

FEATURES

- 1 GHz IF bandwidth
- Compact light weight design
- Weatherproof package
- Phase-locked LNC
- Low phase noise
- Remote Monitor & Control (RS232 / RS485)
- Relay alarm indicators
- LED status indicators
- High stability internal 10MHz reference
- Automatic high power reflected power protection

OPTIONS

- Transmit Reject Filter (external for LNC)
- Receive Reject filter (additional external)
- Redundant operation
- Remote Control Panel or Hand-Held terminal
- Ethernet Interface

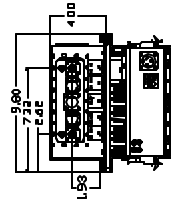
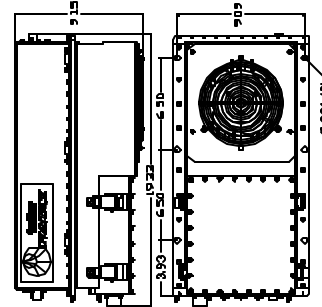
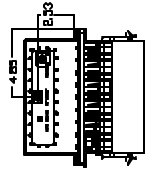
OVERVIEW

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-2000KaS® is a family of hub-mount transceivers operating in the Ka-band. These transceivers are designed for continuous operation in the harshest outdoor environment. Except for the LNC, the complete unit is available in a single integrated package. The built-in microprocessor controller provides for external monitoring and control of the operating parameters, and for the redundancy control. The LNC is connected to the transceiver with a single coaxial cable. Higher power transceivers are also available in the AWMT-KaS series for up to 100W.

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 front panel or the RS485 remote interface will provide full set-up and fault monitoring facilities. The RS232 will provide the Monitor and Control functions via a PC or hand-held terminals and will also allow for software downloading.

* Other frequency bands available upon request



APPLICATION

The AWMT-2000KaS® is designed to operate in the Ka-band with an S-Band interface in the Transmit path and L-Band in the Receive path. The unit is self-contained and is intended for mounting outdoors, close to the OMT of an antenna.

REDUNDANT OPERATION

The AWMT-2000KaS® 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
- PC GUI with RS232/RS485 adapter
- Ethernet adaptor

Ka-BAND TRANSCEIVER 20 W S-BAND INTERFACE AWMT-2000KaS® series



Transmit Path

Power 43 dBm min
P1dB min. 42 dBm

IF Input

Frequency range S-Band (2.0 – 3.0 GHz)
Input Level -30 to -10 dBm
Input Connector Type N female
Connector Impedance 50 Ω
Input VSWR 1.3:1 max

RF Output

Frequency range 30.00 - 31.00 GHz
Output connector WR28
Connector Impedance 50 Ω
Output VSWR 1.3:1 max

Gain Specification

Gain 60 dB @ max. gain setting
Gain control range 20 dB (0.1 dB step size)
Gain flatness ±2.0 dB p-p max over full band
Gain stability 3.0 dB p-p max -30°C to +55°C
Intermodulation Product (IMD3) -26dBc (2 carriers each at 6 dB back-off from total P1dB)
Spurious -60 dBc max, carrier related

Phase Noise*

Offset frequency Phase noise
100 Hz -63 dBc/Hz max
1000 Hz -73 dBc/Hz max
10 KHz -83 dBc/Hz max
100 KHz -93 dBc/Hz max
1 MHz -103 dBc/Hz max

Monitor & Control

Serial port (RS-485) MS3112E10-6P
Serial port (RS-232) MS3112E10-6P
Redundancy Port MS3112E16-26P
Discrete Port MS3112E12-10P

Environmental

Cooling Forced Air
Operational -30°C to +55°C standard
(-50°C to +55°C option)
Storage -55°C to +85°C
Humidity up to 100% condensing
Altitude 3,000 m AMSL (derated 2°C/300m)

* With internal 10MHz reference

Receive Path

RF Input (to LNC)

RF Input Frequency 20.2 - 21.2 GHz
RF Input Interface WR42
Input VSWR 1.3:1 typical at 50 Ω

IF Output

Frequency range 1.0-2.0 GHz
Output Level +10 dBm at P1dB
Output Connector Type N female
Connector Impedance 50 Ω
Output VSWR 1.3:1 typical at 50 Ω

Gain Specification

Gain (LNC + Receiver) 60 dB min
Gain control range 20 dB (0.1 dB step size)
Gain flatness 1.0 dB p-p max over 36 MHz
Gain stability ±3.0 dB p-p max -30°C to +55°C
Spurious -55 dBc
Image Rejection 60 dB

LNC Parameters

LNC type Phase locked LO provided from the Transceiver (via coax. IF cable)
Noise figure 2.5 dB typical
L-band Output Interface Type N female 50 Ω
Gain 30 dB min
DC power 12÷18V DC (via coaxial IF cable)

Frequency Stability*

Aging $\pm 2 \times 10^{-8}$ / day
 $\pm 1 \times 10^{-7}$ / year
Stability over temp. $\pm 2 \times 10^{-8}$ / -30°C to +55°C/day

Power Requirements

AC input voltage 120VAC ± 15% / 220 VAC ± 15%
47 to 63 Hz
AC Connector MS3102R16-10P
Power consumption 400W nominal

Mechanical

Dimensions 19.3" x 9.0" x 9.15"
(49 cm x 23 cm x 23 cm)
LNC Dimensions 3.73" x 3.0" x 2.1"
(9.5 cm x 7.6 cm x 5.3 cm)
Weight 40 lbs (18 kg)
(nominal, without LNC)
Packaging Weatherproof for outdoor use

PB-WT520-Q1 Rev.04 issued on 1/12/2006

An ISO9001 2000 Company

CE
Specifications are subjects to change without notice

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