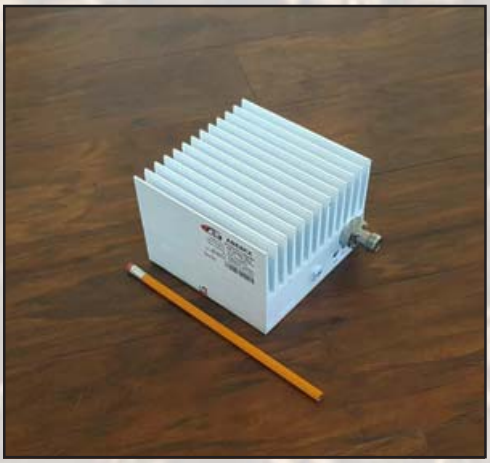
8W Fanless Ext. Ku-Band Block Up Converter

KEY FEATURES

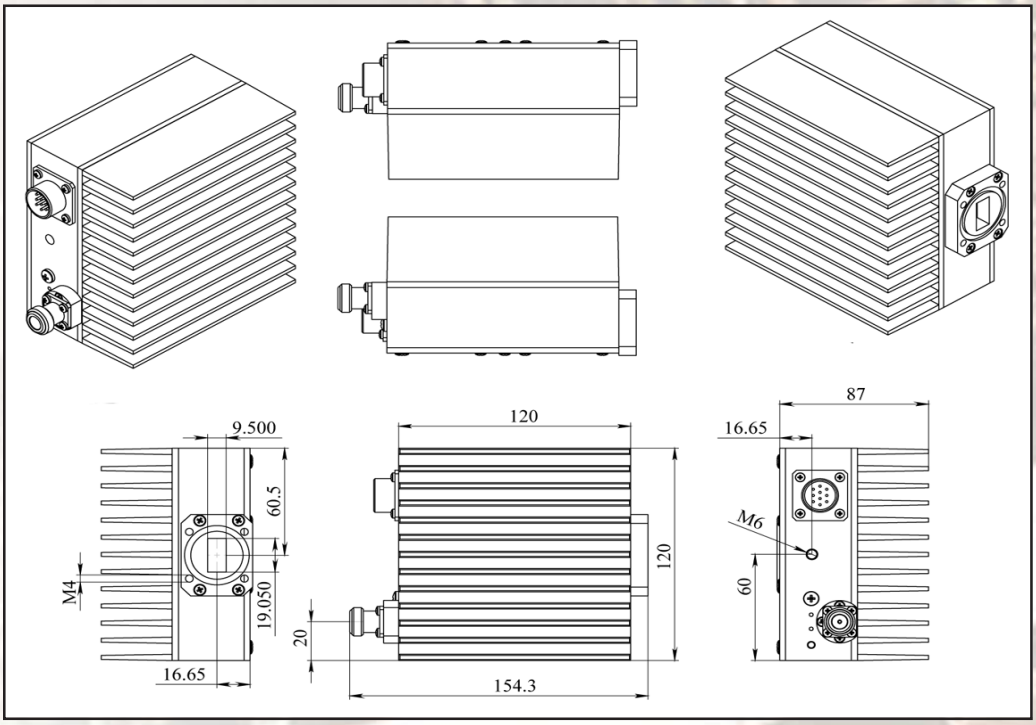
- Output frequency 13.75-14.50 GHz
- Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- Double - L.O. (electronically and manually switchable 12.80 and 13.05 GHz)
- Extreme P-Out GaN linearity
- Auto-ranging power 15-60 VDC
- Incomparable low power consumption (49W max) - can be powered by iDirect or similar modems
- Digital temperature compensation
- L.O. lock and amplifier LEDs
- Field-exchangeable (F/N) IF connector
- M&C - combined RS-232/485, FSK, Ethernet (optional)
- Internal 10MHz high stability reference (optional)
- RoHS Compliant

ABE8KX / ABE8KXF



This smallest and lightest fanless 8W L-To Ku-Band Block Up Converter is based on GaN technology. Incomparable low power consumption, double L.O., Field- Exchangeable connector and auto-ranging (24 or 48 VDC) powering features make unit universal for any Ku-Band application. M&C (FSK) capability enables troubleshooting, monitoring and controlling the BUC. User can choose internal 10MHz high stability reference if the corresponding modulator does not provide it. Incomparable low power consumption allowes the BUC to be powered by iDirect and similar modems.

Mechanical Drawing



8W Fanless Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS

RF frequency	13.75 – 14.50 GHz
Local Oscillator	12.80 GHz and 13.05 GHz
IF frequency	950 to 1,700 MHz
Output power	8W (+39 dBm min) 4.1W P-Linear (+36.1 dBm min.)
IF connector	N-type or F-type (field-exchangeable)
Power supply - auto-ranging	+15~+60 VDC via IF cable, 49 W max
Output interface	WR-75 G
Gain	62 dB typ
IMD3 (two tones)	-26 dBc max 2 signal 5MHz 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)	-30dBc
TX Gain variation **TX Gain stability over temperature range**	± 0.5 dB over 40 MHz ± 1.8 dB over full band ± 1.5 dB typ., ± 1.8 dB max
Requirement for external reference frequency input power	via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port
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**	-60 dBm/Hz (max) -150 dBm/Hz (max)
Noise figure	20 dB max
Input V.S.W.R.	2 : 1 max
Output V.S.W.R.	2 : 1 max.
Mute	Shut off the BUC in case of L.O. unlocked
M&C	via Ethernet
Status LED **RED** **GREEN** **YELLOW** **YELLOW blinking**	Summary alarm All OK All OK standard L.O. 13.05 GHz All OK extended L.O. 12.80 GHz
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	120 (L) x 120 (W) x 87 (H) mm 4.72" (L) x 4.72" (W) x 3.46" (H)
Weight	1.8 kg (4.0 lbs) max