50W Ext. Ku-Band Block Up Converter

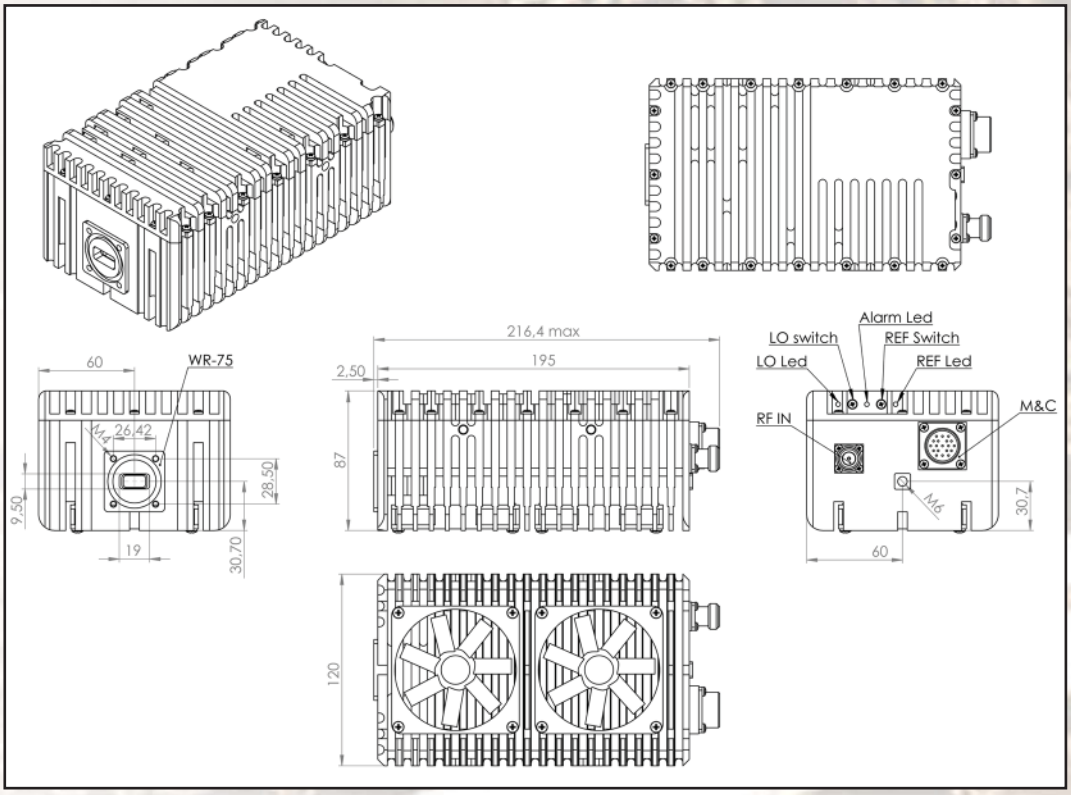
KEY FEATURES

- 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 (272W max.)
- Auto-ranging powering option 30 - 60 VDC
- Digital temperature compensation
- Field-exchangeable (F/N) IF connector
- Internal auto-sensing and controllable 10MHz high stability reference (optional)
- M&C - combined RS-232/485/Ethernet (HTTP and SNMP) and optional FSK
- RoHS compliant

ABCN50KX / ABCN50KXF

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, auto-sensing and controllable internal 10 MHz reference make this unit universal for any Ku-Band application. DC Built-in power and consumes less than 272W.

Mechanical Drawing



50W Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS	
RF frequency	14.0 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	50W (+47 dBm min.) 25W (+44 dBm min.) P-Linear
IF connector	N-type or F-type (field-exchangeable)
Power supply auto-ranging	30 ~ 60 VDC via MS connector, 272W max.
Output interface	WR-75 G
Gain	72 dB typ.
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.	1.5 : 1 max.
Output V.S.W.R.	1.5 : 1 max.
M&C	RS-232 and RS-485, Ethernet (HTTP and SNMP), FSK
Mute	Shut off the HPA if L.O. unlocked
Status LED **Amplifier** **RED** **GREEN** **L.O.** **GREEN** **GREEN blinking** **10MHz** **GREEN** **GREEN blinking** **RED**	 Summary alarm All OK All OK standard L.O. 13.05 GHz All OK extended L.O. 12.80 GHz External 10MHz reference Internal 10MHz reference No 10MHz reference detected
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
IP Rating	IP67
Dimensions & housing	195 (L) x 120 (W) x 87 (H) mm 7.67" (L) x 4.72" (W) x 3.42" (H)
Weight	2.8 kg (6.17 lbs) max.