nine months ended September 30, 2021. Net sales to Comcast Corporation and affiliates (Comcast) accounted for 11% of the Company's total net sales during the three and nine months ended September 30, 2020. Other than Comcast, no other direct customer accounted for 10% or more of the Company's total net sales during the three or nine months ended September 30, 2020. As of September 30, 2021, no direct customer accounted for 10% or more of the Company's accounts receivable.

The Company relies on sole suppliers or a limited group of suppliers for certain key components, subassemblies and modules and a limited group of contract manufacturers to manufacture a significant portion of its products. Any disruption or termination of these arrangements could have a material adverse impact on the Company's results of operations.

As of September 30, 2021, funds affiliated with Carlyle Partners VII S1 Holdings, L.P. (Carlyle) owned 100% of the Series A convertible preferred stock (the Convertible Preferred Stock), which was sold to Carlyle to fund a portion of the acquisition of ARRIS International plc (ARRIS) in 2019. See Note 9 for further discussion of the Convertible Preferred Stock. Other than transactions related to the Convertible Preferred Stock, there were no material related party transactions for the three or nine months ended September 30, 2021.

(In millions, unless otherwise noted)

Product Warranties

The Company recognizes a liability for the estimated claims that may be paid under its customer warranty agreements to remedy potential deficiencies of quality or performance of the Company's products. These product warranties extend over various periods depending upon the product, subject to the warranty and the terms of the individual agreements. The Company records a provision for estimated future warranty claims as cost of sales based upon the historical relationship of warranty claims to sales and specifically identified warranty issues. The Company bases its estimates on assumptions that are believed to be reasonable under the circumstances and revises its estimates, as appropriate, when events or changes in circumstances indicate that revisions may be necessary. Such revisions may be material.

The following table summarizes the activity in the product warranty accrual, included in accrued and other liabilities and other noncurrent liabilities:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Product warranty accrual, beginning of period	$ 69.5	$ 55.9	$ 59.5	$ 61.0
Provision for warranty claims	9.7	10.3	33.0	20.1
Warranty claims paid	(9.2)	(8.4)	(22.4)	(22.8)
Foreign exchange	(0.2)	0.2	(0.3)	(0.3)
Product warranty accrual, end of period	$ 69.8	$ 58.0	$ 69.8	$ 58.0

Commitments and Contingencies

The Company is party to certain intellectual property claims and periodically receives notices asserting that its products infringe on another party's patents and other intellectual property rights. These claims and assertions, whether against the Company directly or against its customers, could require the Company to pay damages, royalties, stop offering the relevant products and/or cease other activities. The Company may also be called upon to indemnify certain customers for costs related to products sold to such customers. The outcome of these claims and notices is uncertain and a reasonable estimate of the loss from unfavorable outcomes in certain of these matters either cannot be determined or is estimated at the minimum amount of a range of estimates. The actual loss could be material and may vary significantly from our estimates.

As of September 30, 2021, the Company had a liability of $21.7 million recorded in accrued and other liabilities and noncurrent liabilities on the Condensed Consolidated Balance Sheets related to certain intellectual property assertions that have been settled or are in process of settlement. For the three and nine months ended September 30, 2021, the Company recorded charges to cost of sales in the Condensed Consolidated Statements of Operations of $5.0 million and $46.5 million, respectively, related to these intellectual property assertions. These charges are reflected in the results of the Broadband, Home and Venue and Campus Networks segments. The Company paid $51.0 million and $55.0 million during the three and nine months ended September 30, 2021, respectively, to settle intellectual property assertions.

The Company is either a plaintiff or a defendant in certain other pending legal matters in the normal course of business. Management believes none of these other pending legal matters will have a material adverse effect on the Company's business or financial condition upon final disposition.

In addition, the Company is subject to various federal, state, local and foreign laws and regulations governing the use, discharge, disposal and remediation of hazardous materials. Compliance with current laws and regulations has not had, and is not expected to have, a materially adverse effect on the Company's financial condition or results of operations.

Asset Impairments

Goodwill is tested for impairment annually or at other times if events have occurred or circumstances exist that indicate the carrying value of the reporting unit may exceed its fair value. There were no indicators of goodwill impairment identified during the three months ended September 30, 2021. During the nine months ended September 30, 2021, the Company assessed goodwill for impairment due to a change in the composition of certain reporting units. The Company performed impairment testing immediately before and after the change and determined that no goodwill impairment existed. See Note 2 for further discussion. There were no indicators of goodwill impairment identified during the three months ended September 30, 2020, but during the nine months ended September 30, 2020, the Company recorded a $206.7 million goodwill impairment charge as a result of lower projected operating results for the Home Networks reporting unit in the Home segment.

Property, plant and equipment, intangible assets and right of use assets with finite lives are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value of the assets may not be recoverable, based on the undiscounted cash flows expected to be derived from the use and ultimate disposition of the assets. Assets identified as impaired are adjusted to estimated fair value. Equity investments without readily determinable fair values are evaluated each reporting period for impairment based on a qualitative assessment and are then measured at fair value if an impairment is determined to exist. Other than certain assets impaired as a result of restructuring actions, there were no definite-lived intangible or other long-lived asset impairments identified during the three or nine months ended September 30, 2021 or 2020.

Income Taxes

For the three months ended September 30, 2021, the Company's effective tax rate was 22.1% and the Company recognized a tax benefit of $35.2 million on a pretax loss of $159.4 million. The Company's tax benefit was higher than the statutory rate of 21% due to favorable changes in uncertain tax positions. For the nine months ended September 30, 2021, the Company's effective tax rate was 14.8% and the Company recognized a tax benefit of $65.3 million on a pretax loss of $440.9 million. The Company's tax benefit was lower than the statutory rate primarily due to the impact of $37.4 million in tax expense related to a foreign tax rate change.

For the three months ended September 30, 2020, the Company's effective tax rate was (8.7)% and the Company recognized income tax expense of $9.3 million on a pretax loss of $107.0 million. The income tax expense on the Company's pretax loss was driven by $19.2 million of tax expense related to a foreign tax rate change. For the nine months ended September 30, 2020, the Company's effective tax rate was 5.9% and the Company recognized a tax benefit of $37.2 million on a pretax loss of $634.5 million. The Company's tax benefit in the nine months ended September 30, 2020 was impacted unfavorably primarily due to a goodwill impairment charge of $206.7 million, for which minimal tax benefits were recorded, $22.7 million of tax expense related to state valuation allowances and $19.2 million in income tax expense related to a foreign tax rate change. For both the three and nine months ended September 30, 2020, the Company's tax rate was also impacted favorably by federal tax credits and unfavorably by U.S. anti-deferral provisions and foreign withholding taxes. Excess tax costs of $1.2 million and $9.0 million related to equity compensation awards also impacted the income taxes unfavorably for the three and nine months ended September 30, 2020, respectively.

Earnings (Loss) Per Share

Basic earnings (loss) per share (EPS) is computed by dividing net income (loss), less any dividends and deemed dividends related to the Convertible Preferred Stock, by the weighted average number of common shares outstanding during the period. The numerator in diluted EPS is based on the basic EPS numerator adjusted to add back any dividends and deemed dividends related to the Convertible Preferred Stock, subject to antidilution requirements. The denominator used in diluted EPS is based on the basic EPS computation plus the effect of potentially dilutive common shares related to the Convertible Preferred Stock and equity-based compensation plans, subject to antidilution requirements.

For the three and nine months ended September 30, 2021, 11.9 million and 12.3 million shares, respectively, of outstanding equity-based compensation awards were not included in the computation of diluted EPS because the effect was antidilutive or the performance conditions were not met. Of those amounts, for the three and nine months ended September 30, 2021, 5.0 million and 5.2 million shares, respectively, would have been considered dilutive if the Company had not been in a net loss position. For the three and nine months ended September 30, 2020, 18.9 million and 17.4 million shares, respectively, of outstanding equity-based compensation awards were not included in the computation of diluted EPS because the effect was either antidilutive or the performance conditions were not met. Of those amounts, for the three and nine months ended September 30, 2020, 4.7 million and 4.5 million shares, respectively, would have been considered dilutive if the Company had not been in a net loss position.

For both the three and nine months ended September 30, 2021, 37.9 million of as-if converted shares related to the Convertible Preferred Stock were excluded from the diluted share count because they were antidilutive. For the three and nine months ended September 30, 2020, 37.4 million and 36.9 million, respectively, of as-if converted shares related to the Convertible Preferred Stock were excluded from the diluted share count because they were antidilutive. These shares may have been considered dilutive if the Company had not been in a net loss position.

The following table presents the basis for the EPS computations (in millions, except per share data):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Numerator:				
Net loss	$ (124.2)	$ (116.3)	$ (375.6)	$ (597.3)
Dividends on Series A convertible preferred stock	(14.3)	(14.1)	(43.0)	(41.8)
Net loss attributable to common stockholders	$ (138.5)	$ (130.4)	$ (418.6)	$ (639.1)
Denominator:				
Weighted average common shares outstanding - basic	204.2	196.9	203.3	195.9
Dilutive effect of as-if converted Series A convertible preferred stock	—	—	—	—
Dilutive effect of equity-based awards	—	—	—	—
Weighted average common shares outstanding - diluted	204.2	196.9	203.3	195.9
Loss per share:				
Basic	$ (0.68)	$ (0.66)	$ (2.06)	$ (3.26)
Diluted	$ (0.68)	$ (0.66)	$ (2.06)	$ (3.26)

Recent Accounting Pronouncements

Adopted During the Nine Months Ended September 30, 2021

On January 1, 2021, the Company adopted Accounting Standards Update (ASU) No. 2020-01, *Investments – Equity Securities (Topic 321), Investments – Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815).* The new guidance is based on a consensus of the Emerging Issues Task Force and is expected to improve comparability in accounting for these transactions. The amendments in this guidance clarify the interaction of accounting for equity securities under Topic 321 and investments accounted for under the equity method of accounting in Topic 323 and the accounting for certain forward contracts and purchased options accounted for under Topic 815. The impact of adopting this new guidance was not material to the consolidated financial statements.

On January 1, 2021, the Company adopted ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes.* The new guidance simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and clarifying and amending existing guidance. The impact of adopting this new guidance was not material to the consolidated financial statements.

(In millions, unless otherwise noted)

Issued but Not Adopted

In August 2020, the Financial Accounting Standards Board (FASB) issued ASU No. 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*. The new guidance simplifies the accounting for convertible instruments by reducing the number of accounting models available for convertible debt instruments and convertible preferred stock and amends the guidance for the derivatives scope exception for contracts in an entity's own equity to reduce form-over-substance-based accounting conclusions and requires the application of the if-converted method for calculating diluted earnings per share, along with expanded disclosures. ASU No. 2020-06 is effective for the Company as of January 1, 2022 and early adoption is permitted beginning January 1, 2021. The Company is currently evaluating the impact of the new guidance on the consolidated financial statements.

In March 2020 and January 2021, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting* and ASU No. 2021-01, *Reference Rate Reform (Topic 848): Scope*, respectively. Together, the ASUs provide temporary optional guidance to ease the potential burden in accounting for reference rate reform. The new guidance provides optional expedients and exceptions for applying generally accepted accounting principles to transactions affected by reference rate reform if certain criteria are met. These transactions include contract modifications, hedging relationships, and sale or transfer of debt securities classified as held-to-maturity. The Company can elect to apply the amendments through December 31, 2022. The Company is currently evaluating the impact of this guidance on the consolidated financial statements.

2. GOODWILL

The following table presents the activity in goodwill by reportable segment.

	December 31, 2020			Activity	September 30, 2021		
	Goodwill	Accumulated Impairment Losses	Total	Foreign Exchange and Other	Goodwill	Accumulated Impairment Losses	Total
Broadband	$ 3,369.7	$ (193.6)	$ 3,176.1	$ (33.3)	$ 3,336.4	$ (193.6)	$ 3,142.8
OWN	669.1	(159.5)	509.6	(3.2)	665.9	(159.5)	506.4
VCN	1,642.0	(41.2)	1,600.8	(10.0)	1,632.0	(41.2)	1,590.8
Home	399.5	(399.5)	—	13.7	413.2	(399.5)	13.7
Total	$ 6,080.3	$ (793.8)	$ 5,286.5	$ (32.8)	$ 6,047.5	$ (793.8)	$ 5,253.7

In the second quarter of 2021, management shifted certain product lines from the Company's Broadband segment to its Home segment to better align the Home segment with how the business is being managed in light of the planned spin-off of the Home Networks business. This changed the composition of the Company's reporting units which resulted in the reallocation of $13.7 million of goodwill from the Network and Cloud reporting unit to the Home Networks reporting unit.

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregated Net Sales

The majority of the Company's net sales are product sales that are recognized at a point in time. The Company does have some customer arrangements where net sales are recognized over time, but this does not represent a significant portion of consolidated net sales. Contracts with net sales recognized over time are primarily concentrated in the Broadband Networks and Venue and Campus Networks segments. In the first quarter of 2021, the Company determined that the geographic disaggregation of net sales by segment is a more meaningful disaggregation of net sales than net sales disaggregated based on the timing of the transfer of goods, given the relatively low level of net sales recognized over time. Therefore, the presentation of net sales by geographic region in Note 7 has been expanded to include segments and the presentation of net sales based on the timing of the transfer of goods has been eliminated.

(In millions, unless otherwise noted)

Allowance for Doubtful Accounts

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Allowance for doubtful accounts, beginning of period	$ 30.8	$ 43.4	$ 40.3	$ 35.4
Provision (benefit)	15.6	(1.1)	7.3	8.8
Write-offs	(0.2)	(0.3)	(0.7)	(3.0)
Foreign exchange and other	(0.6)	1.1	(1.3)	1.9
Allowance for doubtful accounts, end of period	$ 45.6	$ 43.1	$ 45.6	$ 43.1

Customer Contract Balances

The following table provides the balance sheet location and amounts of contract assets, or unbilled accounts receivable, and contract liabilities, or deferred revenue, from contracts with customers as of September 30, 2021 and December 31, 2020.

Contract Balance Type	Balance Sheet Location	September 30, 2021	December 31, 2020
Unbilled accounts receivable	Accounts receivable, less allowance for doubtful accounts	$ 37.2	$ 21.9
Deferred revenue - current	Accrued and other liabilities	108.2	90.0
Deferred revenue - noncurrent	Other noncurrent liabilities	59.3	53.2
Total contract liabilities		$ 167.5	$ 143.2

There were no material changes to contract asset balances for the three or nine months ended September 30, 2021 as a result of changes in estimates or impairments. The change in the contract liability balance from December 31, 2020 to September 30, 2021 was primarily due to upfront support billings recognized over the support term. During the three and nine months ended September 30, 2021, the Company recognized revenue related to contract liabilities recorded as of December 31, 2020 of $17.5 million and $71.2 million, respectively.

4. SUPPLEMENTAL FINANCIAL STATEMENT INFORMATION

Inventories

	September 30, 2021	December 31, 2020
Raw materials	$ 361.4	$ 280.2
Work in process	165.0	140.6
Finished goods	725.8	668.1
	$ 1,252.2	$ 1,088.9

Accrued and Other Liabilities

	September 30, 2021	December 31, 2020
Compensation and employee benefit liabilities	$ 266.6	$ 277.9
Deferred revenue	108.2	90.0
Accrued interest	58.0	120.2
Product warranty accrual	54.7	45.8
Operating lease liabilities	51.3	62.4
Restructuring reserve	47.2	22.0
Patent claims and litigation settlements	13.6	25.7
Other	285.0	266.6
	$ 884.6	$ 910.6

(In millions, unless otherwise noted)

Operating Lease Information

	Balance Sheet Location	September 30, 2021	December 31, 2020
Right of use assets	Other noncurrent assets	$ 139.5	$ 159.3
Lease liabilities	Accrued and other liabilities	$ 51.3	$ 62.4
Lease liabilities	Other noncurrent liabilities	109.2	119.1
Total lease liabilities		$ 160.5	$ 181.5

Accumulated Other Comprehensive Loss

The following table presents changes in accumulated other comprehensive loss (AOCL), net of tax:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Foreign currency translation				
Balance at beginning of period	$ (110.3)	$ (227.7)	$ (80.5)	$ (162.7)
Other comprehensive income (loss)	(41.4)	63.7	(71.7)	(1.3)
Amounts reclassified from AOCL	0.5	—	1.0	—
Balance at end of period	$ (151.2)	$ (164.0)	$ (151.2)	$ (164.0)
Defined benefit plan activity				
Balance at beginning of period	$ (35.8)	$ (25.9)	$ (36.4)	$ (25.4)
Amounts reclassified from AOCL	0.3	(0.1)	0.9	(0.6)
Balance at end of period	$ (35.5)	$ (26.0)	$ (35.5)	$ (26.0)
Hedging instruments				
Balance at beginning of period	$ (35.1)	$ (21.8)	$ (39.0)	$ (8.9)
Other comprehensive income (loss)	4.3	(9.0)	8.2	(21.9)
Balance at end of period	$ (30.8)	$ (30.8)	$ (30.8)	$ (30.8)
Net AOCL at end of period	$ (217.5)	$ (220.8)	$ (217.5)	$ (220.8)

Amounts reclassified from net AOCL related to foreign currency translation and defined benefit plans are recorded in other expense, net in the Condensed Consolidated Statements of Operations.

Cash Flow Information

	Nine Months Ended September 30,	
	2021	2020
Cash paid during the period for:		
Income taxes, net of refunds	$ 64.3	$ 61.8
Interest	455.5	451.8

(In millions, unless otherwise noted)

5. FINANCING

	September 30, 2021	December 31, 2020
7.125% senior notes due July 2028	$ 700.0	$ 700.0
5.00% senior notes due March 2027	750.0	750.0
8.25% senior notes due March 2027	1,000.0	1,000.0
6.00% senior notes due June 2025	1,300.0	1,300.0
4.75% senior secured notes due September 2029	1,250.0	—
6.00% senior secured notes due March 2026	1,500.0	1,500.0
5.50% senior secured notes due March 2024	—	1,250.0
Senior secured term loan due April 2026	3,136.0	3,160.0
Senior secured revolving credit facility	—	—
Total principal amount of debt	$ 9,636.0	$ 9,660.0
Less: Original issue discount, net of amortization	(21.5)	(24.8)
Less: Debt issuance costs, net of amortization	(101.5)	(114.6)
Less: Current portion	(32.0)	(32.0)
Total long-term debt	$ 9,481.0	$ 9,488.6

See Note 8 in the Notes to Consolidated Financial Statements in the 2020 Annual Report for additional information on the terms and conditions of the Company's debt obligations except the new 4.75% senior secured notes due 2029 (the 2029 Secured Notes), which are described below.

4.75% Senior Secured Notes due September 2029

On August 23, 2021, the Company issued $1,250.0 million aggregate principal amount of the 2029 Secured Notes. The Company will pay interest on the 2029 Secured Notes semi-annually in arrears on March 1 and September 1 of each year, commencing on March 1, 2022. Unless repurchased or redeemed earlier, the 2029 Secured Notes will mature on September 1, 2029. The 2029 Secured Notes were offered in a private placement exempt from registration under the Securities Act of 1933, as amended (the Securities Act), to qualified institutional buyers pursuant to Rule 144A under the Securities Act and to certain non-U.S. persons outside of the United States in reliance on Regulation S under the Securities Act. The Company used the net proceeds from the offering of the 2029 Secured Notes, together with cash on hand, to redeem and retire all of the outstanding 5.50% senior secured notes due 2024 (the 2024 Secured Notes) and pay fees and expenses related to the transaction. The redemption of the 2024 Secured Notes resulted in a charge of $34.4 million, reflected in other expense, net, and the write-off of $9.9 million of debt issuance costs, reflected in interest expense, during the three and nine months ended September 30, 2021.

The 2029 Secured Notes are guaranteed on a senior secured basis by CommScope Holding Company, Inc. and each of CommScope, Inc.'s existing and future wholly owned domestic restricted subsidiaries that is an obligor under the senior secured credit facilities or certain other debt, subject to certain exceptions. The 2029 Secured Notes and the related guarantees are secured on a first-priority basis by security interests in all of the assets that secure indebtedness under the 2026 Term Loan (as defined below) on a first-priority basis, and on a second-priority basis in all assets that secure the Revolving Credit Facility (as defined below) on a first-priority basis and the 2026 Term Loan on a second-priority basis. The 2029 Secured Notes and the related guarantees rank senior in right of payment to all of CommScope, Inc.'s and the guarantors' subordinated indebtedness and equally in right of payment with all of CommScope, Inc.'s and the guarantors' senior indebtedness (without giving effect to collateral arrangements), including the senior secured credit facilities and the Company's other senior notes. The 2029 Secured Notes and the related guarantees are effectively subordinated to any of CommScope, Inc.'s or the guarantors' indebtedness that is secured by assets that do not constitute collateral for the 2029 Secured Notes and effectively subordinated to any of CommScope, Inc.'s or the guarantors' indebtedness that is secured by a senior-priority lien, including under the senior secured asset-based revolving credit facility (the Revolving Credit Facility), in each case to the extent of the value of the assets securing such indebtedness. In addition, the 2029 Secured Notes and related guarantees are structurally subordinated to all existing and future liabilities (including trade payables) of CommScope, Inc.'s subsidiaries that do not guarantee the 2029 Secured Notes.

