Data Sheet

ADTRAN

1612

Standard RFoG Micronode with PON Pass-through

Gigabit

Low TCO

Benefits

- **Simple, plug and play micronode solution for converting Radio Frequency signals at the customer premises**
- **PON pass-through allows for easy integration with existing ONU solutions**
- **Extends the life of existing Radio Frequency headend**
- **Provides a cost effective migration path for Cable Multiple System Operators fiber deployments**
- **Compact packaging for easy installation**

Overview

Cable MSOs are deploying more fiber in their networks than ever before, but they face the challenge of executing this strategy in a cost effective manner. Minimizing upgrade cost and complexity by maintaining their headend and customer premises equipment are key factors to success.

The ADTRAN 1612 Radio Frequency over Glass (RFoG) with PON Pass-through micronode is the perfect solution for Cable MSOs who are making the transition to fiber, but are still looking to utilize the Radio Frequency (RF) signals generated by their current headend equipment. The ADTRAN 1612 provides a cost effective solution for converting these RF signals at the customer premises to useable signals that can traverse the legacy Coax wiring present in many homes.

PRODUCT SPECIFICATIONS

Optical Specifications Rx

- Distortion Performance (CNR), minimum: 48 dB
- Distortion Performance (CSO), maximum: 60 –dBc
- Distortion Performance (CTB), maximum: 65 –dBc
- Distortion Performance Note (CNR): 50–552 MHz CW Analog; 552–1002 MHz digital, -4 dBm receive
- Distortion Performance Note (CSO): 50–552 MHz CW Analog; 552–1002 MHz digital, 0 dBm receive
- Distortion Performance Note (CTB): 50–552 MHz CW Analog; 552–1002 MHz digital, 0 dBm receive
- Input Power, maximum: 0 dBm
- Input Power, minimum: -6 dBm
- LED Indicator, green: Optical input power
- Technology Type: Passive optical network (PON) compatible I RF over glass (RFoG)
- Wavelength, maximum: 1565.00 nm
- Wavelength, minimum: 1540.00 nm

RF Specifications Rx

- Operating Frequency Band: 54–1002 MHz
- Flatness: ±2.0 dB
- Output Level, typical: 17 dBmV @ 550 MHz, 77 dBµV @ 550 MHz
- Return Loss, minimum: 16 dB
- Tilt Across Frequency Band, typical: 5.00 dB

Optical Specifications Tx

- Laser Type: Distributed feedback (DFB) Class 1
- Technology Type: Passive optical network (PON) compatible I RF over glass (RFoG)
- Wavelength, nominal: 1610.00 nm
- Dynamic Range at NPR, minimum: 15 dB @ 30 dB
- Laser Activation Time: 1.0 µs
- LED Indicator, green: Upstream RF activity
- Output Power, typical: 3 dBm
- Wavelength Range, pass-through port, maximum 1500.00 nm
- Wavelength Range, pass-through port, minimum 1260.00 nm

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PRODUCT SPECIFICATIONS (continued)

Rf Specifications Tx

- **Flatness:** ±2.0 dB
- **Input Activation Level, typical:** 14.000 dBmV I 74.000 dBµV
- **Input Power Range, typical:** 20–45 dBmV I 80–105 dBµV
- **Operating Frequency Band:** 5–42 MHz
- **Return Loss, minimum:** 16 dB

Electrical Specifications

- **Electrical Safety Standard:** CE I IEC 60825-1 I TüV I US FCC Part 15B
- **Power Consumption at Voltage, maximum:** 2.5 W @ 12 Vdc
- **Surge Capability Test Method:** IEEE C62.41-A3 (6 kV, 200 A, Ring wave) on both ports
- **Voltage Range:** 8.5–18 Vdc

Environmental Specifications

- **Operating Temperature:** -40 ºF to +149 ºF (-40 ºC to +65 ºC)
- **Relative Humidity:** 5%–95%, non-condensing

Mechanical Specifications

- **LED Indicator, green:** dc input power
- **Optical Port Interface:** SC/APC Female
- **RF Port Impedance:** 75 ohm
- **RF Port Interface:** F Female

General Specifications

- **Application:** Indoor I Outdoor (enclosure required)
- **Warranty:** One year

Dimensions

- **Height:** 0.97 in I 24.64 mm
- **Length:** 4.15 in I 105.41 mm
- **Net Weight:** 0.40 lb I 0.18 kg
- **Width:** 3.53 in I 89.66 mm

Regulatory Compliance/ Certifications

- ISO 9001:2008

ORDERING INFORMATION

Equipment	Part No.
ADTRAN 1612 Standard RFoG Micronode with PON Pass-through	**1721612F1**
External Power Supply (sold separately)	**172PWRF1**

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