



### FEATURES

- Operating X-band Tx: 7.90 – 8.40 GHz  
Rx: 7.25 – 7.75 GHz
- L-band Tx and Rx interface
- Easy to install and operate
- Compact light weight design
- Weatherproof package
- LNA operation
- Low phase noise
- Remote Monitor & Control (RS232 / RS485)
- Relay alarm indicators
- LED status indicators
- Automatic high power reflected power protection
- Harmonic Filter
- High stability internal 10 MHz reference
- Downloadable PC GUI
- Redundant ready operation

### OPTIONS

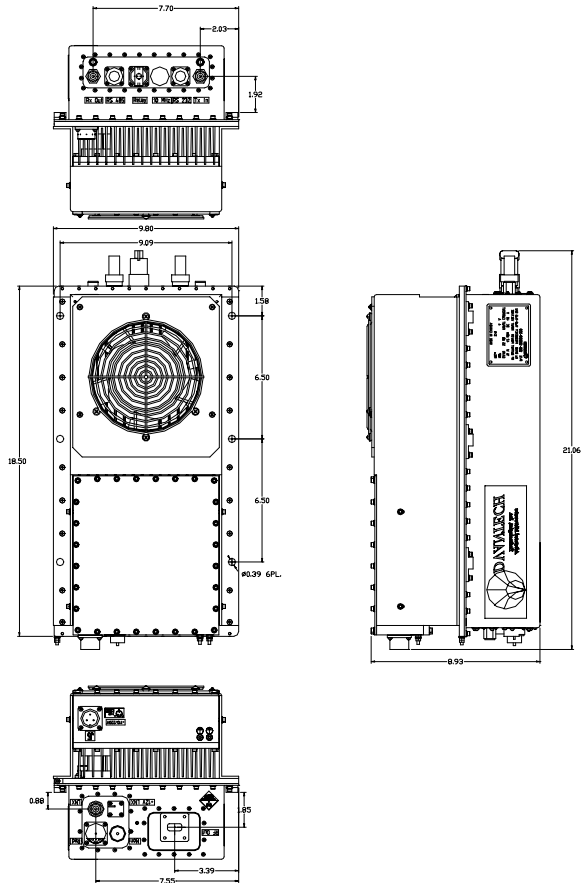
- Phase-locked LNB
- TX or RX Reject Filter
- Remote M&C panel (Ethernet port optional)
- External 10 MHz reference with auto sensing

### OVERVIEW

The Advantech range of transceivers uses the latest technology, local and remote control thus providing the ultimate in performance and user friendly operation at a very competitive price.

AWMT-2000XL® is a family of hub-mount transceivers operating in the X-band with an output power ranging from 20W to 200W. These transceivers are designed for continuous operation in the harshest outdoor environment. The built-in microprocessor controller provides for external monitoring and control of the operating parameters, and for the redundancy control. The LNB is connected to the transceiver with a single coaxial cable. Apart from the LNB, the complete unit is available in a single integrated package. Higher power transceivers are also available in the AWMT-XL® series for up to 400W.

The flexible and comprehensive monitor and control features on the transceiver ensure that it will fit into any network management system architecture. The user-friendly RS-232 interface will provide full set-up and fault monitoring facilities via a PC terminal mode communication or a hand-held terminal. The RS-485 interface will provide functional remote Monitor & Control, using the Graphic User Interface (GUI) or the Monitor & Control Panel.



### APPLICATION

The AWMT-2000XL® is designed to operate in the X-band with L-Band Tx and Rx interface. The unit is self-contained and is intended for mounting outdoors, close to the OMT of an antenna.

### REDUNDANCY

The AWMT-2000XL® series of transceivers may be configured to operate in 1:1 redundancy mode. No extra controller is required for redundancy operation, as the built-in controller in each amplifier provides this function. Redundancy kits are required for redundant operation.

