



## 50W Ext. Ku-Band Block Up Converter

### KEY FEATURES

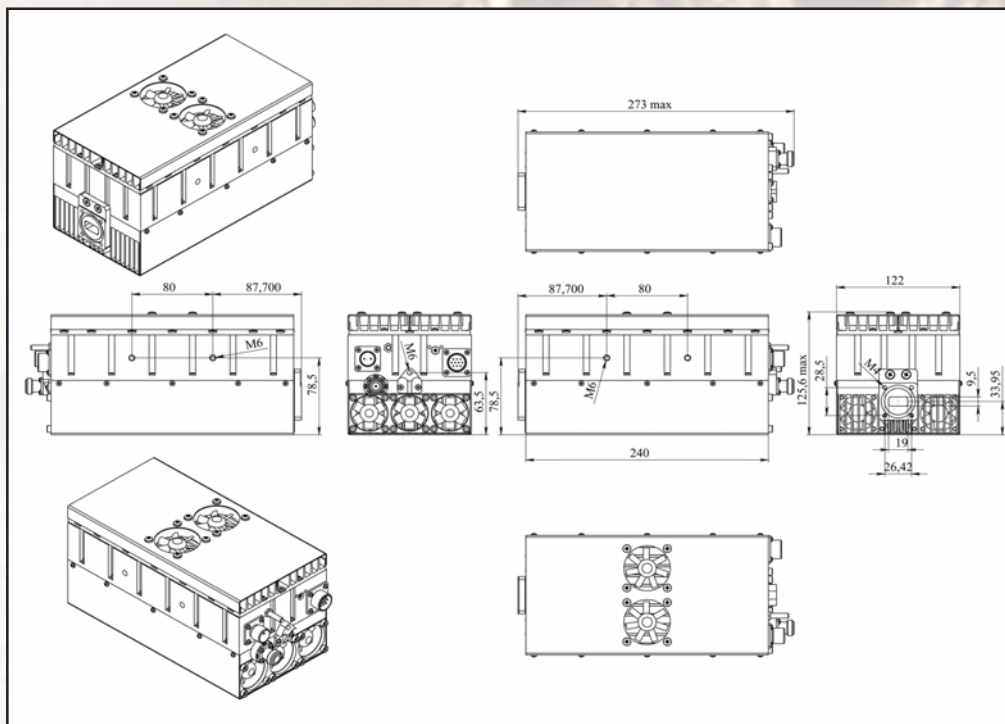
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- ◆ Double - L.O. (electronically and manually switchable 12.80 and 13.05 GHz)
- ◆ Extreme P-Out GaN linearity
- ◆ Auto-ranging power 36-58 VDC or 80-240 power options
- ◆ Incomparable low power consumption (272W max)
- ◆ Digital temperature compensation
- ◆ L.O. lock and amplifier LEDs
- ◆ Field-exchangeable (F/N) IF connector
- ◆ M&C - combined RS-232/485, FSK (optional), Ethernet (optional)
- ◆ Internal 10MHz high stability  $10^{-8}$  reference (optional)
- ◆ Ethernet control (optional)
- ◆ Three-year warranty
- ◆ RoHS compliant

### ABD50KX / ABD50KXF ABC50KX / ABC50KXF



This smallest and lightest 50W 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 36-58 VDC, or 80-240 VAC powering features make this 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.

### Mechanical Drawing





## 50W Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
<b>RF frequency</b>	<b>L.O. 13.05 GHz</b> <b>L.O. 12.80 GHz</b>	14.00 to 14.50 GHz 13.75 to 14.50 GHz
<b>Dual local oscillator-</b> electronically and manually switchable		13.05 GHz and 12.80 GHz
<b>IF frequency</b>		950 to 1,700 MHz
<b>Output power</b>	<b>@ PSAT</b> <b>@ PLINEAR</b>	50W (+47 dBm min.) 25W (+44 dBm typ.)
<b>IF connector</b>		N-type or F-type (field-exchangeable)
<b>Power supply</b> <b>ABC50KX- auto-ranging</b> <b>ABD50KX- auto-ranging</b>		+36~+58 VDC via IF cable, 270 W max 80~240 VAC via MS connector, 272W max
<b>Internal 10MHz high stability reference</b>		10 <sup>-8</sup>
<b>Spurious</b>		-50 dBc max
<b>L.O. leakage</b>		-45 dBm
<b>Gain</b>		68 dB min.
<b>IMD3 (two tones)</b>		-26 dBc typ. 2 signal 5MHz apart at P-LINEAR
<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)		-55 dBc/Hz max. @ 10 Hz -65 dBc/Hz max. @ 100 Hz -75 dBc/Hz max. @ 1 KHz -85 dBc/Hz max. @ 10 KHz -95 dBc/Hz max. @ 100 KHz -115 dBc/Hz max @ 1 MHz
<b>Noise power density</b>	<b>Transmit</b> <b>Receive</b>	-66 dBm/Hz (max) -157 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>	<b>RED</b> <b>GREEN</b> <b>YELLOW</b> <b>YELLOW blinking</b>	Summary alarm All OK All OK standard L.O. 13.05 GHz All OK extended L.O. 12.80 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>		240 (L) x 122 (W) x 125.6 (H) mm 9.6" (L) x 4.8" (W) x 5" (H)
<b>Weight</b>		3.9 kg (8.6 lbs) max