

# Multi-Band Ka Block Up-Converters Weatherproof Outdoor



## Features

- L-Band IF 950-1950 MHz
- Ka-Band 27.5 – 31 GHz in selectable 4-bands
- High stability and excellent phase noise characteristics exceeds IESS 308/309 requirements
- Excellent spurious emission performance
- Up to +3 dBm output level
- Compact weather proof package to IP66

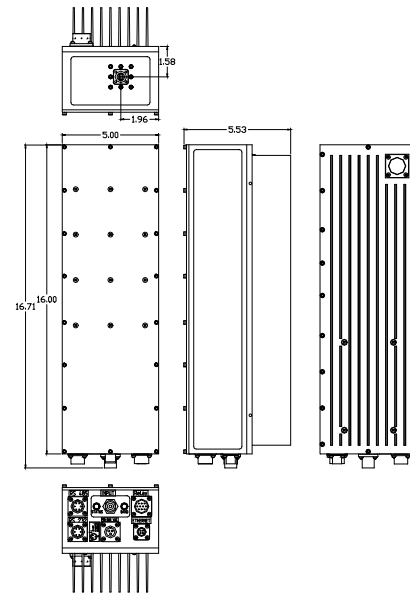
## Overview

The Advantech Wireless WP 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 converter uses a PLL oscillators either locked to a highly stable internal 10 MHz reference or to external 10 MHz reference. It is designed to be completely self-controlled; therefore it does not require any operator intervention. When the 10 MHz reference signal is not provided to the converter, or when the local oscillator is out-of-lock, the RF output of the up-converter is automatically muted. Moreover, should the internal temperature rise beyond +85°C, the up-converter will be automatically shut down.



## Applications

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 weather proved packaging, the converter can meet the demands of the installations in severe environmental conditions.

External Receive Reject Filter.

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

The HP outdoor converters are available in other frequencies upon request.

## Multi-Band Ka Block Up-Converters Weatherproof Outdoor

General Specifications			
IF Input		Interfaces	
Frequency range	950 – 1950 MHz	Monitor and Control	RS232 MS3112E10-6P
Impedance	50 Ω		RS432 MS3112E10-6P
Input Connector	Type N (female)		Ethernet MS3112E10-6P or RJ45 (option)
Return loss	14dB max.	Supply	DC MS3102R16-11 AC (option) MS3102R-14S7
RF Output		Display	
Output Power (P1db)	+10 dBm min.	Operating band	LED green
Frequency range	27.5 – 31 GHz Selectable Bands	Alarm	LED red
<b>Operating Bands</b> (selectable via serial port)		Power On	LED blue
Band 1	27.5 – 28.5 GHZ	Environmental	
Band 2	28.0 – 29.0 GHZ	Operational	-40°C to +55°C standard
Band 3	29.0 – 30.0 GHZ	Storage	-55°C to +85°C
Band 4	30.0 – 31.0 GHZ	Humidity	100% condensing
Output connector	WR28	Altitude	3.000m AMSL
Impedance	50 Ω	Power Supply	
Return loss	11 dB max.	Voltage	DC +20V to +54 V AC 120/220v auto ranging
Transfer Characteristics		Power Consumption	50W
Conversion Gain	33 ± 5dB	Reference	
Gain control range	20 dB in 0.1 dB steps	Input level	0±5 dBm
Gain flatness	5.0 dB p-p over 1000 MHz 1.0 dB p-p over 40 MHz	Internal reference	Stability ± 2 x 10 <sup>-8</sup> / day Aging ± 1 x 10 <sup>-7</sup> / day
Gain Stability	±0.25 dB over temp. range / 24Hours		
In-Band Spurious @ Pout = 0 dBm	-55 dBc carrier related < -55 dBm non-carrier related		
Phase noise (max)	1KHz -75 dBc/Hz max. 100KHz -95 dBc/Hz	10KHz	-85 dBc/Hz max.
Group delay (over 40 MHz)	Linear 0.02 ns/Hz Parabolic 0.003 ns/MHz <sup>2</sup> Ripple 1 ns p-p		
Mechanical			
Dimensions	Length 16.53" (427 mm) Width 4.72" (127mm) Height 5.51" (140 mm)		
Cooling	Convection		
Weatherproof rating	IP66		

Ref.: PB-WPUKa-18252

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