

Single / Dual / Triple / Quad FCB200



Features

- L-Band IF
- · Cost effective solution
- Fully compliant with IESS 308/309
- High linearity
- Low group delay
- Front panel control (local)
- Full remote control (remote)

Overview

The Advantech HP range 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.

The flexible and comprehensive monitor and control features on the HP converter 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 and will also allow for software upgrades downloading.

The PLL oscillator used in the converter is either locked to a highly stable internal 10 MHz reference or if the external reference option is fitted and the proper level of signal is present, the PLL will automatically lock to the external reference.

Application

The HP range of converters is particularly suited for use in VSAT, SCPC Networks, SNG, DVB-RCS and Hub systems. This makes them an ideal choice for large earth stations requiring cost effective solutions for frequency conversion. The lightweight, rugged and compact design also ensures that the HP converter provides the ideal solution for mobile truck or flyaway DSNG systems. With a fully welded aluminum chassis and robust modular internal construction the converter can even meet the demands of military installations.

The HP range of converters provides an industry leading MTBF of over 120,000 hours.

Operating Bands Up-Converters

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Model Number	Туре	Input Frequency	Output Frequency
ARUN-LX	single	→ Q50-1/150 MHz ··· ·· ··	
ARUD-LX	dual		7.9 - 8.4 GHz
ARUT-LX	triple		Non-inverted
ARUQ-LX	quad		

Down-Converters

Model Number	Туре	Input Frequency	Output Frequency
ARDN-XL	single		
ARDD-XL	dual	7.25 - 7.75 GHz	950 – 1450 MHz
ARDT-XL	triple	7.25 - 7.75 GHZ	Non-inverted
ARDQ-XL	quad		

Up/Down -Converters

Model Number	Туре	Input Frequency	Output Frequency
ADMILY	Up section	950-1450 MHz	7.9 - 8.4 GHz Non-inverted
ARMT-LX	Down section	7.25 - 7.75 GHz	950 – 1450 MHz Non-inverted

Options

- Ethernet port and SNMP Interface
- External 10 MHz with Autosensing
- Dual, quad, Up/Down, or 1:1 redundant hot swap converters in single 1RU chassis
- Redundant Ready (for 1:N)*