(In millions, unless otherwise noted)

The 2029 Secured Notes may be redeemed prior to maturity under certain circumstances. Upon certain change of control events, the 2029 Secured Notes may be redeemed at the option of the holders at 101% of their principal amount, plus accrued and unpaid interest. The 2029 Secured Notes may be redeemed by CommScope, Inc. on or after September 1, 2024 at the redemption prices specified in the indenture governing the 2029 Secured Notes. Prior to September 1, 2024, the 2029 Secured Notes may be redeemed by CommScope, Inc. at a redemption price equal to 100% of their principal amount, plus a make-whole premium (as specified in the indenture governing the 2029 Secured Notes), plus accrued and unpaid interest. Prior to September 1, 2024, under certain circumstances, CommScope, Inc. may also redeem up to 40% of the aggregate principal amount of the 2029 Secured Notes at a redemption price of 104.750%, plus accrued and unpaid interest, using the proceeds of certain equity offerings. At any time prior to September 1, 2024, CommScope, Inc. may redeem during each calendar year up to 10% of the aggregate principal amount of the 2029 Secured Notes at a redemption price equal to 103% of the aggregate principal amount of the 2029 Secured Notes to be redeemed, plus accrued and unpaid interest, if any, to, but not including, the date of redemption.

In connection with issuing the 2029 Secured Notes, the Company incurred costs of $11.8 million during the three and nine months ended September 30, 2021, which were recorded as a reduction of the carrying amount of the debt and are being amortized over the term of the 2029 Secured Notes.

Senior Secured Credit Facilities

During the three and nine months ended September 30, 2021, the Company did not borrow under the Revolving Credit Facility. As of September 30, 2021, the Company had no outstanding borrowings under the Revolving Credit Facility and had availability of $686.4 million, after giving effect to borrowing base limitations and outstanding letters of credit.

During the three and nine months ended September 30, 2021, the Company made quarterly scheduled amortization payments totaling $8.0 million and $24.0 million, respectively, on the senior secured term loan due in 2026 (the 2026 Term Loan). The current portion of long-term debt reflects $32.0 million of repayments due under the 2026 Term Loan.

No portion of the 2026 Term Loan was reflected as a current portion of long-term debt as of September 30, 2021 related to the potentially required excess cash flow payment because the amount that may be payable in 2022, if any, cannot currently be reliably estimated. There is no excess cash flow payment required in 2021 related to 2020.

Other Matters

The following table summarizes scheduled maturities of long-term debt as of September 30, 2021:

	Remainder of 2021	2022	2023	2024	2025	Thereafter
Scheduled maturities of long-term debt	$ 8.0	$ 32.0	$ 32.0	$ 32.0	$ 1,332.0	$ 8,200.0

The Company's non-guarantor subsidiaries held $3,205 million, or 24%, of total assets and $1,021 million, or 8%, of total liabilities as of September 30, 2021 and accounted for $695 million, or 33%, and $1,990 million, or 31%, of net sales for the three and nine months ended September 30, 2021, respectively. As of December 31, 2020, the non-guarantor subsidiaries held $3,488 million, or 26%, of total assets and $956 million, or 8%, of total liabilities. For the three and nine months ended September 30, 2020, the non-guarantor subsidiaries accounted for $637 million, or 29% and $1,834 million, or 29%, of net sales, respectively. All amounts presented exclude intercompany balances.

The weighted average effective interest rate on outstanding borrowings, including the impact of the interest rate swap, and the amortization of debt issuance costs and original issue discount, was 5.74% and 5.86% as of September 30, 2021 and December 31, 2020, respectively.

(In millions, unless otherwise noted)

6. FAIR VALUE MEASUREMENTS

The Company's financial instruments consist primarily of cash and cash equivalents, trade receivables, trade payables, debt instruments, interest rate derivatives and foreign currency contracts. For cash and cash equivalents, trade receivables and trade payables, the carrying amounts of these financial instruments as of September 30, 2021 and December 31, 2020 were considered representative of their fair values due to their short terms to maturity. The fair values of the Company's debt instruments, interest rate derivatives and foreign currency contracts were based on indicative quotes.

Fair value measurements using quoted prices in active markets for identical assets and liabilities fall within Level 1 of the fair value hierarchy, measurements using significant other observable inputs fall within Level 2, and measurements using significant unobservable inputs fall within Level 3.

The carrying amounts, estimated fair values and valuation input levels of the Company's debt instruments, interest rate derivatives and foreign currency contracts as of September 30, 2021 and December 31, 2020, are as follows:

	September 30, 2021		December 31, 2020		
	Carrying Amount	Fair Value	Carrying Amount	Fair Value	Valuation Inputs
Assets:					
Foreign currency contracts	$ 3.5	$ 3.5	$ 11.7	$ 11.7	Level 2
Liabilities:					
7.125% senior notes due 2028	$ 700.0	$ 714.1	$ 700.0	$ 743.8	Level 2
5.00% senior notes due 2027	750.0	710.7	750.0	741.5	Level 2
8.25% senior notes due 2027	1,000.0	1,045.0	1,000.0	1,068.5	Level 2
6.00% senior notes due 2025	1,300.0	1,319.5	1,300.0	1,329.3	Level 2
4.75% senior secured notes due 2029	1,250.0	1,246.9	—	—	Level 2
6.00% senior secured notes due 2026	1,500.0	1,560.6	1,500.0	1,576.8	Level 2
5.50% senior secured notes due 2024	—	—	1,250.0	1,285.9	Level 2
Senior secured term loan due 2026	3,136.0	3,126.2	3,160.0	3,156.1	Level 2
Foreign currency contracts	1.6	1.6	24.4	24.4	Level 2
Interest rate swap contracts	18.2	18.2	29.9	29.9	Level 2

These fair value estimates are based on pertinent information available to management as of the valuation date. Although management is not aware of any factors that would significantly affect these fair value estimates, such amounts have not been comprehensively revalued for purposes of these financial statements since those dates, and current estimates of fair value may differ significantly from the amounts presented.

(In millions, unless otherwise noted)

7. SEGMENTS AND GEOGRAPHIC INFORMATION

The Company has four reportable segments as described below.

The Broadband Networks (Broadband) segment provides an end-to-end product portfolio serving the telco and cable provider broadband market. The segment includes converged cable access platform, passive optical networking, video systems, access technologies, fiber and coaxial cable, fiber and copper connectivity and hardened closures.

The Outdoor Wireless Networks (OWN) segment focuses on the macro and metro cell markets. The segment includes base station antennas, RF filters, tower connectivity, microwave antennas, metro cell products, cabinets, steel, accessories, Spectrum Access Systems and Comsearch.

The Venue and Campus Networks (VCN) segment targets both public and private networks for campuses, venues, data centers and buildings. The segment combines Wi-Fi and switching, distributed antenna systems, licensed and unlicensed small cells and enterprise fiber and copper infrastructure.

The Home Networks (Home) segment includes subscriber-based solutions that support broadband and video applications. The broadband offerings in the Home segment include devices that provide residential connectivity to a service provider's network, such as digital subscriber line and cable modems and telephony and data gateways which incorporate routing and Wi-Fi functionality. Video offerings include set top boxes that support cable, satellite and IP television content delivery and include products such as digital video recorders, high definition set top boxes and hybrid set top devices.

In the second quarter of 2021, management shifted certain product lines from the Company's Broadband segment to its Home segment to better align with how the business is being managed in light of the planned spin-off of the Home Networks business. All prior period amounts in these condensed consolidated financial statements have been recast to reflect these operating segment changes.

The following table provides summary financial information by reportable segment:

	September 30, 2021	December 31, 2020
Identifiable segment-related assets:		
Broadband	$ 6,315.1	$ 6,441.1
OWN	1,341.9	1,264.4
VCN	3,311.7	3,352.3
Home	1,438.7	1,709.0
Total identifiable segment-related assets	12,407.4	12,766.8
Reconciliation to total assets:		
Cash and cash equivalents	411.5	521.9
Deferred income tax assets	433.1	288.1
Total assets	$ 13,252.0	$ 13,576.8

(In millions, unless otherwise noted)

The Company's measurement of segment performance is adjusted EBITDA (earnings before interest, income taxes, depreciation and amortization). The Company defines adjusted EBITDA as operating income (loss), adjusted to exclude depreciation, amortization of intangible assets, restructuring costs, asset impairments, equity-based compensation, transaction, transformation and integration costs and other items that the Company believes are useful to exclude in the evaluation of operating performance from period to period because these items are not representative of the Company's core business.

The following table provides net sales, adjusted EBITDA, depreciation expense and additions to property, plant and equipment by reportable segment:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Net sales:				
Broadband	$ 779.7	$ 811.0	$ 2,366.4	$ 2,069.8
OWN	355.6	271.8	1,036.2	949.0
VCN	554.9	511.8	1,587.4	1,459.7
Home	415.1	573.5	1,372.6	1,825.6
Consolidated net sales	$ 2,105.3	$ 2,168.1	$ 6,362.6	$ 6,304.1
Segment adjusted EBITDA:				
Broadband	$ 158.1	$ 202.3	$ 488.3	$ 414.9
OWN	60.5	53.6	214.4	218.4
VCN	56.0	55.6	135.1	131.6
Home	(15.5)	30.4	18.6	88.1
Total segment adjusted EBITDA	259.1	341.9	856.4	853.0
Amortization of intangible assets	(153.0)	(158.1)	(461.9)	(473.5)
Restructuring (costs) credits, net	3.1	(40.3)	(100.2)	(83.6)
Equity-based compensation	(21.0)	(34.0)	(61.0)	(90.0)
Asset impairments	—	—	—	(206.7)
Transaction, transformation and integration costs	(26.2)	(4.8)	(62.7)	(17.8)
Acquisition accounting adjustments	(2.8)	(5.1)	(9.0)	(15.8)
Patent claims and litigation settlements	(5.0)	1.4	(46.5)	(11.4)
Executive severance	—	(6.3)	—	(6.3)
Depreciation	(33.2)	(38.9)	(103.6)	(118.7)
Consolidated operating income (loss)	$ 21.0	$ 55.8	$ 11.5	$ (170.8)
Depreciation expense:				
Broadband	$ 14.1	$ 14.6	$ 42.8	$ 44.2
OWN	3.8	4.1	11.4	12.7
VCN	10.3	11.7	31.8	34.9
Home	5.0	8.5	17.6	26.9
Consolidated depreciation expense	$ 33.2	$ 38.9	$ 103.6	$ 118.7
Additions to property, plant and equipment:				
Broadband	$ 22.5	$ 9.0	$ 55.3	$ 27.1
OWN	2.7	3.6	7.6	10.3
VCN	8.0	7.4	26.1	20.3
Home	2.8	5.8	7.2	15.8
Consolidated additions to property, plant and equipment	$ 36.0	$ 25.8	$ 96.2	$ 73.5

(In millions, unless otherwise noted)

Sales to customers located outside of the U.S. comprised 42.9% and 42.7% of total net sales for the three and nine months ended September 30, 2021, respectively, compared to 39.2% and 38.3%, of total net sales for the three and nine months ended September 30, 2020, respectively. The following table presents net sales by reportable segment, disaggregated based on geographic region:

	Three Months Ended September 30,									
	Broadband		OWN		VCN		Home		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Geographic Region:										
United States	$ 477.4	$ 545.4	$ 227.6	$ 163.2	$ 300.8	$ 277.9	$ 196.0	$ 331.7	$ 1,201.8	$ 1,318.2
Europe, Middle East and Africa	127.7	109.6	67.4	61.5	116.2	109.9	107.5	126.3	418.8	407.3
Asia Pacific	60.9	79.8	35.0	22.6	108.4	103.9	24.1	12.8	228.4	219.1
Caribbean and Latin America	87.2	56.3	13.2	21.4	23.4	13.3	32.4	58.9	156.2	149.9
Canada	26.5	19.9	12.4	3.1	6.1	6.8	55.1	43.8	100.1	73.6
Consolidated net sales	$ 779.7	$ 811.0	$ 355.6	$ 271.8	$ 554.9	$ 511.8	$ 415.1	$ 573.5	$ 2,105.3	$ 2,168.1

	Nine Months Ended September 30,									
	Broadband		OWN		VCN		Home		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Geographic Region:										
United States	$ 1,495.1	$ 1,334.0	$ 649.1	$ 645.6	$ 816.3	$ 808.1	$ 687.4	$ 1,104.6	$ 3,647.9	$ 3,892.3
Europe, Middle East and Africa	343.0	310.0	195.3	185.0	345.0	310.6	330.0	355.8	1,213.3	1,161.4
Asia Pacific	180.6	193.6	111.6	62.1	340.5	279.9	65.2	62.9	697.9	598.5
Caribbean and Latin America	278.3	162.6	32.8	43.9	57.8	39.2	169.7	186.6	538.6	432.3
Canada	69.4	69.6	47.4	12.4	27.8	21.9	120.3	115.7	264.9	219.6
Consolidated net sales	$ 2,366.4	$ 2,069.8	$ 1,036.2	$ 949.0	$ 1,587.4	$ 1,459.7	$ 1,372.6	$ 1,825.6	$ 6,362.6	$ 6,304.1

8. RESTRUCTURING COSTS (CREDITS), NET

The Company incurs costs associated with restructuring initiatives intended to improve overall operating performance and profitability. The costs related to restructuring actions are generally cash-based and primarily consist of employee-related costs, which include severance and other one-time termination benefits.

In addition to the employee-related costs, the Company also records other costs associated with restructuring actions such as the gain or loss on the sale of facilities and impairment costs arising from unutilized real estate or equipment. The Company attempts to sell or lease this unutilized space but additional impairment charges may be incurred related to these or other excess assets.

The Company's net pretax restructuring activity included in restructuring costs (credits), net on the Condensed Consolidated Statements of Operations, by segment, were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Broadband	$ (3.6)	$ 11.7	$ 69.6	$ 16.9
OWN	0.4	5.9	6.6	9.8
VCN	(0.1)	18.9	16.0	29.0
Home	0.2	3.8	8.0	27.9
Total	$ (3.1)	$ 40.3	$ 100.2	$ 83.6

(In millions, unless otherwise noted)

Restructuring liabilities were included in the Company’s Condensed Consolidated Balance Sheets as follows:

	September 30, 2021	December 31, 2020
Accrued and other liabilities	$ 47.2	$ 22.0
Other noncurrent liabilities	33.9	4.0
Total restructuring liabilities	$ 81.1	$ 26.0

CommScope NEXT Restructuring Actions

In the first quarter of 2021, the Company announced and began implementing a business transformation initiative called CommScope NEXT. This initiative is designed to drive shareholder value through three pillars: focusing on strategies to drive profitable growth, undertaking a full portfolio evaluation and optimizing the business by focusing on efficiency and eliminating unnecessary non-value-added complexity and cost across the business. The activity within the liability established for CommScope NEXT restructuring actions was as follows:

	Employee-Related Costs	Other	Total
Balance at June 30, 2021	$ 68.4	$ —	$ 68.4
Expense reversal, net	(5.1)	—	(5.1)
Cash paid	(4.9)	—	(4.9)
Balance at September 30, 2021	$ 58.4	$ —	$ 58.4
Balance at December 31, 2020	$ —	$ —	$ —
Additional expense, net	83.1	4.0	87.1
Cash paid	(24.7)	—	(24.7)
Non-cash items	—	(4.0)	(4.0)
Balance at September 30, 2021	$ 58.4	$ —	$ 58.4

(In millions, unless otherwise noted)

CommScope NEXT actions to date have included the planned closure of a manufacturing facility as well as headcount reductions in manufacturing, engineering, marketing, sales and administrative functions.

The Company expects to make cash payments of $2.3 million during the remainder of 2021 and additional cash payments of $56.1 million between 2022 and 2023 to settle CommScope NEXT restructuring actions. Additional restructuring actions related to CommScope NEXT are expected to be identified and the resulting charges and cash requirements are expected to be material.

ARRIS Integration Restructuring Actions

In anticipation of and following the acquisition of ARRIS, the Company initiated a series of restructuring actions to integrate and streamline operations and achieve cost synergies. The activity within the liability established for the ARRIS integration restructuring actions was as follows:

	Employee-Related Costs	Other	Total
Balance at June 30, 2021	$ 22.6	$ 0.2	$ 22.8
Additional expense, net	1.3	0.7	2.0
Cash paid	(1.6)	(0.3)	(1.9)
Non-cash items	—	(0.6)	(0.6)
Balance at September 30, 2021	$ 22.3	$ —	$ 22.3
Balance at December 31, 2020	$ 24.4	$ 0.8	$ 25.2
Additional expense, net	10.5	2.6	13.1
Cash paid	(12.6)	(1.3)	(13.9)
Non-cash items	—	(2.1)	(2.1)
Balance at September 30, 2021	$ 22.3	$ —	$ 22.3

The ARRIS integration actions included headcount reductions in manufacturing, sales, engineering, marketing and administrative functions. The Company has recognized restructuring charges of $187.7 million since the ARRIS acquisition for integration actions. For the three and nine months ended September 30, 2021, the other restructuring category primarily includes activity from impairment of operating lease right of use assets related to ceasing use of certain leased facilities as part of restructuring activities, which is included in restructuring costs, net on the Condensed Consolidated Statements of Operations.

The Company expects to make cash payments of $17.9 million during the remainder of 2021 and additional cash payments of $4.4 million in 2022 to settle the ARRIS integration initiatives. The Company does not expect to identify significant additional restructuring actions related to the ARRIS integration.

9. SERIES A CONVERTIBLE PREFERRED STOCK

On April 4, 2019, the Company issued and sold 1,000,000 shares of the Convertible Preferred Stock to Carlyle for $1.0 billion, or $1,000 per share, pursuant to an Investment Agreement between the Company and Carlyle, dated November 8, 2018. The Convertible Preferred Stock is convertible at the option of the holders at any time into shares of CommScope common stock at an initial conversion rate of 36.3636 shares of common stock per share of the Convertible Preferred Stock (equivalent to $27.50 per common share). The conversion rate is subject to customary anti-dilution and other adjustments.

Holders of the Convertible Preferred Stock are entitled to a cumulative dividend at the rate of 5.5% per year, payable quarterly in arrears. Dividends can be paid in cash, in-kind through the issuance of additional shares of the Convertible Preferred Stock or any combination of the two, at the Company's option. During the three and nine months ended September 30, 2021, the Company paid cash dividends of $14.3 million and $43.0 million, respectively. During the three and nine months ended September 30, 2020, the Company paid dividends in-kind of $14.1 million and $41.8 million, respectively, which was recorded as additional Convertible Preferred Stock in the Condensed Consolidated Balance Sheets.

10. STOCKHOLDERS' EQUITY

Equity-Based Compensation Plans

As of September 30, 2021, $127.0 million of total unrecognized compensation expense related to unvested stock options, restricted stock units (RSUs) and performance share units (PSUs) is expected to be recognized over a remaining weighted average period of 2.1 years. There were no significant capitalized equity-based compensation costs at September 30, 2021.

During the nine months ended September 30, 2021, the Company's stockholders approved the termination of certain executive performance stock options, which is reflected as forfeited stock options below, and the grant of selective performance-based retention equity awards, which is reflected in PSUs granted below. The impact under modification accounting was not material to the condensed consolidated financial statements.

The following table shows a summary of the equity-based compensation expense included in the Condensed Consolidated Statements of Operations:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Selling, general and administrative	$ 10.8	$ 18.6	$ 31.2	$ 49.3
Cost of sales	3.5	5.5	10.0	14.5
Research and development	6.7	9.9	19.8	26.2
Total equity-based compensation expense	$ 21.0	$ 34.0	$ 61.0	$ 90.0

Stock Options

Stock options are awards that allow the recipient to purchase shares of the Company's common stock at a fixed price. Stock options are granted at an exercise price equal to the Company's stock price at the date of grant. These awards generally vest over five years following the grant date and have a contractual term of ten years. The Company uses the Black-Scholes model to estimate the fair value of stock option awards at the date of grant. Key inputs and assumptions used in the model include the grant date fair value of common stock, exercise price of the award, the expected option term, the risk-free interest rate, stock price volatility and the Company's projected dividend yield. There were no stock option awards granted during the three and nine months ended September 30, 2021 or 2020.

