

## TIN40R-1200 Optical Node (Receive Only)

### Features

- Full forward bandwidth up to 1220 MHz
- 5-42 MHz reverse, 2 Mw DFB laser
- 1550 nm reverse optical wavelength
- High RF output range; 40 dBmV stable within wide optical input range (-8 to +4 dBm) with AGC feature
- GaAs E-pHEMT push-pull technology for high and stable output level with very low power consumption
- Optical input test point
- LED display of optical levels
- External powering (11-35 Vdc) or remote powering over coax line via power inserter
- Surge protection (6kV) at RF output
- SCTE compliant F type connectors
- Diecast aluminum housing for excellent heat dissipation and RFI shielding



The TIN40R-1000 is a new, 1310 nm two-way fiber optic node for CATV, SMATV, FTTx, MDU, or private business applications. The TIN40R-1000 has a wide optical input bandwidth range from 1200 to 1600 nm making it ideal for either 1310 nm or 1550 nm systems. The fiber optic receiver has an AGC circuit to maintain an RF output over a -8 to +4 dB optical input level. The high RF output level of 40 dBmV eliminates the need for a separate RF amplifier for distribution. A 0-18dB gain control makes system balancing easy without external pads. The GaAs E-pHEMT push-pull hybrid provides superior performance with low distortions. With a 2 Mw DFB reverse band optical laser, the node is ideal for 2-way systems where reverse channels or modem data is present. The node uses an external 12VDC power supply (included) which can be connected directly or diplexed on the RF output cable for remote powering. The optical input is a SC/APC connector and features a multicolor LED for input level reference. Also featured is an internal LED display showing optical levels.

# TIN40R-1200

## Specifications

### Forward (Down-Stream)

#### Optical Features (RX)

Optical Input Wavelength	1200...1600 nm
Optical Input Range	-6...+2 dBm
Optical Input Level Test Point	-6...+2 dBm (shown on digital display)
Optical Input Level Indicator	Green LED (> -8 dBm)

#### RF Features

Forward Bandwidth Options	54 - 1220 MHz / 102-1220 MHz (field replaceable plug-in duplex filters)
Gain Tilt	0 dB
Slope Control (input)	0...20 dB (with plug-in JXP controllers)
Stability	+/- 2 dB
Return Loss	Typ. -16 dB (Max. -14 dB)
Test Point	- 20 dB
Link Performance (-1 dBm optical input power, NTSC77 channel, OMI=%3,5)	
Output Level	35/48 dBmV (tilted)
CNR	-51 dBc
CTB	-67 dBc
CSO	-67 dBc

### Return (Up-Stream)

#### Optical Features (TX)

Transmitted Wavelength (TX Laser)	1310 nm, 1550 nm DFB, ITU CWDM (1270 nm...1610 nm)
Optical Output Power	2 mW (3 dBm)
Test Point	-6...+2 dBm (by digital display)
Optical Output Level Indicator	-/+ 0,25 mW (shown on digital display)

#### RF Features

Reverse Bandwidth Options	5 - 42 MHz/ 5-85 MHz (field replaceable)
Flatness	+/- 1.5
Input Level Control	0...20 dB dB (with plug-in JXP controllers)
Test Point	- 20 dB
Return Loss	-16 dB

#### Link Performance (6dB link loss, 10 km fiber + optical attenuator)

Optimum Total Input Level	16 dBmV
NPR Peak / Input Level	52,9 @ 29 dBmV tot
TX Input Level (@ NPR=-41dB)	3-24 dBmV tot
TX Input Level (@ NPR=-38dB)	2-26 dBmV tot

### General Features

Connectors	1 F type RF In/Out and 1 F Type Test Reverse
Surge Protection (in/Out)	IEEE62.41 Cat.A3 (6kV,200A)
Powering	11-36 VDC with wall type external power supply
Power Consumption	8 Watt
Impedance	75 ohm
Operating Environment Temperature	-30...+55 C°
Housing	IP54 class protection, diecast housing
Weight	1,2 /2.6 (kg / lb)
Dimension	19,5 x 13,6 x 7,5 / 7-5/8 x 5-3/8 x 3 (cm / inch)