

Features

- Operating Ku-Band Tx: 14.00 - 14.50 GHz
13.75 - 14.50 GHz (optional)
Rx: 10.95 - 12.75 GHz (sub-bands)
- 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/RS-485)
- Relay alarm indicators
- LED status indicators
- Automatic high reflected power protection
- Harmonic Filter
- High stability internal 10MHz reference
- Downloadable PC GUI
- Redundant ready operation

OPTIONS

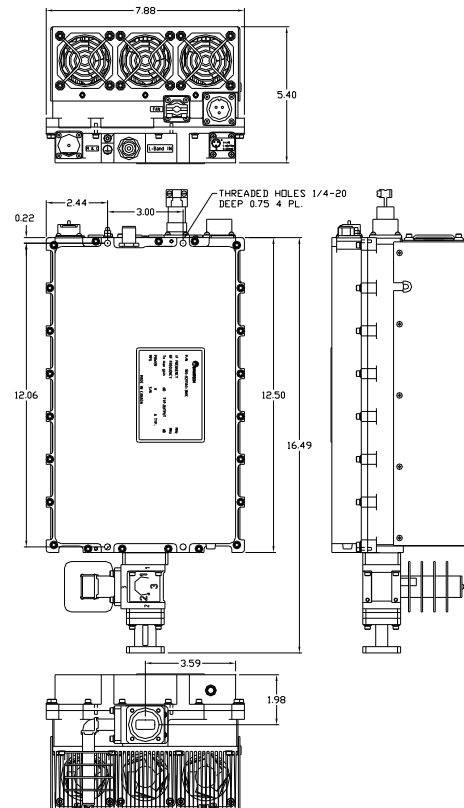
- Extended Ku-band (13.75 – 14.5 GHz)
- LNA operation
- Remote M&C panel (Ethernet port optional)
- External 10 MHz reference with auto sensing

OVERVIEW

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

AWMT-3500KL-G® is a family of hub-mount transceivers operating in the Ku-band from 80W to 100 W. 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-KL-G® 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-3500KL-G® is designed to operate in the Ku-band with L-band interface. The unit is self-contained and is intended for mounting outdoors, close to the OMT of an antenna.

REDUNDANCY

The AWMT-3500KL-G® 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

Ku-BAND TRANSCEIVER 80 W TO 100 W
L-BAND INTERFACE
AWMT-3500KL-G® series GaN TECHNOLOGY



PRODUCT FEATURES & SPECIFICATIONS

Transmit Path		
Model	80W	100W
Psat (dBm)	49	50
Plinear (dBm)	46	47
Gain min @ max. gain set (dB)	69	70
Power Consumption (at Psat)	600 W	650 W
Unit Weight	22 lbs (10 kg)	
Dimensions (L x W x H)	16.50" x 7.9" x 5.2" (416 x 200 x 132 mm)	

Transmit Path			
L-Band Input		RF Output	
Frequency range	950-1450 MHz 950-1700 MHz (optional)	Frequency range (Non-inverting)	14.00 – 14.50 GHz 13.75 – 14.50 GHz (optional)
Input Connector	Type N female	Output connector	WR 75
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)	-25 dBc max at 3dB total back-off from rated Psat
Gain Specification		Spurious	-55 dBc max at Plinear
Gain control range	20 dB (0.1 dB step size)	Noise Power Density	-70 dBm/Hz max in TX band
Gain flatness	3.0 dB p-p max		-145 dBm/Hz max in 10.95 – 12.75 GHz in RX band
Gain stability	3.0 dB p-p max over temp. range	Spectrum Regrowth	-30dBc@Plinear

Receive Path			
RF Input		Gain Specification	
RF Input Frequency	10.95 – 12.75 GHz	Gain (LNB + Receiver)	75 dB @ max gain set
	* Field selectable bands	Gain control range	20 dB (0.1 dB step size)
Bands	1) 10.95 – 11.70 GHz 2) 11.70-12.20 GHz 3) 12.25-12.75 GHz	Gain flatness	±2.5 dB max over full RF band
		Gain stability	±3.0 dB max over temp. range
		Spurious	-55 dBc max
RF Input Interface	WR75	Image Rejection	50 dB
Input VSWR	2.5:1	LNB Parameters	
L-band Output		LNB type	Phase locked to 10 MHz ref. (from Transceiver via coax. cable)
		Noise Temperature	65°K
Frequency range	950 – 1450 MHz 950 – 1700 MHz (optional)	L-band Output Frequency	950-1750 MHz
Output P1dB, min	+10 dBm	L-band Output Interface	Type N female 50 Ω
Output Connector	Type N female / 50 Ω	Conversion Gain	60 dB
Output Return Loss	18 dB/50 Ω	DC power	12÷18V DC (via coaxial cable)
		LNA Parameters(optional)	
		Noise Temperature	85°K
		Output Interface	Type N female 50 Ω
		Gain	60 dB
		DC Power	12÷18V DC (via coaxial cable)

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Common Parameters (Tx & Rx)			
Synthesizer step size	1 MHz (option 125 KHz)	Environmental	
Frequency Stability		Cooling	Forced Air
-40°C to +55°C	$\pm 2 \times 10^{-8}$	Operational	-30°C to +55°C standard (-40°C to +55°C option)
Aging	$\pm 1 \times 10^{-7}$ /year		
Phase Noise	<i>(With internal 10MHz reference)</i>	Storage	-55°C to +85°C
Offset frequency	Phase noise (max)	Humidity	Up to 100% condensing
100 Hz	-63 dBc/Hz	Altitude	3,000 m AMSL (derated 2°C/300m)
1000 Hz	-73 dBc/Hz		
10 KHz	-83 dBc/Hz	Power Requirements	
100 KHz	-93 dBc/Hz	AC input voltage	Auto ranging 110/220±15% (47-63 Hz)
Monitor & Control		AC Connector	MS3102R16-10P
Serial port (RS-485)	MS3112E10-6P	Mechanical	
Serial port (RS-232)	MS3112E10-6P	Dimensions	See Table above
Redundancy Port	MS3112E16-26P	Packaging	Weatherproof for outdoor use
Discrete Port	MS3112E12-10P		

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