125W Ext. Ku-Band Block Up Converter

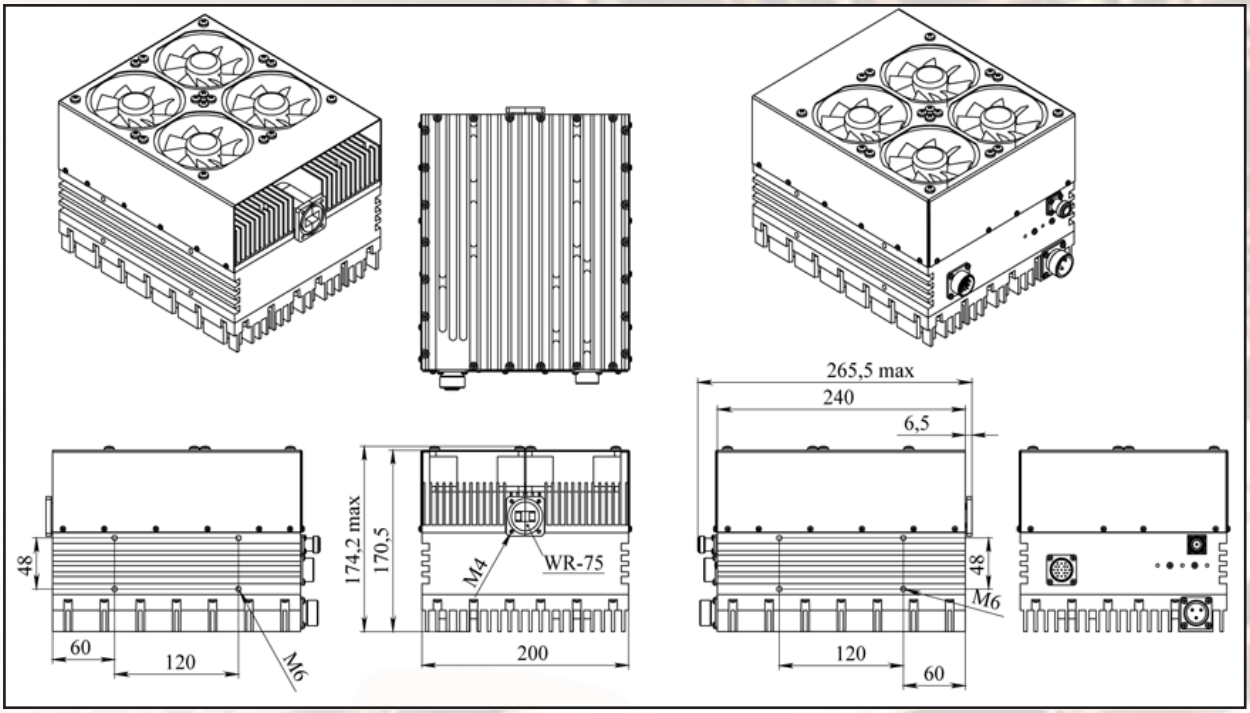
KEY FEATURES

- 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 80-240 VAC power options
- Incomparable low power consumption (695W max)
- Digital temperature compensation
- L.O. lock and amplifier LEDs
- Field-exchangeable (F/N) IF connector
- M&C - combined RS-232/485 and optional FSK
- Internal 10MHz high stability 10^{-8} reference (optional)
- Ethernet control (optional)
- Three-year warranty
- RoHS compliant

ABD125KX / ABD125KXF

This smallest and lightest 125W L-T o Ku-Band Block Up Converter is based on GaN technology . Incomparable low power consumption, double L.O., Field- Exchangeable connector and auto-ranging 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



GaN Based Product

125W Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS	
RF frequency	14.00 to 14.50 GHz 13.75 to 14.50 GHz
Dual local oscillator- electronically and manually switchable	13.05 GHz and 12.80 GHz
IF frequency	950 to 1,700 MHz
Output power	125W +51 dBm (min) 60W +47.8 dBm PLINEAR
IF connector	N-type or F-type (field-exchangeable)
Power supply **ABD125KX- auto-ranging**	80~240 VAC via MS connector, 695W max.
Internal 10MHz high stability reference	10^{-8}
Output interface	WR-75 G
Gain	70 dB min., 73 dB nominal
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 3dB back-off from rated output power)	-30dBc
TX Gain variation **TX Gain stability over temperature range**	± 0.5 dB over 40 MHz max. ± 1.8 dB over full band max. ± 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)	-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
Noise power density **Transmit** **Receive**	-66 dBm/Hz (max) -157dBm/Hz (max)
Noise figure	20 dB max
Input V.S.W.R.	1.5 : 1 max
Output V.S.W.R.	1.5 : 1 max. (with optional output isolator 1.10:1 max.)
Mute	Shut off the BUC in case of L.O. unlocked
M&C	RS-232 and RS-485, Ethernet (optional)
FSK	Multiplexed on TX IFL, compatible with Comtech and Paradigm
Status LED **RED** **GREEN** **YELLOW** **YELLOW blinking** **10MHz REF**	 Summary alarm All OK All OK standard L.O. 13.05 GHz All OK extended L.O. 12.80 GHz Green (detected) Red (absent)
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	265 (L) x 200 (W) x 174 (H) mm
	10.45" (L) x 7.87" (W) x 6.85" (H)
Weight	8.9 kg (19.6 lbs) max