



50W X-Band Block Up Converter

KEY FEATURES

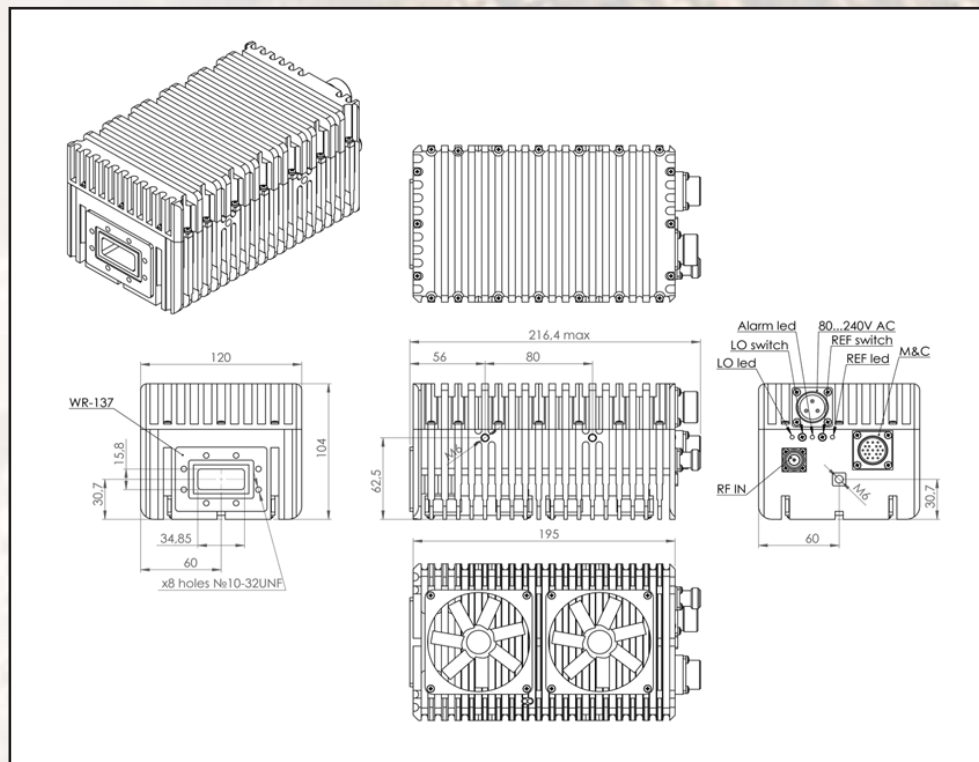
- ◆ Output frequency 7.90 - 8.4 GHz
- ◆ L.O. 6.95 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Incomparable low power consumption (189W max)
- ◆ Auto-ranging powering 30 - 60 VDC
- ◆ High power efficiency (50W min over temperature)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Advanced M&C - combined RS-232/485 / Ethernet (HTTP and SNMP ver. 2 & 3) / FSK (optional)
- ◆ Internal 10MHz high stability reference (optional)
- ◆ Special Feature: Chinese GUI (optional)

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). Unit can use either external or internal 10MHz reference.

Mechanical Drawing





50W X-Band Block Up Converter

TECHNICAL SPECIFICATIONS

RF frequency	7.90 to 8.40 GHz
Local oscillator	6.95 GHz
IF frequency	950 to 1,450 MHz
Output power	50 W (+47 dBm min.) , 25 W (44 dBm) P-Linear
IF connector	N-type or F-type (field-exchangeable)
Power supply : auto-ranging via MS connector	+30 ~ +60 VDC, 189W max.
Output interface	CPR-137G, CPR-112G, WR-90, WR-112G
Gain	70 dB typ.
IMD3 (two tones)	-26 dBc max. 2 signal 5 MHz 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
Requirement for external reference: frequency input power	via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port
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.
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	-66 dBm/Hz (max.) -157 dBm/Hz (max.)
M&C	RS-232/485 / Ethernet / FSK (optional)
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
Status LED Amplifier L.O. 10MHz RED GREEN GREEN GREEN GREEN blinking RED	Summary alarm All OK All OK L.O. is set to 6.95 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 104 (H) mm 7.67"(L) x 4.72"(W) x 4.09" (H)
Weight	2.96 kg (6.5 lbs) max.