8W Fanless Low Ext. Ku-Band BUC

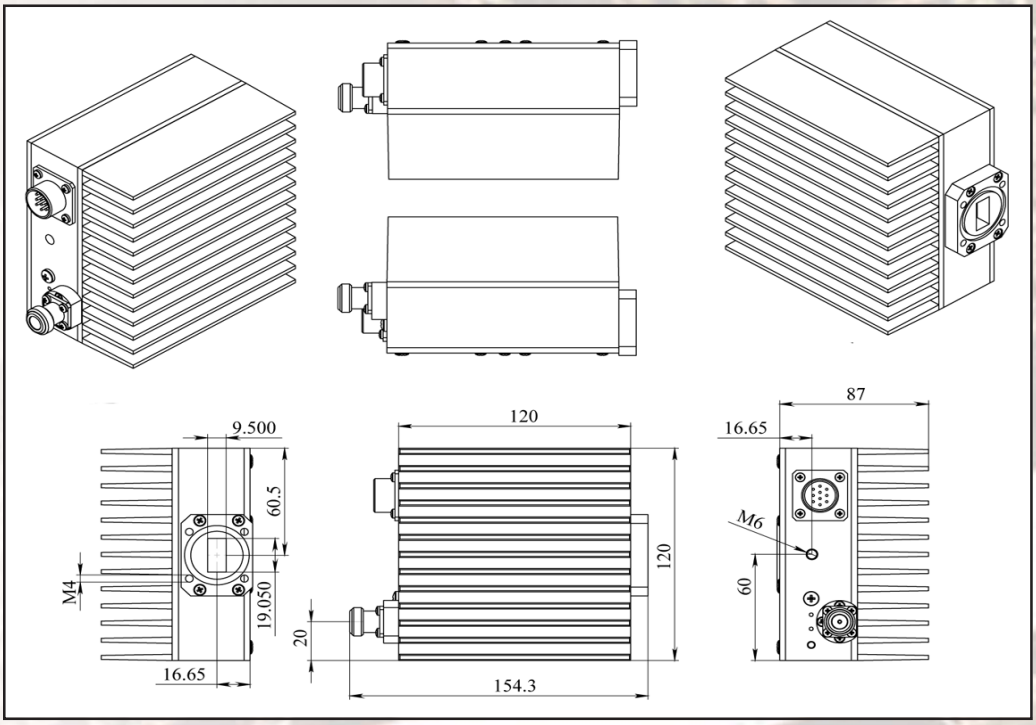
KEY FEATURES

- Output frequency 12.75-13.50 GHz
- Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- Double - L.O. (electronically and manually switchable 11.80 and 12.05 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 10^{-8} reference (optional)
- RoHS Compliant
- Three-year warranty

ABE8KXL / ABE8KXLF

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



GaN Based Product

8W Fanless Low Ext. Ku-Band BUC

TECHNICAL SPECIFICATIONS	
RF frequency	12.75 – 13.50 GHz
Local Oscillator	11.80 GHz and 12.05 GHz
IF frequency	950 to 1,700 MHz
Output power	8W (+39 dBm min)
IF connector	N-type or F-type (field-exchangeable)
Power supply - auto-ranging	+15~+60 VDC via IF cable, 49 W max
Internal 10MHz high stability reference	10^{-8}
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	RS-232 and RS-485, Ethernet
FSK	Multiplexed on TX IFL, compatible with Comtech and Paradigm
Status LED **RED** **GREEN** **YELLOW** **YELLOW blinking**	Summary alarm All OK All OK standard L.O. 12.05 GHz All OK extended L.O. 11.80 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