

X band Hubmount converter

Features

- Converts L-band to X-band
- Phase lock oscillator to 10MHz reference
- Internal high stability 10MHz reference
- Cost effective solution
- High stability and excellent phase noise characteristics
- Protection against out-of-lock condition
- High linearity
- Weatherproof package
- Built-in power supply
- CE marking

Overview

The AWUB-LX and AWDB-XL are hub mount converters operating in the transmit and receive X bands. They presents as integrated units with internal power supply, phase-locked oscillator, mixer and filters. Other block converters are also available for operation at other frequencies.

The design of these units is based on Advantech Wireless industry proven reliable converters, resulting in MTBF exceeding 120 000 hours.

Application

Designed for X-Band satellite applications, the AWUB-LX and AWDB-XL have been designed to interface easily with popular L-band modulators and can provide a full bandwidth operation over the whole X-band transmission range. These converters are designed to be completely self-controlled, therefore it does not require any operator intervention

Options

- Redundant system with automatic and manual switching
- External reference
- Reference and DC supply trough L band connector
- Remote M&C panel
- RS485 interface
- Ethernet port



Operating Bands *Up-Converters*

Model Number	RF Output	IF Frequency
AWUB-LX	7.9-8.4 GHz Non-inverted	950-1450 MHz

Down-Converters

Model Number	RF Input	IF Frequency
AWDB-XL	7.25 - 7.75 GHz Non-inverted	950 – 1450 MHz

The Remote Control Panel is optional. The interface between the outdoor system and the Remote Control Panel is via the RS485 interface. The Remote Control Panel will also provide its own RS485 and TCP/IP interface



Optional Remote Control Panel

X-Band Block Outdoor Frequency Converters

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	Type N (female)				Input Connector	Type N (female)			
Return loss	16 dB				Return loss	18 dB			
RF Output					IF Output				
Frequency range	(See table on front page)				Frequency range	(See table on front page)			
Output level	+5 dBm at P1dB				Output level	+% dBm at P1dB			
IMD3 (two tone)	-45 dBc max @ -5 dBm output				IMD3 (two tone)	-45 dBc max @ -5dBm output			
Output connector	Type N (female)				Output connector	Type N (female)			
Connector Impedance	50 Ω				Connector Impedance	50 Ω			
Return loss	18 dB				Return loss	16 dB			
Transfer Characteristics					Transfer Characteristics				
Conversion Gain	20 dB @ max gain setting				Conversion Gain	30dB @ max gain setting			
Gain flatness	3 dB p-p over the full band				Gain flatness	3 dB p-p over the full band			
	0.6 dB p-p over 40 MHz					0.6 dB p-p over 40 MHz			
Gain stability at constant temperature	±0.25 dB max. /24 hours				Gain stability at constant temperature	±0.25 dB max. / 24 hours			
	±1 dB over temp. range					±1 dB over temp. range			
In band Spurious	-60 dBc carrier related @ -5 dBm				Spurious	-60 dBc carrier related @ 0 dBm			
Noise Figure	20 dB				Noise Figure	15 dB			
Phase noise (dBc/Hz)	100Hz	1kHz	10kHz	100kHz	Phase noise	100Hz	1kHz	10kHz	100kHz
	-65	-75	-85	-105		-67	-77	-87	-105
Reference (with external reference option)					Mechanical				
External Reference	10 MHz, +/- 3 dBm input level				Dimensions	Length 21" (26.67 cm)			
Internal reference stability	± 2 x 10 ⁻¹⁰ / day					Width 4.5" (11.86 cm)			
Aging	± 5 x 10 ⁻⁸ / year					Height 5.0" (20.02 cm)			
					Weight	5.4 kg (12 lbs)			
Environmental					Power Supply (Standard configuration)				
Operational	-30°C to +55°C standard				Voltage	90 – 265 VAC (47 – 63 Hz)			
Option	-40°C to +55°C standard				Power	40W (typical)			
Storage	-55°C to +85°C				Connector	MS 3102R16-10P			
Humidity	100% Condensing								
Altitude	3,000m AMSL								
					Monitor and Control (Options)				
					RS 485	MS 3112-E10-6P			
					Discrete alarm	MS 3112-E10-6P			
					Ethernet (optional)	MS 3112-E10-6P			
					Redundancy	MS 3112-E16-16P			

NORTH AMERICA USA

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

CANADA

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

BRAZIL

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

ASIA

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

INDIA

Tel: +1 770 400 9544
info.india@advantechwireless.com

INDONESIA

Tel: +1 514 420 0045
Info.indonesia@advantechwireless.com

An ISO 9001 : 2008 Company



Ref.: PB-AWUB-LX-AWDB-XL-17265