

YTOR175ST-RFOG-1A5 FTTB RFoG Optical Node OBI FREE



RFOG Node series are bidirectional optical receivers supporting RFOG mode. The upstream output optical wavelength can be set as CWDM standard to realize OBI Free.

4 groups of wavelengths are optional: 1450, 1470, 1590, 1610nm, each group can be adjusted by 4 wavelengths with an interval of 0.5-1nm. Total 16 different wavelengths.

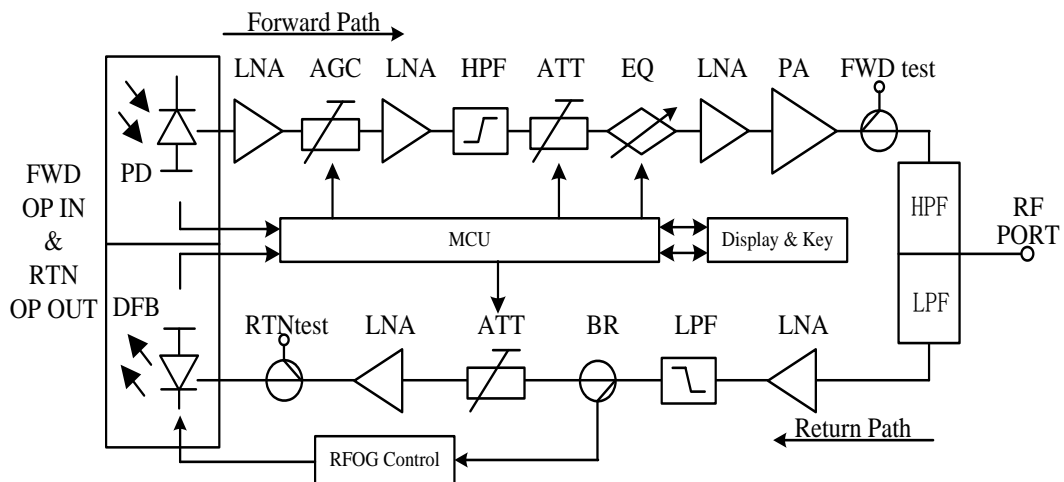
Frequency Range: 5~85/110~1218MHz, support update to (5~204/258~1218MHz).

Support optical AGC, and control range is 0 ~ -5/-6/-7/-8dBm adjustable.

Adopt electric adjusting mode for both EQ and ATT circuit, nixie tube display.

Support DOCSIS3.0 and DOCSIS3.1 system and OBI Free.

Block diagram



CWDM RFOG Node (OBI Free)		
DS Optical Receiver Input Wavelength	1540nm-1560 nm.	
Optical AGC Range	0~-5/-6/-7/-8 dBm Lower limit can be selected through the menu	
RF Bandwidth	110~1218 MHz (Optional replacement diplexer & filter upgrade to 258~1218 MHz for DOCSIS 3.1)	
Gain Control	0~18 dB, step 1dB	
Slope Control	0~12 dB, step 1dB	
Flatness	±1.0dB @110~862 MHz ±1.5dB @110~1218 MHz	
Equivalent Noise Current	<6 pA/rt(Hz)	
Photo-diode Sensitivity	>0.8A/W	
FORWARD PERFORMANCE		
CENELEC 42 channel loading, RF Output Level : 108 dBuV with EQ 6dB 102dBuV at 119.25 MHz and 108dBuV at 855.25 MHz OMI = 3.5% per ch.	CNR	>44 dB, -5dBm input power
	CSO	-60 dbc, 0dBm input power
	CTB	-60 dbc, 0dBm input power
Channel Loading Full Digital Load 254~1218 MHz QAM256 RF Output Level : 108 dBuV with EQ 8dB 100dBuV at 254MHz and 108dBuV at 1218MHz OMI = 3,5% per ch.	MER	40 dB. -5dBm and 0dBm input power
	BER	10^{-9} post FEC, -5dBm and 0dBm input power
Upstream Transmitter	DFB laser with Burst and CW mode.	
Frequency Range	5~85 MHz (Optional replacement diplexer & filter upgrade to 5~204 MHz)	
Flatness	±1.0dB	
Gain Control	0~18 dB, step 1dB	
Optical Output Power	3.0±1dBm	
Upstream Optical Transmission Wavelength	CWDM / 1450-1470-1590-1610 nm. Each CWDM wavelength can be divided into 4. There will be 16 wavelengths to be set to be OBIfree.	
US OBI FREE TEST		
US CER (Codeword error rate)	<% 0,01	
US SNR	>35 dB.	
The wavelengths of the Optical Spectrum Analyzer will be monitored during the test. The difference between the wavelengths during the test: See Values Min 165 pm	Min. 165 pm.	
US PERFORMANCE TEST		
MER	38 dB	
BER	10^{-9} post-FEC	
US OMI LEVEL		
RF input level for 15% OMI	75 dBμV	

NPR TEST - DYNAMIC RANGE	
Dynamic Range	16 dB @36 dB CNR, BER=10 ⁻⁹ post-FEC
GENERAL FEATURES	
Protection Class	IP41
Rf Connector	F-Female
RF Return Loss	EN 50083/3 Table 1 Class B
Test Points Flatness	±1.5 dB
Optical Connectors	SC/APC
Voltage Range	220V AC
Surge protection RF Ports	>4 kV (EN61000-4-5, 1,2/50 μs pulse)
Power Consumption	18W
Tx Turn On/Off time	According to SCTE standards
Operation temperature range	(-20~+55)°C