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CommScope Revolutionizes Wireless Network Testing with Groundbreaking PIM Solution

HICKORY, N.C.--(BUSINESS WIRE)-- CommScope is changing the way operators test for a costly source of interference in advanced wireless networks called passive intermodulation (PIM), turning what is a reactionary procedure into a proactive process with its innovative Optical PIM Tester.

A single technician can connect directly to the base band unit at the bottom of the tower with the Optical PIM Tester. (Photo: Business Wire)

A revolutionary test methodology is introduced with the affordable, portable tester. For the first time ever, a single technician can connect directly to the base band unit at the bottom of the tower and perform a "truly active" PIM test over the Common Public Radio Interface (CPRI) by using the Optical PIM Tester.

Additionally, the Optical PIM Tester can easily be included within every technician's arsenal thanks to its compact size and ease of use. It provides a convenient, user-friendly interface that is accessible from a smartphone, tablet or notebook computer. Entire technical crews including tower climbers no longer need to be sent out to a site to test for PIM by disconnecting coaxial cable from antennas, potentially introducing new PIM in the test process.

"As PIM requirements become more stringent as demanded by LTE networks, it gets harder to determine if there is a PIM problem needing remediation," said Morgan Kurk, senior vice president, Wireless, CommScope. "The Optical PIM Tester utilizes an interface that is not susceptible to creating PIM and thus prevents testing from becoming part of the problem. Its simplicity enables PIM testing to become part of standard network acceptance and preventative maintenance processes."

The Optical PIM Tester features:

- Active PIM testing over CPRI by injecting signals into the downlink and looking for PIM products in the uplink, making it easier to identify
- Support for all frequency bands in one unit, eliminating the need for multiple PIM units
- Simultaneous access to multiple sectors and frequency bands, saving on testing time
- PIM testing at ground level, increasing safety and massively reducing costs and time
- A user-friendly interface that is accessible from a smartphone, tablet or notebook computer

Part of the Andrew Solutions® portfolio, the Optical PIM Tester is a battery powered, ruggedized, portable unit that connects between the base band unit and remote radio units using fiber optic cables. The Optical PIM Tester enables a single technician to test for PIM in a fraction of the time required with legacy PIM testers. When a smartphone, tablet or a notebook computer connects to the Optical PIM Tester over Wi-Fi, a user-friendly interface appears for executing the test process. The system is highly automated, requiring no specialized knowledge of PIM.

"The intense scrutiny of PIM is not going away, and we envision a resource like our Optical PIM Tester will become a fundamental part of every operator's effort to minimize PIM," said Kurk. "CommScope is helping operators manage PIM before it degrades their networks."

PIM is interference resulting from the mixing of two or more frequencies in a passive circuit. If the interference coincides with a network's transmit frequencies, it can cripple network performance and throughput. PIM can occur from a loose or poorly made cabling connection, an incorrectly torqued connector or a poorly manufactured or installed antenna, filter, or remote radio

head—and can degrade the network dramatically. For example, just a one decibel drop in uplink sensitivity due to PIM can reduce wireless coverage in an LTE network by 11 percent.

CommScope bundles numerous resources for limiting PIM on its PIM Site Audit and Avoidance webpage, most of which come from its comprehensive "PIM Happens: Just Not on Our Watch" program. Wireless network engineers can utilize PIM System Calculators that help design low-PIM cell sites. Additionally, the CommScope Infrastructure Academy offers an online PIM certification class for installers and field engineers to learn more about the performance degrading interference.

CommScope will demonstrate the Optical PIM Tester in Stand #2E46 at Mobile World Congress in Barcelona, March 2-5. To schedule a demonstration and access a preview chapter from the forthcoming "LTE Best Practices" ebook, join the CommScope Community.

Related Blog Posts:

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Preventing PIM

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