Automated OBI Mitigation with
Continuum Wave Shifting Technology

MX700-3AC-AT series ONU's provide excellent **Automated OBI Mitigation** incorporating **Continuum Wave Shifting Technology.** The Maxcom MX700-3 OBI series ONU's are ideal for use in **Residential** or **MDU** or fiber to the business applications. An excellent 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 range Continuum Wave Shifting DFB return transmitter. Maxcom Continuum Wave Shifting Technology automatically and continually adjust the agile DFB Laser allowing multiple RFOG ONU's to share a single receiver, a tested and simple solution in OBI mitigation. OBI occurs when two or more customers are transmitting on the same wavelength at the same time. By deploying the Maxcom Continuum Wave Shifting Technology, OBI is mitigated automatically without the need to place additional equipment in the field or headend. Works with all existing RFoG deployments regardless of brand. Built with maximum toughness and the best warranty in its class.

ONU Features

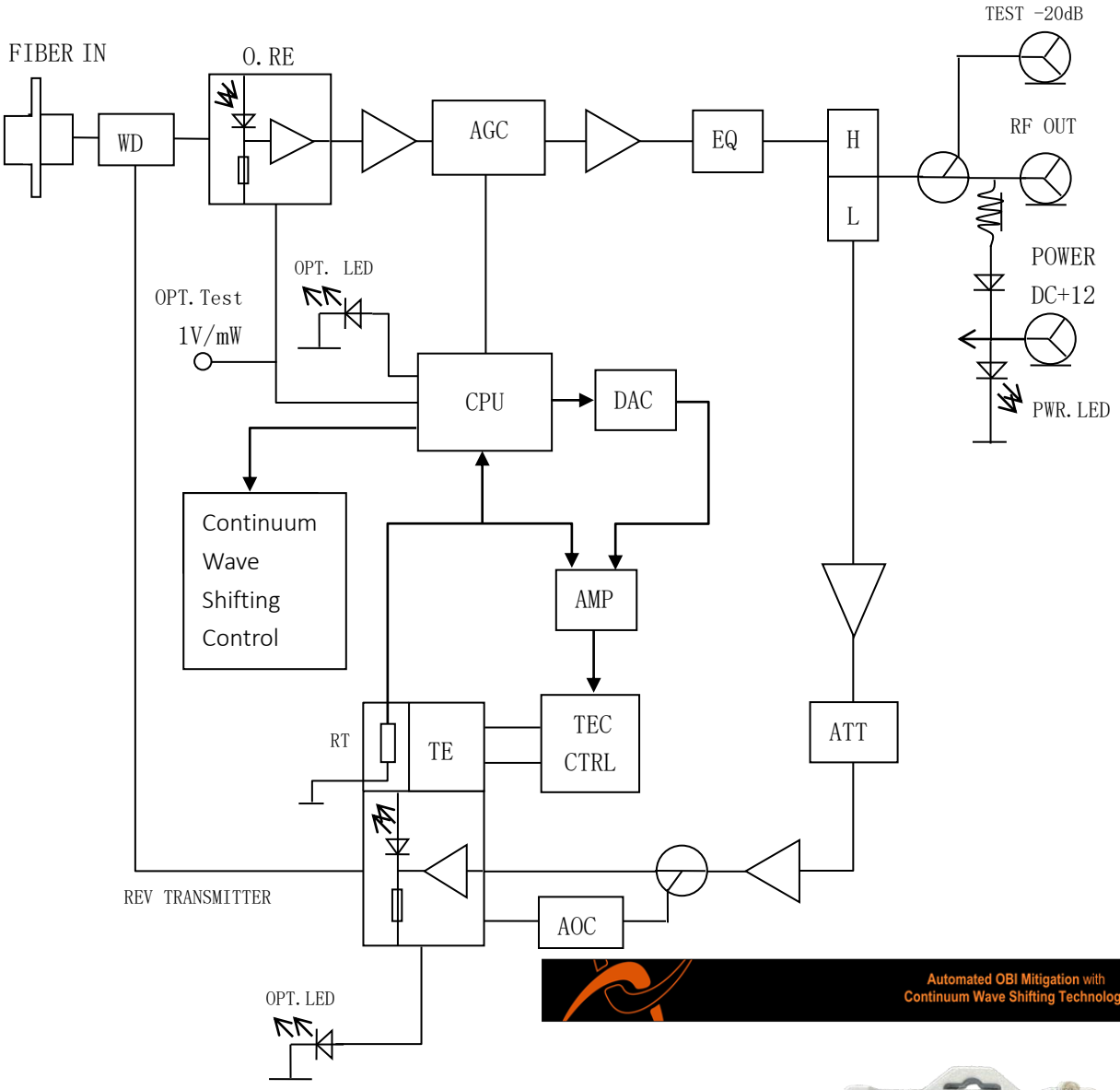
1. **Continuum Wave Shifting Technology** to **avoid OBI**
2. CATV Bi-directional single fiber port
3. Simple – Plug and Play with LED status indicators
4. Superior proven technologies for both the RF amplification and optical components
5. AGC for consistent RF level output 20 dBmV standard Residential, or 36 dBmV MDU
6. Automatic Optical Control is designed to reduce return noise effectively.
7. Low power consumption, compact in size, built tough, with Max reliability
8. Follows SCTE 174 standards

