



# ADTRAN RFOG SOLUTIONS

Radio Frequency over Glass or RF over Glass (RFOG) is a cost effective way to convert an RF or Hybrid fiber-coaxial (HFC) network to support Fiber to the Home or Premises (FTTH/FTTP). This conversion allows for improved reliability, lower maintenance costs and significantly increased performance all while utilizing existing headend equipment and back-office systems. RFOG simply converts the electrical RF-based signal into light and utilizes fiber as the medium to get it to the customer premises where a MicroNode converts the signal back to electrical RF.

ADTRAN brings industry revolutionizing technology to the RFOG application with cost-effective MicroNodes that are compatible with 1G- and 10G-EPON, interoperate with other RFOG vendor equipment, and provide an efficient Optical beat interference (OBI)-mitigating solution.

OBI is an artifact of RFOG that has created a challenge in performance, especially as higher bandwidth and multiple upstream channels are introduced. The ADTRAN solution utilizes an OBI-mitigating MicroNode that overcomes OBI's impact on upstream communication without the need for costly active splitters or the extensive cost, configuration, and management required to implement selectable wavelength solutions.

ADTRAN MicroNode solutions work seamlessly with both new and existing RFOG deployments. In a new deployment environment, ADTRAN RFOG MicroNodes can be used to mitigate OBI before it is a problem. In existing networks, simply replace existing standard RFOG Optical Network Units (ONUs)/MicroNodes to mitigate the OBI, improve network performance, and simplify service delivery.

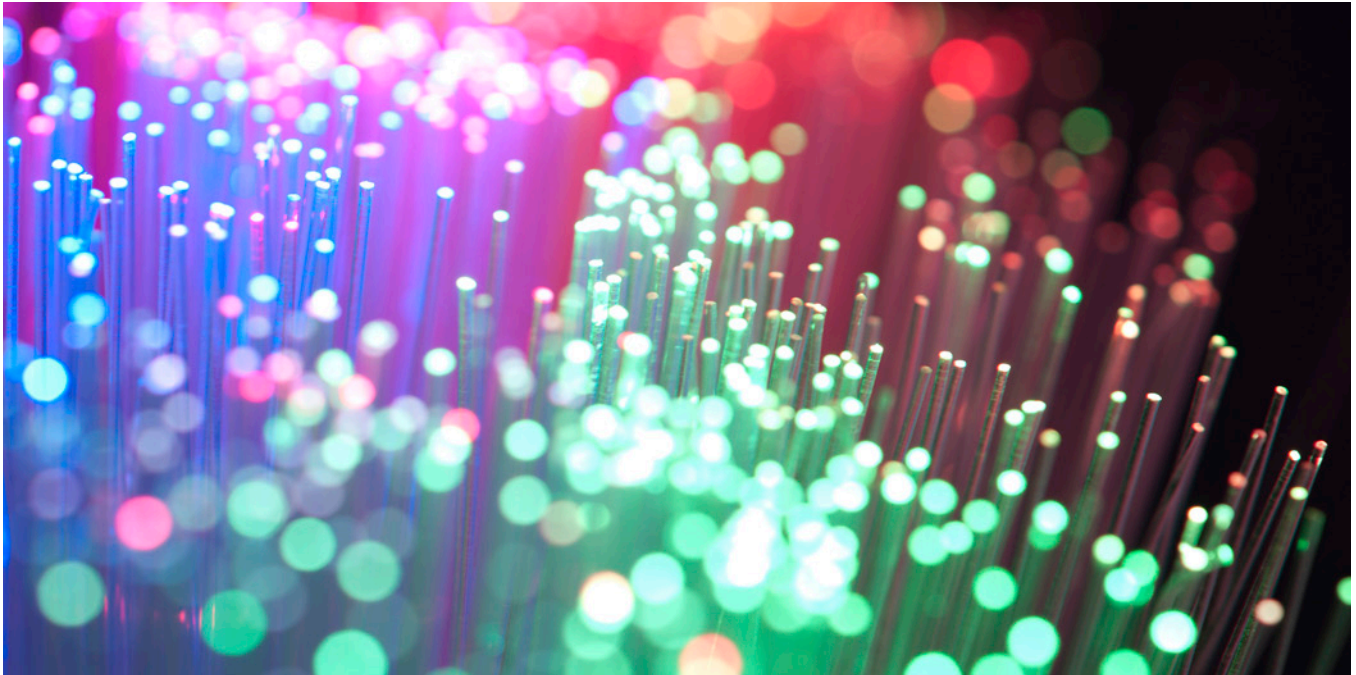
## HIGHLIGHTS

### Innovative OBI Mitigation

- Supports both DOCSIS® 3.0 and 3.1 implementations over RFOG
- Preserves high QoE due to low (1%) packet loss
- Drastically reduces initial capital outlay via distributed pay-as-you-grow architecture
- Eliminates need for active (powered) components within the outside plant

### Differentiated RFOG implementation

- Supports multi-vendor RFOG interoperability
- Both 1G-EPON and 10G-EPON compatible
- Cost effective
- Temperature hardened
- Simple to install
- Multiple powering options



**MN-1602-1: 42/1002 MHz,  
10G compatible optics, no WDM port**

- 1G/10G PON compatible (Operates without interference on a PON network)
- Ring surge (Lightning suppression)



**MN-1602-O: 42/1002MHz,  
10G compatible optics, no WDM port**

- OBI mitigated version of MN-1602-1



**MN-1612: 42/1002MHz,  
1G compatible optics**

- PON pass-through
- Ring surge (Lightning suppression)



**PS-11-12P-0500-10: Power  
Supply for RFoG MicroNodes**