The following table summarizes the stock option activity (in millions, except per share data and years):

	Shares	Weighted Average Option Exercise Price Per Share	Weighted Average Remaining Contractual Term in Years	Aggregate Intrinsic Value
Options outstanding at June 30, 2021	3.2	$ 23.95	5.8	$ 6.5
Exercised	(0.1)	$ 18.60		
Forfeited	(0.1)	$ 18.60		
Expired	(0.1)	$ 27.82		
Options outstanding at September 30, 2021	2.9	$ 24.19	5.1	$ 0.5
Options outstanding at December 31, 2020	6.2	$ 19.86	6.6	$ 5.6
Exercised	(0.8)	$ 7.18		
Forfeited	(2.4)	$ 18.40		
Expired	(0.1)	$ 25.88		
Options outstanding at September 30, 2021	2.9	$ 24.19	5.1	$ 0.5
Options vested at September 30, 2021	2.2	$ 25.93	4.3	$ 0.4
Options unvested at September 30, 2021	0.7	$ 18.14	7.6	$ 0.1

The exercise prices of outstanding options at September 30, 2021 were in the following ranges (in millions, except per share data and years):

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Shares	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Price Per Share	Shares	Weighted Average Exercise Price Per Share
$5.50 to $18.50	0.1	4.6	$ 10.15	0.1	$ 9.20
$18.51 to $30.00	1.9	5.6	$ 19.59	1.2	$ 20.06
$30.01 to $45.00	0.9	4.0	$ 36.45	0.9	$ 36.45
$5.50 to $45.00	2.9	5.1	$ 24.19	2.2	$ 25.93

Restricted Stock Units

RSUs entitle the holder to shares of common stock after a vesting period that generally ranges from one to three years. The fair value of the awards is determined on the grant date based on the Company's stock price.

The following table summarizes the RSU activity (in millions, except per share data):

	Restricted Stock Units	Weighted Average Grant Date Fair Value Per Share
Non-vested share units at June 30, 2021	11.3	$ 15.00
Forfeited	(0.4)	$ 14.84
Non-vested share units at September 30, 2021	10.9	$ 15.01
Non-vested share units at December 31, 2020	13.2	$ 13.62
Granted	3.8	$ 20.39
Vested and shares issued	(5.0)	$ 15.72
Forfeited	(1.1)	$ 13.78
Non-vested share units at September 30, 2021	10.9	$ 15.01

Performance Share Units

PSUs are stock awards in which the number of shares ultimately received by the employee depends on either a market-based performance measure or an internal performance measure and the number of shares can vary from 0% to 300% depending on the achievement. Certain of CommScope's PSUs have a market condition performance measure based on stock price milestones as well as a service condition. The Company used a Monte Carlo simulation model to estimate the fair value of these PSUs at the date of grant. Key assumptions used in the model include the risk-free interest rate, which reflects the yield on zero-coupon U.S. treasury securities, and stock price volatility, which is derived based on the historical volatility of the Company's stock. The following table presents the weighted average assumptions used to estimate the fair value of these awards granted during the nine months ended September 30, 2021. These awards were not granted during the three months ended September 30, 2021.

	Nine Months Ended September 30, 2021
Risk-free interest rate	0.4 %
Expected volatility	56.0 %
Weighted average fair value at grant date	$ 11.21

During the three months ended September 30, 2021, the Company granted certain PSUs with an internal performance measure vesting at the end of three years. The fair value of these awards was determined on the date of grant based on the Company's stock price.

The following table summarizes the PSU activity (in millions, except per share data):

	Performance Share Units	Weighted Average Grant Date Fair Value Per Share
Non-vested share units at June 30, 2021	2.2	$ 6.30
Granted	0.3	$ 18.97
Forfeited	(0.1)	$ 13.88
Non-vested share units at September 30, 2021	2.4	$ 8.02
Non-vested share units at December 31, 2020	1.5	$ 4.03
Granted	1.0	$ 14.48
Forfeited	(0.1)	$ 13.88
Non-vested share units at September 30, 2021	2.4	$ 8.02

ITEM 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following narrative is an analysis of the three and nine months ended September 30, 2021 compared to the three and nine months ended September 30, 2020. The discussion is provided to increase the understanding of, and should be read in conjunction with, the unaudited condensed consolidated financial statements and accompanying notes included in this report as well as the audited consolidated financial statements, related notes thereto and management’s discussion and analysis of financial condition and results of operations, including management’s discussion and analysis regarding the application of critical accounting policies and the risk factors in our Annual Report on Form 10-K for the year ended December 31, 2020 (2020 Annual Report).

We discuss certain financial measures in management’s discussion and analysis of financial condition and results of operations, including adjusted EBITDA, that differ from measures calculated in accordance with generally accepted accounting principles in the United States (U.S. GAAP). See "Reconciliation of Non-GAAP Measures" included elsewhere in this quarterly report for more information about these non-GAAP financial measures, including our reasons for including the measures and material limitations with respect to the usefulness of the measures.

Overview

We are a global provider of infrastructure solutions for communication and entertainment networks. Our solutions for wired and wireless networks enable service providers including cable, telephone and digital broadcast satellite operators and media programmers to deliver media, voice, Internet Protocol (IP) data services and Wi-Fi to their subscribers and allow enterprises to experience constant wireless and wired connectivity across complex and varied networking environments. Our solutions are complemented by a broad array of services including technical support, systems design and integration. We are a leader in digital video and IP television distribution systems, broadband access infrastructure platforms and equipment that delivers data and voice networks to homes. Our global leadership position is built upon innovative technology, broad solution offerings, high-quality and cost-effective customer solutions, and global manufacturing and distribution scale.

In the first quarter of 2021, we announced a transformation initiative called CommScope NEXT designed to drive shareholder value through three pillars: focusing on strategies to drive profitable growth, undertaking a full portfolio evaluation and optimizing our business by focusing on efficiency and eliminating unnecessary non-value-added complexity and cost across the business. We believe these efforts are critical to making us more competitive and allowing us to invest in growth and maximize shareholder and stakeholder value. We have incurred $100.2 million of restructuring costs and $62.7 million of transaction, transformation and integration costs during the nine months ended September 30, 2021, both primarily related to CommScope NEXT. We expect to continue to incur restructuring costs and transaction, transformation and integration costs related to CommScope NEXT and such costs are expected to be material.

As a step in our CommScope NEXT transformation plan, on April 8, 2021, we announced our plan to spin-off the Home Networks business to form a new stand-alone publicly traded company. Below we refer to certain supplementary “Core” financial measures, which reflect the results of our Broadband Networks (Broadband), Outdoor Wireless Networks (OWN) and Venue and Campus Networks (VCN) segments, in the aggregate. Our Core financial measures exclude the results and performance of our Home Networks (Home) segment. See the Segment Results section below for illustration of the aggregation of our Core financial measures. These metrics represent the business segments as we have reported. However, the ultimate definition of the Home Networks business that we expect to spin-off may vary, and future results may differ materially.

In the second quarter of 2021, we shifted certain product lines from our Broadband segment to our Home segment to better align with how the business is being managed in light of the planned spin-off of the Home Networks business. All prior period amounts have been recast to reflect these operating segment changes.

COVID-19 Update

The COVID-19 outbreak had an adverse impact on our financial performance in 2020 primarily related to decreased demand, supply constraints due to the temporary shutdown of certain of our facilities and increased business continuity costs. We took a variety of actions in 2020 to help mitigate the financial impacts such as headcount reductions, lower capital spending and lower discretionary spending. The negative impact of COVID-19 on our financial performance has eased during 2021, with network strain driving increased demand for our Broadband segment products in particular. The recovery in demand has also had unfavorable business impacts, including commodity inflation (primarily copper and resins), logistics cost increases, extended lead times and certain component part shortages. We expect certain of these unfavorable impacts to continue for the remainder of 2021 and into 2022.

The extent of the negative impact of the COVID-19 pandemic on our operational and financial performance will depend on future developments, including the duration and spread of the pandemic, including new variants, the effectiveness and adoption of vaccines and related actions taken by domestic and international jurisdictions to maintain and prevent disease spread, and the extent of any financial recession resulting from the pandemic, all of which are uncertain and cannot be predicted.

Performance Highlights

The below are highlights of our results for the three and nine months ended September 30, 2021 compared to the prior year periods. We refer to the three-month period as the "quarter" and the nine-month period as "year-to-date." Core financial measures reflect the results of our Broadband, OWN and VCN segments, in the aggregate. Core financial measures exclude the results of our Home segment. See the Segment Results section below for illustration of the aggregation of our Core financial measures.

- Net sales decreased 2.9% for the quarter and increased 0.9% year-to-date
- Core net sales increased 6.0% for the quarter and 11.4% year-to-date
- Net loss increased 6.8% for the quarter and decreased 37.1% year-to-date
- Non-GAAP adjusted EBITDA decreased 24.2% for the quarter and increased 0.4% year-to-date
- Core adjusted EBITDA decreased 11.8% for the quarter and increased 9.5% year-to-date
- Diluted loss per share increased 3.0% for the quarter and decreased 36.8% year-to-date

CRITICAL ACCOUNTING POLICIES

There have been no changes in our critical accounting policies as disclosed in our 2020 Annual Report.

COMPARISON OF RESULTS OF OPERATIONS FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2021 WITH THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2020

	Three Months Ended September 30,					
	2021		2020			
	Amount	% of Net Sales	Amount	% of Net Sales	$ Change	% Change
	(dollars in millions, except per share amounts)					
Net sales	$ 2,105.3	100.0 %	$ 2,168.1	100.0 %	$ (62.8)	(2.9)%
Core net sales [1]	1,690.2	80.3	1,594.6	73.5	95.6	6.0
Gross profit	653.0	31.0	735.5	33.9	(82.5)	(11.2)
Operating income	21.0	1.0	55.8	2.6	(34.8)	(62.4)
Core operating income [1]	89.4	5.3	57.8	3.6	31.6	54.7
Non-GAAP adjusted EBITDA [2]	259.1	12.3	341.9	15.8	(82.8)	(24.2)
Core adjusted EBITDA [1]	274.6	16.2	311.5	19.5	(36.9)	(11.8)
Net loss	(124.2)	(5.9)	(116.3)	(5.4)	(7.9)	6.8
Diluted loss per share	$ (0.68)		$ (0.66)		$ (0.02)	3.0

	Nine Months Ended September 30,					
	2021		2020			
	Amount	% of Net Sales	Amount	% of Net Sales	$ Change	% Change
	(dollars in millions, except per share amounts)					
Net sales	$ 6,362.6	100.0 %	$ 6,304.1	100.0 %	$ 58.5	0.9 %
Core net sales [1]	4,990.0	78.4	4,478.5	71.0	511.5	11.4
Gross profit	1,998.5	31.4	2,032.8	32.2	(34.3)	(1.7)
Operating income (loss)	11.5	0.2	(170.8)	(2.7)	182.3	(106.7)
Core operating income [1]	164.8	3.3	98.5	1.6	66.3	67.3
Non-GAAP adjusted EBITDA [1]	856.4	13.5	853.0	13.5	3.4	0.4
Core adjusted EBITDA [1]	837.8	16.8	764.9	12.1	72.9	9.5
Net loss	(375.6)	(5.9)	(597.3)	(9.5)	221.7	(37.1)
Diluted loss per share	$ (2.06)		$ (3.26)		$ 1.20	(36.8)

(1) Core financial measures reflect the results of our Broadband, OWN and VCN segments, in the aggregate. Core financial measures exclude the results of our Home segment. See the Segment Results section below for illustration of the aggregation of our Core financial measures.

(2) See “Reconciliation of Non-GAAP Measures.”

Net sales

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2021	2020	$ Change	% Change	2021	2020	$ Change	% Change
	(dollars in millions)							
Net sales	$ 2,105.3	$ 2,168.1	$ (62.8)	(2.9)%	$ 6,362.6	$ 6,304.1	$ 58.5	0.9 %
Domestic	1,201.8	1,318.2	(116.4)	(8.8)	3,647.9	3,892.3	(244.4)	(6.3)
International	903.5	849.9	53.6	6.3	2,714.7	2,411.8	302.9	12.6

Compared to the prior year periods, net sales decreased $62.8 million, or 2.9%, for the three months ended September 30, 2021 and increased $58.5 million, or 0.9%, for the nine months ended September 30, 2021. Core net sales for the three months ended September 30, 2021 increased $95.6 million, or 6.0%, compared to the prior year period with increases in the OWN segment of $83.8 million and the VCN segment of $43.1 million, partially offset by a decrease in the Broadband segment of $31.3 million. Core net sales for the nine months ended September 30, 2021 increased $511.5 million, or 11.4%, compared to the prior year period with increases in the Broadband segment of $296.6 million, the VCN segment of $127.7 million and the OWN segment of $87.2 million. For the three and nine months ended September 30, 2021, net sales in the Home segment decreased $158.4 million and $453.0 million, respectively, compared to the prior year periods. In the three and nine months ended September 30, 2021, all our segments experienced supply shortages and extended lead times for certain materials that negatively affected our ability to meet customer demand for our products. We expect these shortages and delays to persist for the remainder of 2021 and into 2022. In addition, our Broadband segment faced capacity constraints that negatively affected net sales in the three and nine months ended September 30, 2021.

From a regional perspective, for the three months ended September 30, 2021 compared to the prior year period, net sales decreased in the U.S. by $116.4 million. The decrease in the U.S. was partially offset by increases in Canada by $26.5 million, the Europe, Middle East and Africa (EMEA) region by $11.5 million, the Asia Pacific (APAC) region by $9.3 million and the Caribbean and Latin American (CALA) region by $6.3 million. For the nine months ended September 30, 2021, net sales increased in the CALA region by $106.3 million, the APAC region by $99.4 million, the EMEA region by $51.9 million and Canada by $45.3 million. The increases in international net sales for the nine months ended September 30, 2021 were partially offset by a decrease of $244.4 million in the U.S. For additional information on regional sales by segment, see discussion of Segment Results below and Note 7 in the Notes to Unaudited Condensed Consolidated Financial Statements herein. Foreign exchange rate changes impacted net sales favorably by approximately 1% for both the three and nine months ended September 30, 2021 compared to the same prior year periods.

Net sales to customers located outside of the U.S. comprised 42.9% and 42.7% of total net sales for the three and nine months ended September 30, 2021, respectively, compared to 39.2% and 38.3% for the three and nine months ended September 30, 2020, respectively. For further details by segment, see the section titled “Segment Results” below.

Gross profit, SG&A expense and R&D expense

	Three Months Ended September 30,		$	%	Nine Months Ended September 30,		$	%
	2021	2020	Change	Change	2021	2020	Change	Change
				(dollars in millions)				
Gross profit	$ 653.0	$ 735.5	$ (82.5)	(11.2)%	$ 1,998.5	$ 2,032.8	$ (34.3)	(1.7)%
As a percent of sales	31.0%	33.9%			31.4%	32.2%		
SG&A expense	314.3	296.7	17.6	5.9	909.3	898.7	10.6	1.2
As a percent of sales	14.9%	13.7%			14.3%	14.3%		
R&D expense	167.8	184.6	(16.8)	(9.1)	515.6	541.1	(25.5)	(4.7)
As a percent of sales	8.0%	8.5%			8.1%	8.6%		

Gross profit (net sales less cost of sales)

Gross profit decreased for the three months ended September 30, 2021 compared to the prior year period primarily due to higher material and freight costs as well as lower net sales. For the nine months ended September 30, 2021, gross profit decreased despite higher net sales compared to the prior year period primarily due to higher freight and material costs as well as pricing pressures related to certain of our OWN segment products that were only partially offset by increased pricing on certain of our VCN segment products. In addition, we recorded charges of $5.0 million and $46.5 million that reduced gross profit in the three and nine months ended September 30, 2021, respectively, related to the settlement of intellectual property assertions.

Selling, general and administrative expense

In the first quarter of 2021, we announced a transformation initiative, CommScope NEXT, and in early April 2021, we announced our intention to spin-off our Home Networks business. We are also continuing to integrate the 2019 acquisition of ARRIS International plc (ARRIS), including our work to combine our enterprise resource planning systems. Due to these efforts, we incurred $26.2 million and $62.7 million of transaction, transformation and integration costs during the three and nine months ended September 30, 2021, respectively, compared to $4.8 million and $17.8 million during the three and nine months ended September 30, 2020, respectively. Transaction, transformation and integration costs during the prior year periods were mainly focused on the integration of the ARRIS business. We expect to continue to incur transaction, transformation and integration costs related to CommScope NEXT, the spin-off of the Home Networks business, and the integration of the ARRIS business, and such costs are expected to be material.

For the three and nine months ended September 30, 2021, excluding transaction, transformation and integration costs, selling, general and administrative (SG&A) expense decreased by $3.8 million and $34.3 million, respectively. For the three months ended September 30, 2021, the decrease was primarily due to lower variable compensation expense of $9.4 million and cost savings initiatives offset partially by higher bad debt expense of $16.3 million. For the nine months ended September 30, 2021, the decrease was primarily due to cost savings initiatives. Our cost savings initiatives in certain back-office functions have allowed us to reinvest in selling and marketing activities in our Core segments.

Research and development expense

R&D expense decreased for the three and nine months ended September 30, 2021 primarily due to decreased spending on Home segment products. R&D activities generally relate to ensuring that our products are capable of meeting the evolving technological needs of our customers, bringing new products to market and modifying existing products to better serve our customers.

Amortization of purchased intangible assets, Restructuring costs (credits), net and Asset impairments

	Three Months Ended September 30, 2021	Three Months Ended September 30, 2020	$ Change	% Change	Nine Months Ended September 30, 2021	Nine Months Ended September 30, 2020	$ Change	% Change
	(dollars in millions)							
Amortization of purchased intangible assets	$ 153.0	$ 158.1	$ (5.1)	(3.2)%	$ 461.9	$ 473.5	$ (11.6)	(2.4%)
Restructuring costs (credits), net	(3.1)	40.3	(43.4)	NM	100.2	83.6	16.6	19.9
Asset impairments	—	—	—	NM	—	206.7	(206.7)	NM

NM – Not meaningful

Amortization of purchased intangible assets

For the three and nine months ended September 30, 2021, amortization of purchased intangible assets was lower compared to the prior year periods because certain of our intangible assets became fully amortized.

Restructuring costs (credits), net

The net restructuring costs (credits) recorded during the three and nine months ended September 30, 2021 reflected actions initiated during 2021 and included $(5.1) million and $87.1 million, respectively, related to CommScope NEXT. For the three and nine months ended September 30, 2021, restructuring costs (credits) also reflected $2.0 million and $13.1 million, respectively, related to integrating the ARRIS business. Restructuring credits arise as estimates are refined or severance is forfeited when employees depart prior to the termination date. The restructuring costs recorded during the three and nine months ended September 30, 2020 were primarily related to integrating the ARRIS business. From a cash perspective, we paid $6.8 million and $38.6 million to settle restructuring liabilities during the three and nine months ended September 30, 2021, respectively, and expect to pay an additional $20.2 million by the end of 2021 and $60.5 million between 2022 and 2023 related to restructuring actions that have been initiated. Additional restructuring actions related to CommScope NEXT are expected to be identified and the resulting charges and cash requirements are expected to be material. The Company does not expect to identify significant additional restructuring actions related to the ARRIS integration.

Asset impairments

We did not record any asset impairment charges during the three or nine months ended September 30, 2021. For the three and nine months ended September 30, 2020, we recorded a goodwill impairment charge of $206.7 million related to our Home Networks reporting unit within our Home segment.

Other expense, net

	Three Months Ended September 30, 2021	Three Months Ended September 30, 2020	$ Change	% Change	Nine Months Ended September 30, 2021	Nine Months Ended September 30, 2020	$ Change	% Change
	(dollars in millions)							
Foreign currency loss	$ (1.4)	$ (5.6)	$ 4.2	(75.0)%	$ (2.3)	$ (19.5)	$ 17.2	(88.2)%
Other expense, net	(30.9)	(11.3)	(19.6)	173.5	(27.5)	(10.7)	(16.8)	157.0

Foreign currency loss

Foreign currency loss includes the net foreign currency gains and losses resulting from the settlement of receivables and payables, foreign currency contracts and short-term intercompany advances in a currency other than the subsidiary's functional currency. The foreign currency loss in the prior year periods was primarily driven by certain unhedged currencies.

