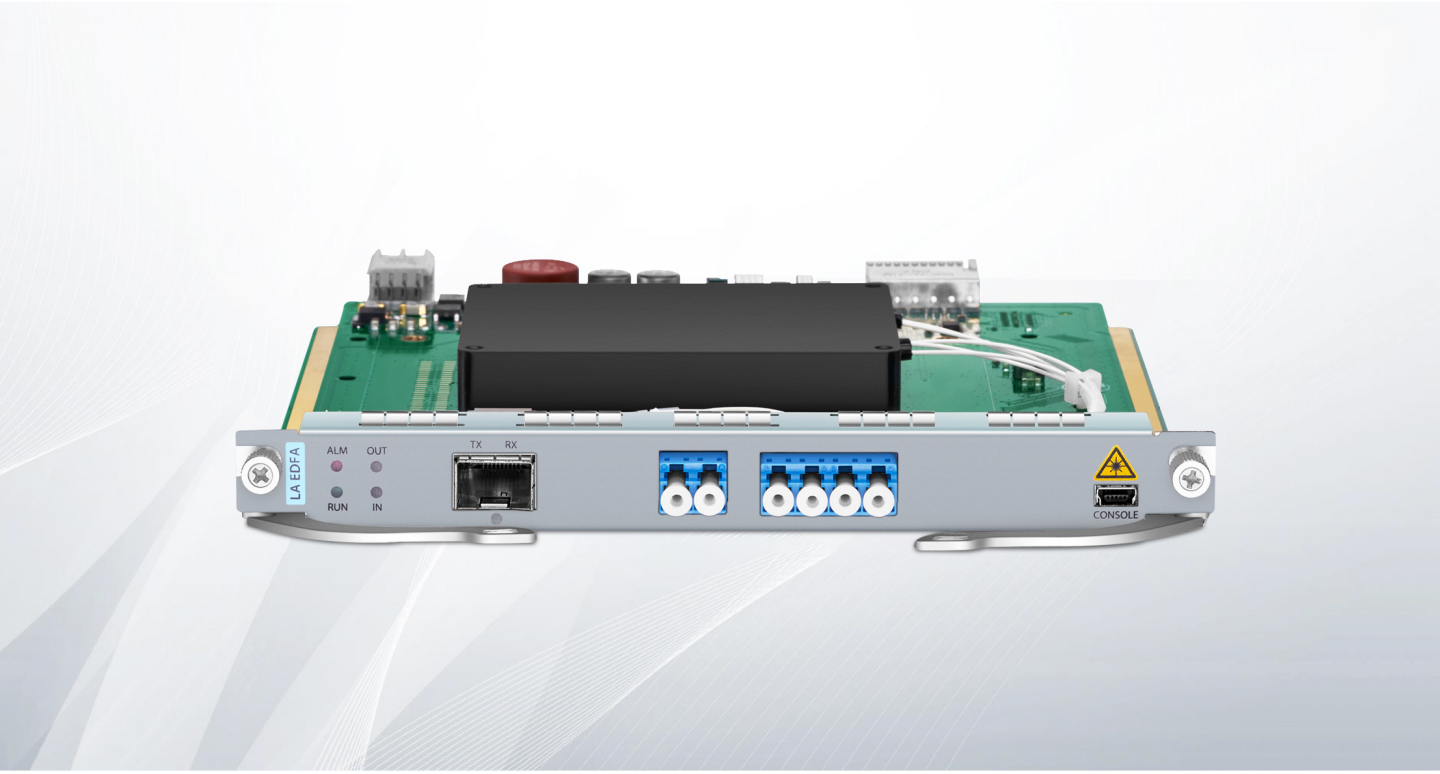
20dBm Output In-line DWDM EDFA Amplifier, 25dB Gain, LC/UPC

Pluggable Module for M6200 Series Multi-Service Transport System



Description

M6200 series variable gain flattened single-stage line optical amplifier can achieve all-optical amplification of optical signals, compensates for the insertion loss of optical devices or the attenuation loss of optical fiber lines in the DWDM system. And it has the characteristics of stable output power and low noise and low power consumption. It usually operates in the middle point of the optical link. Its kernel components are high availability pump laser and high-performance gain flattening filters.

It is designed for all network segments (access, metro, regional and long haul) and network applications (telecom, cable, and enterprise).

