



## 12W Fanless Low Ext. Ku-Band BUC

### KEY FEATURES

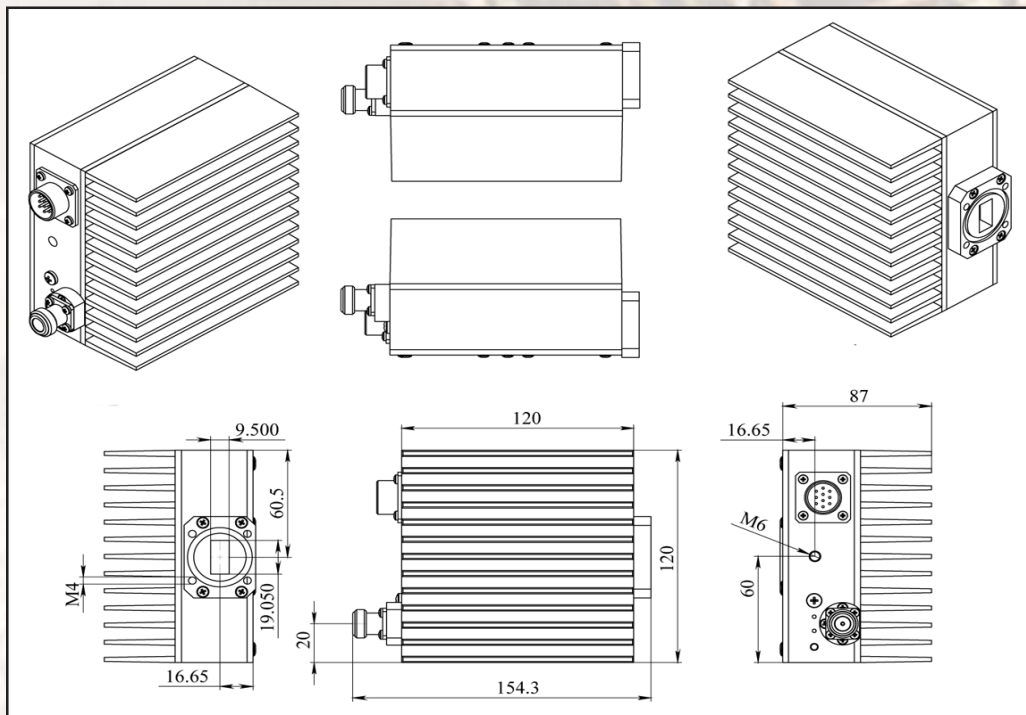
- ◆ Output frequency 12.75-13.50 GHz
- ◆ Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- ◆ Double - L.O. (electronically and manually switchable 11.80 and 12.05 GHz)
- ◆ Extreme P-Out GaN linearity
- ◆ Auto-ranging power 15-60 VDC
- ◆ Incomparable low power consumption (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

### ABE12KXL / ABE12KXLF



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 Low Ext. Ku-Band BUC

<b>TECHNICAL SPECIFICATIONS</b>	
<b>RF frequency</b>	12.75 – 13.50 GHz
<b>Local Oscillator</b>	11.80 GHz and 12.05 GHz
<b>IF frequency</b>	950 to 1,700 MHz
<b>Output power</b>	12W (+41 dBm min)
<b>IF connector</b>	N-type or F-type (field-exchangeable)
<b>Power supply - auto-ranging</b>	+15~+60 VDC via IF cable, 60 W max
<b>Internal 10MHz high stability reference</b>	10 <sup>-8</sup>
<b>Output interface</b>	WR-75 G
<b>Gain</b>	62 dB typ
<b>IMD3 (two tones)</b>	-26 dBc max 2 signal 5MHz apart at P-LINEAR
<b>L.O. leakage</b>	-45 dBm max
<b>Spurious</b>	-53 dBc max
<b>Spectral regrowth</b> (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power)	-30dBc
<b>TX Gain variation</b>	± 0.5 dB over 40 MHz ± 1.8 dB over full band
<b>TX Gain stability over temperature range</b>	± 1.5 dB typ., ± 1.8 dB max
<b>Requirement for external reference</b> frequency input power	via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port
<b>Phase noise</b>  (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
<b>Noise power density</b>	<b>Transmit</b> -60 dBm/Hz (max) <b>Receive</b> -150 dBm/Hz (max)
<b>Noise figure</b>	20 dB max
<b>Input V.S.W.R.</b>	2 : 1 max
<b>Output V.S.W.R.</b>	2 : 1 max.
<b>Mute</b>	Shut off the BUC in case of L.O. unlocked
<b>M&amp;C</b>	RS-232 and RS-485, Ethernet
<b>FSK</b>	Multiplexed on TX IFL, compatible with Comtech and Paradigm
<b>Status LED</b>	Summary alarm All OK All OK standard L.O. 12.05 GHz All OK extended L.O. 11.80 GHz
<b>Temperature range (ambient)</b>  operating storage	-40 deg C to +55 deg C -55 deg C to +85 deg C
<b>Vibration and shock</b>	Complies with MIL-STD-810E
<b>Dimensions &amp; housing</b>	120 (L) x 120 (W) x 87 (H) mm 4.72" (L) x 4.72" (W) x 3.46" (H)
<b>Weight</b>	1.8 kg (4.0 lbs) max