Other expense, net

For the three and nine months ended September 30, 2021, other expense, net was driven by the redemption fee of $34.4 million related to the refinancing of the 5.50% senior secured notes due March 2024 (the 2024 Secured Notes) as further described in Note 5 in the Notes to Unaudited Condensed Consolidated Financial Statements. For the three and nine months ended September 30, 2020, other expense, net was driven by redemption fees of $14.9 million related to the refinancing of the 5.00% senior notes due 2021 (the 2021 Notes) and the 5.50% senior notes due June 2024 (the 2024 Notes) and the redemption of $100.0 million of the 6.00% senior notes due 2025 (the 2025 Notes).

Interest expense, Interest income and Income taxes

	Three Months Ended September 30, 2021	Three Months Ended September 30, 2020	$ Change	% Change	Nine Months Ended September 30, 2021	Nine Months Ended September 30, 2020	$ Change	% Change
	(dollars in millions)							
Interest expense	$ (148.6)	$ (147.2)	$ (1.4)	1.0%	$ (424.1)	$ (437.7)	$ 13.6	(3.1%)
Interest income	0.5	1.3	(0.8)	(61.5)	1.5	4.2	(2.7)	(64.3)
Income tax (expense) benefit	35.2	(9.3)	44.5	NM	65.3	37.2	28.1	75.5

NM – Not meaningful

Interest expense and interest income

For the three and nine months ended September 30, 2021, we wrote off $9.9 million of debt issuance costs related to the refinancing of the 2024 Secured Notes as further described in Note 5 in the Notes to Unaudited Condensed Consolidated Financial Statements. For the three months ended September 30, 2020, we wrote off $6.0 million related to the refinancing of the 2021 Notes and 2024 Notes and the partial redemption of the 2025 Notes. Excluding the write-off of debt issuance costs, interest expense decreased for the three and nine months ended September 30, 2021 due to lower variable interest rates on our senior secured term loan due 2026 (the 2026 Term Loan). Our weighted average effective interest rate on outstanding borrowings, including the impact of the interest rate swap and the amortization of debt issuance costs and original issue discount, was 5.74% at September 30, 2021, 5.86% at December 31, 2020 and 5.87% at September 30, 2020.

Income tax (expense) benefit

For the three months ended September 30, 2021, our effective tax rate was 22.1% and we recognized a tax benefit of $35.2 million on a pretax loss of $159.4 million. Our tax benefit was higher than the statutory rate of 21% due to favorable changes in uncertain tax positions. For the nine months ended September 30, 2021, our effective tax rate was 14.8% and we recognized a tax benefit of $65.3 million on a pretax loss of $440.9 million. Our tax benefit was lower than the statutory rate primarily due to the impact of $37.4 million in tax expense related to a foreign tax rate change.

Our effective income tax rate was (8.7)% and 5.9% for the three and nine months ended September 30, 2020. We recognized income tax expense of $9.3 million on a pretax loss of $107.0 million and a tax benefit of $37.2 million on a pretax loss of $634.5 million respectively. For the three months ended September 30, 2020, the income tax expense on our pretax loss was driven by $19.2 million of tax expense related to a foreign tax rate change. Our tax benefit in the nine months ended September 30, 2020 was impacted unfavorably primarily by a goodwill impairment charge of $206.7 million, for which minimal tax benefits were recorded, $22.7 million of tax expense related to state valuation allowances and $19.2 million in income tax expense related to a foreign tax rate change. For both the three and nine months ended September 30, 2020, our tax rate was also impacted favorably by federal tax credits and unfavorably by U.S. anti-deferral provisions and foreign withholding taxes. Excess tax costs of $1.2 million and $9.0 million related to equity compensation awards also impacted the income taxes unfavorably for the three and nine months ended September 30, 2020, respectively

Segment Results

	Three Months Ended September 30,					
	2021		2020			
	Amount	% of Net Sales	Amount	% of Net Sales	$ Change	% Change
			(dollars in millions)			
Net sales by segment:						
Broadband	$ 779.7	37.0 %	$ 811.0	37.4 %	$ (31.3)	(3.9) %
OWN	355.6	16.9	271.8	12.5	83.8	30.8
VCN	554.9	26.4	511.8	23.6	43.1	8.4
Core net sales (1)	1,690.2	80.3	1,594.6	73.5	95.6	6.0
Home	415.1	19.7	573.5	26.5	(158.4)	(27.6)
Consolidated net sales	$ 2,105.3	100.0 %	$ 2,168.1	100.0 %	$ (62.8)	(2.9) %
Operating income (loss) by segment:						
Broadband	$ 50.8	6.5 %	$ 75.0	9.2 %	$ (24.2)	(32.3) %
OWN	43.2	12.1	26.0	9.6	17.2	66.2
VCN	(4.6)	(0.8)	(43.2)	(8.4)	38.6	(89.4)
Core operating income (1)	89.4	5.3	57.8	3.6	31.6	54.7
Home	(68.4)	(16.5)	(2.0)	(0.3)	(66.4)	3,320.0
Consolidated operating income	$ 21.0	1.0 %	$ 55.8	2.6 %	$ (34.8)	(62.4) %
Adjusted EBITDA by segment:						
Broadband	$ 158.1	20.3 %	$ 202.3	24.9 %	$ (44.2)	(21.8) %
OWN	60.5	17.0	53.6	19.7	6.9	12.9
VCN	56.0	10.1	55.6	10.9	0.4	0.7
Core adjusted EBITDA (1)	274.6	16.2	311.5	19.5	(36.9)	(11.8)
Home	(15.5)	(3.7)	30.4	5.3	(45.9)	(151.0)
Non-GAAP consolidated adjusted EBITDA (2)	$ 259.1	12.3 %	$ 341.9	15.8 %	$ (82.8)	(24.2) %

	Nine Months Ended September 30,					
	2021		2020			
	Amount	% of Net Sales	Amount	% of Net Sales	$ Change	% Change
Net sales by segment:						
Broadband	$ 2,366.4	37.2 %	$ 2,069.8	32.8 %	$ 296.6	14.3 %
OWN	1,036.2	16.3	949.0	15.1	87.2	9.2
VCN	1,587.4	24.9	1,459.7	23.2	127.7	8.7
Core net sales (1)	4,990.0	78.4	4,478.5	71.0	511.5	11.4
Home	1,372.6	21.6	1,825.6	29.0	(453.0)	(24.8)
Consolidated net sales	$ 6,362.6	100.0 %	$ 6,304.1	100.0 %	$ 58.5	0.9 %
Operating income (loss) by segment:						
Broadband	$ 70.0	3.0 %	$ 55.8	2.7 %	$ 14.2	25.4 %
OWN	158.4	15.3	146.5	15.4	11.9	8.1
VCN	(63.6)	(4.0)	(103.8)	(7.1)	40.2	(38.7)
Core operating income (1)	164.8	3.3	98.5	2.2	66.3	67.3
Home	(153.5)	(11.2)	(269.3)	(14.8)	115.8	(43.0) %
Consolidated operating income (loss)	$ 11.5	0.2 %	$ (170.8)	(2.7) %	$ 182.1	NM
Adjusted EBITDA by segment:						
Broadband	$ 488.3	20.6 %	$ 414.9	20.0 %	$ 73.4	17.7 %
OWN	214.4	20.7	218.4	23.0	(4.0)	(1.8)
VCN	135.1	8.5	131.6	9.0	3.5	2.7
Core adjusted EBITDA (1)	837.8	16.8	764.9	17.1	72.9	9.5
Home	18.6	1.4	88.1	4.8	(69.5)	(78.9)
Non-GAAP consolidated adjusted EBITDA (1)	$ 856.4	13.5 %	$ 853.0	13.5 %	$ 3.4	0.4 %

(1) Core financial measures reflect the results of our Broadband, OWN and VCN segments, in the aggregate. Core financial measures exclude the results of our Home segment.
(2) See “Reconciliation of Non-GAAP Measures.”

Note: Components may not sum to total due to rounding.
NM – Not meaningful

Broadband Networks Segment

Net sales for the Broadband segment decreased for the three months ended September 30, 2021 compared to the prior year period primarily due to a slowdown in service provider spending in the U.S. on our network and cloud products, and certain software licensing revenue recorded in the prior year period that did not recur in the current year. These decreases were somewhat offset by higher sales of our network connectivity products. For the nine months ended September 30, 2021, net sales increased compared to the prior year period due to increased demand for our products and services as service providers enhance their networks to keep pace with broadband demand. We are experiencing capacity constraints and supply shortages with certain of our network cable products, which hindered our ability to meet customer demand for our Broadband segment products in the three and nine months ended September 30, 2021. We are investing to alleviate our capacity constraints and expect them to ease in the fourth quarter of 2021. We expect the supply shortages to extend for the remainder of 2021 and into 2022. From a regional perspective, for the three months ended September 30, 2021, net sales decreased in the U.S. by $68.0 million and the APAC region by $18.9 million but increased in the CALA region by $30.9 million, the EMEA region by $18.1 million and Canada by $6.6 million. For the nine months ended September 30, 2021, net sales increased in the U.S. by $161.1 million, the CALA region by $115.7 million and the EMEA region by $33.0 million but decreased in the APAC region by $13.0 million and Canada by $0.2 million. Foreign exchange rate changes impacted Broadband segment net sales favorably by approximately 1% during both the three and nine months ended September 30, 2021 compared to the same prior year periods.

For the three months ended September 30, 2021, Broadband segment operating income and adjusted EBITDA decreased compared to the prior year period primarily due to higher material and freight costs, lower sales volumes and increased expenses to expand capacity to meet demand. For the nine months ended September 30, 2021, Broadband segment operating income and adjusted EBITDA increased compared to the prior year period due to increased sales volumes, partially offset by higher freight and material costs and increased expenses to expand capacity to meet demand. Broadband segment operating income was unfavorably impacted by increased restructuring costs of $52.7 million and an intellectual property settlement charge of $20.0 million for the nine months ended September 30, 2021. Restructuring costs and intellectual property settlements are not reflected in adjusted EBITDA. See "Reconciliation of Segment Adjusted EBITDA" below.

Outdoor Wireless Networks Segment

For the three months ended September 30, 2021, OWN segment net sales increased compared to the prior year period primarily due to an increase in spending on wireless network equipment by certain of our U.S. service provider customers. For the nine months ended September 30, 2021, OWN segment net sales increased compared to the prior year period primarily due to an increase in spending on macro cell solutions in the APAC region and Canada. Although OWN segment net sales increased year over year for both the three and nine months ended September 30, 2021, net sales were negatively affected by supply shortages of certain materials that hindered our ability to meet customer demand. From a regional perspective, for the three months ended September 30, 2021, OWN segment net sales increased in the U.S. by $64.4 million, the APAC region by $12.4 million, Canada by $9.3 million and the EMEA region by $5.9 million but decreased in the CALA region by $8.2 million. For the nine months ended September 30, 2021, OWN segment net sales increased in the APAC region by $49.5 million, Canada by $35.0 million, the EMEA region by $10.3 million and the U.S. by $3.5 million and decreased in the CALA region by $11.1 million. Foreign exchange rate changes impacted OWN segment net sales favorably by approximately 1% during both the three and nine months ended September 30, 2021 compared to the same prior year periods.

For the three months ended September 30, 2021, OWN segment operating income and adjusted EBITDA increased compared to the prior year period primarily due to increased sales volumes, partially offset by pricing pressure on certain products and higher material and freight costs. For the nine months ended September 30, 2021, OWN segment operating income and adjusted EBITDA both benefitted from increased sales volumes and benefits from cost savings initiatives, partially offset by pricing pressures on certain products and higher freight and material costs. In addition, OWN segment operating income for the nine months ended September 30, 2021 also increased as a result of a $9.1 million reduction in amortization expense compared to the prior year period. Amortization expense is excluded from adjusted EBITDA. See "Reconciliation of Segment Adjusted EBITDA" below.

Venue and Campus Networks Segment

For the three months ended September 30, 2021, net sales increased in the VCN segment due to higher sales of enterprise copper and fiber products, partially offset by lower net sales of Ruckus products and distributed antenna systems. For the nine months ended September 30, 2021, net sales increased in the VCN segment with higher net sales of enterprise and Ruckus products, partially offset by lower net sales of distributed antenna systems. Net sales of Ruckus products decreased in the third quarter and were unfavorably impacted for the year-to-date period due to shortages of certain materials that negatively affected our ability to meet customer demand. We expect this supply shortage to continue for the remainder of 2021 and into 2022. From a regional perspective, for the three months ended September 30, 2021, net sales increased in the U.S. by $22.9 million, CALA region by $10.1 million, EMEA region by $6.3 million and APAC region by $4.5 million but decreased in Canada by $0.7 million. For the nine months ended September 30, 2021, net sales increased in the APAC region by $60.6 million, the EMEA region by $34.4 million, the CALA region by $18.6 million, the U.S. by $8.2 million and Canada by $5.9 million. Foreign exchange rate changes impacted VCN segment net sales favorably by approximately 1% and 2% during the three and nine months ended September 30, 2021, respectively, compared to the same prior year periods.

For the three and nine months ended September 30, 2021, VCN segment operating loss decreased and adjusted EBITDA increased compared to the prior year periods primarily due to favorable pricing impacts on certain products, higher sales volumes and favorable geographic and product mix, partially offset by higher material and freight costs. See "Reconciliation of Segment Adjusted EBITDA" below.

Home Networks Segment

Net sales for the Home segment decreased for the three and nine months ended September 30, 2021 primarily due to the continuing decline in demand for video products from both U.S. and international service providers as well as the negative impact of supply shortages and delays on our ability to meet customer demand. From a regional perspective, for the three months ended September 30, 2021, net sales decreased in the U.S. by $135.7 million, CALA region by $26.5 million, EMEA region by $18.8 million and increased in the APAC region by $11.3 million and Canada by $11.3 million. For the nine months ended September 30, 2021, net sales decreased in the U.S. by $417.2 million, EMEA region by $25.8 million and CALA region by $16.9 million and increased in Canada by $4.6 million and the APAC region by $2.3 million. Foreign exchange rate changes impacted Home segment net sales favorably by approximately 1% during both the three and nine months ended September 30, 2021 compared to the same prior year periods.

For the three months ended September 30, 2021, Home segment operating loss increased and adjusted EBITDA decreased compared to the prior year period primarily due to lower sales volumes, higher material costs and higher bad debt expense, offset partially by benefits from cost savings initiatives. For the nine months ended September 30, 2021, excluding the impact of the $206.7 million prior year period goodwill impairment charge, Home segment operating loss increased and adjusted EBITDA decreased primarily due to lower sales volumes, higher material costs and higher bad debt expense, partially offset by benefits from cost savings initiatives. Home segment operating loss was also unfavorably impacted for the three and nine months ended September 30, 2021 by higher transaction, transformation and integration costs of $11.9 million and $27.3 million, respectively, and higher intellectual property litigation charges of $20.1 million and $31.5 million, respectively. During the three and nine months ended September 30, 2020, the Home segment benefited from the release of a $23.6 million accrual related to an intellectual property royalty matter that was settled for less than anticipated. Of the $23.6 million accrual release, $15.1 million related to pre-acquisition sales and was excluded from the calculation of adjusted EBITDA; the remaining $8.5 million release provided a benefit to Home segment adjusted EBITDA in the three and nine months ended September 30, 2020. Home segment transaction, transformation and integration costs were primarily related to the announced planned spin-off of the Home Networks business. Transaction, transformation and integration costs and intellectual property settlements are not reflected in adjusted EBITDA. See “Reconciliation of Segment Adjusted EBITDA” below.

LIQUIDITY AND CAPITAL RESOURCES

The following table summarizes certain key measures of our liquidity and capital resources (in millions, except percentage data).

	September 30, 2021	December 31, 2020	$ Change	% Change
		(dollars in millions)		
Cash and cash equivalents	$ 411.5	$ 521.9	$ (110.4)	(21.2) %
Working capital [1], excluding cash and cash equivalents and current portion of long-term debt	972.3	911.2	61.1	6.7
Availability under revolving credit facility	686.4	735.1	(48.7)	(6.6)
Long-term debt, including current portion	9,513.0	9,520.6	(7.6)	(0.1)
Total capitalization [2]	10,471.4	10,917.4	(446.0)	(4.1)
Long-term debt as a percentage of total capitalization	90.8 %	87.2 %		

(1) Working capital consisted of current assets of $3,438.5 million less current liabilities of $2,086.7 million at September 30, 2021. Working capital consisted of current assets of $3,354.5 million less current liabilities of $1,953.4 million at December 31, 2020.

(2) Total capitalization includes long-term debt, including the current portion, Series A convertible preferred stock (the Convertible Preferred Stock) and stockholders’ equity.

Our principal sources of liquidity on a short-term basis are cash and cash equivalents, cash flows provided by operations, availability under our credit facilities and potential distributions related to the spin-off of the Home Networks business. On a long-term basis, our potential sources of liquidity also include raising capital through the issuance of additional equity and/or debt.

The primary uses of liquidity include debt service requirements, voluntary debt repayments or redemptions, working capital requirements, capital expenditures, transaction separation costs, transformation costs, restructuring costs, acquisition integration costs, dividends related to the Convertible Preferred Stock if we elect to pay such dividends in cash, litigation settlements and income tax payments. We believe that our existing cash, cash equivalents and cash flows from operations, combined with availability under our senior secured revolving credit facility (the Revolving Credit Facility), will be sufficient to meet our presently anticipated future cash needs. We may experience volatility in cash flows between periods due to, among other reasons, variability in the timing of vendor payments and customer receipts. We may, from time to time, borrow additional amounts under the Revolving Credit Facility or issue debt securities, if market conditions are favorable, to meet future cash needs or to reduce our borrowing costs.

Although there are no financial maintenance covenants under the terms of our senior notes, there is a limitation, among other limitations, on certain future borrowings based on an adjusted leverage ratio or a fixed charge coverage ratio. These ratios are based on financial measures similar to non-GAAP adjusted EBITDA as presented in the “Reconciliation of Non-GAAP Measures” section below, but also give pro forma effect to certain events, including acquisitions, synergies and savings from cost reduction initiatives such as facility closures and headcount reductions. For the twelve months ended September 30, 2021, our pro forma adjusted EBITDA, as measured pursuant to the indentures governing our notes, was $1,303.8 million, which included annualized synergies expected to be mostly realized within the next year ($6.1 million) and annualized savings expected from cost reduction initiatives ($79.1 million) so that the impact of the synergies and cost reduction initiatives is fully reflected in the twelve-month period used in the calculation of the ratios. In addition to limitations under these indentures, our senior secured credit facilities contain customary negative covenants based on similar financial measures. We believe we are in compliance with the covenants under our indentures and senior secured credit facilities at September 30, 2021.

Cash and cash equivalents decreased during the nine months ended September 30, 2021 primarily driven by cash paid for capital expenditures of $96.2 million, cash dividends paid for the Convertible Preferred Stock of $43.0 million, a debt extinguishment payment of $34.4 million, tax withholding payments for vested equity-based compensation awards of $24.7 million, a payment to settle a net investment hedge of $18.0 million and debt issuance costs paid of $9.6 million, partially offset by cash generated from operating activities of $134.7 million. We expect cash generation to be lower in 2021 than the prior year as we continue to expand capacity for our Broadband segment and invest in CommScope NEXT initiatives. As of September 30, 2021, approximately 62% of our cash and cash equivalents were held outside the U.S.

Working capital, excluding cash and cash equivalents and the current portion of long-term debt, increased during the nine months ended September 30, 2021 primarily due to higher inventory balances as a result of rising material costs and increases in stock as we build inventory waiting for certain materials or components to complete our products for sale. Partially offsetting the increase in inventory is an increase in accounts payable due to the timing of payments. In September 2021, we sold approximately $31 million of accounts receivable under customer-sponsored supplier financing agreements. Of that amount, approximately $25 million impacted working capital as of September 30, 2021. Under these agreements, we are able to sell accounts receivable to a bank, and we retain no interest in and have no servicing responsibilities for the accounts receivable sold.

The net reduction in total capitalization during the nine months ended September 30, 2021 reflected the net loss for the period and foreign currency translation losses.

Cash Flow Overview

	Nine Months Ended September 30, 2021	Nine Months Ended September 30, 2020	$ Change	% Change
	(dollars in millions)			
Net cash generated by operating activities	$ 134.7	$ 338.5	$ (203.8)	(60.2)%
Net cash used in investing activities	(111.6)	(76.8)	(34.8)	45.3
Net cash used in financing activities	(127.7)	(259.8)	132.1	(50.8)

Operating Activities

	Nine Months Ended September 30,	
	2021	2020
	(in millions)	
Net loss	$ (375.6)	$ (597.3)
Adjustments to reconcile net loss to net cash generated by operating activities:		
Depreciation and amortization	595.8	618.8
Equity-based compensation	61.0	90.0
Deferred income taxes	(158.1)	(96.6)
Asset impairments	—	206.7
Changes in assets and liabilities:		
Accounts receivable	(36.2)	200.9
Inventories	(173.5)	(130.3)
Prepaid expenses and other assets	11.0	32.2
Accounts payable and other liabilities	170.5	(25.0)
Other	39.8	39.1
Net cash generated by operating activities	$ 134.7	$ 338.5

During the nine months ended September 30, 2021, operating cash flows decreased compared to the prior year period primarily as a result of increases in working capital in the current year as net sales improved. We participated in a customer-sponsored supplier financing arrangement that favorably impacted operating cash flows by approximately $25 million during the nine months ended September 30, 2021.

