

## Connecting communities

Maximize BEAD and RDOF investments with testing gear that ensures broadband networks are built right the first time

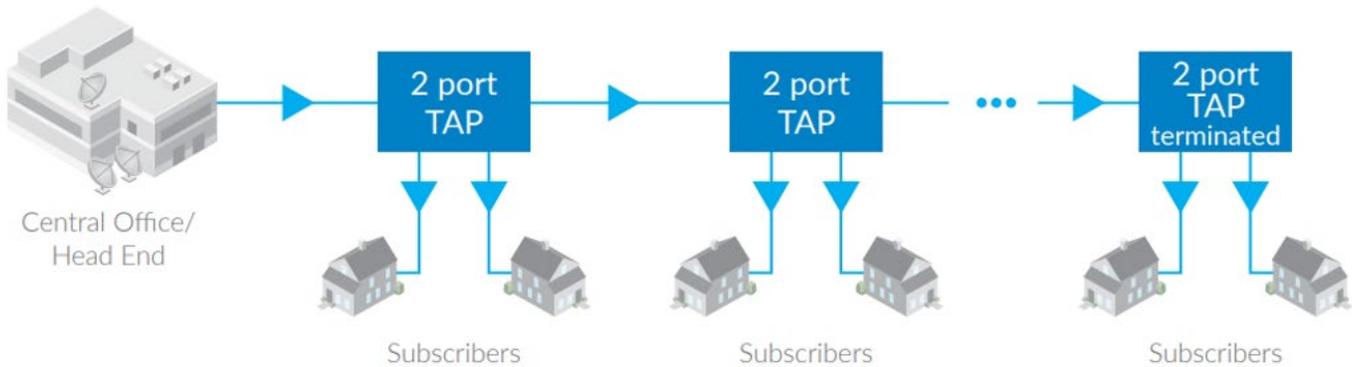


## Background

**Rural Electric Cooperatives** and their optical network design and test partners are gearing up to deploy thousands of miles of new fiber cables under NTIA's Broadband Equity Access and Deployment (BEAD) Program and FCC's Rural Digital Opportunity Fund (RDOF). The objective: to expand broadband access to underserved communities across the United States.

## New passive optical network (PON) architectures

To serve residents in sparsely populated rural areas cost-effectively (i.e., as an alternative to traditional centralized or cascaded PON), a new PON architecture has been developed: distributed tap. This and other PON types can be characterized with EXFO's iOLM.



## About the FCC's Rural Digital Opportunity Fund

The RDOF aims to ensure that consumers in rural areas have access to modern broadband networks at rates that are comparable to those found in urban areas.

The FCC demands testing at the service level to verify that speed and latency requirements are met. Service-level quality depends on good physical infrastructure, which can be certified using the iOLM, an optical fiber multimeter (OFM) and fiber inspection scopes.

Reference: [www.fcc.gov/auction/904](http://www.fcc.gov/auction/904)

PERFORMANCE TIER	SPEED
Minimum	≥ 10/1 Mbit/s
Baseline	≥ 25/3 Mbit/s
Above baseline	≥ 100/20 Mbit/s
Gigabit	≥ 1 Gbit/s / 500 Mbit/s

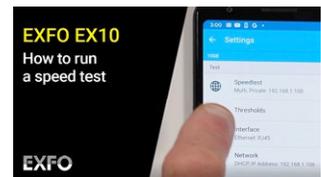
LATENCY	REQUIREMENT
Low latency	≤ 100 ms
High latency	≤ 750 ms & MOS of ≥ 4

Source: The Federal Communications Commission (FCC)

# Test solutions for BEAD and RDOF projects

SOLUTION		WHEN TO USE IT	WHY?
 <p><a href="#">FTBx-730D OTDR with intelligent Optical Link Mapper (iOLM)</a></p>	<ul style="list-style-type: none"> <li>• Characterize and troubleshoot through splitters of all PON architectures.</li> <li>• Generate reports right from the field.</li> </ul>	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Expansion</li> <li>• Advanced maintenance</li> </ul>	EXFO's unique, proven iOLM provides accurate characterization that prevents false impairments and properly identifies performance issues, helping technicians resolve all network faults. One button push is all it takes to unleash adaptive acquisition, resulting in optimal results, clear diagnostics, and comprehensive troubleshooting guidance.
 <p><a href="#">Optical Explorer (OX1), the first optical fiber multimeter</a></p>	<ul style="list-style-type: none"> <li>• Confirm power level and verify subscriber-to-splitter link in seconds.</li> <li>• Identify most common issues impacting customer installation.</li> <li>• Generate and share reports via smartphones right from the field.</li> </ul>	<ul style="list-style-type: none"> <li>• Drop cable installation</li> <li>• Customer activation</li> <li>• Maintenance</li> </ul>	Get the instant and accurate visibility you need to improve your first-time install success rate—at the push of one button, no expertise required.
 <p><a href="#">AXS-130</a></p>	<ul style="list-style-type: none"> <li>• Complete link analysis from the ONT to the OLT through splitter(s).</li> <li>• Fast troubleshooting up to the splitter, and splitter continuity validation.</li> <li>• Spot common issues with visual fault indicator (VFL).</li> </ul>	Customer activation	Optimized display, intuitive touchscreen and ruggedized for field use.
 <p><a href="#">PPM-350D</a></p>	<ul style="list-style-type: none"> <li>• Confirm upstream and downstream power levels at the ONT.</li> <li>• Pass-through mode for ONT/ONU verification.</li> <li>• Compatible with GPON, EPON including XGS-PON</li> </ul>	Customer activation	Enables technicians to validate whether downstream signal power and upstream power burst are within network acceptable range.
 <p><a href="#">FIP-200 Connector Checker</a></p>	<ul style="list-style-type: none"> <li>• Certify connector cleanliness in one click.</li> <li>• Five-bar rating (LED lights) to quickly assess connector health.</li> </ul>	Every time a fiber connector is manipulated	Reliable and fast, makes inspection easy.
 <p><a href="#">EX10 multigigabit residential and business services tester</a></p>	Validate bandwidth speeds up to full line rate 10 Gigabit Ethernet, including GPON, XGS-PON.	Validate throughput of link under test	Handheld tester delivers fast test execution and efficient job closeout, complete with birth certificate generation.

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