



The Maxcom MX700-3 series ONU's are ideal for use in fiber to the home and fiber to the business applications. A perfect platform for delivering upstream and downstream DOCSIS, voice, video, and high-speed data service over FTTX applications. They are designed compliant to industry standards to terminate an RF over Glass (RFoG) communications network. The standard model uses a single fiber and receives downstream signals at 1550nm and uses a 1610nm isolated DFB return transmitter. Built with maximum toughness and the best warranty in its class.

The MX700 series may be ordered with various features and options. Single and Dual fiber models are available, and PON pass through ports are optional. Various optical wavelengths may be ordered for the forward and return optics. Contact Maxcom to learn about these and other options.

## ONU Features

1. CATV Bi-directional single fiber port
2. Burst mode operation – Isolated DFB Lasers for improved stability to reduce OBI
3. Superior proven technologies for both the RF amplification and optical components
4. AGC for consistent RF level outputs (20 dBm standard) with 36 dBmV output versions available
5. Automatic Optical Control is designed to reduce return noise effectively.
6. Low power consumption, compact in size, built tough, with Max reliability
7. Follows SCTE 174 standards

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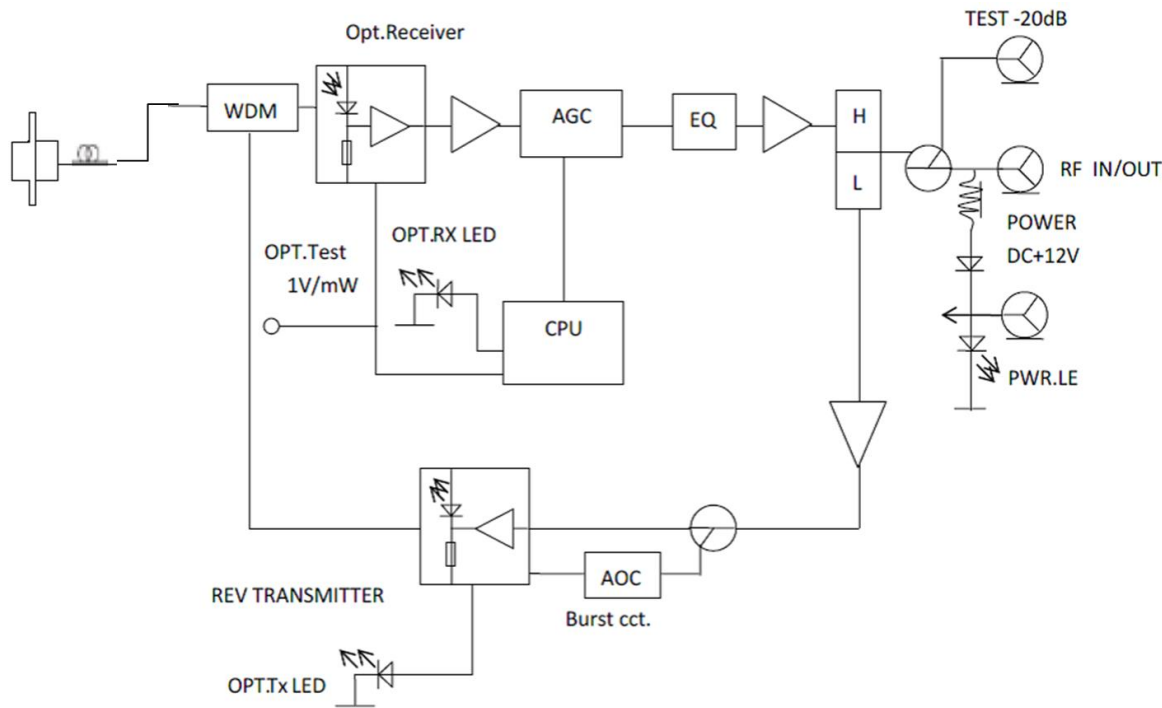
## Specifications