Investing Activities

	Nine Months Ended September 30,	
	2021	2020
	(in millions)	
Additions to property, plant and equipment	$ (96.2)	$ (73.5)
Proceeds from sale of property, plant and equipment	2.6	0.2
Payments upon settlement of net investment hedge	(18.0)	—
Cash paid for Cable Exchange acquisition	—	(3.5)
Net cash used in investing activities	$ (111.6)	$ (76.8)

During the nine months ended September 30, 2021, the increase in cash used in investing activities was driven by a payment made to settle a net investment hedge and an increase of $22.7 million in our investment in property, plant and equipment that primarily related to supporting improvements in manufacturing operations, including expanding production capacity and investing in information technology, including software developed for internal use.

Financing Activities

	Nine Months Ended September 30, 2021	2020
	(in millions)	
Long-term debt repaid	$ (1,274.0)	$ (1,174.0)
Long-term debt proceeds	1,250.0	950.0
Debt issuance costs	(9.6)	(11.6)
Debt extinguishment costs	(34.4)	(14.9)
Dividends paid on Series A convertible preferred stock	(43.0)	—
Proceeds from the issuance of common shares under equity-based compensation plans	5.5	1.0
Tax withholding payments for vested equity-based compensation awards	(24.7)	(10.3)
Other	2.5	—
Net cash used in financing activities	$ (127.7)	$ (259.8)

In August 2021, we issued $1,250.0 million of 4.75% senior secured notes due 2029 (the 2029 Secured Notes) and used the net proceeds from the offering, together with cash on hand, to redeem and retire $1,250.0 million outstanding under the 2024 Secured Notes. In connection with the issuance of the 2029 Secured Notes, we paid $9.6 million of debt issuance costs. We paid a redemption premium of $34.4 million to retire the 2024 Secured Notes. We also paid three quarterly scheduled amortization payments totaling $24.0 million on the senior secured term loan due in 2026 (the 2026 Term Loan). We may continue to look for favorable opportunities to refinance portions of our existing debt to lower borrowing costs, extent the term or adjust the total amount of fixed-rate or floating-rate debt.

In July 2020, we issued $700.0 million of 7.125% senior notes due 2028 (the 2028 Notes) and used the net proceeds from the offering to redeem and retire the $700.0 million outstanding under the 5.00% senior notes due 2021 (the 2021 Notes) and the 2024 Notes. We incurred $11.6 million of debt issuance costs in connection with the issuance of the 2028 Notes. Also during the nine months ended September 30, 2020, we borrowed and repaid $250.0 million under our senior secured asset-based revolving credit facility (the Revolving Credit Facility). In addition, we redeemed $100.0 million aggregate principal amount of the 2021 Notes, redeemed $100.0 million aggregate principal amount of the 2025 Notes and paid three quarterly scheduled amortization payments totaling $24.0 million on the 2026 Term Loan. We paid redemption premiums of $11.9 million to retire the 2024 Notes and $3.0 million to partially redeem the 2025 Notes.

As of September 30, 2021, we had no outstanding borrowings under the Revolving Credit Facility and the remaining availability was $686.4 million, reflecting a borrowing base of $731.6 million reduced by $45.2 million of letters of credit issued under the Revolving Credit Facility.

Also impacting cash used in financing activities for the nine months ended September 30, 2021 was the increase of $43.0 million in cash dividends paid for the Convertible Preferred Stock. In the prior year period, the dividends for the Convertible Preferred Stock were paid in additional shares of Convertible Preferred Stock. During the nine months ended September 30, 2021, we received proceeds of $5.5 million related to the exercise of stock options compared to $1.0 million in the prior year period. During the nine months ended September 30, 2021, employees surrendered shares of our common stock to satisfy their tax withholding requirements on vested restricted stock units and performance share units, which reduced cash flows by $24.7 million compared to $10.3 million in the prior year period.

Off-Balance Sheet Arrangements

We were not party to any significant off-balance sheet arrangements during the nine months ended September 30, 2021.

Reconciliation of Non-GAAP Measures

We believe that presenting certain non-GAAP financial measures enhances an investor's understanding of our financial performance. We further believe that these financial measures are useful in assessing our operating performance from period to period by excluding certain items that we believe are not representative of our core business. We also use certain of these financial measures for business planning purposes and in measuring our performance relative to that of our competitors.

We believe these financial measures are commonly used by investors to evaluate our performance and that of our competitors. However, our use of the term non-GAAP adjusted EBITDA may vary from that of others in our industry. These financial measures should not be considered as alternatives to operating income (loss), net income (loss) or any other performance measures derived in accordance with U.S. GAAP as measures of operating performance, operating cash flows or liquidity.

We also believe presenting these non-GAAP results for the twelve months ended September 30, 2021 provides an additional tool for assessing our recent performance. Such amounts are unaudited and are derived by subtracting the data for the nine months ended September 30, 2020 from the data for the year ended December 31, 2020 and then adding the data for the nine months ended September 30, 2021.

Although there are no financial maintenance covenants under the terms of our senior notes, there is a limitation, among other limitations, on certain future borrowings based on an adjusted leverage ratio or a fixed charge coverage ratio. These ratios are based on financial measures similar to non-GAAP adjusted EBITDA as presented in this section, but also give pro forma effect to certain events, including acquisitions and savings from cost reduction initiatives such as facility closures and headcount reductions.

Consolidated

	Three Months Ended September 30,		Nine Months Ended September 30,		Year Ended December 31,	Twelve Months Ended September 30,
	2021	2020	2021	2020	2020	2021
			(in millions)			
Net loss	$ (124.2)	$ (116.3)	$ (375.6)	$ (597.3)	$ (573.4)	$ (351.7)
Income tax expense (benefit)	(35.2)	9.3	(65.3)	(37.2)	(81.1)	(109.2)
Interest income	(0.5)	(1.3)	(1.5)	(4.2)	(4.4)	(1.7)
Interest expense	148.6	147.2	424.1	437.7	577.8	564.2
Other expense, net	32.3	16.9	29.8	30.2	29.3	28.9
Operating income (loss)	$ 21.0	$ 55.8	$ 11.5	$ (170.8)	$ (51.8)	$ 130.5
Adjustments:						
Amortization of purchased intangible assets	153.0	158.1	461.9	473.5	630.5	618.9
Restructuring costs (credits), net	(3.1)	40.3	100.2	83.6	88.4	105.0
Equity-based compensation	21.0	34.0	61.0	90.0	115.0	86.0
Asset impairments	—	—	—	206.7	206.7	—
Transaction, transformation and integration costs [1]	26.2	4.8	62.7	17.8	24.9	69.8
Acquisition accounting adjustments [2]	2.8	5.1	9.0	15.8	20.6	13.8
Patent claims and litigation settlements	5.0	(1.4)	46.5	11.4	16.3	51.4
Executive severance	—	6.3	—	6.3	6.3	—
Depreciation	33.2	38.9	103.6	118.7	158.3	143.2
Non-GAAP adjusted EBITDA	$ 259.1	$ 341.9	$ 856.4	$ 853.0	$ 1,215.2	$ 1,218.6

(1) In 2021, primarily reflects transaction separation costs related to the planned spin-off of the Home Networks business, transformation costs related to CommScope NEXT and integration costs related to the ARRIS acquisition. In 2020, primarily reflects integration costs related to the ARRIS acquisition.

(2) In 2021 and 2020, reflects acquisition accounting adjustments related to reducing deferred revenue to its estimated fair value.

Note: Components may not sum to total due to rounding.

Reconciliation of Segment Adjusted EBITDA

Segment adjusted EBITDA is provided as a performance measure in Note 7 in the Notes to Unaudited Condensed Consolidated Financial Statements included in this Quarterly Report on Form 10-Q. Below we reconcile segment adjusted EBITDA for each segment individually to operating income (loss) for that segment to supplement the reconciliation of the total segment adjusted EBITDA to consolidated operating loss in that footnote.

Broadband Networks Segment

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
	(in millions)			
Operating income	$ 50.8	$ 75.0	$ 70.0	$ 55.8
Adjustments:				
Amortization of purchased intangible assets	80.5	81.2	241.9	243.4
Restructuring costs (credits), net	(3.6)	11.7	69.6	16.9
Equity-based compensation	8.6	13.1	25.0	34.7
Transaction, transformation and integration costs	6.4	1.7	15.4	6.1
Acquisition accounting adjustments	1.2	2.8	3.6	8.6
Patent claims and litigation settlements	—	—	20.0	3.0
Executive severance	—	2.2	—	2.2
Depreciation	14.1	14.6	42.8	44.2
Adjusted EBITDA	$ 158.1	$ 202.3	$ 488.3	$ 414.9

Outdoor Wireless Networks Segment

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
	(in millions)			
Operating income	$ 43.2	$ 26.0	$ 158.4	$ 146.5
Adjustments:				
Amortization of purchased intangible assets	8.2	11.4	25.3	34.4
Restructuring costs, net	0.4	5.9	6.6	9.8
Equity-based compensation	2.2	4.0	6.3	10.6
Transaction, transformation and integration costs	2.7	0.9	6.4	3.2
Executive severance	—	1.2	—	1.2
Depreciation	3.8	4.1	11.4	12.7
Adjusted EBITDA	$ 60.5	$ 53.6	$ 214.4	$ 218.4

Venue and Campus Networks Segment

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
	(in millions)			
Operating loss	$ (4.6)	$ (43.2)	$ (63.6)	$ (103.8)
Adjustments:				
Amortization of purchased intangible assets	38.3	39.6	116.9	117.9
Restructuring costs (credits), net	(0.1)	18.9	16.0	29.0
Equity-based compensation	6.7	10.3	19.5	27.4
Transaction, transformation and integration costs	4.3	1.3	10.4	5.3
Acquisition accounting adjustments	1.0	1.7	3.9	5.7
Patent claims and litigation settlements	—	13.7	0.3	13.7
Executive severance	—	1.7	—	1.7
Depreciation	10.3	11.7	31.8	34.9
Adjusted EBITDA	$ 56.0	$ 55.6	$ 135.1	$ 131.6

Home Networks Segment

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
	(in millions)			
Operating loss	$ (68.4)	$ (2.0)	$ (153.5)	$ (269.3)
Adjustments:				
Amortization of purchased intangible assets	26.0	26.0	77.9	77.9
Restructuring costs, net	0.2	3.8	8.0	27.9
Equity-based compensation	3.5	6.5	10.2	17.3
Asset impairments	—	—	—	206.7
Transaction, transformation and integration costs	12.8	0.9	30.5	3.2
Acquisition accounting adjustments	0.5	0.5	1.4	1.4
Patent claims and litigation settlements	5.0	(15.1)	26.2	(5.3)
Executive severance	—	1.2	—	1.2
Depreciation	5.0	8.5	17.6	26.9
Adjusted EBITDA	$ (15.5)	$ 30.4	$ 18.6	$ 88.1

Note: Components may not sum to total due to rounding.

FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q or any other oral or written statements made by us or on our behalf may include forward-looking statements that reflect our current views with respect to future events and financial performance. These statements may discuss goals, intentions or expectations as to future plans, trends, events, results of operations or financial condition or otherwise, in each case, based on current beliefs and expectations of management, as well as assumptions made by, and information currently available to, management. These forward-looking statements are generally identified by their use of such terms and phrases as “intend,” “goal,” “estimate,” “expect,” “project,” “projections,” “plans,” “potential,” “anticipate,” “should,” “could,” “designed to,” “foreseeable future,” “believe,” “think,” “scheduled,” “outlook,” “target,” “guidance” and similar expressions, although not all forward-looking statements contain such terms. This list of indicative terms and phrases is not intended to be all-inclusive.

These forward-looking statements are subject to various risks and uncertainties, many of which are outside our control, including, without limitation, risks related to the planned spin-off of the Home Networks business, including uncertainty regarding whether such transaction will be commenced or completed and the timing and value of such transaction; risks related to the potential separation of the Home Networks business; our ability to integrate and fully realize anticipated benefits from prior or future divestitures, acquisitions or equity investments; selling or discontinuing one or more of our product lines; potential difficulties in realigning global manufacturing capacity and capabilities among our global manufacturing facilities or those of our contract manufacturers that may affect our ability to meet customer demands for products; possible future restructuring actions; our dependence on customers’ capital spending on data and communication systems; concentration of sales among a limited number of customers and channel partners; changes in technology; industry competition and the ability to retain customers through product innovation, introduction, and marketing; risks associated with our sales through channel partners; changes to the regulatory environment in which we and our customers operate; product quality or performance issues and associated warranty claims; our ability to maintain effective management information technology systems and to successfully implement major systems initiatives; cyber-security incidents, including data security breaches, ransomware or computer viruses; the risk our global manufacturing operations suffer production or shipping delays, causing difficulty in meeting customer demands; the risk that internal production capacity or that of contract manufacturers may be insufficient to meet customer demand or quality standards; the use of open standards; the long-term impact of climate change; changes in cost and availability of key raw materials, components and commodities and the potential effect on customer pricing; risks associated with our dependence on a limited number of key suppliers for certain raw materials and components; the risk that contract manufacturers we rely on encounter production, quality, financial or other difficulties; substantial indebtedness and restrictive debt covenants; our ability to incur additional indebtedness; our ability to generate cash to service our indebtedness; possible future impairment charges for fixed or intangible assets, including goodwill; income tax rate variability and ability to recover amounts recorded as deferred tax assets; our ability to attract and retain qualified key employees; labor unrest; obligations under our defined benefit employee benefit plans requiring plan contributions in excess of current estimates; significant international operations exposing us to economic, political and other risks, including the impact of variability in foreign exchange rates; our ability to comply with governmental anti-corruption laws and regulations and export and import controls worldwide; our ability to compete in international markets due to export and import controls to which we may be subject; changes in the laws and policies in the United States affecting trade, including the risk and uncertainty related to tariffs or a potential global trade war and potential changes to laws and policies as a result of a new administration in the United States, that may impact our products; cost of protecting or defending intellectual property; costs and challenges of compliance with domestic and foreign environmental laws; the impact of litigation and similar regulatory proceedings that we are involved in or may become involved in, including the costs of such litigation; the scope, duration and impact of disease outbreaks and pandemics, such as COVID-19, on our business including employees, sites, operations, customers, supply chain and the global economy; risks associated with stockholder activism, which could cause us to incur significant expense, hinder execution of our business strategy and impact the trading value of our securities; and other factors beyond our control. These and other factors are discussed in greater detail in our 2020 Annual Report on Form 10-K and in Part II, Item 1A, “Risk Factors” of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 and may be updated from time to time in our annual reports, quarterly reports, current reports and other filings we make with the Securities and Exchange Commission. Although the information contained in this Quarterly Report on Form 10-Q represents our best judgment as of the date of this report based on information currently available and reasonable assumptions, we can give no assurance that the expectations will be attained or that any deviation will not be material. Given these uncertainties, we caution you not to place undue reliance on these forward-looking statements, which speak only as of the date made. We are not undertaking any duty or obligation to update this information to reflect developments or information obtained after the date of this report, except as otherwise may be required by law.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There have been no material changes in the interest rate risk, commodity price risk or foreign currency exchange rate risk information previously reported under Item 7A of our 2020 Annual Report, as filed with the SEC on February 17, 2021.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that these disclosure controls and procedures are effective.

Changes in Internal Control Over Financial Reporting

Reference should be made to our 2020 Annual Report for additional information regarding discussion of the effectiveness of the Company's controls and procedures. There have been no other changes in our internal control over financial reporting during the quarter ended September 30, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

The Company is party to certain intellectual property claims and also periodically receives notices asserting that its products infringe on another party's patents and other intellectual property rights. These claims and assertions, whether against the Company directly or against its customers, could require the Company to pay damages, royalties, stop offering the relevant products and/or cease other activities. The Company may also be called upon to indemnify certain customers for costs related to products sold to such customers. The outcome of these claims and notices is uncertain and a reasonable estimate of the loss from unfavorable outcomes in certain of these matters either cannot be determined or is estimated at the minimum amount of a range of estimates. The actual loss could be material and may vary significantly from our estimates.

The Company is also either a plaintiff or a defendant in certain other pending legal matters in the normal course of business. Management believes none of these pending legal matters will have a material adverse effect on the Company's business or financial condition upon final disposition.

In addition, the Company is subject to various federal, state, local and foreign laws and regulations governing the use, discharge, disposal and remediation of hazardous materials. Compliance with current laws and regulations has not had, and is not expected to have, a materially adverse effect on the Company's financial condition or results of operations.

ITEM 1A. RISK FACTORS

The Company's business, financial condition, results of operations and cash flows are subject to various risks which could cause actual results to vary from recent results or from anticipated future results. Other than the supplemental risk factor previously reported in Item 1A of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2021, which is incorporated herein by reference, there have been no material changes to our risk factors disclosed in Part I - Item 1A, Risk Factors, of our Form 10-K for the year ended December 31, 2020.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Recent Sales of Unregistered Securities:

None.

Issuer Purchases of Equity Securities:

The following table summarizes the stock purchase activity for the three months ended September 30, 2021:

Period	Total Number of Shares Purchased [(1)]	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Value of Shares that May Yet be Purchased Under the Plans or Programs
July 1, 2021 - July 31, 2021	593	21.58	—	$ —
August 1, 2021 - August 31, 2021	1,385	20.05	—	—
September 1, 2021 - September 30, 2021	2,381	14.94	—	—
Total	4,359	$ 17.47	—	

(1) The shares purchased were withheld to satisfy the withholding tax obligations related to restricted stock units and performance share units that vested during the period.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

3.1**	Fifth Amended and Restated By-Laws of CommScope Holding Company, Inc. (as adopted May 7, 2021).
4.1*	Indenture, dated as of August 23, 2021, by and among CommScope, Inc., the guarantors party thereto and Wilmington Trust, National Association, as trustee and collateral agent, including the form of 4.750% Senior Secured Note due 2029 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on August 23, 2021).
10.1*	Separation Agreement, dated August 10, 2021, by and between Morgan C.S. Kurk and CommScope, Inc. (incorporated by reference to Exhibit 10.1of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on August 10, 2021).
31.1 **	Certification of Principal Executive Officer pursuant to Rule 13a-14(a).
31.2 **	Certification of Principal Financial Officer pursuant to Rule 13a-14(a).
32.1 **	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished pursuant to Item 601(b)(32)(ii) of Regulation S-K).
101.INS	Inline XBRL Instance Document – The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
101.SCH	Inline XBRL Schema Document, furnished herewith.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

* Previously filed.

** Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

	COMMSCOPE HOLDING COMPANY, INC.
November 3, 2021	/s/ Kyle D. Lorentzen
Date	Kyle D. Lorentzen
	Executive Vice President and Chief Financial Officer
	(Principal Financial Officer and duly authorized officer)

Exhibit 3.1

CommScope Holding Company, Inc.

Fifth Amended and Restated Bylaws

As Adopted on May 7, 2021

TABLE OF CONTENTS

COMMSCOPE HOLDING COMPANY, INC.
FIFTH AMENDED AND RESTATED BYLAWS

As Adopted on May 7, 2021

ARTICLE I

MEETINGS OF STOCKHOLDERS

Section 1.01 Annual Meetings. The annual meeting of the stockholders of CommScope Holding Company, Inc. (the "Corporation") for the election of directors (each, a "Director") and for the transaction of such other business as properly may come before such meeting shall be held each year either within or outside the State of Delaware at such place, if any, and on such date and at such time, as may be fixed from time to time by resolution of the Corporation's Board of Directors (the "Board") adopted by a majority of the total number of authorized Directors (whether or not there exists any vacancies in previously authorized directorships at the time such resolution is presented to the Board for adoption) and set forth in the notice or waiver of notice of the meeting, unless, subject to the certificate of incorporation of the Corporation (the "Certificate of Incorporation") and Section 1.11 of these bylaws, the stockholders have acted by written consent to elect Directors as permitted by the General Corporation Law of the State of Delaware, as amended from time to time (the "DGCL"). The Board may postpone, reschedule or cancel any annual meeting of stockholders previously scheduled by the Board.

