

FEATURES

- Converts synthesized L-Band to Ku-Band (see table A)
- Phase-locked oscillator to external 10MHz reference
- High linearity (low intermodulation products)
- High stability and excellent phase noise characteristics
- Internal High Stability 10 MHz Reference
- Weatherproof package
- Protection against thermal runaway and out-of-lock conditions
- Built-in power supply
- Compact packaging
- CE Marking

OPTIONS

- Redundant system
- Remote M&C panel (Ethernet port optional)

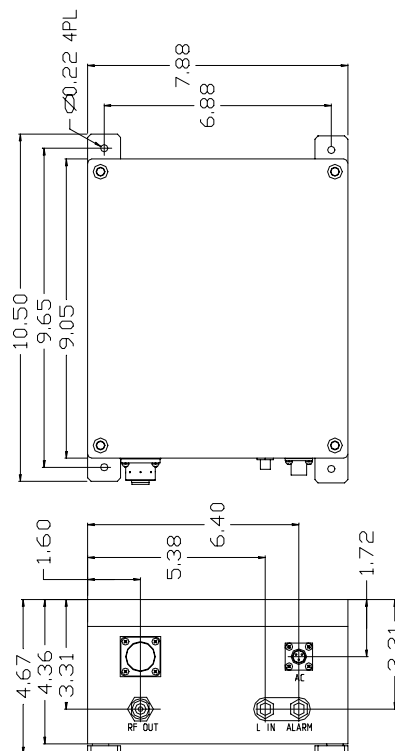
OVERVIEW

The AWUB-LKu® series are hub-mount up-converter transmitters, operating in the Ku-Band. The AWUB-LKu® is an integrated unit, complete with power supply, phase-locked oscillator, mixer, and filter. Intended for outdoor operation, the AWUB-LKu® provides the utmost in convenience and efficiency. They are the smallest fully integrated units on the market today. Other block-up converters are also available for operation at other frequencies.

The design of these units is based on Advantech AMT™ industry proven reliable block-up converter. Built-in design features and assembly methods incorporated with efficient combining techniques result in an amplifier with exceptional linearity and operating efficiency. The use of high efficiency power supply and conservative thermal designs contribute to the trouble-free operation of the amplifier.

REDUNDANCY

The AWUB-LKu® series are available in redundant configuration with a single Monitor and Control interface.



Outline Drawing of the Block-up Converter Shown

Table A

Band	RF Band (GHz)	IF Band (MHz)	LO (GHz)
KS	14.00 – 14.50	950 - 1450	13.05
KX	13.75 – 14.50	950 - 1700	12.80
KL	12.75 – 13.25	950 - 1450	11.80

*Other frequency sub-bands are available. Please consult factory.

APPLICATION

The AWUB-LKu® series convert an L-Band signal to the Ku-band frequency (see table A). Designed for Ku-Band satellite up-link applications, the AWUB-LKu has been designed to interface easily with popular L-band modulators and can provide a full bandwidth operation over the whole Ku-band transmission range. The up converter is designed to be completely self-controlled, therefore it does not require any operator intervention

L-BAND TO KU-BAND HUB-MOUNT BLOCK-UP CONVERTER AWUB-LKu[®]



Technical Specifications

Electrical Characteristics

Input /Output frequency range	Standard Ku-Band: 950 - 1450 MHz/14.00 – 14.50 GHz Extended Ku-Band: 950 – 1700 MHz/13.75 – 14.50 GHz KL-band: 950 – 1450 MHz/12.75 – 13.25 GHz
Output power (P1dB)	0 dBm, min
Conversion gain @ central frequency	15 ± 0.5 dB
Conversion gain flatness	3.0 dB p-p, max over 575 MHz, 0.6 dB p-p, max over 40 MHz
Input return loss	9dB, min
Output return loss	16dB, min
Noise Figure	25 dB, typical
Spurious (in-band) at rated power	-60 dBc, max
Output third order intercept point	+13 dBm, min
LO leakage	-20 dBm, max
Phase noise @ offset frequency:	
100 Hz	-63 dBc/Hz max
1kHz	-73 dBc/Hz max
10 kHz	-83 dBc/Hz max
100 kHz	-93 dBc/Hz max
Group Delay	Linear 0.02 ns /MHz, max
(over any 40 MHz):	Parabolic 0.003 ns/MHz ² , max
	Ripple 1 nsec p-p, max

Internal reference

Reference frequency	10 MHz, sine wave
Reference frequency level	0 ± 3dBm

Power Requirements

Supply voltage	110/220 V AC (autoranging)
Current consumption	150 mA @ 110V, typical

Mechanical Characteristics

Dimensions (W x H x L)	10.50" x 4.67" x 7.88" (26.67 x 11.86 x 20.02 cm)
Weight	5.40 kg (12.00 lbs)
Interfaces:	RF input Type F (F) Alarm Output: Type F (F) RF output Type N (F) AC input MS 3112E8-3P

Environmental Conditions

Temperature:	Operating -30°C to +55°C; Option: E-40°C to +55°C; G: -50°C to +50°C Storage -55°C to +85°C
Humidity	100%, condensing (2" rain/hour)
Altitude	10,000' AMSL, de-rated 2°C/1,000' from AMSL



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