L-BAND TO C-BAND HUB-MOUNT
BLOCK-UP CONVERTER

AWUB-LC®

L-Band to C-Band Block-up Converter

FEATURES

- Converts synthesized L-Band to C-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)

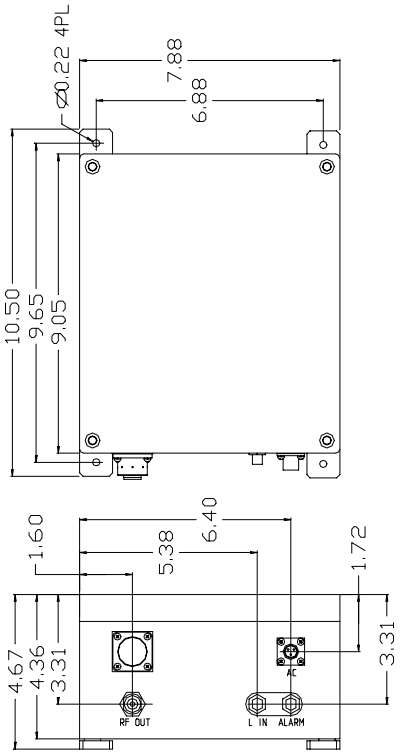

Table A

Band	RF Band (GHz)	IF Band (MHz)	LO (GHz)
CL	4.400 – 5.000	950 – 1550	3.450
CP	6.425 – 6.725	1025 – 1325	5.400
CI	6.725 – 7.025	1025 – 1325	5.700
CR	5.725 – 6.025	950 – 1450	4.775
CS	5.850 – 6.425	950 – 1525	4.900
CX	5.850 – 6.725	950 – 1825	4.900

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

OVERVIEW

The AWUB-LC® series are hub-mount up-converter transmitters, operating in the C-Band. The AWUB-LC ® is an integrated unit, complete with power supply, phase-locked oscillator, mixer, and filter. Intended for outdoor operation, the AWUB-LC ® 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-LC® series are available in redundant configuration with a single Monitor and Control interface.

APPLICATION

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

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Technical Specifications		
Electrical Characteristics		
Input /Output frequency range		Standard C-Band: 950 –1525 MHz/5.850 – 6.425 GHz Extended C-band: 950 – 1825 MHz/5.85 – 6.725 GHz Insat C-band: 1025 – 1325 MHz/6.725 – 7.025 GHz Palapa C-band: 1025 – 1325 MHz/6.425 – 6.725 GHz CL-Band: 950 –1550 MHz/4.400 – 5.000 GHz CR-Band: 950 –1450 MHz/5.725 – 6.025 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		-65 dBc, max
Output third order intercept point		+13 dBm, min
LO leakage		-20 dBm, max
Phase noise @ offset frequency:		
100 Hz		-65 dBc/Hz max
1kHz		-75 dBc/Hz max
10 kHz		-85 dBc/Hz max
100 kHz		-95 dBc/Hz max
Group Delay (over any 40 MHz):	Linear Parabolic Ripple	0.02 ns /MHz, max 0.003 ns/MHz^2, max 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		5.4 kg (12 lbs)
Interfaces:	RF input: Type F (F) RF output: Type N (F) AC input: MS 3112E8-3P	Alarm Output: Type F (F)
Environmental Conditions		
Temperature:	Operating Storage	-30°C to +55°C; Option: E-40°C to +55°C; G: -50°C to +50°C -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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