Section 1.02 Special Meetings. A special meeting of the stockholders of the Corporation for any purpose or purposes may be called at any time only by or at the direction of the Board pursuant to a resolution of the Board adopted by a majority of the total number of authorized Directors (whether or not there exists any vacancies in previously authorized directorships at the time such resolution is presented to the Board for adoption). The stockholders of the Corporation shall not have the power to call a special meeting of the stockholders. Except as otherwise required by law, the business to come before, and be conducted at, a special meeting of stockholders shall be limited exclusively to the business set forth in the notice (and any supplement thereof) and the individual or group calling such meeting shall have exclusive authority to determine the business included in such notice. The Board may postpone, reschedule or cancel any special meeting of the stockholders previously scheduled by the Board. Any special meeting of the stockholders shall be held at such place, if any, within or outside the State of Delaware, and on such date and at such time, as shall be specified in the notice of such special meeting.

Section 1.03 Participation in Meetings by Remote Communication. The Board, acting in its sole discretion, may establish guidelines and procedures in accordance with applicable provisions of the DGCL and any other applicable law for the participation by stockholders and proxyholders in a meeting of stockholders by means of remote communications, and may determine that any meeting of stockholders will not be held at any place but will be held solely by means of remote communication. Stockholders and proxyholders complying with such procedures and guidelines and otherwise entitled to vote at a meeting of stockholders shall be deemed present in person and entitled to vote at a meeting of stockholders, whether such meeting is to be held at a designated place or solely by means of remote communication.

Section 1.04 Notice of Meetings; Waiver of Notice.

(a) In order that the Corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board, and which record date shall, unless otherwise required by law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If the Board so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination. The Secretary or any Assistant Secretary shall cause notice of each meeting of stockholders to be given in a manner permitted by the DGCL not less than ten (10) days nor more than sixty (60) days prior to the meeting to each stockholder of record entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting, subject to such exclusions as are then permitted by the DGCL. The notice shall specify (i) the record date for determining the stockholders entitled to vote at the meeting (if such date is different from the record date for stockholders entitled to notice of the meeting), (ii) the place, if any, date and time of such meeting, (iii) the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting, (iv) in the case of a special meeting, the purpose or purposes for which such meeting is called and (v) such other information as may be required by law or as may be deemed appropriate by the Board, the Chairman of the Board, the President or the Secretary. If the stockholder list referred to in Section 1.06 of these bylaws is made accessible on an electronic network, the notice of meeting must indicate how the stockholder list can be accessed. If the meeting of stockholders is to be held solely by means of electronic communications, the notice of meeting must provide the information required to access such stockholder list during the meeting.

(b) A written waiver of notice of meeting signed by a stockholder or a waiver by electronic transmission by a stockholder, whether given before or after the meeting time stated in such notice, is deemed equivalent to notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in a waiver of notice. Attendance of a stockholder at a meeting, whether in person or by proxy, is a waiver of notice of such meeting, except when the stockholder attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business at the meeting on the ground that the meeting is not lawfully called or convened.

Section 1.05 Proxies.

(a) Each stockholder entitled to vote at a meeting of stockholders or to express consent to or dissent from corporate action in writing without a meeting may authorize another person or persons to act for such stockholder by proxy.

(b) A stockholder may authorize a valid proxy by executing a written instrument signed by such stockholder, or by causing his or her signature to be affixed to such writing by any reasonable means, including but not limited to by facsimile signature, or by transmitting or authorizing an electronic transmission (as defined in Section 8.08 of these bylaws) setting forth an authorization to act as proxy to the person designated as the holder of the proxy, a proxy solicitation firm or a like authorized agent. Proxies by electronic transmission must either set forth, or be submitted with, information from which it can be determined that the electronic transmission was authorized by the stockholder. Any copy, facsimile telecommunication or other reliable reproduction of a writing or transmission created pursuant to this section may be substituted or used in lieu of the original writing or transmission for any and all purposes for which the original writing or transmission could be used if such copy, facsimile telecommunication or other reproduction is a complete reproduction of the entire original writing or transmission.

(c) No proxy may be voted or acted upon after the expiration of three years from the date of such proxy, unless such proxy provides for a longer period. Every proxy is revocable at the pleasure of the stockholder executing it unless the proxy states that it is irrevocable and applicable law makes it irrevocable. A stockholder may revoke any proxy that is not irrevocable by attending the meeting and voting in person or by filing an instrument in writing revoking the proxy or by filing another duly executed proxy bearing a later date with the Secretary.

Section 1.06 Voting Lists. The officer of the Corporation who has charge of the stock ledger of the Corporation shall prepare, at least ten (10) days before every meeting of the stockholders (and before any adjournment thereof for which a new record date has been set), a complete list of the stockholders of record entitled to vote at the meeting (provided, however, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the date of the meeting, the list shall reflect the stockholders entitled to vote as of the tenth (10th) day before the meeting date), arranged in alphabetical order and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Nothing contained in this Section 1.06 shall require the Corporation to include electronic mail addresses or other electronic contact information on such list. This list, which may be in any format including electronic format, shall be open to the examination of any stockholder prior to and during the meeting for any purpose germane to the meeting in the manner required by the DGCL and other applicable law. The stock ledger shall be the only evidence as to who are the stockholders entitled by this section to examine the list required by this section or to vote in person or by proxy at any meeting of stockholders.

Section 1.07 Quorum. Except as otherwise provided in the Certificate of Incorporation or by law, the presence in person or by proxy of the holders of record of a majority in voting power of the shares entitled to vote at a meeting of stockholders shall constitute a quorum for the transaction of business at such meeting, provided, however, that where a separate vote by a class or series is required, the holders of a majority in voting power of all issued and outstanding stock of such class or series entitled to vote on such matter, present in person or represented by proxy, shall constitute a quorum entitled to take action with respect to such matter. When a quorum is once present it is not broken by the subsequent withdrawal of any stockholder. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. In the absence of a quorum, the stockholders so present may, by a majority in voting power thereof, adjourn the meeting from time to time in the manner provided in Section 1.09 of these bylaws until a quorum shall attend.

Section 1.08 Voting. Except as otherwise provided in the Certificate of Incorporation or by law, every holder of record of shares entitled to vote at a meeting of stockholders is entitled to one vote for each share outstanding in his or her name on the books of the Corporation (x) at the close of business on the record date for such vote or (y) if no record date has been fixed, at the close of business on the day next preceding the day on which notice of the meeting is given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. Except as otherwise required by law, the Certificate of Incorporation, these bylaws, the rules and regulations of any stock exchange applicable to the Corporation or pursuant to any other rule or regulation applicable to the Corporation, its securities or its stockholders, the vote of a majority of the voting power of the shares entitled to vote at a meeting of stockholders on the subject matter in question represented in person or by proxy at any meeting at which a quorum is present shall be sufficient for the transaction of any business at such meeting. The stockholders do not have the right to cumulate their votes for the election of Directors.

Section 1.09 Adjournment. Any meeting of stockholders may be adjourned from time to time, whether or not a quorum is present, by the chairperson of the meeting or by the vote of a majority in voting power of the shares of stock present in person or represented by proxy at the meeting, to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the place, if any, and date and time thereof (and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting) are announced at the meeting at which the adjournment is taken unless the adjournment is for more than thirty (30) days or a new record date is fixed for the adjourned meeting after the adjournment, in which case notice of the adjourned meeting in accordance with Section 1.04 of these bylaws shall be given to each stockholder of record entitled to vote at the meeting. At the adjourned meeting, the Corporation may transact any business that might have been transacted at the original meeting. If after the adjournment a new record date for determination of stockholders entitled to vote is fixed for the adjourned meeting, the Board shall fix as the record date for determining stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote at the adjourned meeting, and shall give notice of the adjourned meeting to each stockholder of record as of the record date so fixed for notice of such adjourned meeting.

Section 1.10 Organization; Procedure; Inspection of Elections.

(a) At every meeting of stockholders the presiding officer shall be the Chairman of the Board, or in the event of his or her absence or disability, the President, or in the event of both the Chairman’s and the President’s absence or disability, a presiding officer chosen by resolution of the Board. The Secretary, or in the event of his or her absence or disability, the Assistant Secretary, if any, or if there be no Assistant Secretary, in the absence of the Secretary, an appointee of the presiding officer, shall act as secretary of the meeting.

(b) To the maximum extent permitted by applicable law, the Board shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to any such rules and regulations, the presiding officer of any meeting shall have the right and authority to convene and (for any or no reason) to recess and/or adjourn the meeting and to prescribe rules, regulations and procedures for such meeting and to take all such actions as in the judgment of the presiding officer are necessary, appropriate or convenient for the proper conduct of such meetings. Such rules, regulations or procedures, whether adopted by the Board or prescribed by the presiding officer of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order, decorum, safety and security at the meeting; (iii) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the presiding person of the meeting shall determine; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; (v) limitations on the time allotted to questions or comments by participants; (vi) determining when the polls should be opened and closed for voting; (vii) removing any stockholder who refuses to comply with meeting procedures, rules or guidelines as established by the chairman of the meeting; and (viii) complying with any state and local laws and regulations concerning safety and security. The presiding officer at any meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting, shall, if the facts warrant, determine and declare to the meeting that a matter or business was not properly brought before the meeting and if such presiding person should so determine, such presiding person shall so declare to the meeting and any such matter of business not properly brought before the meeting shall not be transacted or considered. Unless and to the extent determined by the Board or the person presiding over the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

(c) Preceding any meeting of the stockholders, the Board may, and when required by law shall, appoint one or more persons to act as inspectors of elections who may be employees of the Corporation, and may designate one or more alternate inspectors. If no inspector or alternate so appointed by the Board is able to act, or if no inspector or alternate has been appointed and the appointment of an inspector is required by law, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting. No Director or nominee for the office of Director shall be appointed as an inspector of elections. Each inspector, before entering upon the discharge of the duties of an inspector, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of his or her ability. The inspectors shall discharge their duties in accordance with the requirements of applicable law.

Section 1.11 Stockholder Action by Written Consent.

Except as otherwise provided in the Certificate of Incorporation, any action required or permitted to be taken at any annual or special meeting of stockholders of the Corporation may be taken only upon the vote of the stockholders at an annual or special meeting duly called and may not be taken by written consent of the stockholders.

Section 1.12 Notice of Stockholder Proposals and Nominations.

(a) *Annual Meetings.*

(i) Nominations of persons for election to the Board and proposals of business to be considered by the stockholders at an annual meeting of stockholders may be made only (x) as specified in the Corporation's notice of meeting (or any supplement thereto), (y) by or at the direction of the Board, or a committee appointed by the Board for such purpose, or (z) by any stockholder of the Corporation who or which (1) is entitled to vote at the meeting, (2) complies in a timely manner with all notice procedures and other requirements set forth in this Section 1.12, and (3) is a stockholder of record when the required notice is delivered and at the date of the meeting. The immediately preceding sentence shall be the exclusive means for a stockholder to make nominations at, or bring business (other than matters properly brought under Rule 14a-8 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and included in the Corporation's notice of meeting) before, an annual meeting of stockholders.

(ii) Notice in writing of a stockholder nomination or stockholder proposal must be delivered to the attention of the Secretary at the principal place of business of the Corporation by the close of business not fewer than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting; provided that if the date of the annual meeting is advanced by more than 30 days or delayed by more than 70 days from such anniversary date of the preceding year's annual meeting, notice by the stockholder to be timely must be so delivered not earlier than 120 days prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the 10th day following the day on which public announcement of the date of such meeting is first made. If the number of Directors to be elected to the Board at an annual meeting is increased, and if the Corporation does not make a public announcement naming all of the nominees for Director or specifying the size of the increased Board at least 100 days prior to the first anniversary of the preceding year's annual meeting, then any stockholder nomination in respect of the new position(s) created by such increase in the number of positions shall be considered timely if delivered not later than the close of business on the 10th day following the day on which a public announcement naming all nominees or specifying the size of the increased Board is first made by the Corporation.

(iii) Notice of a stockholder nomination or proposal shall include (A) as to each person whom the stockholder proposes to nominate for election or reelection as a Director: (1) a description of all direct and indirect compensation or other material monetary agreements, arrangements and understandings during the past three years, and any other material relationships, between or among each such person and his or her respective affiliates and associates, on the one hand, and the stockholder of record and beneficial owner or owners, if any, or other person on whose behalf the nomination is made and their respective affiliates and associates, on the other hand, including without limitation all information that would be required to be disclosed pursuant to Rule 404 promulgated under Regulation S-K if the stockholder of record making the nomination and any beneficial owner or owners, if any, or other person on whose behalf the nomination is made, or any affiliate or associate thereof, were the "registrant" for purposes of such rule and the nominee were a director or executive officer of such registrant and (2) all other information relating to such person required to be disclosed in a proxy statement or other filings required to be made with the Securities and Exchange Commission in connection with the solicitations of proxies for the election of Directors in a contested election pursuant to and in accordance with Section 14(a) of the Exchange Act, and the rules and regulations promulgated thereunder (whether or not the proponent or such person intends to or does deliver a proxy statement or conduct its own proxy solicitation), including such person's written consent to being named in the proxy statement as a nominee and to serving as a Director if elected, and (B) as to any other business that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the text of the proposal (including the text of any resolutions proposed for consideration and if such business includes proposed amendments to the Certificate of Incorporation and/or bylaws of the Corporation, the text of the proposed amendments), the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made.

(iv) Notice of a stockholder nomination or proposal shall also set forth, as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made:

(1) the name and address of such stockholder, as they appear on the Corporation's books and records, and of any such beneficial owner;

(2) the class or series and number of shares of capital stock of the Corporation which are owned beneficially (within the meaning of Rule 13d-3 under the Exchange Act) and of record by such stockholder and any such beneficial owner, provided that such stockholder shall be deemed to beneficially own any shares of any class or series of the Corporation as to which such stockholder has a right to acquire beneficial ownership at any time in the future;

(3) a description of any agreement, arrangement or understanding between or among such stockholder and any such beneficial owner, any of their respective affiliates or associates, and any other person or persons (including their names) in connection with the proposal of such nomination or other business;

(4) a description of any agreement, arrangement or understanding (including, regardless of the form of settlement, any derivative, long or short positions, profit interests, forwards, futures, swaps, options, warrants, convertible securities, stock appreciation or similar rights, hedging transactions and borrowed or loaned shares) that has been entered into by or on behalf of, or any other agreement, arrangement or understanding that has been made, the effect or intent of which is to create or mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of, such stockholder or any such beneficial owner or any such nominee with respect to the Corporation's securities (a "Derivative Instrument");

(5) to the extent not disclosed pursuant to clause (4) above, the principal amount of any indebtedness of the Corporation or any of its subsidiaries beneficially owned by such stockholder or by any such beneficial owner, together with the title of the instrument under which such indebtedness was issued and a description of any Derivative Instrument entered into by or on behalf of such stockholder or such beneficial owner relating to the value or payment of any indebtedness of the Corporation or any such subsidiary;

(6) a representation that such stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business or nomination;

(7) any other information relating to such stockholder and any such beneficial owner required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in an election contest pursuant to and in accordance with Section 14(a) of the Exchange Act and the rules and regulations promulgated thereunder (whether or not such stockholder intends to or does deliver a proxy statement or conduct its own proxy solicitation); and

(8) a representation as to whether such stockholder or any such beneficial owner intends or is part of a group which intends (x) to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the Corporation's outstanding capital stock required to elect the nominee or to approve or adopt the proposal or and/or (y) otherwise to solicit proxies from stockholders in support of such nomination or proposal.

If requested by the Corporation, the information required under clauses (iv)(2), (3), (4) and (5) of the preceding sentence of this Section 1.12(a) shall be supplemented and updated by such stockholder and any such beneficial owner, if necessary, so that the information provided or required to be provided in such notice by these Bylaws shall be true and correct as of the record date for the meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the corporation not later than five (5) business days after the record date for the meeting (in the case of the update and supplement required to be made as of the record date), and not later than five (5) business days prior to the date for the meeting, if practicable (or, if not practicable, on the first practicable date prior to) or any adjournment or postponement thereof (in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof). The foregoing notice requirements of this Section 1.12(a) shall be deemed satisfied by a stockholder with respect to business or a nomination if such stockholder has notified the Corporation of his or her intention to present a proposal or make a nomination at an annual meeting in compliance with the applicable rules and regulations promulgated under the Exchange Act and such stockholder's proposal or nomination has been included in a proxy statement that has been prepared by the Corporation to solicit proxies for such annual meeting.

(i) *Special Meetings*.

(i) Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting pursuant to the Corporation's notice of meeting pursuant to Section 1.04 of these bylaws. Nominations of persons for election to the Board at a special meeting of stockholders at which Directors are to be elected pursuant to the Corporation's notice of meeting may be made only (x) by or at the direction of the Board, or a committee appointed by the Board for such purpose or (y) provided that the Board (or stockholders, to the extent in accordance with Section 1.02 hereof) has determined that Directors shall be elected at such meeting, by any stockholder of the Corporation. Subject to the foregoing, a stockholder may nominate persons for election to the Board (a "stockholder nomination") at a special meeting only if the stockholder (1) is entitled to vote at the meeting, (2) complies in a timely manner with the notice procedures and other requirements set forth in paragraph (ii) of this Section 1.12(b), and (3) is a stockholder of record when the required notice is delivered and at the date of the meeting.

(ii) Notice in writing of a stockholder nomination must be delivered to the attention of the Secretary at the principal place of business of the Corporation not more than 120 days prior to the date of the meeting and not later than the close of business on the later of the 90th day prior to the meeting or the 10th day following the last to occur of (a) the public announcement by the Corporation of the date of such meeting and (b) the public announcement by the Corporation of the nominees proposed by the Board to be elected at such meeting, and must comply with the provisions of Sections 1.12(a)(iii) and (iv) of these bylaws. The foregoing notice requirements of this Section 1.12(b) shall be deemed satisfied by a stockholder with respect to a nomination if the stockholder has notified the Corporation of his or her intention to present a nomination at such special meeting in compliance with the applicable rules and regulations promulgated under the Exchange Act and such stockholder's nomination has been included in a proxy statement that has been prepared by the Corporation to solicit proxies for such special meeting.

(c) *General*.

(i) Except as otherwise expressly provided in any applicable rule or regulation promulgated under the Exchange Act, only such persons who are nominated in accordance with the procedures set forth in this Section 1.12 shall be eligible to be elected at an annual or special meeting of stockholders of the Corporation to serve as Directors and only such business shall be conducted at a meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in this Section 1.12. Except as otherwise provided by law, the Certificate of Incorporation or these bylaws, the presiding officer of a meeting of stockholders shall have the power and duty (x) to determine whether a nomination or any business proposed to be brought before the meeting was made in accordance with the procedures set forth in this Section 1.12 and (y) if any proposed nomination or business is not in compliance with this Section 1.12, to declare that such defective nomination shall be disregarded or that such proposed business shall not be transacted.

(ii) The Corporation may require any proposed stockholder nominee for Director to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as a Director. Unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) making a nomination or proposal under this Section 1.12 does not appear at a meeting of stockholders to present such nomination or proposal, the nomination shall be disregarded and/or the proposed business shall not be transacted, as the case may be, notwithstanding that proxies in favor thereof may have been received by the Corporation. For purposes of this Section 1.12, to be considered a qualified representative of the stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the meeting of stockholders.

(iii) For purposes of this Section 1.12, “public announcement” shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

(iv) Notwithstanding the foregoing provisions of this Section 1.12, a stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder with respect to the matters set forth in this Section 1.12; provided, however, that any references in these bylaws to the Exchange Act or the rules and regulations promulgated thereunder are not intended to and shall not limit any requirements applicable to nominations or proposals as to any other business to be considered pursuant to this Section 1.12. Nothing in this Section 1.12 shall be deemed to affect any rights of (x) stockholders to request inclusion of proposals in the Corporation’s proxy statement pursuant to Rule 14a-8 under the Exchange Act or (y) the holders of any series of preferred stock to elect Directors pursuant to any applicable provisions of the Certificate of Incorporation or of the relevant preferred stock certificate of designation.

(v) The announcement of an adjournment or postponement of an annual or special meeting does not commence a new time period (and does not extend any time period) for the giving of notice of a stockholder nomination or a stockholder proposal.

ARTICLE II

BOARD OF DIRECTORS

Section 2.01 General Powers. Except as may otherwise be provided by law or by the Certificate of Incorporation, the affairs and business of the Corporation shall be managed by or under the direction of the Board and the Board may exercise all the powers and authority of the Corporation. The Directors shall act only as a Board, and the individual Directors shall have no power as such.

Section 2.02 Number and Term of Office.

