

OFA

EDFA for WDM, SDH/SONET

Main Features

- Protocol Transparent
- Automatically Control for Gain or Power
- Gain Flattened for DWDM
- Filter Single Channel Type for SDH/SONET
- Output Tilt Controlled optional
- Max saturation output power up to 23dBm
- Booster, in-line, Pre-amplifier and C/L band
- Mid-stage for DCM optional
- Variable gain optical amplifier for smart transmission system
- Support Optical supervisor channel (OSC)
- Transient Suppressed
- Support CLI, Telnet, SNMP, GUI NMS Danriver iCEO C/S

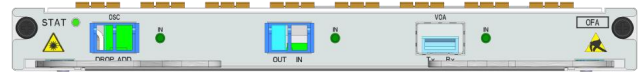


Figure 1: OFA Card

Benefits

- High quality and reliability
- Fiber Extension, optical amplifier to achieve greater distances
- Managed service platform CTX6600
- Modular and cost-effective for future growth and maintenance access

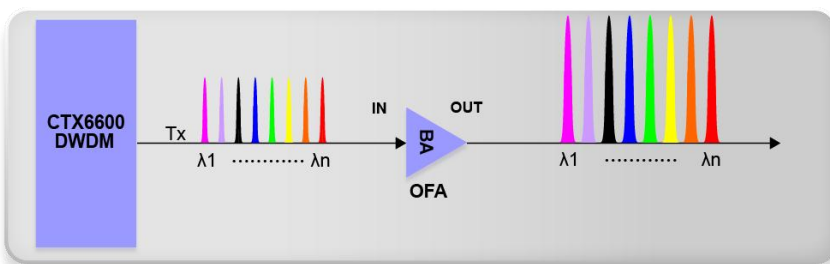
Applications

- Amplify optical power
- Amplify C and L band wavelengths
- Extend transmission distance for long haul
- SDH/SONET and WDM transmission system
- CATV use with 1xN splitter

Description

Optical Fiber Amplifier OFA board as part of CTX product family, is pluggable card integrated one Smart model amplifier, MSA footprint. In this amplifier board, higher power and gain flattening filter are available, integrated into single or multi-wavelength transmission systems, and are plug-and-play as part of SONET, SDH and WDM equipment. Most of applications for SDH/Sonet and WDM is point-to-point amplification. Distance can go as much as 300 km without mid-span repeater, application diagram below:

OFA block diagram



Technical Specifications

Common Features	Value		
Wavelength Range	C band: 1528 to 1567 nm L band: 1570 nm to 1605 nm		
Gain Flatness at Specified Gain	±0.5dB Typical		
Maximum Output Power	23dBm		
Input/Output Detection Range	25 dB min. ,35 dB max		
Signal Detection Accuracy (Within the Range)	0.3dB Typical		
Variable gain range(specified)	13~33dB		
Flat gain range(specified)	10~15dB		
Signal spontaneous noise figure	5dB (typical)		
Optical Return Loss(at input and output ports)	30 dB min.		
Polarization Mode Dispersion	0.3 ps typ. 0.5 ps max.		
Polarization Dependent Gain	0.2 dB typ. 0.5 dB max.		
Control Modes	AGC, APC or ACC		
Transient Suppression	Standard		
Transient Overshoot (15 dB Drop)	0.5dB Typical		
Transient Settling Time	1ms		
Application Specific	Booster	Inline	Pre-amplifier
Minimum Input (dBm)	-20	-30	-40
Maximum Input (dBm)	Maximum Output - Specified Gain		
Minimum Output (dBm)	Minimum Input +Specified Gain		
Maximum Output (dBm)	≤23	≤20	≤13
Gain (Typical, dB, see note)	5 ~ 15	10 ~ 25	15 ~ 35
Noise figure	6	5	4.5
ASE Filter (optional)	N/A	N/A	100G /200G
Mid-stage Loss (optional)	From 3 to 10 dB customizable		
Performance Monitoring			
Visual Indicators	LED status indicators for: input/ouput ports,current, STAT of line card		
Optical Monitoring	IN/OUT Optical Power, status etc		
OAM	Event logs Alarms		
Physical feature			
Dimensions(HxWxD mm)	20x192x223		
Weight (kg)	0.4		
Package options	Plug-in Card		
Platform	CTX6600 I/II/V		
Slot assignment	Any slot except for Slot 1		
Environment			
Operating Temperature	-5°C to 50°C		
Storage	-20°C to 85°C		
Humidity	5% ~ 85% RH non-condensing		
Power Supply			
Power Input	DC -48V input from backplane		
Power Consumption	< 30W		
Compliance			
Standards	RoHS 5/6		

The specifications and information within this document are subject to change without further notice. All statements, information and recommendations are believed to be accurate but are presented without warranty of any kind. Contact Danriver for more details.
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NOTES:

- 1) Customer specified output power shall be less or equal than above specification.
- 2) Gain for single channel amplifier is used as reference only for optimization purpose. Customer can set gain within the amplifier control limit, taking into account gain and noise figure trade-offs.