



600W to 1000W
AWMT- 5000LC™ series



Features

- L-band Tx and Rx interface
- Easy to install and operate
- Compact light weight design
- Weatherproof package
- Phase-locked LNB
- Low phase noise
- Remote Monitor & Control (RS-232 and RS-485)
- Relay alarm indicators
- LED status indicators
- Automatic high reflected power protection
- Harmonic Filter
- High stability internal 10MHz reference
- Downloadable PC GUI
- Redundant operation ready

Overview

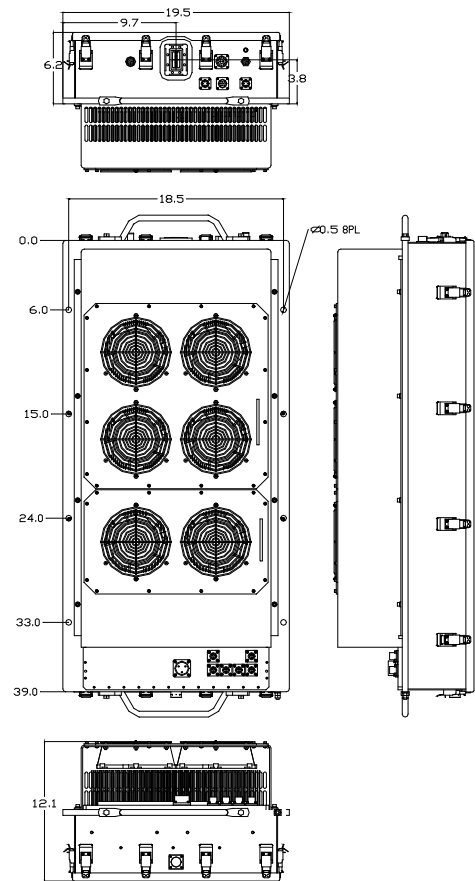
The Advantech range of transceivers uses the latest technology, local and remote control thus providing the ultimate in performance and user friendly operation at a very competitive price.

AWMT-5000LC™ is a family of hub-mount transceivers operating in the C-band from 600W to 1000W. 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.

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-5000LC™ is designed to operate in the C-band with L-band interface. The unit is self-contained and is intended for mounting outdoors, close to the OMT of an antenna.



Options

- Extended C-Band (5.85 – 6.725 GHz)
- LNA operation
- Remote M&C panel (Ethernet port optional)
- External 10 MHz reference with auto sensing

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

Redundancy

The AWMT-5000LC™ 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.

C-Band Transceiver L-Band IF Interface

Technical Specifications

Transmit Path				
Model	600W	700W	800W	1000W
P1dB min. (dBm)	+ 57	+ 57.5	+ 58	+ 59
Gain min @ max. gain set (dB)	78	79	79	80
Power Consumption	3500	4000	4500	5500
Unit Weight	80 Kg (176lbs)			
Dimensions (L x W x H)	39.00" x 18.50" x 12.10" (99.00 x 47.00 x 30.70 cm)			
Transmit Path				
L-Band Input		RF Output		
Frequency range	950-1525 MHz	Frequency range (Non-inverting)	5.850 – 6.425 GHz 6.425 – 6.725 GHz 6.725 – 7.025 GHz	
Input Connector	Type N female			
Input Return Loss	18 dB / 50 Ω			
		Output connector	CPR 137G	
		Output Return Loss	20 dB	
Gain Specification		Spurious	-55 dBc max at rated power	
Gain control range	20 dB (0.1 dB step size)	Third order IMD (2 tones 5 MHz apart)	-26 dBc max at 3dB total back-off from rated P1dB	
Gain flatness	±2 dB max	Noise Power Density	-70 dBm/Hz max in TX band	
Gain stability	3.0 dB p-p max over temp. range		-155 dBm/Hz max in 3.4 – 4.2 GHz	
Receive Path				
RF Input		LNB Parameters		
RF Input Frequency	3.4 – 4.2 GHz 4.2 – 4.5 GHz (CI)	LNB type	Phase lock to 10 MHz ref. (from Transceiver via coax. cable)	
RF Input Interface	CPR-229G	Noise Temperature	25°K	
Input VSWR	2.5:1	L-band Output Frequency	950-1750 MHz	
L-band Output	950 – 1750 MHz	L-band Output Interface	Type N female 50 Ω	
Frequency range	+5 dBm	Conversion Gain	60 dB	
Output P1dB min	Type N female / 50 Ω	DC power	12÷18V DC (via coaxial cable)	
Output Connector	18 dB/ 50 Ω			
Output Return Loss		LNA Parameters (optional)		
Gain Specification		Noise Temperature	35°K (30°K optional)	
Gain (LNB + Receiver)	80 dB @ max gain set	Output Interface	Type N female 50 Ω	
Gain control range	20 dB (0.1 dB step size)	Gain	60 dB	
Gain flatness	±2.5 dB max over full RF band	DC power	12÷18V DC (via coaxial cable)	
Gain stability	3.0 dB max over temp. range			
Spurious	-55 dBc max			
Image Rejection	50 dB			
Common Parameters (Tx & Rx)				
Frequency Stability		Environmental		
-40°C to +55°C	±2 x 10 ⁻⁸	Cooling	Forced Air	
Aging	±1 x 10 ⁻⁷ /year	Operational	-30°C to +55°C standard (-40°C to +55°C option)	
Phase Noise	(With internal 10MHz reference)			
Offset frequency	Phase noise (max)	Storage	-55°C to +85°C	
100 Hz	-60 dBc/Hz -65 dBc/Hz typical	Humidity	Up to 100% condensing	
1000 Hz	-70 dBc/Hz -73 dBc/Hz typical	Altitude	3,000 m AMSL (derated 2°C/300m)	
10 KHz	-80 dBc/Hz -85 dBc/Hz typical			
100 KHz	-90 dBc/Hz -95 dBc/Hz typical	Power Requirements		
Monitor & Control		AC input voltage	Auto ranging 110/220±15% (47-63 Hz)	
Serial port (RS-485)	MS3112E10-6P			
Serial port (RS-232)	MS3112E10-6P	AC Connector	MS3102R20-19P	
Redundancy Port	MS3112E16-26P	Mechanical		
Discrete Port	MS3112E12-10P	Packaging	Weatherproof for outdoor use	

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Ref.: PB-AWMT5000-LC-600-1000-13150