(a) The number of Directors, other than any Directors elected by the holders of shares of any class or series of preferred stock provided for or fixed pursuant to the provisions of Article Sixth of the Certificate of Incorporation (the "Preferred Stock Directors"), shall initially be eleven (11), which number may be modified (but not reduced to less than seven (7)) from time to time exclusively by a Board resolution adopted by the affirmative vote of a majority of the total number of Directors then in office, subject to the rights of the holders of shares of any class or series of preferred stock, if any. Until the election of directors at the 2023 annual meeting, the Directors shall be classified with respect to the time for which they severally hold office into three classes, as nearly equal in number as possible, designated as Class I, Class II and Class III. The term of office for the Class II directors elected at the 2018 annual meeting of stockholders shall expire at the 2021 annual meeting; the term of office for the Class III directors elected at the 2019 annual meeting of stockholders shall expire at the 2022 annual meeting; and the term of office for the Class I directors elected at the 2020 annual meeting of stockholders shall expire at the 2023 annual meeting, with directors of each class to hold office until their successors are duly elected and qualified; provided that the term of each director shall continue until the election and qualification of a successor and be subject to such director's earlier death, resignation or removal. Commencing at the 2021 annual meeting of stockholders directors elected to the Class whose terms expire at each annual meeting of stockholders shall be elected to hold office for a term expiring at the next annual meeting of stockholders and until their successors are duly elected and qualified; provided that the term of each director shall continue until the election and qualification of a successor and be subject to such director's earlier death, resignation or removal. Commencing with the election of directors at the 2023 annual meeting of stockholders, the classification of the directors shall terminate and all directors shall be elected annually and serve until the next annual meeting of stockholders and until their successors are duly elected and qualified; provided that the term of each director shall continue until the election and qualification of a successor and be subject to such director's earlier death, resignation or removal. No decrease in the number of Directors shall shorten the term of any incumbent Director.

(b) Except as provided in Section 2.02(a) of this Article, each director shall be elected by the vote of the majority of the votes cast with respect to the director at any meeting for the election of directors at which a quorum is present, provided that, if as of a date that is fourteen (14) days in advance of the date the corporation files its definitive proxy statement (regardless of whether or not thereafter revised or supplemented) with the Securities and Exchange Commission the number of nominees exceeds the number of directors to be elected, the directors shall be elected by the vote of a plurality of the shares represented in person or by proxy at any such meeting and entitled to vote on the election of directors. For purposes of this Section, a majority of the votes cast means that the number of shares voted "for" a director must exceed the number of votes cast "against" that director. The Nominating Committee has established procedures under which any director who is not elected shall offer to tender his or her resignation to the Board. The Nominating Committee will make a recommendation to the Board on whether to accept or reject the resignation, or whether other action should be taken. The Board will act on the Committee's recommendation and publicly disclose its decision and the rationale behind it within 90 days from the date of the certification of the election results.

Section 2.03 Annual Meetings; Regular Meetings. The annual meeting of the Board may be held at such time or place (within or outside the State of Delaware) as shall be specified in a notice thereof given as hereinafter provided. Regular meetings of the Board shall be held on such dates, and at such times and places (within or outside the State of Delaware) as are determined from time to time by resolution of the Board.

Section 2.04 Special Meetings. Special meetings of the Board shall be held whenever called by the President or the Chairman of the Board or in the event of his or her absence or disability, by any Vice President, or by a majority of the Directors then in office, at such place (within or outside the State of Delaware), date and time as may be specified in the respective notices or waivers of notice of such meetings. Any business may be conducted at a special meeting of the Board.

Section 2.05 Notice of Meetings; Waiver of Notice.

(a) Notices of special meetings shall be given to each Director, and notice of each resolution or other action affecting the date, time or place of one or more regular meetings shall be given to each Director not present at the meeting adopting such resolution or other action, subject to Section 2.08 of these bylaws. Notices shall be given personally, or by telephone confirmed by facsimile or email dispatched promptly thereafter, or by facsimile or email confirmed by a writing delivered by a recognized overnight courier service, directed to each Director at the address from time to time designated by such Director to the Secretary. Each such notice and confirmation must be given (received in the case of personal service or delivery of written confirmation) at least 24 hours prior to the time of a meeting.

(b) A written waiver of notice of meeting signed by a Director or a waiver by electronic transmission by a Director, whether given before or after the meeting time stated in such notice, is deemed equivalent to notice. Attendance of a Director at a meeting is a waiver of notice of such meeting, except when the Director attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business at the meeting on the ground that the meeting is not lawfully called or convened.

Section 2.06 Quorum; Voting. At all meetings of the Board, the presence of a majority of the total authorized number of Directors shall constitute a quorum for the transaction of business. Except as otherwise required by law, the Certificate of Incorporation or these bylaws, the vote of a majority of the Directors present at any meeting at which a quorum is present shall be the act of the Board.

Section 2.07 Action by Telephonic Communications. Members of the Board may participate in a meeting of the Board by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this provision shall constitute presence in person at such meeting.

Section 2.08 Adjournment. A majority of the Directors present may adjourn any meeting of the Board to another date, time or place, whether or not a quorum is present. No notice need be given of any adjourned meeting unless (a) the date, time and place of the adjourned meeting are not announced at the time of adjournment, in which case notice conforming to the requirements of Section 2.05 of these bylaws shall be given to each Director, or (b) the meeting is adjourned for more than 24 hours, in which case the notice referred to in clause (a) shall be given to those Directors not present at the announcement of the date, time and place of the adjourned meeting.

Section 2.09 Action Without a Meeting. Unless otherwise restricted in the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board may be taken without a meeting if all members of the Board consent thereto in writing or by electronic transmission, and such writing or writings or electronic transmissions are filed with the minutes of proceedings of the Board. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 2.10 Regulations. To the extent consistent with applicable law, the Certificate of Incorporation and these bylaws, the Board may adopt such rules and regulations for the conduct of meetings of the Board and for the management of the affairs and business of the Corporation as the Board may deem appropriate. The Board may elect from among its members a chairperson and one or more vice-chairpersons to preside over meetings and to perform such other duties as may be designated by the Board.

Section 2.11 Resignations of Directors. Any Director may resign at any time by submitting an electronic transmission or by delivering a written notice of resignation, signed by such Director, to the Chairman of the Board, the President or the Secretary. Such resignation shall take effect upon delivery unless the resignation specifies a later effective date or an effective date determined upon the happening of a specified event.

Section 2.12 Removal of Directors.

(a) Subject to the rights of the holders of shares of any class or series of preferred stock, if any, to elect Directors pursuant to the Certificate of Incorporation (including any certificate of designation thereunder), (i) until the election of directors at the 2023 annual meeting of stockholders, any Director may be removed only for cause, upon the affirmative vote of the holders of at least three-quarters of the votes which could be cast by the holders of all outstanding shares of capital stock of the Corporation entitled to vote generally for the election of Directors, voting together as a single class, at any duly called annual or special meeting of the stockholders called for that purpose in accordance with the DGCL, the Certificate of Incorporation and these bylaws, and (ii) from and after the election of directors at the 2023 annual meeting of stockholders, a director may be removed, either for or without cause, upon the affirmative vote of the holders of a majority of the votes which could be cast by the holders of all outstanding shares of capital stock entitled to vote generally for the election of directors, voting together as a single class, at any duly called annual or special meeting of the stockholders called for that purpose.

(b) For purposes of these Bylaws, “cause” shall mean (i) a final conviction (without any further right of appeal) of a felony involving moral turpitude, or (ii) willful misconduct that is materially and demonstrably injurious economically to the Corporation. For purposes of this definition of “cause,” no act, or failure to act, by a Director shall be considered “willful” unless committed in bad faith and without a reasonable belief that the act or failure to act was in the best interest of the Corporation or any affiliate of the Corporation. “Cause” shall not exist unless and until the Corporation has delivered to the Director a written notice of the Director’s failure to act that constitutes “cause” and, if cure is possible, such Director shall not have cured such act or omission within ninety (90) days after the delivery of such notice.

Section 2.13 Vacancies and Newly Created Directorships. Subject to the rights of the holders of shares of any class or series of preferred stock, if any, to elect Directors pursuant to the Certificate of Incorporation (including any certificate of designation thereunder), and except as otherwise provided by law, any newly-created directorship on the Board that results from an increase in the number of Directors, or any vacancy in the Board that results from the death, disability, resignation, disqualification or removal of any Director or from any other cause shall be filled solely by the affirmative vote of a majority of the total number of Directors then in office, even if less than a quorum, or by a sole remaining Director. Until the election of directors at the 2023 annual meeting of stockholders, any Director filling a vacancy shall be of the same class as that of the Director whose death, resignation, disqualification, removal or other event caused the vacancy, and any Director filling a newly created directorship shall be of the class specified by the Board at the time the newly created directorship was created, and such Director shall hold office until his or her successor has been elected and qualified, or until his or her earlier death, resignation or removal. From and after the election of directors at the 2023 annual of stockholders, any director filling a vacancy or a newly created directorship shall hold office for a term expiring at the next annual meeting of stockholders and until his or her successor has been elected and qualified, or until his or her earlier death, resignation or removal.

Section 2.14 Director Fees and Expenses. The amount, if any, which each Director shall be entitled to receive as compensation for his or her services shall be fixed from time to time by the Board and, if any Director shall serve as a member of any committee of the Board or perform special services at the request of the Board, such Director may be paid such additional compensation as the Board may from time to time determine. The Corporation will cause each non-employee Director serving on the Board to be reimbursed for all reasonable out-of-pocket costs and expenses incurred by him or her in connection with such service. Such compensation and reimbursement shall be payable even though there be an adjournment because of the absence of a quorum. No such payment shall preclude any Director from serving the Corporation in any other capacity and receiving compensation therefor.

Section 2.15 Reliance on Accounts and Reports, etc. A Director, as such or as a member of any committee designated by the Board, shall in the performance of his or her duties be fully protected in relying in good faith upon the records of the Corporation and upon information, opinions, reports or statements presented to the Corporation by any of the Corporation’s officers or employees, or committees designated by the Board, or by any other person as to the matters the member reasonably believes are within such other person’s professional or expert competence and who has been selected with reasonable care by or on behalf of the Corporation.

Section 2.16 Interested Directors. No contract or transaction between the Corporation and one or more of its Directors or officers, or between the Corporation and any other corporation, partnership, association, or other organization in which one or more of its Directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the Director or officer is present at or participates in the meeting of the Board or committee thereof which authorizes the contract or transaction, or solely because such person’s or persons’ votes are counted for such purposes if (a) the material facts as to such person’s or persons’ relationship or interest and as to the contract or transaction are disclosed or are known to the Directors or committee who then in good faith authorizes the contract or transaction by the affirmative vote of a majority of the disinterested Directors, even though the disinterested Directors be less than a quorum, (b) the material facts as to such person’s or persons’ relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders or (c) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified, by the Board, a committee thereof or the stockholders. Interested Directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee which authorizes the contract or transaction.

ARTICLE III

COMMITTEES

Section 3.01 Designation of Committees. The Board shall designate such committees as may be required by applicable laws, regulations or stock exchange rules and may designate such additional committees as it deems necessary or appropriate. Each committee shall consist of such number of Directors, and with such qualifications, as may be required by applicable laws, regulations or stock exchange rules or as from time to time may be fixed by the Board and shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation to the extent delegated to such committee by resolution of the Board (and, in the exercise of any such authority, may authorize the seal of the corporation to be affixed to all papers which may require it), which delegation shall include all such powers and authority as may be required by applicable laws, regulations or stock exchange rules. No committee shall have any power or authority as to (a) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of Directors) expressly required by the DGCL to be submitted to stockholders for approval, (b) adopting, amending or repealing any of these bylaws or (c) as may otherwise be excluded by law or by the Certificate of Incorporation.

Section 3.02 Members and Alternate Members. The members of each committee and any alternate members shall be selected by the Board and the Board may provide that the members and alternate members serve at the pleasure of the Board. Any Committee may be abolished or re-designated from time to time by the Board. An alternate member may replace any absent or disqualified member at any meeting of the committee. An alternate member shall be given all notices of committee meetings, may attend any meeting of the committee, but may count towards a quorum and vote only if a member for whom such person is an alternate is absent or disqualified. Each member (and each alternate member) of any committee shall hold office only until the time he or she shall cease for any reason to be a Director, until his or her successor shall have been designated and qualified or until his or her earlier death, resignation or removal.

Section 3.03 Committee Procedures. A quorum for each committee shall be a majority of its members, unless the committee has only one or two members, in which case a quorum shall be one member, or unless a greater quorum is established by the Board. The vote of a majority of the committee members present at a meeting at which a quorum is present shall be the act of the committee. Each committee shall keep regular minutes of its meetings and report to the Board when required. The Board shall adopt a charter for each committee for which a charter is required by applicable laws, regulations or stock exchange rules, may adopt a charter for any other committee, and may adopt other rules and regulations for the government of any committee not inconsistent with the provisions of these bylaws or any such charter, and each committee may adopt its own rules and regulations of government, to the extent not inconsistent with these bylaws or any charter or other rules and regulations adopted by the Board.

Section 3.04 Meetings and Actions of Committees. Except to the extent that the same may be inconsistent with the terms of any committee charter or applicable laws, regulations or stock exchange rules, meetings and actions of each committee shall be governed by, and held and taken in accordance with, the provisions of the following sections of these bylaws, with such bylaws being deemed to refer to the committee and its members in lieu of the Board and its members:

(a) Section 2.03 (to the extent relating to place and time of regular meetings);

(b) Section 2.04 (relating to special meetings);

(c) Section 2.05 (relating to notice and waiver of notice);

(d) Sections 2.07 and 2.9 (relating to telephonic communication and action without a meeting); and

(e) Section 2.08 (relating to adjournment and notice of adjournment).

Special meetings of committees may also be called by resolution of the Board.

Section 3.05 Resignations and Removals. Any member (and any alternate member) of any committee may resign from such position at any time by submitting an electronic transmission or by delivering a written notice of resignation, signed by such member, to the Chairman of the Board, the President or the Secretary. Such resignation shall take effect upon delivery unless the resignation specifies a later effective date or an effective date determined upon the happening of a specified event. Any member (and any alternate member) of any committee may be removed from such position by the Board at any time, either for or without cause.

Section 3.06 Vacancies. If a vacancy occurs in any committee for any reason, the remaining members (and any alternate members) may continue to act if a quorum is present. A committee vacancy may be filled only by the Board in accordance with Section 3.02.

ARTICLE IV

OFFICERS

Section 4.01 Officers. The Board shall elect a President and a Secretary as officers of the Corporation. The Board may also elect a Chairman of the Board (who, if so elected, must be a Director), a Treasurer, one or more Vice Presidents (any one or more of whom may be designated an Executive Vice President or Senior Vice President or other classifications of Vice Presidents), Assistant Secretaries and Assistant Treasurers, and such other officers and agents as the Board may determine. In addition, the Board from time to time may delegate to any officer the power to appoint subordinate officers or agents and to prescribe their respective rights, terms of office, authorities and duties. Any action by an appointing officer may be superseded by action by the Board. Any number of offices may be held by the same person, except that one person may not hold both the office of President and the office of Secretary. No officer need be a Director. For the avoidance of doubt, the term Vice President shall refer to an officer elected by the Board as Vice President and shall not include any employees of the Corporation whose employment title is “Vice President” unless such individual has been elected as a Vice President of the Corporation in accordance with these bylaws.

Section 4.02 Election. Unless otherwise determined by the Board, the officers of the Corporation need not be elected for a specified term but shall serve at the pleasure of the Board or for such terms as may be agreed in the individual case by each officer and the Board. Officers and agents appointed pursuant to delegated authority as provided in Section 4.01 (or, in the case of agents, as provided in Section 4.07) shall hold their offices for such terms as may be determined from time to time by the appointing officer. Each officer shall hold office until his or her successor has been elected or appointed and qualified, or until his or her earlier death, resignation or removal. A failure to elect officers shall not dissolve or otherwise affect the Corporation.

Section 4.03 Compensation. The salaries and other compensation of all officers and agents of the Corporation shall be fixed by the Board or in the manner established by the Board. An officer of the Corporation shall not be prevented from receiving compensation by reason of the fact that such officer is also a Director.

Section 4.04 Removal and Resignation; Vacancies. Any officer may be removed for or without cause at any time by the Board, without prejudice to the rights, if any, of such officer under any contract to which such officer is a party. Any officer granted the power to appoint subordinate officers and agents as provided in Section 4.01 may remove any subordinate officer or agent appointed by such officer, at any time, for or without cause, without prejudice to the rights, if any, of such officer under any contract to which such officer is a party. Any officer or agent may resign at any time by delivering notice of resignation, either in writing signed by such officer or by electronic transmission, to the Board, the Chairman of the Board or the President, without prejudice to the rights, if any, of the Corporation under any contract to which such officer is a party. Unless otherwise specified therein, such resignation shall take effect upon delivery. Any vacancy occurring in any office of the Corporation by death, resignation, removal or otherwise, may be filled by the Board or by the officer, if any (provided that the delegated authority as provided in Section 4.01 has not been revoked as of such time), who appointed the person formerly holding such office.

Section 4.05 Authority and Duties of Officers. An officer of the Corporation shall have such authority and shall exercise such powers and perform such duties (a) as may be required by law, (b) to the extent not inconsistent with law, as are specified in these bylaws, (c) to the extent not inconsistent with law or these bylaws, as may be specified by resolution of the Board, and (d) to the extent not inconsistent with any of the foregoing, as may be specified by the appointing officer with respect to a subordinate officer appointed pursuant to delegated authority under Section 4.01. The Board may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

Section 4.06 Chairman of the Board. If the Chairman of the Board shall have been elected or appointed, the Chairman of the Board shall preside at all meetings of the stockholders and Directors at which he or she is present and shall have such other powers and duties as may from time to time be assigned by the Board.

Section 4.07 President. Unless there is a separately designated Chairman of the Board, the President shall preside at all meetings of the stockholders and Directors at which he or she is present, shall be the chief executive officer of the Corporation, shall have general control and supervision of the policies and operations of the Corporation and shall see that all orders and resolutions of the Board are carried into effect. He or she shall manage and administer the Corporation's business and affairs and shall also perform all duties and exercise all powers usually pertaining to the office of a chief executive officer of a corporation, including, without limitation all powers incident to the title "President" under the DGCL. He or she shall have the authority to sign, in the name and on behalf of the Corporation, checks, orders, contracts, leases, notes, drafts and all other documents and instruments in connection with the business of the Corporation. Except as otherwise determined by the Board, he or she shall have the authority to cause the employment or appointment of such employees (other than the President) or agents of the Corporation as the conduct of the business of the Corporation may require, to fix their compensation, and to remove or suspend such employee or any agent employed or appointed by any officer or to suspend any agent appointed by the Board. In addition, the President shall have such other powers and perform such other duties as may be delegated to him or her by the Board or as are set forth in the Certificate of Incorporation or these bylaws. The President shall have the duties and powers of the Treasurer if no Treasurer is elected and shall have such other duties and powers as the Board may from time to time prescribe.

Section 4.08 Vice Presidents. Unless otherwise determined by the Board, if one or more Vice Presidents have been elected or appointed, each Vice President shall perform such duties and exercise such powers as may be assigned to him or her from time to time by the Board or the President. In the event of absence or disability of the President, the duties of the President shall be performed, and his or her powers may be exercised, by such Vice President as shall be designated by the Board or, failing such designation, by the Vice President in order of seniority of title, with the title of "Executive Vice President" being more senior than "Senior Vice President" which is, in turn, more senior than "Vice President" (and among Vice Presidents with the same seniority of title, among them in seniority of election or appointment to that office), in each case, without limiting the last sentence of Section 4.01.

Section 4.09 Secretary. Unless otherwise determined by the Board, the Secretary shall issue all authorized notices for, and shall keep minutes of, all meetings of the stockholders and the Board. He or she shall have charge of the corporate books and shall perform other duties as the Board or the President shall designate from time to time.

Section 4.10 Treasurer. Unless otherwise determined by the Board, if the Treasurer shall have been elected or appointed, the Treasurer shall keep or cause to be kept the books of account of the Corporation in a thorough and proper manner and shall render statements of the financial affairs of the Corporation in such form and as often as required by the Board or the President. The Treasurer, subject to the order of the Board, shall have the custody of all funds and securities of the Corporation. The Treasurer shall perform other duties commonly incident to such office and shall also perform such other duties and have such other powers as the Board or the President shall designate from time to time.

Section 4.11 Security. The Board may require any officer, agent or employee of the Corporation to provide security for the faithful performance of his or her duties, in such amount and of such character as may be determined from time to time by the Board.

