

I-HUB

EDFA Optical Amplifier Modules

The I-HUB family of ruggedized EDFAs includes versions optimized for a wide variety of CATV & FTTx applications requiring a field deployable (strand, pedestal or vault) solution. Depending upon the application, ATX's I-HUB platform which has a 10 single-slot capacity, supports CATV super-trunking, multi-wavelength per fiber distribution, hub eliminations, node segmentation, RFoG service area creation, & RF overlay for PON networks.

Key Benefits

- Wide variety of application optimized EDFAs:
 - DSAs incorporate dual-stage EDFAs with interstage dispersion compensation for highest performance in long reach, multi-wavelength applications
 - GCAs for cost-effective, typical reach, multi-wavelength applications
 - POAs for FTTx (PON overlay or RFoG) providing four outputs per EDFA
- Each EDFA family type includes:
 - Low noise figure design
 - Multiple gain versions
 - Multiple total output power versions
 - +/- 0.2 dB output power stability
- Ruggedized, temperature hardened design
- Express port options to improve network design efficiency & maintainability

Features

- Wide range of EDFA modules optimized for CATV, FTTx & RFoG
- Low noise figure
- Multiple gain & output power options
- Express port options to reduce fiber interconnections
- SNMP remote status monitoring



Chassis
(open view)

Applications

The high performance ATX EDFA has been deployed for numerous applications:

- Long haul super-trunking
- Hub eliminations
- Node segmentation
- Distribution networks
- RFoG applications
- FTTx networks



EDFA Optical Amplifier Modules in Chassis
(open view)

Specifications

EDFA Optical Amplifier Modules

EDFA Optical Amplifier Modules		DSA	GCA	POA
I-HUB EDFA OPTIONS				
APPLICATION		Multi-wavelength	Multi-wavelength	Single Wavelength, PON Overlay
OUTPUT PORTS		1	1	4
OPTICAL PERFORMANCE				
BANDWIDTH⁽¹⁾		1530-1562nm		
INPUT POWER	MINIMUM	-7 dBm		
	MAXIMUM⁽²⁾	See Note		
NOISE FIGURE⁽³⁾		< 4.5 dB		
POWER PER PORT⁽⁴⁾		As per Ordering Information, which includes any Express Port loss if present		
OUTPUT POWER VARIATION OVER TEMPERATURE⁽⁵⁾		± 0.2 dB		
EXPRESS PORT (Optional, See Ordering Information)				
OPTICAL BANDWIDTH		1530-1562nm		
REFLECT BAND		1300-1620nm		
INSERTION LOSS⁽⁴⁾		See Note		
NETWORK MANAGEMENT		SNMP v2c, CLI, Web GUI, Telnet		
POWERING				
POWER CONSUMPTION		9W	9W	18W
ENVIRONMENTAL				
OPERATING TEMPERATURE		-40°C to +65°C (-40°F to +149°F)		
STORAGE TEMPERATURE		-40°C to +85°C (-40°F to +185°F)		
HUMIDITY		Max. 85% Non-condensing		
PHYSICAL				
DIMENSIONS		I-HUB Three-slot Module 5.77"H x 7.56"W x 2.07"D (14.66H x 19.2W x 5.26D cm)	I-HUB One-slot Module 5.77"H x 2.5"W x 2.07"D (14.66H x 6.35W x 5.26D cm)	I-HUB Two-slot Module 5.77"H x 5.03"W x 2.07"D (14.66H x 12.78W x 5.26D cm)
WEIGHT		2.0 lbs (0.91 kg)	0.5 lbs (0.23 kg)	1.0 lbs (0.45 kg)

NOTES:

- (1) Optical bandwidth is reduced to 1545-1562 when input express port option is utilized.
- (2) Maximum input power equals total optical power out minus gain.
- (3) Measured at 0 dBm input power.
- (4) Express port optional typically reduces output power by < 1 dB, but this is already accounted for in the part number. As an example, the same 18 dBm per port EDFA device will have "18" in part number with no Express Port, or "17" in part number with Express Port.
- (5) GCA model includes optical AGC.

Ordering Information

Dual Stage Amplifiers IHUB-DSA_ _ _ _ _ _ a bbcc dde	Constant Gain Amplifiers IHUB-GCA- _ _ _ _ S- _ _ _ bbcc dde	PON, Constant Power Amplifiers IHUB-POA-4X_ _ S- _ _ _ cc dde
a = Dispersion Compensation	bb = Gain*	cc = Output Power, Single Wavelength* (Includes any Express Port Loss)
2 = 20 km	06 = 6 dB	10 = 10 dBm
3 = 30 km	09 = 9 dB	14 = 14 dBm
4 = 40 km	12 = 12 dB	15 = 15 dBm
bb = Gain*	cc = Output Power, Composite* (Includes any Express Port Loss)	18 = 18 dBm
09 = 9 dB	15 = 15 dBm	dd = Optional Express Port
12 = 12 dB		
18 = 18 dB		
cc = Output Power, Composite* (Includes any Express Port Loss)	18 = 18 dBm	Blank = None
15 = 15 dBm	20 = 20 dBm	1E = One Input Express Port
18 = 18 dBm	dd = Optional Express Port	e = Connector Type (All Ports)
20 = 20 dBm	Blank = None	C = SC/APC
dd = Optional Express Port	1E = One Input Express Port	L = LC/APC
Blank = None	e = Connector Type (All Ports)	
1E = One Input Express Port	C = SC/APC	
e = Connector Type (All Ports)	L = LC/APC	
C = SC/APC		
L = LC/APC		

NOTE:

* Typical options listed. Others may be available or on price list. Contact ATX for further details.

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