

How a Mid-West Telecom Provider Uses AFL's FlowScout™ PON Optical Power Meter

An increase in demand for high-speed broadband internet access, Over-the-Top (OTT) video or TV and telephone/wireless services has fueled the need for service providers to invest in or expand upon fiber optic or "FTTx" networks. Whether it's a single-family residence or home, a multi-dwelling commercial or residential unit, warehouse or other building, node or desk, FTTx brings signal and bandwidth from service providers to subscribers. Due to an explosive bandwidth demand for homes, businesses and 5G backhaul, FTTx/PON has become the technology of choice to meet these needs, and [AFL's FlowScout™ PON Optical Power Meter](#) is one of the many additions to [AFL's FTTx solution portfolio](#).



[PRTC](#), a telecommunications/technology provider located in South Carolina, relies on AFL's FlowScout for testing and recently used it for XPON network troubleshooting. PRTC's technicians stay busy, covering an average of 10 appointments per day and often ride alone. Service calls can either be for activation or troubleshooting, and in rural areas, customer visits can be up to 30 miles apart. They must be ready to replace fiber jumpers at customer homes, so they need a versatile power meter that confirms light for verification purposes, upturns and troubleshooting. FlowScout has become a trusted tool for PRTC. In two different scenarios, they've used it to diagnose a variety of problems including low light fiber and splicing issues at a customer site.

Depending on the location, PRTC runs two different wavelengths: GPON at a wavelength of 1490 nm in a new expansion area and XGS-PON at 1577 nm in their original home fiber area. When technicians need to test these networks, they test at the ONT location both inside and outside the customer's home depending on the trouble encountered. After testing, they usually send images of the results to a supervisor for verification and reporting.

Running different wavelengths across different regions can be challenging when it comes to choosing the right tool to use. AFL's FlowScout proved to alleviate such challenges as it automatically detects GPON, XGS-PON and video signals simultaneously without having to use multiple meters for measurements.

"One of the biggest things I really appreciate about AFL's FlowScout is its ability to read 1577 nm and being able to come back into another district and read 1490 nm or different light levels without having to do anything," said Dustin Pittinger, a PRTC technician. "You can walk up, plug it in and it will tell you what frequency and show you your light levels. Also, it will break it down and give you an "X" if it's too low or a green check if it's good! This meter takes the guesswork out."

In another scenario, partners of PRTC used independent contractors to help with xPON network installations by hanging and burying cable to fiber splicing for a recent subscriber expansion. When testing these new installations for continuity, splicing consistency was found to be a big issue and there was often little light to no light reaching the customers' homes. By using FlowScout, PRTC found that the measurements initially reported by contracts did not match actual light levels. This tool allowed technicians to verify these signal losses and document results quickly and easily.