*Maxcom products may be customized for customer requests.

Specifications

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Forward Receiver					
Optical Wavelength	*Extended/custom wavelength options avail. (Example 1525~1565nm)	1540	1550	1565	nm
Monitor Voltage	λ=1550		1		V/mW
Optical Input Power	Optical AGC / Continuous	-6	-1	+2	dBm
Bandwidth	Optional Return Diplex Avail	54		1218	MHz
Flatness of Frequency Response	f=54 to 1200 MHz		±0.75	±1	dB
Output Return Loss		14	16		dB
Standard Reference Output Level w/AGC when optical input is between -6 and +2 dBm	(Note 1) @ 3.5% OMI per Ch.		*20	+36 on MDU Model	dBmV
Standard Reference Output Level w/AGC when optical input is between -6 and +2 dBm	(Note 1) @ 2.7% OMI per Ch.		*20	+35 on MDU Model	dBmV
Slope	Typical		6		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=110MHz			7	pA/Hz
Return Transmitter					
Optical Wavelength	*Note 2	1600	1610	1620	nm
△λ Wavelength Shift	16 to 24 wavelength settings by 0.25nm steps	.25		.25	nm
Optical Output Power	w/ 2mW Isolated DFB laser	2	3	4	dBm
Dynamic Input Range	NPR ≥38		20		
RF Input Level (Standard Residential Version)	*Depending on output power ordered	20	30	40	dBmV
RF Input Level (MDU Version)	*Depending on output power ordered	10	20	30	dBmV
Bandwidth	Expanded options available	5		42	MHz
Flatness of Frequency Response	f=5 to 42MHz		±0.75	±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 3)	13	15		dBmV
Optical Laser turn OFF	Follows SCTE 174 (Note 3)		-5		dBmV
Laser Rise Time to 90% optical ON				1.3	μs
Laser Fall Time for optical to 10%				*1.6*	*μs*
General Parameters					
Total Current Consumption (DC)	*W/12VDC Power Adapter*			*10*	*W*
Temperature Range in Fahrenheit degrees		*-40*		*+131*	*°F*
Dimensions (includes connectors)	*Width x Height x Depth*	*7.45”*	*5.25”*	*1.65”*	*Inch*

Note 1: Power output is measured at 1200MHz.
Note 2: DWDM range，0.25nm Step with Continuum Wave Shifting Technology
Note 3: Burst mode parameter may be adjustable according to model ordered



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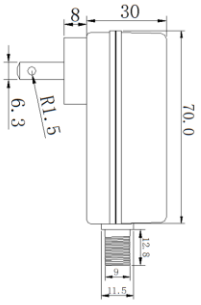

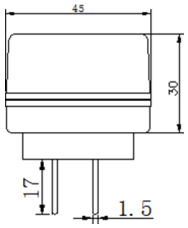

Power supply included

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

Contact us at 877-330-5333 or visit our website at www.maxcomcorp.com

and let us assist with answering any questions or providing technical support.

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RF Over Glass Series

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