Ku-Band Block Frequency Converter

Redundant
FCB300R

Features

- Two hot swappable converters in 1U
- Cost effective solution
- Full range of block and agile converters
- Meets or exceeds IESS 308/309 requirements
- High linearity
- Low group delay
- Front panel control (local)
- Full remote control (remote)

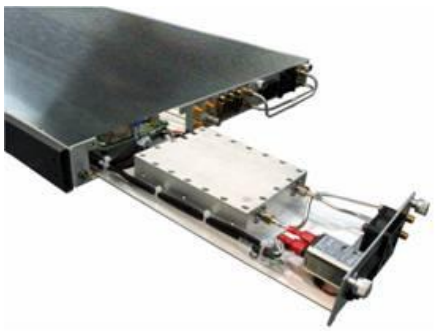
Overview

The Advantech Dual - HP range of converters uses the latest technology in conversion, giving two independent conversion chains in 1 RU package, 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 downloading.

The converter uses a PLL oscillator 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 oscillator will automatically lock to the external reference.



Operating Bands

Up-Converters		
Model Number	**RF Output**	**IF Frequency**
ARUD-LKuR	14.00 - 14.50 GHz Non-inverted	950-1450 MHz
ARUD-LKxR	13.75 - 14.50 GHz Non-inverted	950-1700 MHz
ARUD-LKLR	12.75 - 13.25 GHz Non-inverted	950-1450 MHz

Down-Converters		
Model Number	**RF Output**	**IF Frequency**
ARDD-K1LR	10.95 - 11.70 GHz	950 – 1700 MHz Non-inverted
ARDD-K2LR	11.70 - 12.20 GHz	950 – 1450 MHz Non inverted
ARDD-K3LR	12.25- 12.75 GHz	950 – 1450 MHz Non-inverted
ARDD-K4LR	10.70 – 11.70 GHz	950 – 1950 MHz Non-inverted

Application

The HP range of converters is particularly suited for use in VSAT, SCPC Networks, SNG, DVB-RCS and Hub systems were compact redundancy is required. 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 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.

The hot swappable 1:1 redundancy feature provides for the ultimate flexibility in a very compact package.

Ku-Band Block Frequency Converter

Technical Specifications			
Up-Converter		**Down-Converter**	
IF Input		**RF Input**	
Frequency range	(See table on front page)	Frequency range	(See table on front page)
Impedance	50 Ω	Impedance	50 Ω
Input Connector	BNC (female)	Input Connector	Type N (female)
Return loss	16 dB	Return loss	18 dB
RF Output		**IF Output**	
Output power (P1dB)	0 dBm	Frequency range	(See table on front page)
Frequency range	(See table on front page)	Output level	+5 dBm at P1dB
IMD3 (two tone)	-40 dBc max @ -10 dBm output	Output Connector	BNC female
Output connector	Type N (female)	Connector Impedance	50 Ω
Connector Impedance	50 Ω	Return Loss	16 dB
Return loss	18 dB		
Transfer Characteristics		**Transfer Characteristics**	
Conversion Gain	20 dB @ max gain setting	Conversion Gain	40 dB @ max gain setting
Gain adjustment	20 dB	Gain adjustment	20 dB
Attenuator step size	0.1 dB	Attenuator step size	0.1 dB
Gain flatness	±1.5 dB p-p over 500 MHz	Gain flatness	±1.5.dB p-p over 500 or 750 MHz
	± 0.5 dB p-p over 36 MHz		±0.5 dB p-p over 36 MHz
Gain stability	±0.25 dB max. /24 hours	Gain stability	±0.25 dB max. / 24 hours
	±1 dB over temp. range		±1 dB over temp. range
Spurious	-55 dBc carrier related @ -10 dBm < -60 dBm non-carrier related	Spurious	-55 dBc @ -5 dBm
		Image rejection	60 dB
		Noise Figure	20 dB
Phase noise	Meets or Exceeds IESS 308/309	Phase noise	Meets or Exceeds IESS 308/309
Reference		**Mechanical**	
External Reference	10 MHz, +/- 3 dBm input level	Dimensions	Width 19" (482.6 mm)
Internal reference stability	± 2 x 10^{-10} / day		Height 1U 1.75" (44.5 mm)
Aging	± 5 x 10^{-8} / year		Depth 24" (609.6 mm)
Environmental		**Power Supply**	
Operational	0°Cto +50°Cstandard	Voltage	90 – 265 VAC (47 – 63 Hz)
Storage	-55°C to +85°C	Power	50W (typical)
Humidity	Non-condensing	Connector	IEC 603320 10A
Altitude	3,000m AMSL		
		Monitor and Control	
		RS 485	DB9
		RS 232	DB9
		Discrete	DB9
		Ethernet (optional)	RJ45 F

Request A Quote