maxcom

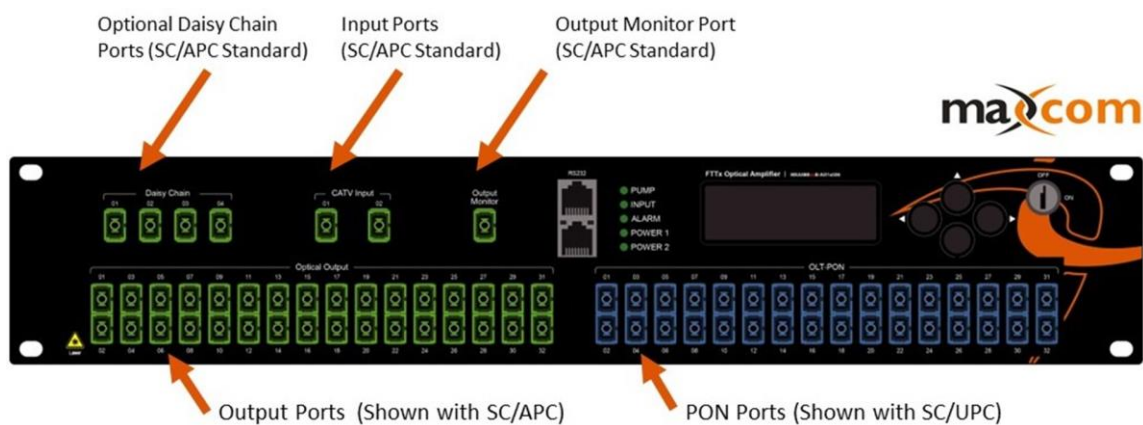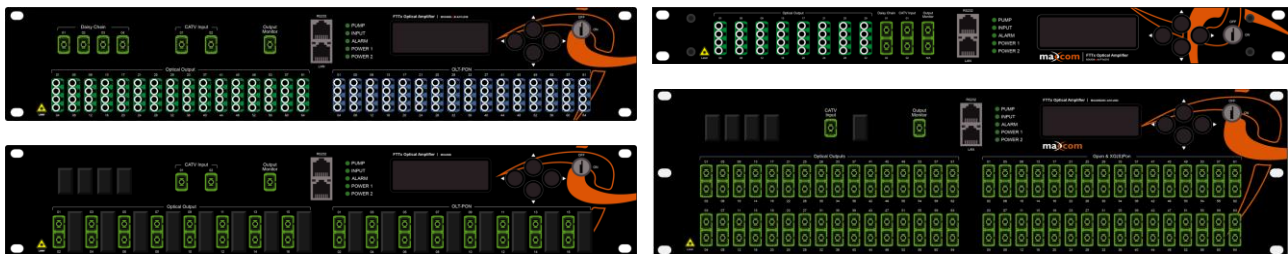# 1550 NM CATV EDFA· MXA5 SERIES

Multiple configurations available with PON ports supporting 1270, 1310, 1490, 1577, 1610nm wavelengths

Optional Daisy Chain Ports (SC/APC Standard)

Input Ports (SC/APC Standard)

Output Monitor Port (SC/APC Standard)

Output Ports (Shown with SC/APC)

PON Ports (Shown with SC/UPC)

Example Illustrations of Multiple MXA5 EDFA Configurations:

*Also available without PON ports

Legendary Reliability and Performance

PRODUCT SUMMARY

The MXA5 series is a low noise, high performance, FTTx high power multi-port optical amplifier with a gain spectrum band within 1540~1563nm. Each output port for the optical amplifier has built-in high performance CWDM PON port to conveniently connect with an OLT. Each of the 1550nm (CATV)'s output optical ports will multiplex 1310/1490nm and 1270/1577nm wavelengths from an external OLT, reducing the quantity of the components and improving the performance and reliability of the system. Models are also available with an option to pass 1610nm RFoG wavelengths.

The MXA5 Series has an extremely low noise figure. The unit adopts twin-stage amplification, the pre-amplifier adopts a low noise EDFA, and the output cascade adopts high power EYDFA technology. When the input optical power PIN is 0dBm, the noise figure of the unit is: Typ ≤4.5dB, Max ≤5.0dB unlike other manufactures which need higher optical power input to maintain lower noise figures.

The MXA5 Series optical amplifier incorporates world class pump lasers and American made OFS erbium-doped optical fiber. Superb APC, ACC, and ATC control, coupled with excellent design in the ventilation and heat-dissipation ensure a long life and exceptionally reliable operation of the pump laser. RS232 and RJ45 offer serial communication and SNMP network management ports.

The MXA5 Series LCD located on the front panel offers access to all equipment indexes and warning alarms. A WEB GUI interface is also available for operators preferring remote access and visibility.

