



50W X-Band Block Up Converter

KEY FEATURES

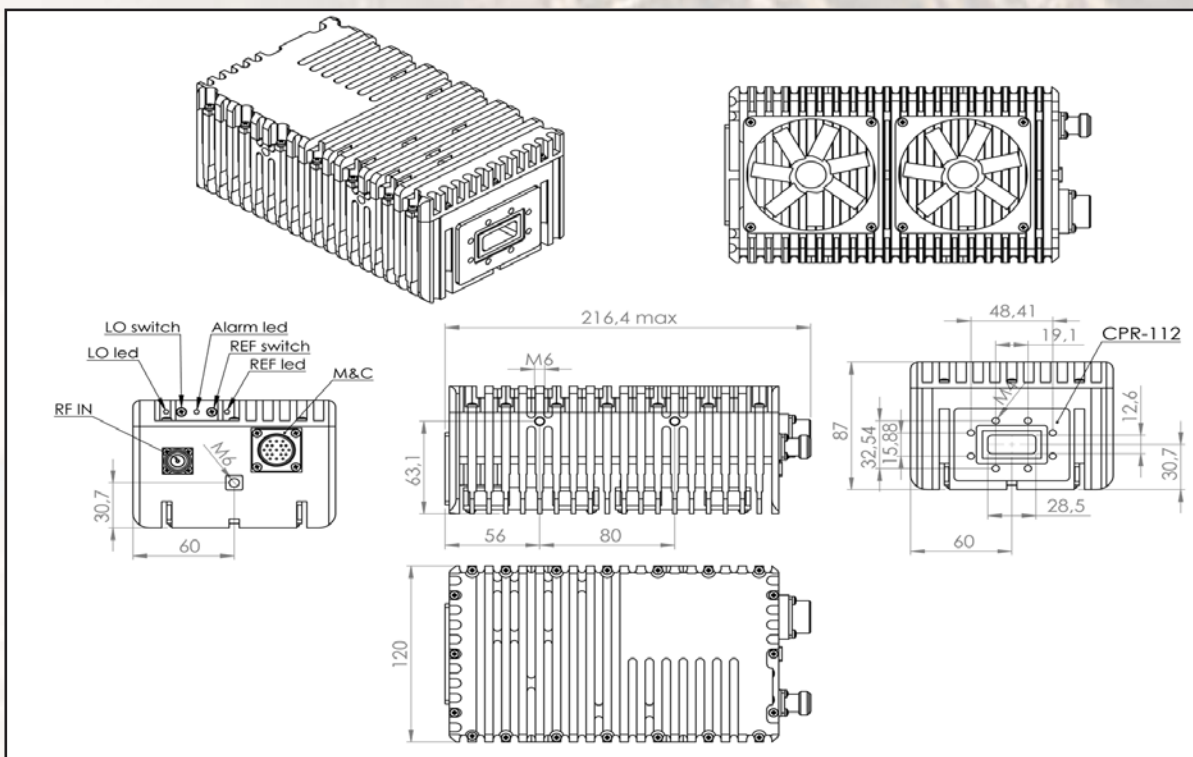
- ◆ 7.9 GHz - 8.4 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Incomparable low power consumption (189W max)
- ◆ High power efficiency (50W min over temperature)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Power and lock status LED
- ◆ Advanced M&C RS-232/485, FSK (optional), Ethernet (optional)
- ◆ Internal 10MHz high stability 10^{-8} reference (optional)
- ◆ RoHS compliant
- ◆ Three-year warranty

ABCN50X / ABCN50XF



This smallest and lightest 50W(min) L-To X-Band Block Up Converter is based on GaN technology. It could be mounted directly on a feed horn. High power efficiency resulting in low current (<3.9 amps).

Mechanical Drawing





50W X-Band Block Up Converter

TECHNICAL SPECIFICATIONS

RF frequency	7.9 to 8.4 GHz
Local oscillator	6.95 GHz
IF frequency	950 to 1,450 MHz
Output power	50W (+47 dBm min.) 25W P-linear (44 dBm min.)
IF connector	N-type or F-type (field-exchangeable)
Power supply - auto-ranging	+30 ~ +60 VDC via MS Connector, 189 W max
Internal 10MHz high stability reference	10 ⁻⁸
Output interface	CPR-112G, CPR-137G, WR-90G, WR-112G
Gain	70 dB typ.
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 2dB back-off from rated output power)	-30 dBc
TX Gain variation	± 0.5 dB over 40 MHz ± 1.8 dB over full band
TX Gain stability over temperature range	± 1.5 dB typ., ± 1.8 dB max
Requirement for external reference frequency input power	via IF cable 10 MHz (sine-wave) -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 -115 dBc/Hz max @ 1 MHz
Noise power density	Transmit -66 dBm/Hz (max) Receive -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
Mute	Shut off the BUC in case of L.O. unlocked
M&C	RS-232 and RS-485, Ethernet
FSK	Multiplexed on TX IFL, compatible with Comtech and Paradigm
Status LED RED GREEN	Power OK, L.O unlocked L.O locked and amplifier functioning normally
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	216.5 (L) x 120 (W) x 87 (H) mm 8.66" (L) x 4.8" (W) x 3.48" (H)
Weight	2.8 kg (6.17 lbs) max