



The **MAXCOM MX700 MINI-MAX** 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 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 (or optional Dual, or PON) fiber port
2. Burst mode operation – Isolated DFB Lasers (Always on return lasers also available)
3. Superior proven technologies for both the RF amplification and optical components
4. Optional AGC for consistent RF level outputs (17, 20, 30, and 36 dBmV and other output levels 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

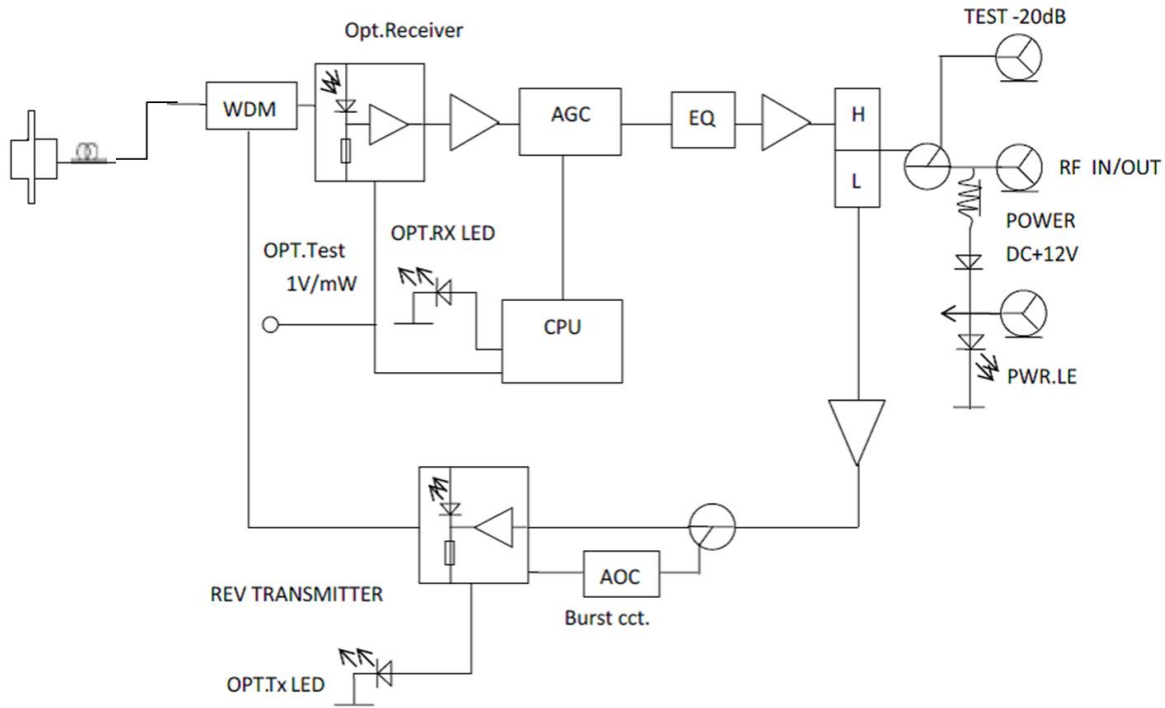
PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
<b>Forward Receiver</b>					
Optical Wavelength	(1310 nm receiver options also available)	1540	1550	1560	nm
Monitor Voltage	$\lambda=1550$		1		V/mW
Optical Input Power	Optical AGC / Continuous	-6	-1	+2	dBm
Bandwidth		54		1002	MHz
Flatness of Frequency Response	f=54 to 1002MHz		$\pm 0.75$	$\pm 1$	dB
Output Return Loss		14	16		dB
Standard Reference Output Level w/AGC when optical input is between -6 and +2 dBm <small>*(may be ordered w/ 20, 30 or 36dBmV output versions)</small>	(Note 1) @ 3.5% OMI per Ch.		*17		dBmV
Standard Reference Output Level w/AGC when optical input is between -6 and +2 dBm <small>*(may be ordered w/ 20, 30 or 36dBmV output versions)</small>	(Note 1) @ 2.7% OMI per Ch.		*14.8		dBmV
Slope			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. Additional wavelengths avail.	1600	1610	1620	nm
Optical Output Power	w/ 2mW DFB laser	2	3	4	dBm
Dynamic Input Range	NPR $\geq 38$		20		
RF Input Level	Typical 20-40	10	28	40	dBmV
Bandwidth		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	16		dBmV
Optical Laser turn OFF	Follows SCTE 174 (Note 2)		-8		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		3.8		W
Temperature Range in Fahrenheit degrees		+32		+131	$^{\circ}$ F

Note 1: Power output is measured at 1002MHz.

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

\*Some Parameters may differ based on the model ordered (Model features and ordering options on next page)





Sample Functional Diagram of MX700A series ONU (may vary depending on model ordered)



**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				
MX700-XXX (A=AGC on forward path, C=Burst mode return laser)		XX <sup>①</sup>	XX <sup>②</sup>	X	X	XX	XXX	XX <sup>③</sup>	XX	XX				
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
		23	23dBmV	25	25dBmV	D DFB	2	2mW		1470 1470nm	45 42/54	01 North America	12	1220MHz
MX700-3	Single fiber I/O	25	25dBmV	28	28dBmV	I Isolated DFB	3	3mW		1490 1490nm	57 55/70			
		35	35dBmV	30	30dBmV					1510 1510nm	68 65/85			
				35	35dBmV					1530 1530nm	81 85/105			
MX700-4	One fiber I/O, a 2nd fiber for PON port									1550 1550nm				
MX700-2C	Dual fiber I/O, burst mode on the return path									1570 1570nm				
MX700-3C	Single fiber I/O, burst on the return path									1590 1590nm				
MX700-4C	Single fiber I/O, a 2nd fiber for PON port, burst on the return path									1610 1610nm				
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													

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\* Note: the series (4) 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 1310 and 1490nm wavelengths

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

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

Contact a Maxcom Sales Representative for customer requested custom orders 209-339-2333

Maxcom carries a full line of Optical Products and CATV Products supporting RFOG.

Transmitters, Receivers, EDFA's, 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.

