

C-Band HP Converters Outdoor Series



Features

- 70 MHz or 140 MHz IF
- C-Band (5.85-6.425GHz) and CX (5.85-6.725GHz)
- 125 kHz step size
- Superior phase noise performance
- Built-in internal reference with auto-sensing
- On-site reference aging correction capability
- High linearity
- RS232, RS485 and Ethernet interface with SNMP and Web Interface

Overview

The Advantech Wireless C-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 C-band series of converters provides an industry leading MTBF of over 150,000 hours.

Models

Up-Converters

AWUN-70C	70 MHz to C-Band (5.85-6.425GHz)
AWUN-70CX	70 MHz to CX (5.85-6.725GHz)

Down-Converters

AWDN-C70	C-Band (3.4-4.2GHz) to 70 MHz
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Options

- 140 MHz IF Frequency
- 50 ohms IF impedance
- 1:1 Redundancy

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Technical Specifications			
Up-Converter		Down-Converter	
IF Input		RF Input	
Frequency range	70 ± 18 MHz 140 ± 36 MHz (optional)	Frequency range	3.4-4.2 GHz
Impedance	50 Ω*	Impedance	50 Ω
Input connector	Type N (female)	Output connector	Type N (female)
Return loss	18dB	Return loss	16 dB
RF Output		IF Output	
Frequency range	5.85-6.425 GHz Option 5.85-6.725 GHz	Frequency range	70 ± 18 MHz 140 ± 36 MHz (optional)
Output level	+10 dBm at P1dB	Output level	+5 dBm at P1dB
IMD3 (two tone)	-40 dBc max @ -5 dBm output	IMD3 (two tone)	-40 dBc max @ -5 dBm output
Output connector	Type N (female)*	Output Connector	Type N (female)*
Connector Impedance	50 Ω	Connector Impedance	50 Ω *
Return loss	16 dB	Return loss	18 dB
Transfer Characteristics			
Conversion Gain	20 dB Up Converter ;30 dB Down Converter @ max gain setting		
Gain adjustment	20 dB (0.1 dB step size)		
Gain flatness	1.5 dB p-p max. 36 MHz 2.0 dB p-p max. 72 MHz		
Gain stability	±0.25 dB max. /24 hours ±1.5 dB over temp. range		
Spurious (in band)	<-55 dBc carrier related @ -5 dBm <-60 dBm non-carrier related		
Synthesizer step size	125kHz		
		Image rejection	-60dBc
Standard Group delay	10 to 15 ns pk-pk		
Group delay : 70MHZ IF option 140MHZ IF	Linear 0.030 ns/MHz 0.025 ns/MHz	Parabolic 0.010 ns/MHz ² 0.003 ns/MHz ²	Ripple 1ns p-p 1ns p-p
Phase noise @ dBm/Hz	Meets or exceeds IESS 308/309		
Reference		Mechanical	
External Reference	10 MHz (optional)	Dimensions	Width 4.5"
Internal reference stability	± 2 x 10 ⁻⁸ over 0° to +50°C		Height 5.0"
Aging	± 2 x 10 ⁻¹⁰ / day ± 5 x 10 ⁻⁸ / year		Depth 21"
Environmental		Power Supply	
Operational	-30°C to +55°C standard	Voltage	90 – 265 VAC (47 – 63 Hz)
Storage	-55°C to +85°C	Power	40W typ.
Humidity	Non-condensing	Connector	MS3102R16-10P
Altitude	3,000m AMSL		
* Other options		Monitor and Control	
1) 10MHz auto-sensing reference		RS 485	MS3112E10-6P
2) 75 ohms IF impedance		RS 232	MS3112E10-6P
		Discrete	MS3112E12-10P
		Redundancy	MS3112E16-26P
		Ethernet (optional)	MS3112E8-4S

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