



12W Fanless Ext. Ku-Band Block Up Converter

KEY FEATURES

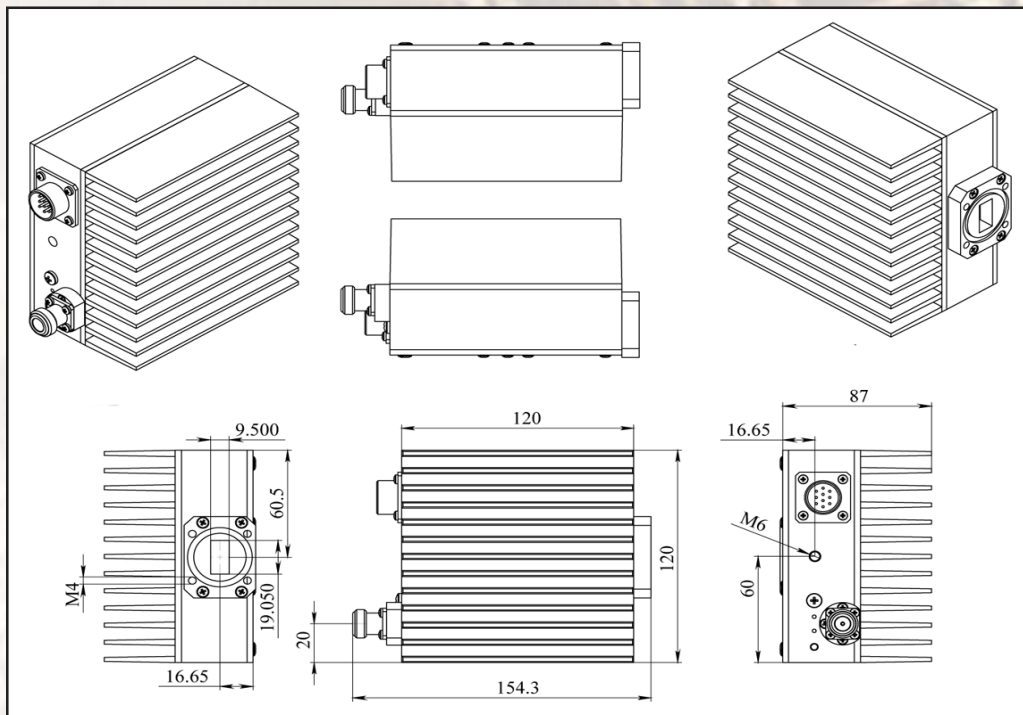
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- ◆ Double - L.O. (electronically and manually switchable 12.80 and 13.05 GHz)
- ◆ Extreme P-Out GaN linearity
- ◆ Auto-ranging power 15-60 VDC
- ◆ Incomparable low power consumption (60W 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

ABE12KX / ABE12KXF



This smallest and lightest fanless 12W 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 allows the BUC to be powered by iDirect and similar modems.

Mechanical Drawing





12W 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	12W (+41 dBm min)	
IF connector	N-type or F-type (field-exchangeable)	
Power supply - auto-ranging	+15~+60 VDC via IF cable, 60 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	± 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	
Requirement for external reference	frequency	via IF cable 10 MHz (sine-wave)
	input power	-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	-60 dBm/Hz (max)
	Receive	-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. 13.05 GHz All OK extended L.O. 12.80 GHz
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	
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	