



12W Fanless Ext. Ku-Band Block Up Converter

KEY FEATURES

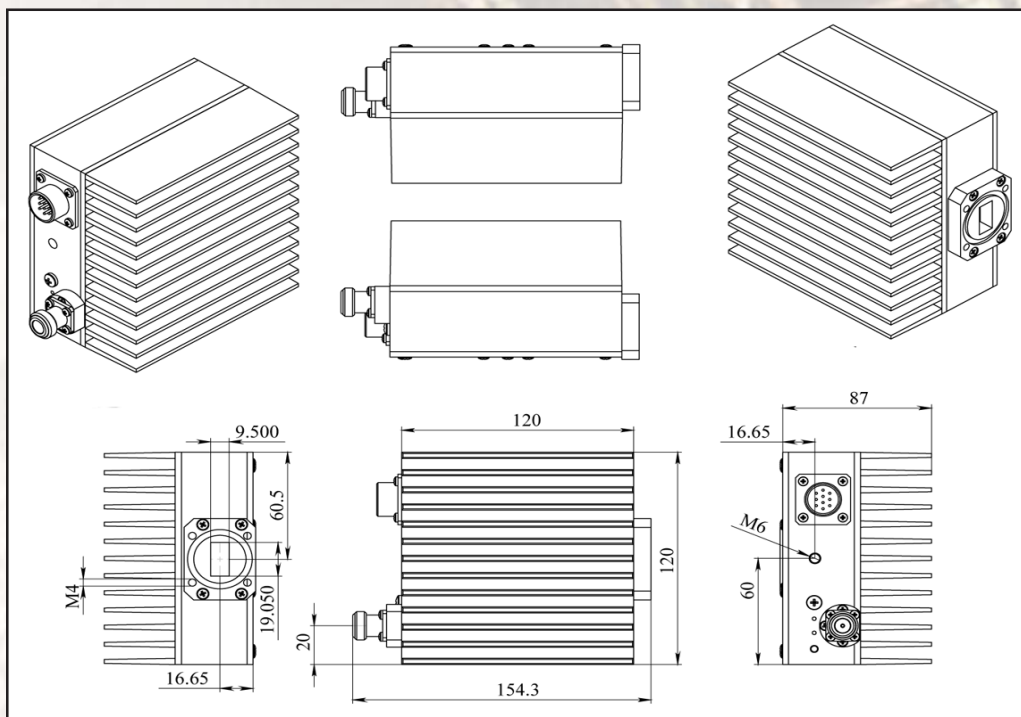
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- ◆ Double - L.O. (electronically and manually switchable 12.80 and 13.05 GHz)
- ◆ Extreme P-Out GaN linearity
- ◆ Auto-ranging power 15-60 VDC
- ◆ Incomparable 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		via IF cable
frequency		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		-60 dBm/Hz (max)
Transmit 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		Summary alarm
RED		All OK
GREEN		All OK standard L.O. 13.05 GHz
YELLOW		All OK extended L.O. 12.80 GHz
YELLOW blinking		
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