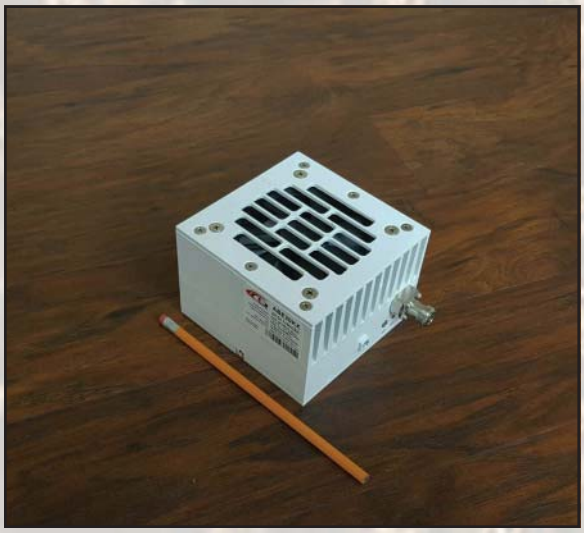
20W Ext. Ku-Band Block Up Converter

KEY FEATURES

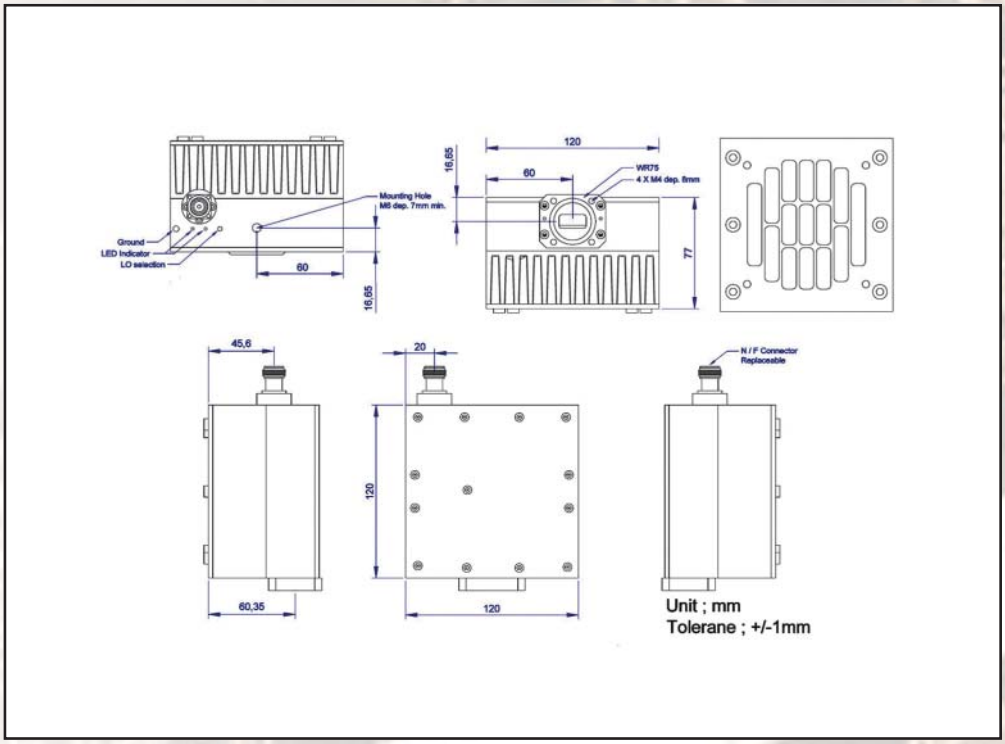
- Output frequency 13.75-14.50 GHz
- Double- L.O. (switchable 12.80 & 13.05 GHz)
- Based on GaN technology which enables high efficiency, low power consumption and high reliability
- Incomparable low power consumption (135W max.)
- Auto-ranging powering option 15 - 60 VDC
- Internal 10MHz high stability 10^{-8} reference (optional)
- Digital temperature compensation
- Field-exchangeable (F/N) IF connector
- M&C - combined RS-232/485 and optional FSK
- Ethernet control (optional)
- RoHS compliant
- Three-year warranty

ABE20KX / ABE20KXF



This smallest and lightest 20W L-To Ku-Band Block Up Converter is based on GaN technology. Incomparable low power consumption, double L.O., field-exchangeable connector, internal 10 MHz reference, and it is powered either with 24 or 48 VDC and consumes less than 135W. The unit is ideal for portable and mobile aplications.

Mechanical Drawing



GaN Based Product

20W 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	13.05 GHz and 12.80 GHz
IF frequency	950 to 1,700 MHz
Output power	20W (+43 dBm min.)
IF connector	N-type or F-type (field-exchangeable)
Internal 10MHz high stability reference	10^{-8}
Power supply auto-ranging	+15 ~ +60 VDC via IF cable, 135W typ.
Output interface	WR-75 G
Gain	65 dB min., 68 dB nominal
IMD3 (two tones)	-26 dBc max. 2 signal 5 MHz apart at P-LINEAR
L.O. leakage	-45 dBm max
Spurious	-50 dBc max
Spectral regrowth (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power)	-30 dBc
Requirement for external reference: frequency input power	**via IF cable** 10 MHz (sine-wave) -5 to +5 dBm @ input port
TX Gain variation **TX Gain stability over temperature range**	**± 0**.5 dB over 40 MHz **± 1.8** dB over full band **±** 1.5 dB typ., ± 1.8 dB max.
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 -115 dBc/Hz max @ 1 MHz
Noise power density **Transmit** **Receive**	-80 dBm/Hz (max) -125 dBm/Hz (max)
Noise figure	15 dB max
Input V.S.W.R.	2 : 1 max
Output V.S.W.R.	2 : 1 max.
M&C	RS-232 and RS-485, Ethernet, FSK (optional)
Mute	Shut off the HPA if L.O. unlocked
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 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	120 (L) x 120 (W) x 77 (H) mm 4.72" (L) x 4.72" (W) x 3.03" (H)
Weight	1.8 kg (4.0 lbs) max