



## 50W X-Band Block Up Converter

### KEY FEATURES

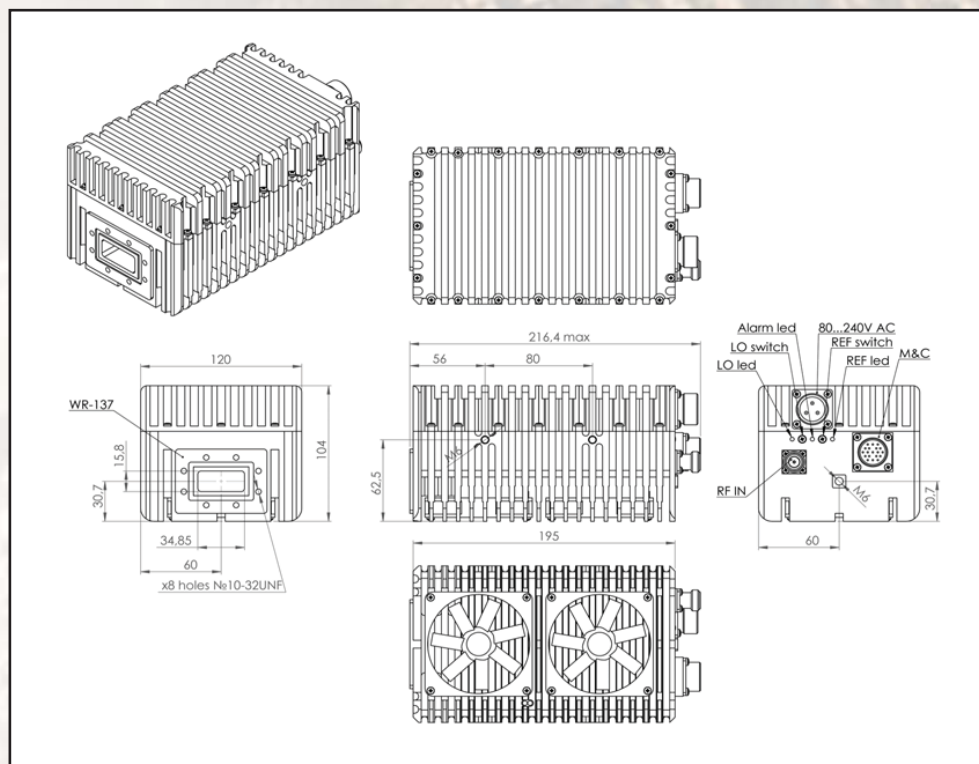
- ◆ Output frequency 7.90 - 8.4 GHz
- ◆ L.O. 6.95 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Incomparable low power consumption (189W max)
- ◆ Auto-ranging powering 30 - 60 VDC
- ◆ High power efficiency (50W min over temperature)
- ◆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

### 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		
<b>RF frequency</b>		7.90 to 8.40 GHz
<b>Local oscillator</b>		6.95 GHz
<b>IF frequency</b>		950 to 1,450 MHz
<b>Output power</b>		50 W (+47 dBm min.) , 25 W (44 dBm) P-Linear
<b>IF connector</b>		N-type or F-type (field-exchangeable)
<b>Power supply : auto-ranging via MS connector</b>		+30 ~ +60 VDC, 189W max.
<b>Output interface</b>		CPR-137G, CPR-112G, WR-90, WR-112G
<b>Gain</b>		70 dB typ.
<b>IMD3 (two tones)</b>		-26 dBc max. 2 signal 5 MHz apart at P-LINEAR
<b>L.O. leakage</b>		-45 dBm max.
<b>Spurious</b>		-53 dBc max.
<b>Spectral regrowth</b> (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power)		-30 dBc
<b>Requirement for external reference:</b> frequency input power		via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port
<b>TX Gain variation</b>		± 0.5 dB over 40 MHz ± 1.8 dB over full band
<b>TX Gain stability over temperature range</b>		± 1.5 dB typ., ± 1.8 dB max.
<b>Phase noise</b>  (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
<b>Noise power density</b>	<b>Transmit</b> <b>Receive</b>	-66 dBm/Hz (max.) -157 dBm/Hz (max.)
<b>FSK</b>		Multiplexed on TX IFL, compatible with Compech and Paradigm
<b>M&amp;C Interface</b>		RS-232, RS-485 and Ethernet (HTTP and SNMP ver.2 and 3)
<b>Noise figure</b>		20 dB max.
<b>Input V.S.W.R.</b>		1.5 : 1 max.
<b>Output V.S.W.R.</b>		1.5 : 1 max.
<b>Mute</b>		Shut off the BUC in case of L.O. unlocked
<b>Status LED</b> <b>Amplifier</b>	<b>RED</b> <b>GREEN</b>	Summary alarm All OK
<b>L.O.</b> <b>10MHz</b>	<b>GREEN</b> <b>GREEN</b> <b>GREEN blinking</b> <b>RED</b>	All OK L.O. is set to 6.95 GHz External 10MHz reference Internal 10MHz reference No 10MHz reference detected
<b>Temperature range (ambient)</b> operating storage		-40 deg C to +55 deg C -55 deg C to +85 deg C
<b>Vibration and shock</b>		Complies with MIL-STD-810E
<b>IP rating</b>		IP67
<b>Dimensions &amp; housing</b>		195 (L) x 120 (W) x 104 (H) mm 7.67"(L) x 4.72"(W) x 4.09" (H)
<b>Weight</b>		2.96 kg (6.5 lbs) max.