Triple Ku-Band HP Converter

1:1 Redundant High Performance
Block Frequency Converter

Features

- M&C Switchable operating bandwidths K1, K2 and K3.
- Two hot swappable converters in 1U
- Cost effective solution
- Meets or exceeds IESS 308/309 requirements
- High linearity
- Front panel control (local)
- Full remote control (remote)

Operating Bands

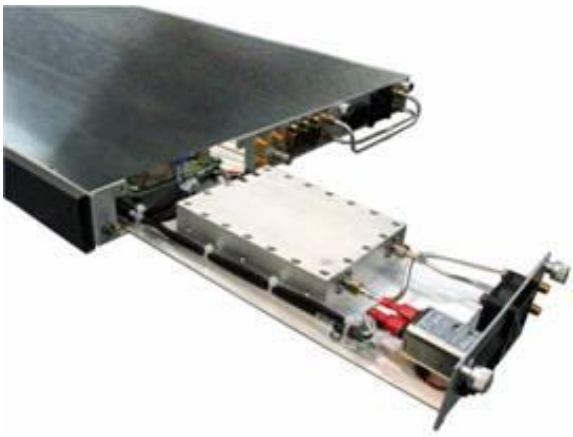
Model Number	RF Input	IF Frequency
ARDD-KW1LR	10.95 - 11.70 GHz	950 – 1700 MHz Non-inverted
	11.70 - 12.20 GHz	950 – 1450 MHz Non inverted
	12.25- 12.75 GHz	950 – 1450 MHz Non-inverted

Overview

The Advantech Triple Ku to L converters integrates in highly space saving the conversion function ususaly achieved 3 different converters. Operator can set any of the specified input bands trough M&C, for maximum flexibility of operation. As for other Dual HP products 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.



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.

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Technical Specifications

Wide Down-Converter

RF Input	
Impedance	50 Ω
Input Connector	Type N (female)
Return loss	18 dB

IF Output	
Output level	+10 dBm at P1dB
IMD3 (two tone)	-40 dBc max @ 0 dBm output
Output Connector	BNC (female)
Connector Impedance	50 Ω
Return Loss	16 dB

Transfer Characteristics				
Frequency range	(See table on front page)			
Conversion Gain	30 dB @ max gain setting			
Gain adjustment	20dB range with 0.1dB step size			
Gain flatness	±1.5.dB p-p over 500 or 750 MHz ±0.5 dB p-p over 36 MHz			
Gain stability	±0.25 dB max. / 24 hours ±1 dB over temp. range			
Spurious	-60 dBc carrier related @ 0 dBm < -65 dBm non-carrier related			
Image rejection	60 dB			
Noise Figure	20 dB			
Phase noise (dBc/Hz)	100Hz	1kHz	10kHz	100kHz
	-65	-75	-85	-100

Reference					Options	
External Reference Input	10 MHz, +/- 5 dBm				Reference	Internal, External, Autosensing
Reference phase noise requirement (dBc/Hz)	100Hz	1kHz	10kHz	100kHz	IF connectors	SMA, Type N, BNC 75 Ω
	-145	-150	-155	-160	RF connectors	SMA, Type N
Internal reference stability	$\pm 2 \times 10^{-8}$ over 0°C to +50°C				Monitor and Control	Ethernet with SNMP/Web Interface
Aging	$\pm 2 \times 10^{-10}$ / day, $\pm 5 \times 10^{-8}$ / year					

Environmental		Power Supply	
Operational	0°C to +50°C standard	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		

Mechanical		Monitor and Control	
Dimensions	Width 19” (482.6 mm) Height 1U 1.75” (44.5 mm) Depth 24” (609.6 mm)	RS 485	DB9
		RS 232	DB9
		Discrete	DB9
		Ethernet (optional)	RJ45 F

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