### ACCESSORIES

- Mounting kits for transceiver installation
- Redundancy kits
- Mounting frame for redundancy applications
- Transmit Reject Filter and/or Receive Reject Filter (external)
- Remote Control Panel
- Hand-held terminal

**X-BAND TRANSCEIVER 20 W to 200 W**  
**L-BAND INTERFACE**  
**AWMT-2000XL® series**



Transmit Path										
Power (W)	20	25	30	40	50	60	80	100	150	200
P1dB min. (dBm)	42	43	44	45	46	47	48	49	51	52
Gain min @ max. gain set (dB)	63	64	65	66	67	68	69	70	72	73
Power Consumption	150	200	250	300	400	500	800	1000	1400	1800

Unit Weight	32 kg (70 lbs)
Dimensions (L x W x H)	18.50" x 9.80" x 8.93" (46.99 x 24.89 x 22.68 cm)

Transmit Path		RF Output	
<b>L-Band Input</b>		<b>RF Output</b>	
Frequency range	950 – 1450 MHz	Frequency range	7.9 - 8.4 GHz
Input Connector	Type N female	(Non-inverting)	
Input Return Loss	18 dB / 50 Ω	Output connector	CPR 112
<b>Gain Specification</b>		Output Return	20dB ( 18 dB for coaxial output)
Gain control range	20 dB (0.1 dB step size)	Third order IMD (2 tones 5 MHz apart)	-25 dBc max at 3dB total back-off from rated P1dB
Gain flatness	3.0 dB p-p max	Spurious	-55 dBc max at rated power
Gain stability	3.0 dB p-p max over temp range	Noise Power Density	-70 dBm/Hz max in TX band -110 dBm/Hz max in 7.25 – 7.75 GHz in RX band

Receive Path		LNA Parameters	
<b>RF Input</b>		<b>LNA Parameters</b>	
RF Input Frequency	7.25 - 7.75 GHz	Noise Temperature	55°K without input isolator 65°K with input isolator
RF Input Interface	CPR-112	Output Interface	Type N female 50 Ω
Input VSWR	2.5:1	Gain	60 dB
	1.3:1 with input isolator	DC power	12±18V DC (via coaxial cable)
<b>L-Band Output</b>		<b>LNB Parameters (optional)</b>	
Frequency range	950 – 1450 MHz 950 – 1700 MHz (optional)	LNB type	Phase lock to 10 MHz ref. (from Transceiver via coax. cable)
Output P1dB min	+10 dBm	Noise Temperature	90°K
Output Connector	Type N female / 50 Ω	L-band Output Frequency	950-1450 MHz
Output Return Loss	18 dB/ 50 Ω	L-band Output Interface	Type N female 50 Ω
<b>Gain Specification</b>		Conversion Gain	60 dB
Gain (LNB+ Receiver)	80 dB @ max gain set	DC power	12±18V DC (via coaxial cable)
Gain control range	20 dB (0.1 dB step size)		
Gain flatness	±2.5 dB max over full RF band		
Gain stability	±3.0 dB max over temp range		
Spurious	-55 dBc max		
Image Rejection	50 dB		

Common Parameters (Tx & Rx)		Environmental	
<b>Synthesizer step size</b>		<b>Environmental</b>	
Synthesizer step size	1 MHz (option 125 KHz)	Cooling	Forced Air
<b>Frequency Stability</b>		Operational	-30°C to +55°C standard (-40°C to +55°C option)
-40°C to +55°C	±2 x 10 <sup>-8</sup>	Storage	-55°C to +85°C
Aging	±1 x 10 <sup>-7</sup> /year	Humidity	Up to 100% condensing
<b>Phase Noise</b>		Altitude	3,000 m AMSL (derated 2°C/300m)
<i>(With internal 10MHz reference)</i>		<b>Power Requirements</b>	
Offset frequency	Phase noise (max)	AC input voltage	Auto ranging 110/220±15% (47-63 Hz)
100 Hz	-65 dBc/Hz	AC Connector	MS3102R16-10P
1000 Hz	-73 dBc/Hz	<b>Mechanical</b>	
10 KHz	-83 dBc/Hz	Packaging	
100 KHz	-100 dBc/Hz	Weatherproof for outdoor use	
<b>Monitor &amp; Control</b>			
Serial port (RS-485)	MS3112E10-6P		
Serial port (RS-232)	MS3112E10-6P		
Redundancy Port	MS3112E16-26P		
Discrete Port	MS3112E12-10P		

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