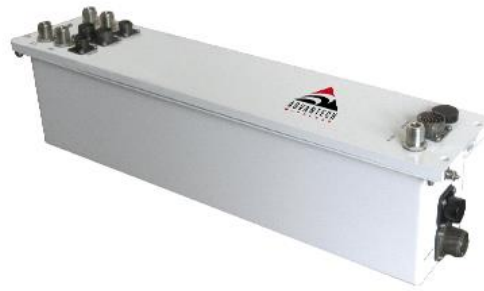


S-Band HP Converters Outdoor series



Features

- 70 MHz or 140 MHz IF
- S-Band 2000 – 2400 MHz option 2000 – 2500 MHz
- 1 kHz step size
- Superior phase noise performance
- Built-in internal reference with auto-sensing
- On-site reference aging correction capability
- High linearity
- Input and output monitors
- RS232, RS485 interfaces
- Ethernet interface with SNMP and Web Interface

Overview

The Advantech Wireless S-band series of converters uses the latest technology in conversion, local and remote control thus providing the ultimate in performance and user friendly operation at a very competitive price.

The spectral purity, low phase noise and stability exceed the requirements of all major international satellite network operators.

Remote management interfaces ensures complete flexibility of integration into existing or new installations. The RS485 remote interface will provide full set-up and fault monitoring facilities. Ethernet option will allow the operator to pilot system operation either through SNMP or Web based interface.

The system reference guaranteeing conversion function's accuracy can optionally be provided externally, internally as a highly stable temperature compensated oscillator, or with auto-detection capacity that will use internal reference only in the absence of an externally provided one.

The S-band series of converters provides an industry leading MTBF of over 120,000 hours.

Models

Up-Converters

AWUN-70S	70 MHz to S-Band
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Down-Converters

AWDN-70S	S-Band to 70 MHz
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S-Band Transceiver

AWMT-70S	70 MHz to S-Band Up/Down-converter Up/Down NINV
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Options

- 140 MHz IF Frequency
- 75 ohms IF impedance
- 1:1 Hot Swap Redundancy
- Ethernet interface with SNMP and Web Interface
- S-Band 2000 – 2500 MHz

S-Band HP Converters Outdoor series

Technical Specifications							
Up-Converter				Down-Converter			
IF Input		RF Input		RF Input		IF Output	
Frequency range	70 ± 20 MHz 140 ± 40 MHz (optional)	Frequency range	2000 – 2400 MHz Option 2000 – 2500 MHz	Frequency range	70 ± 20 MHz 140 ± 40 MHz (optional)	Output level	+15 dBm at P1dB
Impedance	50 Ω*	Impedance	50 Ω	Output level	+15 dBm at P1dB	IMD3 (two tone)	-50 dBc max @ 0 dBm output
Input connector	Type N (female)	Output connector	Type N (female)	Output Connector	Type N (female)*	Output connector	Type N (female)*
Return loss	23dB	Return loss	16 dB	Connector Impedance	50 Ω *	Connector Impedance	50 Ω *
Input monitor connector		Input monitor connector		Return loss	23 dB	Return loss	23 dB
Input monitor coupling	-20dBc	Input monitor coupling	-20dBc	Output monitor connector	Type N (female)*	Output monitor connector	Type N (female)*
RF Output		IF Output		IF Output		Transfer Characteristics	
Frequency range	2000 – 2400 MHz Option 2000 – 2500 MHz	Frequency range	70 ± 20 MHz 140 ± 40 MHz (optional)	Gain	30 dB @ max gain setting	Gain adjustment	20 dB (0.1 dB step size)
Output level	+15 dBm at P1dB	Output level	+15 dBm at P1dB	Gain flatness	0.8 dB p-p max. 40 MHz	Gain flatness	1.0 dB p-p max. 80 MHz
IMD3 (two tone)	-50 dBc max @ 0 dBm output	IMD3 (two tone)	-50 dBc max @ 0 dBm output	Gain stability	±0.25 dB max. /24 hours	Gain stability	±1.5 dB over temp. range
Output connector	Type N (female)*	Output Connector	Type N (female)*	Spurious (in band)	<-60 dBc carrier related @ 0 dBm	Spurious (in band)	<-70 dBm non-carrier related
Connector Impedance	50 Ω	Connector Impedance	50 Ω *	Noise Figure	15 dB	Noise Figure	15 dB
Return loss	16 dB	Return loss	23 dB	Synthesizer step size	1 kHz	Synthesizer step size	1 kHz
Output monitor connector	Type N (female)*	Output monitor connector	Type N (female)*	Image rejection	-60dBc	Image rejection	-60dBc
Output monitor coupling	-20dBc	Output monitor coupling	-20dBc	Group delay : 70MHZ IF	Linear 0.030 ns/MHz	Group delay : 140MHZ IF	Parabolic 0.010 ns/MHz ² 0.003 ns/MHz ²
Reference		Mechanical		Power Supply		Monitor and Control	
External Reference	10 MHz (optional)	Dimensions	Width 4.5"	Voltage	90 – 265 VAC (47 – 63 Hz)	RS 485	MS3112E10-6P
Internal reference stability	± 2 x 10 ⁻⁸ over 0° to +50°C		Height 5.0"	Power	40W typ.	RS 232	MS3112E10-6P
Aging	± 2 x 10 ⁻¹⁰ / day ± 5 x 10 ⁻⁸ / year		Depth 21"	Connector	MS3102R16-10P	Discrete	MS3112E10-6P
Environmental		Power Supply		Monitor and Control		Monitor and Control	
Operational	-30°C to +55°C standard	Voltage	90 – 265 VAC (47 – 63 Hz)	RS 485	MS3112E10-6P	Redundancy	MS3112E16-16P
Storage	-55°C to +85°C	Power	40W typ.	Ethernet (optional)	MS3112E10-6P		
Humidity	Non-condensing	Connector	MS3102R16-10P				
Altitude	3,000m AMSL						
* Other options		Monitor and Control		Monitor and Control		Monitor and Control	
1) 10MHz auto-sensing reference		RS 485		MS3112E10-6P		MS3112E10-6P	
2) 75 ohms IF impedance		RS 232		MS3112E10-6P		MS3112E10-6P	
3) SMA 50 Ω IF connector		Discrete		MS3112E10-6P		MS3112E10-6P	
4) SMA 50 Ω RF connector		Redundancy		MS3112E16-16P		MS3112E16-16P	
5) Auto-sensing reference		Ethernet (optional)		MS3112E10-6P		MS3112E10-6P	

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