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
<b>Forward Receiver</b>					
Optical Wavelength	* 1525~1565nm When ordered w/ E53 option	1540	1550	1565	nm
Monitor Voltage	$\lambda=1550$		1		V/mW
Optical Input Power	Optical AGC / Continuous	-6	-1	+2	dBm
Bandwidth	Alternate Options avail. 54/85/102/258 MHz to 1218 MHz	54		1218	MHz
Flatness of Frequency Response	f=54 to 1218MHz		$\pm 0.75$	$\pm 1$	dB
Output Return Loss		14	16		dB
Standard Reference Output Level w/AGC when optical input is between -6 and +2 dBm (may be ordered w/ 20, 30 or 36dBmV output versions)	(Note 1) @ 3.5% OMI per Ch.		*20		dBmV
Standard Reference Output Level w/AGC when optical input is between -6 and +2 dBm (may be ordered w/ 20, 30 or 36dBmV output versions)	(Note 1) @ 2.7% OMI per Ch.		*20		dBmV
Slope	Custom options available		5		dB
Optical Input Return Losses		45			dB
C/N	(-1dBm optical input, 3.5% OMI/ch, 79ch NTSC, Digital ch above 550MHz at -6dB offset)	50			dB
CTB				-65	dB
CSO				-60	dB
Equivalent Noise Input	f=55MHz			7	pA/Hz
<b>Return Transmitter</b>					
Optical Wavelength	1610nm Standard. Available with 1310nm	1600	1610	1620	nm
Optical Output Power	w/ 2mW Isolated DFB laser	2	3	4	dBm
Dynamic Input Range	NPR $\geq 38$		20		
RF Input Level	Typical 20-40	20	30	40	dBmV
Bandwidth	Expanded options available 5 MHz to 42/65/85/204 MHz	5		42	MHz
Flatness of Frequency Response	f=5 to 42MHz		$\pm 0.75$	$\pm 1$	dB
Input Return Loss	f=5 to 42MHz	14	16		dB
Optical Output Return Loss		45			dB
Optical Laser turn ON Level	Follows SCTE 174 (Note 2)	13	15		dBmV
Optical Laser turn OFF	Follows SCTE 174 (Note 2)		-5		dBmV
Laser Rise Time to 90% optical ON				1.3	$\mu$ s
Laser Fall Time for optical to 10%				1.6	$\mu$ s
<b>General Parameters</b>					
Total Current Consumption (DC)	W/12VDC Power Adapter		4.2		W
Temperature Range in Fahrenheit degrees		-40		+149	$^{\circ}$ F
Dimensions (includes connectors)	Width x Height x Depth	6.77"	4.25"	1.65"	Inch

Note 1: Power output is measured at 1218MHz.

Note 2: Burst mode parameter may be adjustable according to customer's request







Functional Diagram of MX700-3 series ONU



Maxcom Mini Optical Node Modeling Matrix

Maxcom Mini Optical Node Series		Forward Output Level	Return Input Level	Laser Type	Tx. Optical Power	Optical Connector	Transmitter wavelength	Sub Split	Power Adaptor	Forward Frequency	Options				
MX700-XXX (A=AGC on forward path, C=Burst mode return laser)		XX①	XX②	X	X	XX	XXXX	XX③	XX	XX	XXX				
MX700-2	Dual fiber I/O	17 17dBmV	20 20dBmV	F FP	1 1mW	SA SC/APC	1310 1310nm	34 30/47	00 None	None 1000MHz	00 None				
		20 20dBmV	25 25dBmV	D DFB	2 2mW		1470 1470nm	45 42/54	01 North America	1.2G 1220MHz	E53 Extended input RX wavelength 1525~1565nm				
MX700-3	Single fiber I/O	25 25dBmV	28 28dBmV	I Isolated DFB	3 3mW	SA SC/APC	1490 1490nm	57 55/70	PS Included	2.6G 2600MHz					
		36 36dBmV	30 30dBmV				1510 1510nm	68 65/85		3.0G 3000MHz					
MX700-4	One fiber I/O, a 2nd fiber for PON port		35 35dBmV				1530 1530nm	81 85/102							
							1550 1550nm	22 204/258							
MX700-2C	Dual fiber I/O, burst mode on the return path						1570 1570nm								
							1590 1590nm								
MX700-3C	Single fiber I/O, burst on the return path						1610 1610nm								
MX700-4C		Single fiber I/O, a 2nd fiber for PON port, burst on the return path													
MX700-2AC		Dual fiber I/O, burst mode on the return, AGC on the forward path													
MX700-3AC		Single fiber I/O, burst on the return, AGC on the forward path													
MX700-4AC		One fiber I/O, a 2nd fiber for PON port, burst on the return, AGC on the forward path													
MX700-X10AC		One fiber I/O, a 2nd fiber port for GPON & XG(S)PON, burst on the return, AGC on the forward path													



