



2W to 10W  
AWMT-1000LC® 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 (RS232 / RS485)
- 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

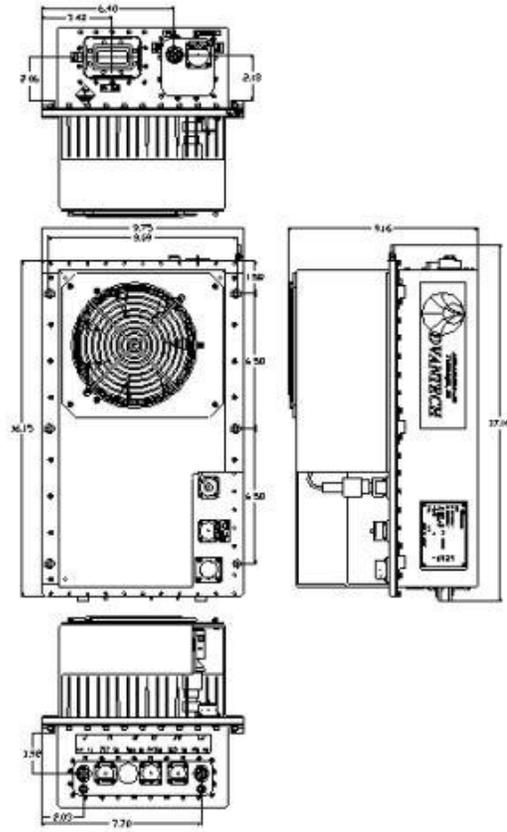
The **Advantech Wireless** range of transceivers uses the latest technology, local and remote control thus providing the ultimate in performance and user friendly operation at a very competitive price.

AWMT-1000LC® is a family of hub-mount transceivers operating in the C-band from 2W to 10W. 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-LC® series for up to 500W.

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-1000LC® 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-1000LC® 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	<b>2W</b>	<b>5W</b>	<b>10W</b>
P1dB min. (dBm)	33	37	40
Gain min @ max. gain set (dB)	54	58	61
Power Consumption	40	60	110
Unit Weight	25 kg (55 lbs)		
Dimensions (L x W x H)	16.15" x 9.75" x 9.16" (41.02 x 24.77 x 23.27 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 (N-Type option up to 100 W)
Gain Specification		Output Return Loss	20 dB (18 dB for coaxial output)
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	2.0 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 -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	35°K
Input VSWR	2.5:1	L-band Output Frequency	950-1750 MHz
L-band Output		L-band Output Interface	Type N female 50 Ω
Frequency range	950 – 1750 MHz	Conversion Gain	60 dB
Output P1dB min	+5 dBm	DC power	12÷18V DC (via coaxial cable)
Output Connector	Type N female / 50 Ω	LNA Parameters (optional)	
Output Return Loss	18 dB/ 50 Ω	Noise Temperature	35°K (30°K optional)
Gain Specification		Output Interface	Type N female 50 Ω
Gain (LNB + Receiver)	75 dB @ max gain set	Gain	60 dB
Gain control range	20 dB (0.1 dB step size)	DC power	12÷18V DC (via coaxial cable)
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)			
Frequency Stability		Environmental	
± 2 x 10 <sup>-8</sup> over 0°C to +50°C	± 2 x 10 <sup>-10</sup> / day	Cooling	Forced Air
Aging	± 5 x 10 <sup>-8</sup> / year	Operational	-30°C to +55°C standard (-40°C to +55°C option)
Phase Noise	(With internal 10MHz reference)	Storage	-55°C to +85°C
Offset frequency	Phase noise (max)	Humidity	Up to 100% condensing
100 Hz	-60 dBc/Hz -65 dBc/Hz typical	Altitude	3,000 m AMSL (derated 2°C/300m)
1000 Hz	-70 dBc/Hz -73 dBc/Hz typical	Power Requirements	
10 KHz	-80 dBc/Hz -85 dBc/Hz typical	AC input voltage	Auto ranging 110/220±15% (47-63 Hz)
100 KHz	-90 dBc/Hz -95 dBc/Hz typical	AC Connector	MS3102R10SL-3P
Monitor & Control		Mechanical	
Serial port (RS-485)	MS3112E10-6P	Packaging	Weatherproof for outdoor use
Serial port (RS-232)	MS3112E10-6P		
Redundancy Port	MS3112E16-26P		
Discrete Port	MS3112E12-10P		

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