



## C-BAND TRANSCEIVER 2 W TO 10 W AWMT-1000C® series



### FEATURES

- 70/140 MHz 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

### OPTIONS

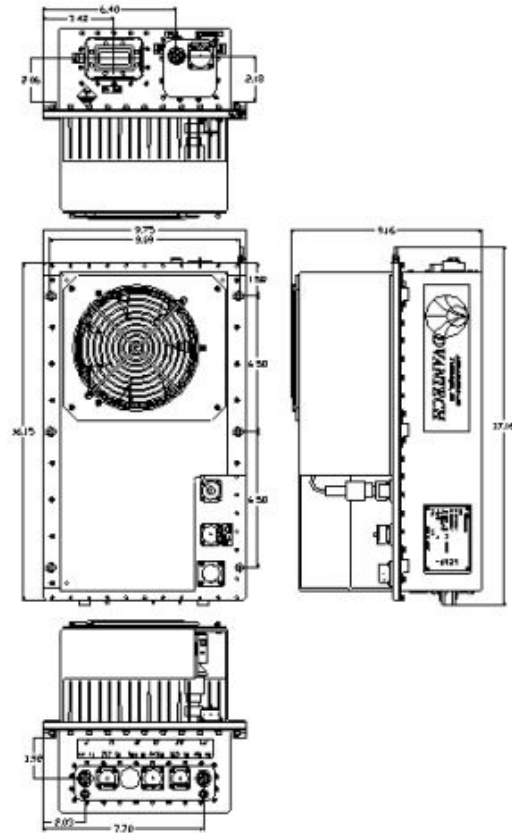
- Extended C-Band (5.85 – 6.725 GHz)
- Additional L band interface
- LNA operation
- Step Size 125 KHz option
- Remote M&C panel (Ethernet port optional)
- External 10 MHz reference with auto sensing

### 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-1000C® 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-C® 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-1000C® is designed to operate in the C-band with 70 MHz or 140 MHz IF interface. The unit is self-contained and is intended for mounting outdoors, close to the OMT of an antenna.

### REDUNDANCY

The AWMT-1000C® 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

## C-BAND TRANSCEIVER 2 W TO 10 W AWMT-1000C® series



Transmit Path			
Model	2W	5W	10W
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			
<b>IF Input</b>		<b>RF Output</b>	
Frequency range	70 ± 18 MHz (140 ± 36 MHz optional)	Frequency range	5.850 – 6.425 GHz 6.425 – 6.725 GHz 6.725 – 7.025 GHz
Input Connector	Type N female	Output connector	CPR 137G (N-Type option up to 150 W)
Input Return Loss	18 dB / 50 Ω	Output Return Loss	20 dB (18 dB for coaxial output)
		Third order IMD (2 tones 5 MHz apart)	-26 dBc max at 3dB total back-off from rated P1dB
<b>Gain Specification</b>		Spurious (in band)	-55 dBc max
Gain control range	20 dB (0.1 dB step size)	Noise Power Density	-70 dBm/Hz max in TX band -155 dBm/Hz max in 3.4 – 4.2 GHz in RX band
Gain flatness	3.0 dB p-p max over 36 MHz		
Gain stability	3.0 dB p-p max over temp. range		

Receive Path			
<b>RF Input</b>		<b>Gain Specification</b>	
RF Input Frequency	3.4 – 4.2 GHz 4.2 – 4.5 GHz (CI)	Gain (LNB + Receiver)	80 dB @ max gain set
RF Input Interface	CPR-229G	Gain control range	20 dB (0.1 dB step size)
Input VSWR	2.5:1	Gain flatness	±2.5 dB max over full RF band
		Gain stability	±3.0 dB max over temp. range
		Spurious	-55 dBc
		Image Rejection	50 dB
<b>IF Output</b>		<b>LNB Parameters</b>	
Frequency range	70 ± 18 MHz (140 ± 36 MHz optional)	LNB type	Phase lock to 10 MHz ref. (from Transceiver via coax. cable)
Output Level	+5 dBm	Noise Temperature	35°K
Output Connector	Type N female / 50 Ω	L-band Output Frequency	950-1750 MHz
Output Return Loss	18 dB at 50 Ω	L-band Output Interface	Type N female 50 Ω
		Conversion Gain	60 dB
		DC power	12±18V DC (via coaxial cable)
		<b>LNA Parameters (optional)</b>	
		Noise Temperature	35°K (30°K optional)
		Output Interface	Type N female 50 Ω
		Gain	60 dB
		DC power	12±18V DC (via coaxial cable)

Common Parameters (Tx & Rx)			
<b>Synthesizer step size</b>	1 MHz (option 125 KHz)		
<b>Frequency Stability</b>	-40°C to +55°C ±2 x 10 <sup>-8</sup>		
Aging	±1 x 10 <sup>-7</sup> /year		
<b>Phase Noise</b>	<i>(With internal 10MHz reference)</i>		
Offset frequency	Phase noise (max)		
100 Hz	-60 dBc/Hz	-65 dBc/Hz typical	
1000 Hz	-70 dBc/Hz	-73 dBc/Hz typical	
10 KHz	-80 dBc/Hz	-85 dBc/Hz typical	
100 KHz	-90 dBc/Hz	-95 dBc/Hz typical	
<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		
	<b>Environmental</b>		
	Cooling	Forced Air	
	Operational	-30°C to +55°C standard (-40°C to +55°C option) -55°C to +85°C	
	Storage	Up to 100% condensing	
	Altitude	3,000 m AMSL (derated 2°C/300m)	
	<b>Power Requirements</b>		
	AC input voltage	Auto ranging 110/220±15% (47-63 Hz)	
	AC Connector	MS3102R10SL-3P	
	<b>Mechanical</b>		
	Packaging	Weatherproof for outdoor use	

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