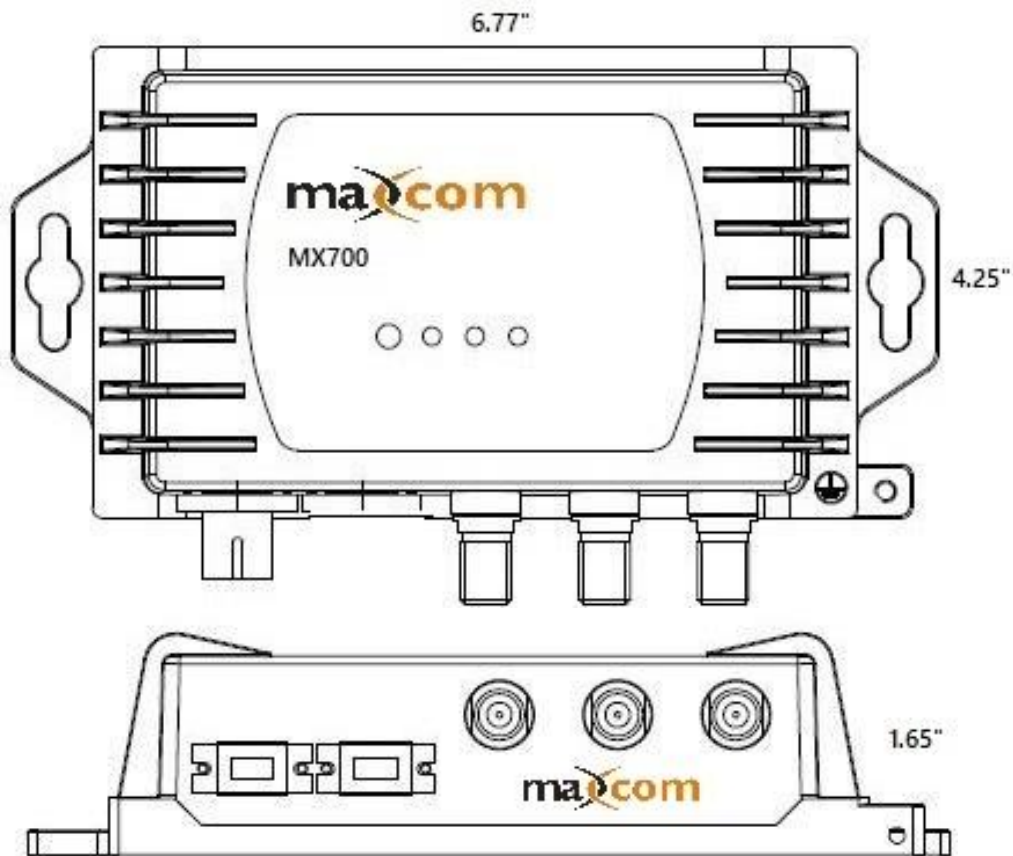
\* Note: the series (4) model is equipped with PON fiber port with internal optical filter that is configured for default standard wavelengths supporting 1550 forward path RX, 1610 return TX, and PON port supporting 1310 and 1490nm wavelengths

\* Note: the series (X10) model is equipped with xPON fiber port with internal optical filter that is configured for default standard wavelengths supporting 1550 forward path RX, 1610 return TX, and PON port supporting both 1 G and 10G PON wavelengths of 1270nm and 1577nm, and 1310 and 1490nm wavelengths. The node is compatible with both 1G GPON and 10G XG(S)PON

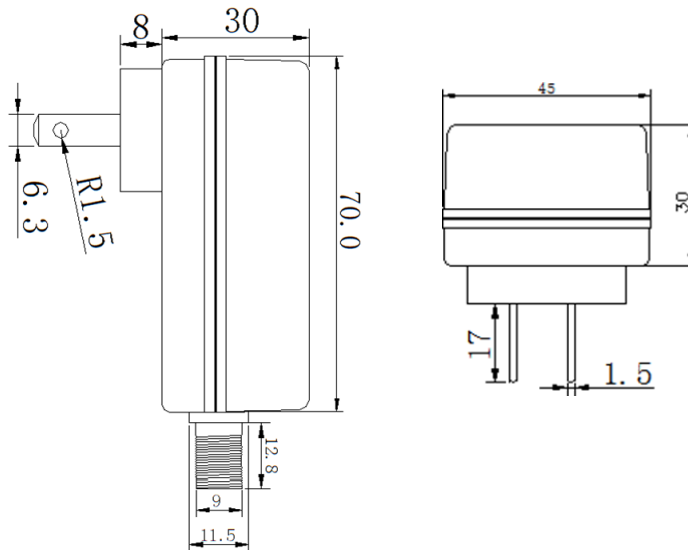
All versions standard with SC/APC optical connectors, North American Power Adapter

Note:①② Please specify levels not included in the Matrix. Note ③ sub split may be customized to customer requirement





Power supply included



Maxcom carries a full line of Optical Products and CATV Products supporting RFoG. Transmitters, Receivers, Optical Jumpers, and Passives. Contact us at 877-330-5333 or visit our website at [www.maxcomcorp.com](http://www.maxcomcorp.com) and let us assist with answering any questions or providing technical support.