Maxcom EDFA's offer a flexible wide range optical input between -5 to +10 dBm.

For safety and protection of the laser components, the laser will automatically switch off if input optical power is interrupted.

The MXA5 Series offers carrier-class reliability and network security management, high quality, superb reliability, and excellent cost performance are ideal for system integrators and system operators.

The MXA5 Series optical amplifiers are available with output power of +15 to +23 dBm per output port. Standard units come in 4, 8, 16, 32, and 64 port configurations. Units come with xPON ports to match the number of output ports. Optional daisy chain ports are also available providing for simple scalability as your network grows.

The MXA5 Series is also available with a built in 2x1 optical switch with auto detection and switching when two optical inputs are used in cases where fiber route redundancy is critical.

Fiber connector types may be customized for operator requirements using SC/APC, SC/UPC, LC/APC, and LC/UPC

All MXA5 Series EDFA's come equipped with Dual Hot Swapable AC or DC power supplies.

Performance Specifications		Index			Supplemental
		Min.	Typ.	Max.	
Optical features	CATV operation wavelength	(nm)	1540		1563	CATV
	OLT pass wavelength	(nm)		1310/1490 1270/1577	1610nm	GPON XGSPON
	CATV pass wavelength loss	(dB)			0.8	1550nm
	OLT pass wavelength loss	(dB)			0.8	1310/1490nm 1270/1577nm
	CATV & OLT isolation	(dB)	40			
	Number of uplink optical ports (for OLT)	(pcs)	4		64	Based on Model
	CATV input power	(dBm)	-5		+10	
	Output power per port	(dBm)	15		23	Based on Model
	Number of output ports	(pcs)	4	32	64	Based on Model
	Difference of each output power	(dB)	-0.5		+0.5	
	Output optical power monitoring	(dB)		-20		
	Output power adjustable range	(dBm)	-6		0	
	Daisy Chain Output Power (per port)	(dBm)	+11	+12	+12.5	Fixed Value, Optional
	Number of Daisy Chain port		1		4	Optional
	Noise figure	(dB)	4.0	4.5/5	6.0	
	Switch time (with auto optical input switch)	(ms)			8.0	
General features	Network management interface		WEB			RJ45, SNMP Optional
	Serial interface		RS232			Optional
	Power supply	(V)	90		265	110VAC
			36		72	-48VDC
	Power consumption	(W)			84	
	Operation temp.	(°C)	-5		65	
	Storage temp.	(°C)	-40		80	
	Relative humidity	(%)	5		95	
	Size (W)×(D)×(H)	(") mm	19×14.7×3.5 482.6x300x88mm			Standard 2 RU Model

EDFA Model Number Ordering Matrix-North American Market

Fill in the □ boxes with the preferred options from

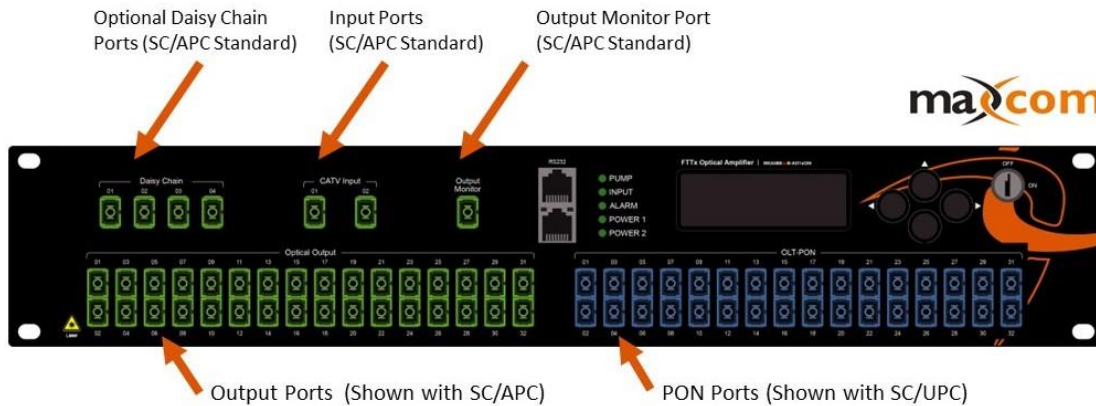| MXA-	5	□	□	□□	□ -	□ X	□□□ -	□□ -	□□ -	□□	- □
Product Series	Operating Wavelength	Production Type	WDM PON Port Configuration	Output Power (dBm) per port	Exterior	Number of Input Ports	Number of output ports	Output Port Connector type	PON Port Connector type	Power Supply	Daisy Chain Ports +12 dBm ea.
Model Series	5 — 1540-1563nm	8 — FTTx PON EDFA	B — Combo GPON & XGSPON 1270/1310/1490/1577 Pass	17 — 17	A — 1RU	1 — Single Input (without switch)	004 — 4 ports	LA — LC/APC	LP — LC/UPC	11 — 110VAC	D — 4 Daisy Chain ports
		4 — NO WDM PON ports	C — Separate GPON & XGSPON Ports. Port 1 = 1310/1490 Pass Port 2 = 1270/1577 Pass	21 — 21	B — 2RU	2 — Dual Input (With Switch)	008 — 08 ports	SA — SC/APC	SP — SC/UPC	22 — 220VAC	Blank — No Daisy Chain ports
				** — Custom dBm	C — 3RU		016 — 66 ports		LA — LC/APC	48 — -48VDC	
				Available Output Power Range: +15 to +23 dBm			032 — 32 ports		SA — SC/APC	42 — -48VDC &	
							064 — 64 ports				