Note: Consult factory for detailed configuration



X-Band Block Frequency Converters

Pipput See table on front page Frequency range See table on front page Frequency range See table on front page Impedance So Ω Impedance Impedance So Ω Impedance Imp	p-Converter		Down-Converter	
Impedance	F Input		RF Input	
Impedance	Frequency range	(See table on front page)	Frequency range	(See table on front page)
Return loss	Impedance	50 Ω	Impedance	1
Return loss	Input Connector	BNC (female)	Input Connector	Type N (female)
Output power (P1dB) +5 dBm at P1dB Output power (P1dB) +5 dBm at P1dB Frequency range (See table on front page) Frequency range (See table on front page) IMD3 (two tone) -45 dBc max @ -5 dBm output IMD3 (two tone) -45 dBc max @ -5 dBm output Output connector Type N (female) Output connector BNC (female) Connector Impedance BNC (female) Draw (female) Connector Impedance BNC (female) Connector Impedance BNC (female) Conversion Gain 20 dB @ max gain setting Conversion Gain 20 dB @ max gain setting Conversion Gain 20 dB @ max gain setting Gain adjustment 20 dB Gain adjustment 20 dB Afternuator step size 0.1 dB Attenuator step size 0.1 dB Gain flatness ±1.5 dB p-p over 40 MHz Gain flatness ±1.5 dB p-p over 40 MHz Gain stability ±0.25 dB max. /24 hours ±1 dB over temp. range ±1 dB over temp. range Spurious Spurious Spurious -60 dBc @ Pout = -5 dBm Spurious Spurious <t< td=""><td></td><td></td><td></td><td></td></t<>				
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MD3 (two tone)				
Output connector Type N (female) Output connector BNC (female) Connector Impedance 50 Ω Connector Impedance 50 Ω Return loss 18 dB Return loss 16 dB ransfer Characteristics Conversion Gain 20 dB Conversion Gain 30 dB @ max gain setting (20dB option) Gain adjustment 20 dB Gain adjustment (20dB option) 20 dB Attenuator step size 0.1 dB Attenuator step size 0.1 dB Gain flatness ±1.5 dB p-p over 500 MHz 0.6 dB p-p over 40 MHz 0.6 dB p-p over 40 MHz Gain stability ±0.25 dB max. /24 hours ±1 dB over temp. range ±1 dB over temp. range ±0.25 dB max. /24 hours ±1 dB over temp. range Spurious <-60 dBc signal related @ -5 dBm			IMD3 (two tone)	
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# 1 dB over temp. range	Gain stability		Gain stability	
Spurious C-60 dBc signal related @ -5 dBm	•	±1 dB over temp. range	,	±1 dB over temp. range
Image rejection 60 dB Noise Figure 15 dB Phase noise -65 dBc/Hz @ 100Hz -75 dBc/Hz @ 10Hz -75 dBc/Hz @ 10kHz -77 dBc/Hz @ 1kHz -85 dBc/Hz @ 100KHz -105 dBc/H	Spurious	<-60 dBc signal related @ -5 dBm	Spurious	· · · · · ·
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Phase noise				
External Reference input 10 MHz, +/- 5 dBm, high purity Dimensions Width 19" (482.6 mm) Internal reference stability ± 2 x 10 ⁻⁸ over 0°C to +50°C Height 1U 1.75" (44.5 mm) Aging ± 2 x 10 ⁻¹⁰ / day ± 5 x 10 ⁻⁸ / year Environmental O°C to +50°C standard Voltage 90 – 265 VAC (47 – 63 Hz) Storage Power 25W (typical, single converted 50W (typical, quad converted 50W (typical, quad converted 50W (typical), quad converted	Phase noise	-75 dBc/Hz @ 1kHz -85 dBc/Hz @ 10kHz		-77 dBc/Hz @ 1kHz -87 dBc/Hz @ 10kHz
External Reference input 10 MHz, +/- 5 dBm, high purity Dimensions Width 19" (482.6 mm) Internal reference stability ± 2 x 10 ⁻⁸ over 0°C to +50°C Height 1U 1.75" (44.5 mm) Aging ± 2 x 10 ⁻¹⁰ / day ± 5 x 10 ⁻⁸ / year Environmental O°C to +50°C standard Voltage 90 – 265 VAC (47 – 63 Hz) Storage Power 25W (typical, single converted 50W (typical, quad converted 50W (typical, quad converted 50W (typical), quad converted	Peference		Mechanical	
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				-
DISCRETE				
Ethernet (optional) RJ45 F				

NORTH AMERICA

Tel: +1 770 456 5601 Fax: +1 770 456 5698 info.usa@advantechwireless.com

Tel: +1 514 420 0045 Fax: +1 514 420 0073 info.canada@advantechwireless.com

SOUTH AMERICA

Tel: +1 514 420 0045 Fax: +1 514 420 0073 info.latam@advantechwireless.com

Tel: +55 11 4810 8890 info.brazil@advantechwireless.com

EUROPE UNITED KINGDOM

Tel: +44 1480 357 600 Fax: +44 1480 357 601 info.uk@advantechwireless.com

RUSSIA & CIS

Tel: +7 495 971 59 18 info.russia@advantechwireless.com

Tel: +1 514 420 0045 ext. 3116 Fax: +1 514 420 0073 info.asia@advantechwireless.com

Tel: +1 770 400 9544 in fo. in dia@advantechwireless.com

Tel: +1 514 420 0045 Info.indonesia@advantechwireless.com An ISO 9001: 2008 Company



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