



20W Fan-less Ext. Ku-Band Block Up Converter

KEY FEATURES

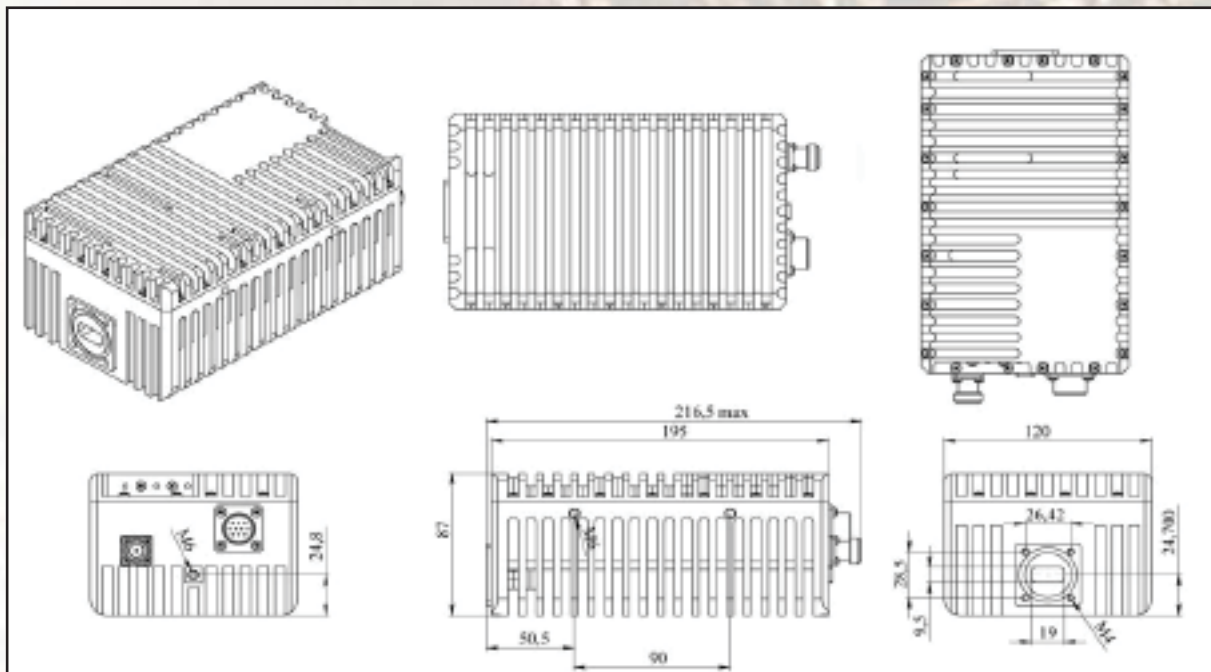
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Built-in redundancy option
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (97W max.)
- ◆ Auto-ranging powering option 15 - 60 VDC
- ◆ Smallest, lightest and fan-less
- ◆ Internal 10MHz high stability reference (optional)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ M&C - combined RS-232/485 and optional FSK
- ◆ Amplifier, L.O. and 10MHz Reference Status LEDs
- ◆ RoHS compliant

ABEN20KX/ ABEN20KXF



This smallest and lightest fanless 20W L-To Ku-Band Block Up Converter is designed to be mounted on a feed horn. The unit is ideal for portable and mobile applications. Double - L.O. feature makes unit universal for Ku-Band requirements. It is powered either with 24/48 VDC and consumes less than 97W.

Mechanical Drawing





20W Fan-less Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
RF frequency	14.00 to 14.50 GHz 13.75 to 14.50 GHz	
Dual local oscillator	13.05 GHz and 12.80 GHz	
IF frequency	950 to 1,700 MHz	
Output power	20W (+43 dBm min.) 10.7W P-Linear (40.3 dBm min.)	
IF connector	N-type or F-type (field-exchangeable)	
Power supply auto-ranging	+15 ~ +60 VDC via IF cable, 97W typ.	
Output interface	WR-75 G	
Gain	68 dB typ.	
IMD3 (two tones)	-26 dBc max. 2 signal 5 MHz apart at P-LINEAR	
L.O. leakage	-45 dBm max	
Spurious	-53 dBc max	
Spectral regrowth (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power)	-30 dBc	
Requirement for external reference: frequency input power	via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port	
TX Gain variation	± 0.5 dB over 40 MHz ± 1.8 dB over full band	
TX Gain stability over temperature range	± 1.5 dB typ., ± 1.8 dB max.	
Phase noise (Exceeds Intelsat's standard IESS308/309)	-53 dBc/Hz max. @ 10 Hz -63 dBc/Hz max. @ 100 Hz -73 dBc/Hz max. @ 1 KHz -83 dBc/Hz max. @ 10 KHz -93 dBc/Hz max @ 100 KHz -113 dBc/Hz max @ 1 MHz	
Noise power density	Transmit Receive	-66 dBm/Hz (max) -157 dBm/Hz (max)
Noise figure	20 dB max	
Input V.S.W.R.	1.5 : 1 max	
Output V.S.W.R.	1.5 : 1 max.	
M&C	RS-232 and RS-485, Ethernet, FSK (optional)	
Mute	Shut off the HPA if L.O. unlocked	
Status LED Amplifier L.O. 10MHz	RED GREEN YELLOW YELLOW blinking GREEN GREEN blinking RED	Summary alarm All OK All OK standard L.O. 13.05 GHz All OK extended L.O. 12.80 GHz External 10MHz reference Internal 10MHz reference No 10MHz reference detected
Temperature range (ambient) operating storage	-40 deg C to +55 deg C -55 deg C to +85 deg C	
Vibration and shock	Complies with MIL-STD-810E	
Dimensions & housing	216.5 (L) x 120 (W) x 87 (H) mm 7.67" (L) x 4.72" (W) x 3.93" (H)	
Weight	2.8 kg (6.17 lbs) max	