Features

- Support up to 40ch DWDM wavelengths in the C-band
- Variable gain at dynamic range of ±5dB
- Embedded OSC for remote management and topology detection
- Monitor port for output power monitoring
- Support external SFP VOA for adjusting the line power
- Support AGC and APC operation modes
- Supports performance monitoring and alarm processing functions.
- Highly integrated with M6200 series management platform

Application

- C-band DWDM long haul transmission
- Metro & DCI Networks and WDM, OTN, SDH/PDH Systems

Product Specifications

Parameter	Description
Amplifier Type	In-Line Amplifier
Operation Wavelength	1259nm~1561nm (C-Band)
Optical Gain	25dB
Dynamic Gain Range	±5dB
Total Input Power	-32dBm~0dBm
Saturated Output Power	≤20dBm
Noise Figure	<6.0dB
Gain Flatness	<1.5dB
Polarization Dependent Loss	<0.5dB
Gain Reponse Time	<10ms
Operation Mode *	AGC (Automatic Gain Control) APC (Automatic Power Control)
Optical Connector	LC/UPC
Monitoring Port	OSC/MON port
VOA Port *	SFP VOA module
Management Type	WEB, SNMP v2
Housing	Pluggable module (Occupies 1-slot in M6200 series managed chassis)
Operating Temperature	-10 to 50 °C
Storage Temperature	-20 to 80 °C

* **Note**:

1. The operation mode of EDFA can be switched between AGC and APC via NMS management softwore.
2. SFP VOA module is an optional product, which is not included in DWDM EDFA. Customers can buy it on demand.

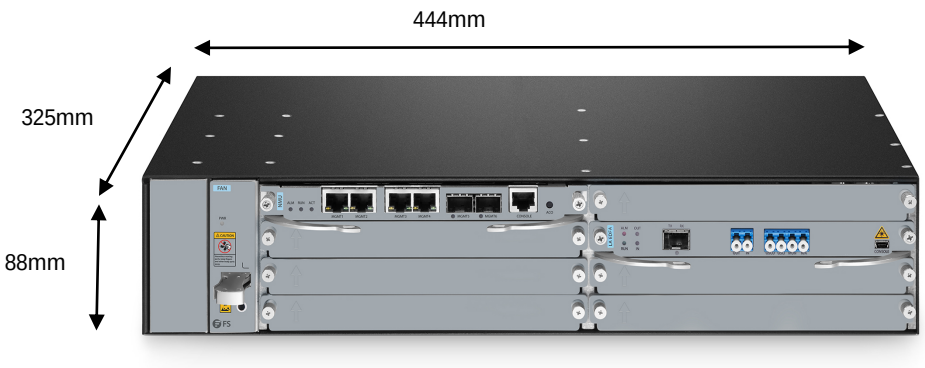
Applications

EDFA is needed to amplify the signal in long-haul transmission. In-Line Amplifier (LA) EDFA is designed to amplify all optical signals and compensate the insertion loss of optical devices or attenuation loss of optical fiber lines in DWDM system. It is usually placed at the middle end of DWDM transmission link.

Matching Chassis

M6200 series DWDM Pre-Amplifier EDFA pluggable module occupies one slot in M6200 series managed chassis.

- Width: 444mm (17.48")
- Height: 88mm (3.46")
- Depth: 325mm (12.80")



Ordering Information

Mux Demux & OADM		
DWDM MUX DEMUX	FMU-D402160M3	40 Channels 100GHz C21-C60, with 1310nm and Monitor Port, 3.5dB Typical IL, LC/UPC, Dual Fiber DWDM Mux Demux, 1U Rack Mount #35887
	M6200-D2160M	40 Channels 100GHz C21-C60 Dual Fiber DWDM Mux and Demux with Monitor Port, Pluggable Module, LC/UPC, Integrated with M6200 Series Managed Chassis #120424
	FMU-D162136EM3	16 Channels 100GHz C21-C36, with Monitor, Expansion and 1310nm Port, LC/UPC, Dual Fiber DWDM Mux Demux, 1U Rack Mount #72430
	FMU-MD085360EM3	CWDM/DWDM Hybrid Solution, 8 Channels 100GHz C53-C60, with Monitor, Expansion and 1310nm Port, LC/UPC, Dual Fiber DWDM Mux Demux, FMU Plug-in Module #72433
CWDM MUX DEMUX	FMU-C182761M	18 Channels 1270-1610nm, with Monitor Port, LC/UPC, Dual Fiber CWDM Mux Demux, 1U Rack Mount #33489
	FMU-MC084761EM	8 Channels 1470-1610nm, with Monitor and Expansion Port, LC/UPC, Dual Fiber, Low Insertion Loss CWDM Mux Demux, FMU Plug-in Module #78163
LWDM MUX DEMUX	ABS-L042930A	4 Channels 1295.56-1309.14nm, Single Fiber LAN-WDM Mux Demux, Side-A, ABS Pigtailed Module, LC/UPC #97782
	ABS-C062737A	6 Channels 1271-1371nm, Single Fiber CWDM Mux Demux, Side-A, ABS Pigtailed Module, LC/UPC #97784
OADM	DOADM-DF	Customized Dual Fiber & Single Fiber DWDM OADM #70427
	COADM-DF	Customized Dual Fiber & Single Fiber CWDM OADM #70425
Chassis	FMU-1UFMX-N	FMU 2-Slot 1U 19" Rack Chassis Unloaded, holds up to 2 Units FMU Plug-in Module #30408
	FUD-1UFMX-N	FUD 4-Slot 1U 19" Rack Chassis Unloaded, holds up to 4 Units FUD Plug-in Module #106578
TRANSPONDERS & MUXPONDERS		
8x 200G	M6800-TSP16	16x 100G QSFP28 to 8x 200G CFP2 OTN Managed Transport Platform#111053
100G/200G	M6500-TMXP5	2x 100G QSFP28/4x 40G QSFP+ to 1x 200G CFP2 Transponder/Muxponder#111049
	M6200-OEO100G	3 Channels 40G & 100G WDM Transponder, QSFP28 to QSFP28, QSFP+ to QSFP+#129994
10G	M6200-OEO10G	5 Channels WDM Transponder (Converter), 10 SFP/SFP+ Slots#107365
Chassis	M6500-CH2U	2U Managed Chassis Unloaded Platform, Supports 2x 200G Transponder/Muxponder #96454
	M6500-CH5U	5U Managed Chassis Unloaded Platform, Supports 6x 200G Transponder/Muxponder #111050
	M6200-CH2U	2U Managed Chassis Unloaded Platform, Supports 7x Mux/DEMUX/EDFA/OEO/OLP/DCM Cards #107371
	M6200-CH5U	5U Managed Chassis Unloaded Platform, Supports 15x MUX/DEMUX/EDFA/OEO/OLP/ DCM Cards #111052

