

GWR1000 Universal Optical Node



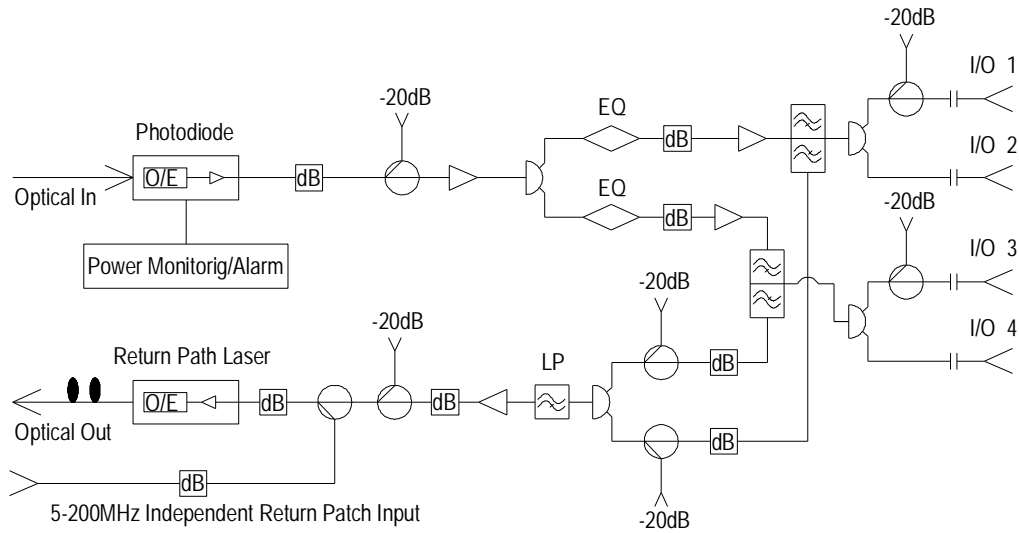
GWR1000 optical node provides network operator the flexibility to fulfill network need and optimize network source. Both forward path receiver and return path transmitter have the same modular design for easy field installation and maintenance. The optical power indicator and RF test port on the module assist the operator checking the node status. User-friendly cover board indicates the main functions of the node. The standard outputs of GWR1000 optical node are 2 independent RF ports and additional 2 split ports can be added upon request.

With high quality FP laser or DFB laser, the return path transmitter module set up a reliable return path optical link. User can power the GWR1000 by 220V AC or 60V AC.

Features:

- | 1550nm/1310nm dual wavelength
- | 862MHz GaAs technology and RF output up to 48dBmV
- | 1000MHz Optional
- | Plug-in diplexer filter, slope circuit, attenuation circuit
- | 2 independent RF ports with or without 2 additional split outputs
- | All-in-one design of return transmitter module for easy upgrade
- | -20dB test ports in forward and return module
- | AC ~220V or ~60V power supply with surge and lightning protection
- | Independent 60V AC Power Input Port

Block Diagram



Specifications:

Electronic parameters

Item	Forward	Return	Notes
Frequency range (MHz)	** -860/1000	5-**MHz	30/42, 42/54, 65/87 optional
Flatness (dB)	±0.75	±0.75	
Reflection loss (dB)	≥16	≥16	
Amplifier gain (dB)	26/30/34	0/16/20	Flat, 4 outputs
Input level (dBmV)	-	15 ~ 25	
Noise power rate (dB)	-	NPR ≥ 15	DFB Laser
Slope (dB)	0~12	0~10	2dB step adjustment
Test port level (dB)		-20	
Test port frequency response (dB)		±1	
Max output level (dBmV)		≥46	
Working voltage (V/DC)		+24	
Max. AC current pass (A/AC)		15	Max input current pass for 60V power supply
Level adjustment (dB)		0~20	1dB step or continuous adjustment
Internal RF connector		SMB connector	75Ω coaxial cable
Output RF Connector		-5 connector	
Output impedance (Ω)		75	
Independent return bandwidth (MHz)		5~200	
Power Consumption (W)		≤35	
Power Supply (V)		AC: 90~265 or 35~95	Customer Select
Humidity		Max. 95%, non condensation	
C/N (dB)		≥51	Test conditions below

C/CSO (dB)	≥62	Test conditions below
C/CTB (dB)	≥67	Test conditions below
Environmental temperature	-40~+85°C	
Dimensions (mm)	325(length)×220(width)×128(height) *including ports	
Weight (Kg)	Max. 4.5 Kg	

Optical parameters:

Item	Parameter	Notes
Forward Path Receiver Module		
Input optical power (dBm)	-8 ~ +3	
Suggested range (dBm)	-4 ~ +2	
Reflection loss (dB)	>45	
Wavelength range (nm)	1100 ~ 1600	
Connector type	FC/APC or SC/APC	Customer select
Fiber type	Single mode	
Optical Responsivity	0.85A/W	1310nm
Optical power test voltage	1V/mW	
Return Path Transmitter Module		
Optical wavelength	1310±20nm	CWDM Wavelength Optional
Optical power test voltage	1V/mW	
Output optical power	1 mW	
Connector type	FC/APC or SC/APC	Customer select
Laser type	FP laser or DFB laser	Customer select

Test condition:

- .. Forward path: input 59 channels Matrix PAL-D signal to standard optical transmitter and measure the optical receiver C/CTB, C/CSO and C/N in conditions of -1dBm optical input (10km fiber + optical attenuator) and 46 dBmV RF output (with 6dB slop board).
- .. Return path: return path specifications are measured in transmitter and receiver composed link.

Ordering Information

GWR1000-A-BC-D-E-FG/HI Optical Receiver

- A: R for the 19" rack mount version with one RF output
 - 2 for 2 independent RF outputs
 - 4 for 2 independent RF outputs with 2 split ports
- BC: 60 for 60V power supply
 - 220 for 220V power supply
- D: none for 860MHz Bandwidth
 - 1000 for 1000MHz Bandwidth
- E: FC for FC/APC connector
 - SC for SC/APC connector
- FG/HI: none-forward only
 - XT- reverse path reserved
 - 30/42- bandwidth split
 - 65/87- bandwidth split

GWT1000-AB-CD-EF Return Transmitter Module built in GWR1000 node

- AB: 10 for 1.0 mW optical output power
- CD: FC for FC/APC connector
 - SC for SC/APC connector
- EF: none for FP laser
 - DFB for isolated DFB laser (Default: 1310nm, CWDM wavelength optional)

Accessory Options

- 001: Attenuator Plug-in (0~20dB Option, 1dB step)
- 002: 0~20dB adjustable attenuator plug-in
- 003: Fixed value equalizer plug-in (0~20dB Option, 1dB step, 1000MHz)
- 004: 0~20dB adjustable equalizer plug-in
- 005: Reverse Equalizer plug-in (0~10dB option, 2dB step)
- 006: Diplexer (30/42, 40/52, 42/54, 55/70, 65/87)