Please consult with your Maxcom Rep for ordering options, *Note - Some options only available of certain chassis or models
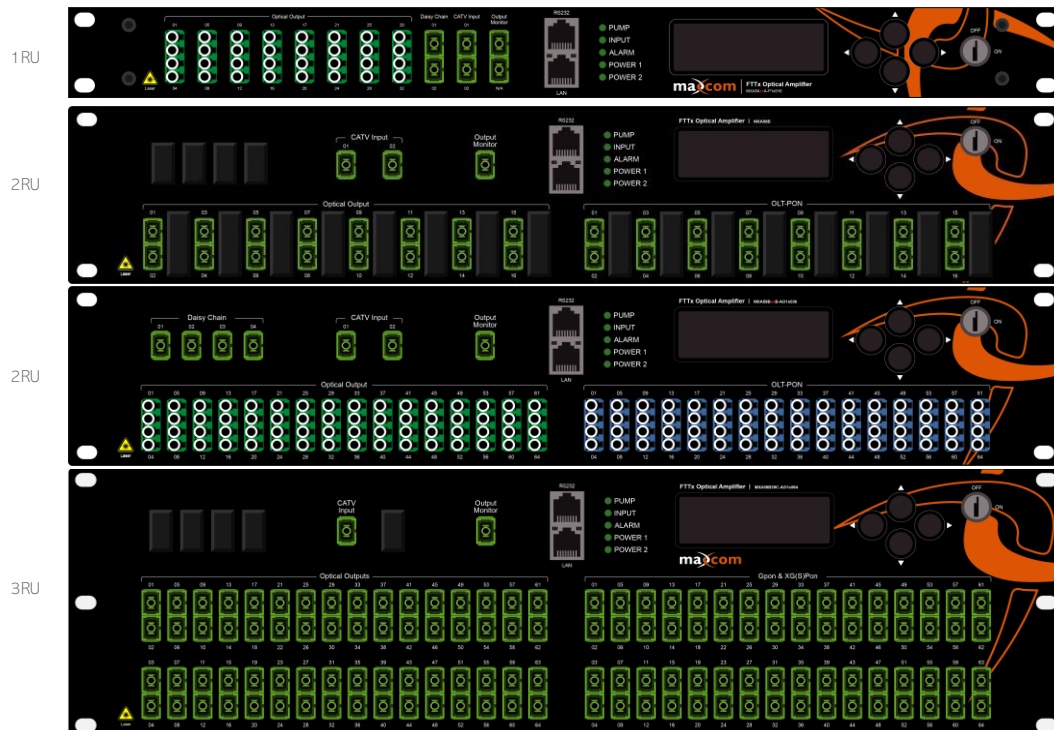
*Notes:
Output Monitor port - Included
Adjustable Output feature - Included
Dual Hot Swappable Power Supplies - Included
SNMP - Web GUI access- Included