OPEN LINE SYSTEM		
Amplifiers	M6200-25PA	25dB Gain DWDM EDFA Pre-Amplifier, 16dBm Output#107367
	M6200-20BA	20dBm Output DWDM EDFA Booster Amplifer, 16dB Gain#107366
Dispersion Compensation	M6200-DCM40	40KM DCF-based Passive Dispersion Compensation Module#107370
	M6200-DCM80	80KM DCF-based Passive Dispersion Compensation Module#119071
Line Protection	M6200-OLP2	1+1 Optical Line Protection Switch (OLP)#107368
Red/Blue Filter	M6200-RB	1x2 Single Fiber DWDM Red/Blue Filter#107369
VOA Units	M6200-SFPVOA	SFP Variable Optical Attenuator Module#107373
	AT-M-LCU	Fixed Fiber Optic Attenuators #70009
Chassis	M6200-CH2U	2U Managed Chassis Unloaded Platform, Supports 7x Mux/DEMUX/EDFA/OEO/OLP/DCM Cards #107371
	M6200-CH5U	5U Managed Chassis Unloaded Platform, Supports 15x MUX/DEMUX/EDFA/OEO/OLP/ DCM Cards #111052
WDM TRANSCEIVERS		
100G/200G CFP2	M-CFP2-DCO	C14 1566.31nm 100G/200G Tunable CFP2-DCO Coherent Transceiver, up to 1000km #120128
25G SFP28	DWDM-SFP25G-10	25G DWDM SFP28 100GHz 1563.86nm 10km DOM LC SMF Optical Transceiver Module #87000
	CWDM-SFP25G-40S	25G 1270nm CWDM SFP28 40km DOM LC SMF Optical Transceiver Module #100112
	CWDM-SFP25G-10SP	25G 1270nm CWDM SFP28 10km DOM LC SMF Optical Transceiver Module #76003
	LWDM-SFP25G-40	25G LWDM SFP28 1286.66nm 40km DOM LC SMF Optical Transceiver Module #93786
16G/8G FC	DWDM-SFP16G-40	Customized 16G DWDM SFP+ C20-C61 100GHz 40km DDM LC SMF Transceiver Module#73084
	DWDM-SFP16GH-40	Customized 16G DWDM SFP+ 50GHz 40km DDM LC SMF Transceiver Module #73085
	CWDM-SFP16G-40	Customized 16G Fiber Channel CWDM SFP+ 1470-1610nm 40km DDM LC SMF Transceiver Module #80765

10G SFP+	DWDM-SFP10G-80	10G DWDM SFP+ 1559.79nm 80km DOM LC SMF Transceiver Module, Commercial Temperature#31237, Industrial Temperature#113562
	DWDM-SFP10G-40	10G DWDM SFP+ 1560.61nm 40km DOM LC SMF Transceiver Module, Commercial Temperature#38731, Industrial Temperature#113511
	DWDM-SFP10G-C	10G DWDM C-band Tunable SFP+ 50GHz 80km DOM LC SMF Transceiver Module #69267
	CWDM-SFP10G-80L	10G CWDM SFP+ 1470nm 80km DOM LC SMF Transceiver Module #19367
	CWDM-SFP10G-40S	10G CWDM SFP+ 1270nm 40km DOM LC SMF Transceiver Module, Commercial Temperature#22168, Industrial Temperature#112392
1G SFP	DWDM-SFP1G-EZX	1000BASE-DWDM SFP 100GHz 1563.86nm 100km DOM LC SMF Transceiver Module #54150
	DWDM-SFP1G-ZX	1000BASE-DWDM SFP 1563.86nm 80km DOM LC SMF Transceiver Module #47697
	CWDM-SFP1G-EZX	1000BASE-CWDM SFP 1270nm 120km DOM LC SMF Transceiver Module #102776
	CWDM-SFP1G-ZX	1000BASE-CWDM SFP 1270nm 80km DOM LC SMF Transceiver Module #33234

*Standard products are listed above. Customized specifications are available upon request.

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