



The Titan H series-EDFAs are low cost, high quality high powered optical amplifiers designed to extend the range of 550nm optical transmission networks. They adopt the latest cladding pump with photonic integration technology to yield high optical amplification, while maintaining low noise to provide superior transmission of video, voice and data. These fully self contained 2RU rack mounted amplifiers may be customized with internal WDMs and splitters allowing support of FTTx (E-PON, G-PON, RFoG) or HFC networks without the need for shelves of WDM couplers and a mountain of optical jumpers. H-EDFAs may be configured to support 28 to 37dBm total optical power, 4 to 32 output ports and AC/DC power making them the most flexible products of their kind. Advanced management features such as input/output power monitoring, user friendly front panel display, and SNMP (SCTE-HMS MIBs), remote management with alarms makes the H series-EDFA an ideal FTTH companion product for head-end and remote hub applications.

Features and Benefits

- Low noise, high performance for the highest video quality.
- Very stable, high quality design to insure years of trouble free service.
- Front access optical connections for easy installation, moves and changes.
- Remote management using SNMP allows easy integration to standard management systems.
- Front panel controls for status at a glance. No terminal needed!
- Built-in WDMs to minimize optical loss and improve reliability.
- AC or DC powering to optimize the power system for each installation.
- Redundant power supplies for high reliability and to minimal downtime.
- Standard 19" or 23" rack mounted for simple installation.

Applications

- GPON/EPON RF overlay access networks
- Inter-office video transport networks
- RFoG access networks
- HFC networks

Generic specifications

General

Dimensions W x H x D	19" x 3.5" x 14.5" (2 RU rack mount)
Weight	30lbs. (dependant on power options)
Optical connectors	SC/APC, LC/APC
Cooling	Fan cooled (Hot-swappable)

Optical Performance

Wavelength	1540nm to 1560nm
Input power	0dB to +10dB (3dB typical)
Total output power	+28dBm to +37dBm
Output port split	4, 8, 16, 32
Noise figure	5.5dB typical @ +3dB input
Output power stability	+/- 0.2 (0 to 50C)
Pump leakage	<-30dB
Return loss	>55dB

Electrical Requirements

AC power	90 - 265VAC, 50/60 Hz (Universal AC)
DC power (optional)	-36 to -60VDC (fuse for 3Amp)
Power consumption	80 Watts

Environmental

Operating temp range	0 to +50 °C
Storage temp range	-40 to +85 °C
Humidity	5 to 95% (non-condensing)

Management

Local display	Backlit LCD with menus, Status LEDs
Local control	Menu keys, laser switch
Configuration	RS232/485 terminal on front panel
Remote monitoring	RJ45/LAN with SNMP on front panel

WDM option specifications

HFC

- **1550** forward, **1310** return
- 1310 insertion loss: **1.5dB** max

The **HFC WDM** splits off the 1310nm return signal and directs it to the return connector on the front panel. The EDFA power is increased to compensate for the WDM loss insuring the output level is maintained as ordered.

RFoG

- **1550** forward, **1610** return
- 1610 insertion loss: **1.5dB** max

The **RFoG WDM splits** off the 1610nm return signal and directs it to the return connector on the front panel. The EDFA power is increased to compensate for the WDM loss.

PON

- **1550** forward, **1490/1310** PON
- OLT insertion loss: **1.5dB** max

The **PON WDM** inserts the EDFA output onto a BPON, EPON or GPON network. The PON wavelengths are directed to the OLT connector on the front panel. The EDFA power is increased to compensate for the WDM loss.

PON + RFoG

- **1550** forward, **1490/1310** PON, **1610** return
- OLT insertion loss: **1.5dB** max
- 1610 insertion loss **1.5dB** max

The **PON + RFoG WDM** inserts the EDFA output onto a BPON, EPON or GPON network. It also separates the 1610 return wavelength. The PON and RF return signals are directed to the OLT and return connectors on the front panel. The EDFA power is increased to compensate for the WDM loss.

Ordering Information

(Stand-alone, 2-RU High-power, EDFA optical amplifier)

Titan H series EDFAs can be ordered and customized to your specific needs as follows:

THEDF-pp-pc-wdm-ps-r

- pp** = Output power/port (dBm) (**13, 16, 18, 21 or specified**)
- pc** = Port count (**4, 8, 16, 32 or specified**)
- wdm** = Integrated WDM (**None, HFC, RFoG, PON, PON + RFoG**)
- ps** = Power supply type (**AC, DC**)
- r** = Redundant power supplies (**None, R**)

Mechanical Drawings

