



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

KEY FEATURES

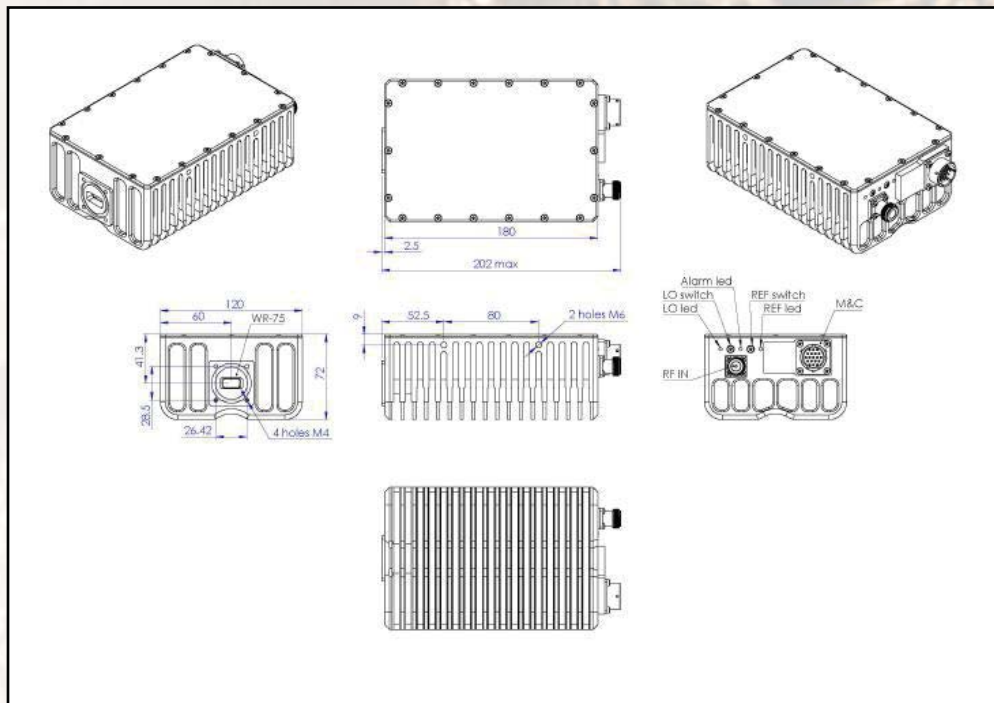
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Built-in redundancy option
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (97W max.)
- ◆ Auto-ranging powering option 15 - 60 VDC
- ◆ Smallest, lightest and fan-less
- ◆ 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 max.	
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	-66 dBm/Hz (max.)
	Receive	-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	RED	Summary alarm
	GREEN	All OK
L.O.	GREEN	All OK standard L.O. 13.05 GHz
	GREEN blinking	All OK extended L.O. 12.80 GHz
10MHz	GREEN	External 10MHz reference
	GREEN blinking	Internal 10MHz reference
	RED	No 10MHz reference detected
Humidity	100%	
Temperature range (ambient)		
operating	-40 deg C to +55 deg C	
storage	-55 deg C to +85 deg C	
Vibration and shock	Complies with MIL-STD-810E	
IP rating	IP67	
Dimensions & housing	180 (L) x 120 (W) x 72 (H) mm 7.08" (L) x 4.72" (W) x 2.83" (H)	
Weight	2.8 kg (6.17 lbs) max.	