All units come standard with SC/APC connectors for **input, monitor, and daisy chain ports**.
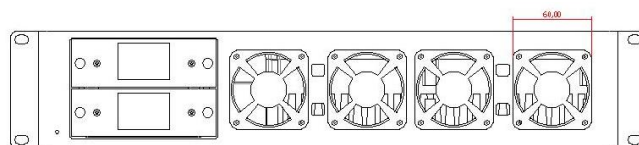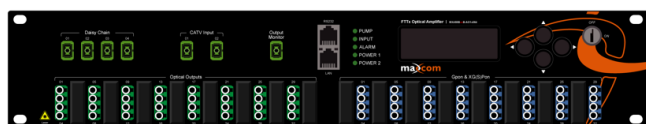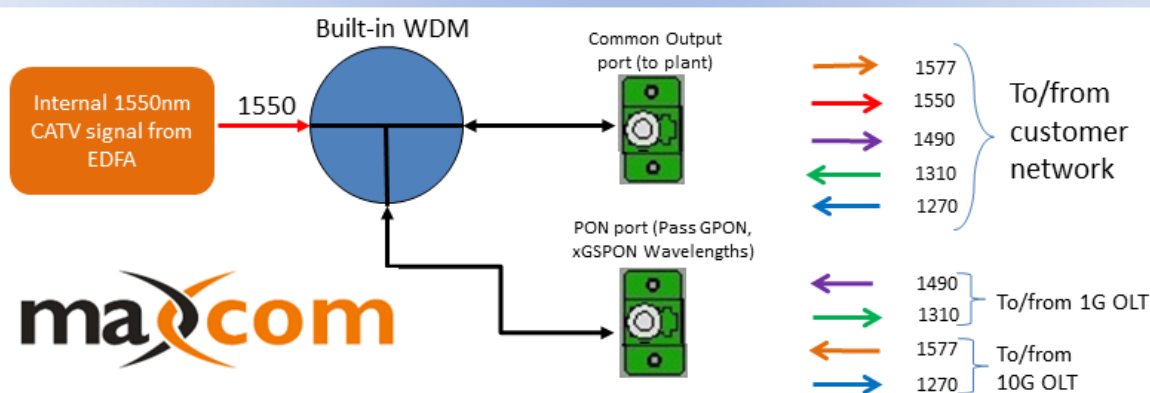Output ports come standard with SC/APC   PON ports come standard with SC/APC
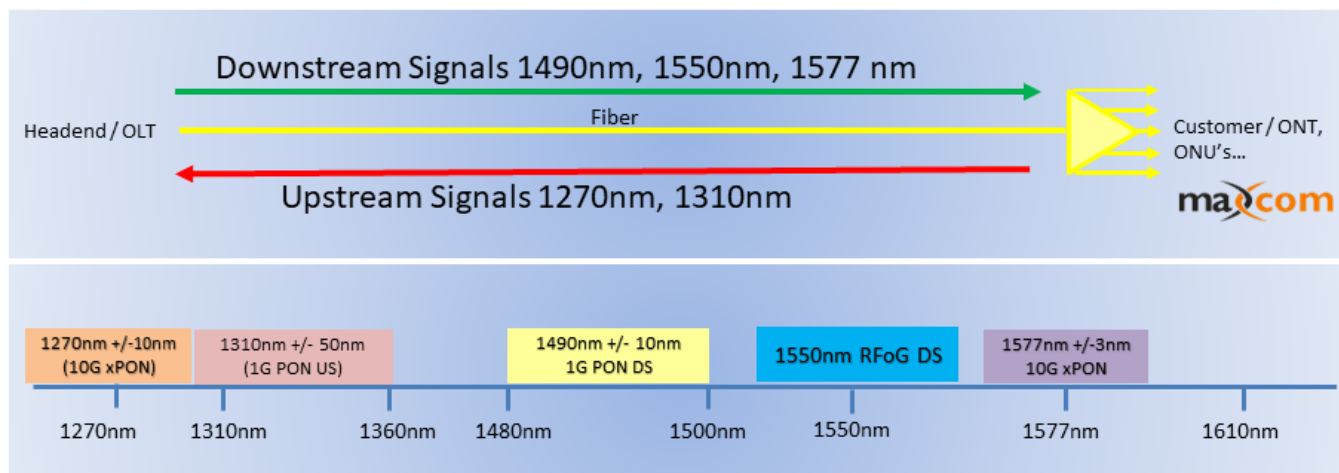
Optional Daisy Chain Ports (SC/APC Standard)

Input Ports (SC/APC Standard)

Output Monitor Port (SC/APC Standard)

Output Ports (Shown with SC/APC)

PON Ports (Shown with SC/UPC)

Example Illustrations of various configurations of EDFA's available

1RU

2RU

2RU

3RU

WAVELENGTH DETAIL for GPON, xGPON, and RF Overlay:

Downstream Signals 1490nm, 1550nm, 1577 nm

Headend / OLT — Fiber — Customer / ONT, ONU's...

Upstream Signals 1270nm, 1310nm

| 1270nm +/-10nm (10G xPON) | 1310nm +/- 50nm (1G PON US) | 1490nm +/- 10nm 1G PON DS | 1550nm RFoG DS | 1577nm +/-3nm 10G xPON |

1270nm   1310nm   1360nm   1480nm   1500nm   1550nm   1577nm   1610nm

Built-in WDM

Internal 1550nm CATV signal from EDFA → 1550

Common Output port (to plant)

PON port (Pass GPON, xGSPON Wavelengths)

→ 1577
→ 1550
→ 1490
← 1310
← 1270
To/from customer network

← 1490
→ 1310
To/from 1G OLT

← 1577
→ 1270
To/from 10G OLT

Warranty Maxcom provides a 2-year warranty on the MXA5 series EDFA. Warranty is from date of purchase. Additional warranty details are available from Maxcom or your Sales Partner.

www.maxcomcorp.com

USA   1-209-339-2333