ARTICLE V

CAPITAL STOCK

Section 5.01 Certificates of Stock; Uncertificated Shares. The shares of the Corporation shall be represented by certificates, except to the extent that the Board has provided by resolution that some or all of any or all classes or series of the stock of the Corporation shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. Every holder of stock in the Corporation represented by certificates shall be entitled to have, and the Board may in its sole discretion permit a holder of uncertificated shares to receive upon request, a certificate signed by the President or a Vice President, and by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary, representing the number of shares registered in certificate form. Such certificate shall be in such form as the Board may determine, to the extent consistent with applicable law, the Certificate of Incorporation and these bylaws.

Section 5.02 Facsimile Signatures. Any or all signatures on the certificates referred to in Section 5.01 of these bylaws may be in facsimile form, to the extent permitted by law. If any officer, transfer agent or registrar who has signed, or whose facsimile signature has been placed upon, a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

Section 5.03 Lost, Stolen or Destroyed Certificates. A new certificate may be issued in place of any certificate theretofore issued by the Corporation alleged to have been lost, stolen or destroyed only upon delivery to the Corporation of an affidavit of the owner or owners (or their legal representatives) of such certificate, setting forth such allegation, and, if required by the Board, a bond or other undertaking, in such form as may be approved by the Board or a financial officer of the Corporation designated by the Board, to indemnify the Corporation against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of any such new certificate.

Section 5.04 Transfer of Stock.

(a) Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares, duly endorsed or accompanied by appropriate evidence of succession, assignment or authority to transfer, the Corporation shall issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books; provided, however, that the Corporation shall be entitled to recognize and enforce any lawful restriction on transfer. Within a reasonable time after the transfer of uncertificated stock, the Corporation shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to Sections 151, 156, 202(a) or 218(a) of the DGCL. Subject to the provisions of the Certificate of Incorporation and these bylaws, the

Board may prescribe such additional rules and regulations as it may deem appropriate relating to the issue, transfer and registration of shares of the Corporation.

(b) The Corporation may enter into additional agreements with stockholders to restrict the transfer of stock of the Corporation in any manner not prohibited by the DGCL.

Section 5.05 Registered Stockholders. Prior to due surrender of a certificate for registration of transfer, the Corporation may treat the registered owner as the person exclusively entitled to receive dividends and other distributions, to vote, to receive notice and otherwise to exercise all the rights and powers of the owner of the shares represented by such certificate, and the Corporation shall not be bound to recognize any equitable or legal claim to or interest in such shares on the part of any other person, whether or not the Corporation shall have notice of such claim or interests; provided, that if a transfer of shares is made for collateral security, and not absolutely, this fact shall be so expressed in the entry of the transfer if, when the certificates are presented to the Corporation for transfer or uncertificated shares are requested to be transferred, both the transferor and transferee request the Corporation to do so.

Section 5.06 Transfer Agent and Registrar. The Board may appoint one or more transfer agents and one or more registrars, and may require all certificates representing shares to bear the signature of any such transfer agents or registrars.

ARTICLE VI

INDEMNIFICATION

Section 6.01 Indemnification.

(a) *In General*. The Corporation shall hold harmless and indemnify, to the fullest extent permitted by the DGCL and other applicable law, as it presently exists or may hereafter be amended, any person who was or is a party or is threatened to be made a party to, or is asked to provide testimony in connection with, or is otherwise involved in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative, investigative, legislative or otherwise and whether formal or informal (each, a "proceeding") by reason of, arising out of, or in any way related to, the fact that (x) such person, or a person for whom he or she is the legal representative, is or was serving or has agreed to serve as a Director or officer of the Corporation, or (y) such person, or a person for whom he or she is the legal representative, while serving as a Director or officer of the Corporation, is or was serving or has agreed to serve at the request of the Corporation as a director, officer, employee, manager or agent of another corporation, partnership, joint venture, trust, nonprofit entity or other enterprise or (z) such person, or a person for whom he or she is the legal representative, is or was serving or has agreed to serve at the request of the Corporation as a director, officer or manager of another corporation, partnership, joint venture, trust or other enterprise (each, an "Other Enterprise"), or by reason of any action alleged to have been taken or omitted by such person in such capacity, and who satisfies the applicable standard of conduct set forth in the DGCL or other applicable law:

(1) in a proceeding other than a proceeding by or in the right of the Corporation, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person or on such person's behalf in connection with such proceeding and any appeal therefrom; or

(2) in a proceeding by or in the right of the Corporation to procure a judgment in its favor, against all expenses (including attorneys' fees) actually and reasonably incurred by such person or on such

person's behalf in connection with the defense or settlement of such proceeding and any appeal therefrom; provided, that, no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery or the court in which such proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

The termination of any proceeding or of any claim, issue or matter therein, by judgment, order, settlement (with or without court approval), conviction, or upon a plea of nolo contendere or its equivalent, shall not of itself adversely affect the right to indemnification as set forth herein or create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Corporation or, with respect to any criminal proceeding, that the person had reasonable cause to believe that his conduct was unlawful.

(c) *Indemnification in Respect of Successful Defense*. To the greatest extent permitted by law, to the extent that a present or former Director or officer of the Corporation has been successful on the merits or otherwise in defense of any proceeding referred to in Section 6.01(a) or in defense of any claim, issue or matter therein, such person shall be conclusively determined to be entitled to indemnification hereunder with respect to such proceeding. Further, for purposes of this Section 6.01(b) and without limitation, the termination of any proceeding referred to in Section 6.01(a), or claim, issue or matter in such proceeding, by settlement (with or without court approval), entry of a plea of nolo contendere (or its equivalent) or by dismissal, with or without prejudice, shall be deemed to be a successful resolution as to such proceeding, claim, issue or matter.

(d) *Indemnification in Respect of Proceedings Instituted by Indemnitee*. Section 6.01(a) does not require the Corporation to indemnify a present or former Director or officer of the Corporation in respect of a proceeding (or part thereof) instituted by such person on his or her own behalf (other than by way of defense, counterclaim or crossclaim), unless such proceeding (or part thereof) has been authorized in the specific case by the Board or the indemnification requested is pursuant to the last sentence of Section 6.03 of these bylaws.

Section 6.02 Advancement of Expenses. The Corporation shall advance all expenses (including reasonable attorneys' fees) incurred by a present or former Director or officer in defending any proceeding prior to the final disposition of such proceeding upon written request of such person and delivery of an undertaking by such person to repay such amount if it shall ultimately be determined by final judicial decision of a court of competent jurisdiction from which there is no further right of appeal that such person is not entitled to be indemnified by the Corporation. The indemnified party's undertaking to repay the Corporation any amounts advanced for expenses shall not be required to be secured and shall not bear interest. Advancements shall be made without regard to the indemnified party's ability to repay the expenses. The Corporation shall not impose on the indemnified party additional conditions to advancement of expenses or require from the indemnitee additional undertakings regarding repayment. Advancements of expenses pursuant to this subsection shall not require approval of the Board or the stockholders of the Corporation, or of any other person or body. The Secretary shall promptly advise the Board in writing of the request for advancement of expenses, of the amount and other details of the request and of the undertaking to make repayment provided pursuant to this subsection. Advancements of expenses shall be made within ten (10) calendar days after receipt by the Corporation of a statement or statements requesting such advancements from time to time. Advancements of expenses shall include any and all reasonable Expenses incurred pursuing an action to enforce this right of advancement, including expenses incurred preparing and forwarding statements to the Corporation to support the advancements claimed. The Corporation may authorize any counsel for the Corporation to represent (subject to applicable conflict of interest considerations) such present or former Director or officer in any proceeding, whether or not the Corporation is a party to such proceeding.

Section 6.03 Procedure for Indemnification. Any indemnification under Section 6.01 of these bylaws or any advancement of expenses under Section 6.02 of these bylaws shall be made only against a written request therefor (together with supporting documentation) submitted by or on behalf of the person seeking indemnification or advancement. Indemnification may be sought by a person under Section 6.01 of these bylaws in respect of a proceeding only to the extent that both the liabilities for which indemnification is sought and all portions of the proceeding relevant to the determination of whether the person has satisfied any appropriate standard of conduct have become final. A person seeking indemnification or advancement of expenses may seek to enforce such person's rights to indemnification or advance of expenses (as the case may be) in the Delaware Court of Chancery to the extent all or any portion of a requested indemnification has not been granted within ninety (90) days of, or to the extent all or any portion of a requested advance of expenses has not been granted within ten (10) days of, the submission of such request. All expenses (including reasonable attorneys' fees) incurred by such person in connection with successfully establishing such person's right to indemnification or advancement of expenses under this Article VI, in whole or in part, shall also be indemnified by the Corporation to the fullest extent permitted by law.

Section 6.04 Burden of Proof.

(a) In any proceeding brought to enforce the right of a person to receive indemnification to which such person is entitled under Section 6.01 of these bylaws, it shall be presumed, to the fullest extent not prohibited by law, that such person is entitled to indemnification under this Agreement and the Corporation shall have the burden to overcome such presumption by establishing that there is no reasonable basis to support it. A prior determination by the Corporation (including its Board or any committee thereof, its independent legal counsel, or its stockholders) that the claimant is not entitled to indemnification shall not prejudice the claimant in any proceeding brought to enforce the right of such person to receive indemnification (and the Corporation may not refer to or introduce into evidence any such determination in such proceeding) and any such proceeding shall be conducted in all respects as a de novo trial, or arbitration, on the merits. For purposes of any determination of good faith, a person shall be deemed to have acted in good faith if the action or failure to act is based on the records or books of account of the Corporation or an Other Enterprise, including financial statements, or on information supplied to such person by the officers, employees, boards (or committees thereof) of the Corporation or an Other Enterprise in the course of their duties, or on the advice of legal counsel or other advisors (including financial advisors and accountants) for the Corporation or an Other Enterprise or on information or records given or reports made to the Corporation or an Other Enterprise by an independent certified public accountant or by an appraiser or other expert or advisor selected by the Corporation or an Other Enterprise. The provisions of this Section 6.04(a) shall not be deemed to be exclusive or to limit in any way the other circumstances in which a person may be deemed or found to have met the applicable standard of conduct.

(b) In any proceeding brought to enforce a claim for advances to which a person is entitled under Section 6.02 of these bylaws, the person seeking an advancement need only show that he or she has satisfied the requirements expressly set forth in Section 6.02 of these bylaws.

(c) The knowledge and/or actions, or failure to act, of any other Director or officer of the Corporation or an Other Enterprise shall not be imputed to an indemnified person for purposes of determining the right to indemnification under this Article VI.

Section 6.05 Contract Right; Non-Exclusivity; Survival.

(a) The rights to indemnification and advancement of expenses provided by this Article VI shall be deemed to be separate contract rights between the Corporation and each Director and officer who serves in any such capacity at any time while these provisions as well as the relevant provisions of the DGCL are in effect, and such contract rights shall vest immediately upon the commencement of such person's service to the Corporation or, in the case of service to an Other Enterprise at the request of the Corporation, to an Other Enterprise. Persons who after the date of the adoption of this provision serve or continue to serve the Corporation as Directors or officers or who, while serving as such, serve or continue to serve an Other Enterprise at the request of the Corporation, shall be conclusively presumed to have relied on the rights to indemnification and advancement of expenses contained in this Article VI. No repeal or modification of any of these provisions or any relevant provisions of the DGCL shall adversely affect any right or obligation of such Director or officer existing at the time of such repeal or modification with respect to any state of facts then or previously existing or any proceeding previously or thereafter brought or threatened based in whole or in part upon any such state of facts. Such "contract rights" may not be modified retroactively as to any present or former Director or officer without the consent of such Director or officer.

(b) The rights to indemnification and advancement of expenses provided by this Article VI shall not be deemed exclusive of any other rights to indemnification or advancement of expenses to which a present or former Director or officer of the Corporation seeking indemnification or advancement of expenses may be entitled by any agreement, vote of stockholders or disinterested Directors, or otherwise.

(c) The rights to indemnification and advancement of expenses provided by this Article VI to any present or former Director or officer of the Corporation shall continue as to a person who has ceased to be a Director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

Section 6.06 Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was or has agreed to become a Director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person or on such person's behalf in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the provisions of this Article VI. The Corporation may also create a trust fund, grant a security interest and/or use other means (including, without limitation, letters of credit, surety bonds and/or other similar arrangements) to the fullest extent authorized or permitted by applicable law to ensure the payment of such amounts as may become necessary to effect the indemnification as provided in this Article VI or elsewhere.

Section 6.07 Employees and Agents. The Board, or any officer authorized by the Board generally or in the specific case to make indemnification decisions, may cause the Corporation to indemnify and advance expenses to any present or former employee or agent of the Corporation in such manner and for such liabilities as the Board may determine, up to the fullest extent permitted by the DGCL and other applicable law.

Section 6.08 Interpretation; Severability. Terms defined in Sections 145(h) or (i) of the DGCL have the meanings set forth in such sections when used in this Article VI. If this Article VI or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless (i) indemnify each Director or officer of the Corporation as to costs, charges and expenses (including attorneys' fees), judgments, fines and amounts paid in settlement with respect to any action, suit or proceeding, whether civil, criminal, administrative or investigative, including an action by or in the right of the Corporation, and (ii) advance expenses to each Director or officer of the Corporation entitled to advancement of expenses under Section 6.02 in accordance therewith, in each case, to the fullest extent permitted by any applicable portion of this Article VI that shall not have been invalidated and to the fullest extent permitted by applicable law.

Section 6.09 Subrogation. Any person entitled to indemnification and/or advancement of expenses, in each case pursuant to this Article VI, and that is an officer, employee, partner or advisor of the Carlyle Stockholder (as such term is defined in the Certificate of Incorporation) (each such person, a "Sponsor Indemnitee"), may have certain rights to indemnification and/or advancement of expenses provided by or on behalf of the Carlyle Stockholder. Notwithstanding anything to the contrary in these bylaws or otherwise: (i) the Corporation is the indemnitor of first resort (i.e., the Corporation's obligations to each Sponsor Indemnitee are primary and any obligation of the Carlyle Stockholder to advance expenses or to provide indemnification for the same expenses or liabilities incurred by each Sponsor Indemnitee are secondary), (ii) the Corporation will be required to advance the full amount of expenses incurred by each Sponsor Indemnitee and will be liable for the full amount of all liabilities, expenses, judgments, penalties, fines and amounts paid in settlement to the extent legally permitted and as required by this Article VI, without regard to any rights each Sponsor Indemnitee may have against the Carlyle Stockholder, and (iii) the Corporation irrevocably waives, relinquishes and releases the Carlyle Stockholder from any and all claims against the Carlyle Stockholder for contribution, subrogation or any other recovery of any kind in respect thereof. Notwithstanding anything to the contrary in these bylaws or otherwise, no advancement or payment by the Carlyle Stockholder on behalf of a Sponsor Indemnitee with respect to any claim for which such Sponsor Indemnitee has sought indemnification or advancement of expenses from the Corporation will affect the foregoing and the Carlyle Stockholder will have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Sponsor Indemnitee against the Corporation. The Carlyle Stockholder is an express third party beneficiary of the terms of this Article VI.

ARTICLE VII

OFFICES

Section 7.01 Registered Office. The registered office of the Corporation in the State of Delaware shall be located at the location provided in the Certificate of Incorporation.

Section 7.02 Other Offices. The Corporation may maintain offices or places of business at such other locations within or outside the State of Delaware as the Board may from time to time determine or as the business of the Corporation may require.

ARTICLE VIII

GENERAL PROVISIONS

Section 8.01 Dividends.

(a) Subject to any applicable provisions of law and the Certificate of Incorporation, dividends upon the shares of the Corporation may be declared by the Board at any regular or special meeting of the Board, or by written consent in accordance with the DGCL and these bylaws, and any such dividend may be paid in cash, property or shares of the Corporation's stock.

(b) A member of the Board, or a member of any committee designated by the Board shall be fully protected in relying in good faith upon the records of the Corporation and upon such information, opinions, reports or statements presented to the Corporation by any of its officers or employees, or committees of the Board, or by any other person as to matters the Director reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Corporation, as to the value and amount of the assets, liabilities and/or net profits of the Corporation, or any other facts pertinent to the existence and amount of surplus or other funds from which dividends might properly be declared and paid.

Section 8.02 Reserves. There may be set apart out of any funds of the Corporation available for dividends such sum or sums as the Board from time to time may determine proper as a reserve or reserves for meeting contingencies, equalizing dividends, repairing or maintaining any property of the Corporation or for such other purpose or purposes as the Board may determine conducive to the interest of the Corporation and its stockholders, and the Board may similarly modify or abolish any such reserve.

Section 8.03 Execution of Instruments. Except as otherwise required by law or the Certificate of Incorporation, the Board or any officer of the Corporation authorized by the Board may authorize any other officer or agent of the Corporation to enter into any contract or execute and deliver any instrument in the name and on behalf of the Corporation. Any such authorization must be in writing or by electronic transmission and may be general or limited to specific contracts or instruments.

Section 8.04 Voting as Stockholder. Unless otherwise determined by resolution of the Board, the President or any officer of the Corporation authorized thereby shall have full power and authority on behalf of the Corporation to attend any meeting of stockholders or equityholders of any corporation or other entity in which the Corporation may hold securities, and to act, vote (or execute proxies to vote) and exercise in person or by proxy all other rights, powers and privileges incident to the ownership of such securities at any such meeting, or through action without a meeting. The Board may by resolution from time to time confer such power and authority (in general or confined to specific instances) upon any other person or persons.

Section 8.05 Fiscal Year. The fiscal year of the Corporation shall end on December 31st of each year, or such other twelve (12) consecutive months as the Board may designate.

Section 8.06 Seal. The seal of the Corporation shall be circular in form and shall contain the name of the Corporation, the year of its incorporation and the words "Corporate Seal" and "Delaware". The form of such seal shall be subject to alteration by the Board. The seal may be used by causing it or a facsimile thereof to be impressed, affixed or reproduced, or may be used in any other lawful manner.

Section 8.07 Books and Records; Inspection. Except to the extent otherwise required by law, the books and records of the Corporation shall be kept at such place or places within or outside the State of Delaware as may be determined from time to time by the Board.

Section 8.08 Electronic Transmission. "Electronic transmission", as used in these bylaws, means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

ARTICLE IX

AMENDMENT OF BYLAWS

Subject to the provisions of the Certificate of Incorporation, these bylaws may be amended, altered or repealed (a) by resolution adopted by a majority of the total number of authorized Directors (whether or not there exists any vacancies in previously authorized directorships at the time such resolution is presented to the Board for adoption) acting at any special or regular meeting of the Board if, in addition to any other notice required by these Bylaws and other applicable requirements contained herein, notice of such amendment, alteration or repeal is contained in the notice or waiver of notice of such meeting, which notice shall also include, without limitation, the text of any such proposed amendment and/or any resolution calling for any such amendment, alteration or repeal or (b) at any regular or special meeting of the stockholders upon the affirmative vote of the holders of at least three-quarters of the shares of the Corporation entitled to vote generally in the election of Directors, voting together as a single class, if, in the case of such special meeting only, in addition to any other notice required by these Bylaws and other applicable requirements contained herein, notice of such amendment, alteration or repeal is contained in the notice or waiver of notice of such meeting, which notice shall also include, without limitation, the text of any such proposed amendment and/or any resolution calling for any such amendment, alteration or repeal.

Notwithstanding the foregoing, no amendment, alteration or repeal of Article VI shall adversely affect any right or protection existing under bylaws immediately prior to such amendment, alteration or repeal, including any right or protection of a present or former Director or officer thereunder in respect of any act or omission occurring prior to the time of such amendment.

ARTICLE X

CONSTRUCTION

In the event of any conflict between the provisions of these bylaws as in effect from time to time and the provisions of the Certificate of Incorporation as in effect from time to time, the provisions of such Certificate of Incorporation shall be controlling.

* * * *

Exhibit 31.1

MANAGEMENT CERTIFICATION

I, Charles L. Treadway, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CommScope Holding Company, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: November 3, 2021

/s/ Charles L. Treadway

Name:	Charles L. Treadway
Title:	President, Chief Executive Officer and Director (Principal Executive Officer)

Exhibit 31.2

MANAGEMENT CERTIFICATION

I, Kyle D. Lorentzen, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CommScope Holding Company, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: November 3, 2021

/s/ Kyle D. Lorentzen

Name:	Kyle D. Lorentzen
Title:	Executive Vice President and Chief Financial Officer (Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of CommScope Holding Company, Inc. (the "Company") on Form 10-Q for the quarter ended September 30, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Charles L. Treadway, President, Chief Executive Officer and Director of the Company, and Kyle D. Lorentzen, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350 as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 3, 2021

/s/ Charles L. Treadway
Charles L. Treadway
President, Chief Executive Officer and Director
(Principal Executive Officer)

/s/ Kyle D. Lorentzen
Kyle D. Lorentzen
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)