



50W X-Band Block Up Converter

KEY FEATURES

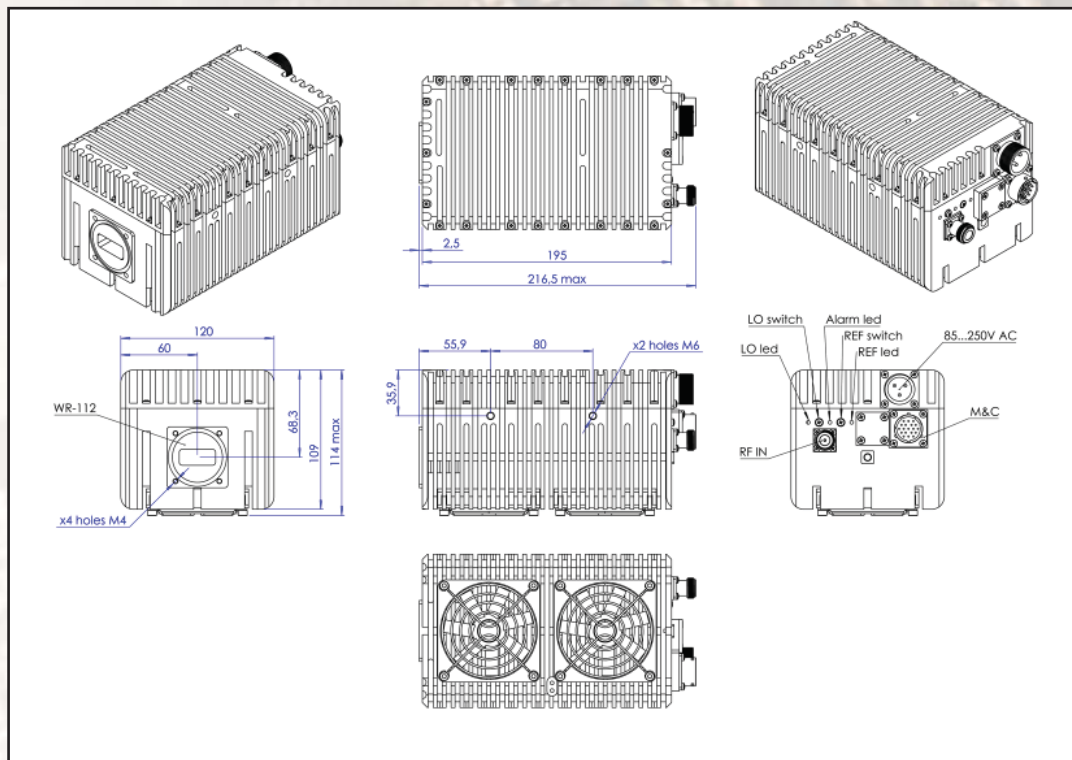
- ◆ Output frequency 7.90 - 8.4 GHz
- ◆ L.O. 6.95 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Incomparable low power consumption (198W max)
- ◆ Auto-ranging 85 - 260 VAC powering option
- ◆ Power and lock status LED
- ◆ Digital temperature 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

ABDN50X / ABDN50XF



This smallest and lightest 50W (min.) L-To X-Band Block Up Converter is based on GaN technology. It is designed to be mounted directly on the feed horn. High power efficiency resulting in low current. 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.) , 26.7 W (44.26 dBm) P-Linear
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via MS connector		+85 ~ +260 VAC, 198W max.
Output interface		CPR-137G, CPR-112G, WR-90, WR-112G
Gain		70 dB nominal
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:		via IF cable
frequency		10 MHz (sine-wave)
input power		-5 to +5 dBm @ input port
TX Gain variation		± 0.5 dB over 40 MHz
TX Gain stability over temperature range		± 1.8 dB over full band
		± 1.5 dB typ., ± 1.8 dB max.
Phase noise		-55 dBc/Hz max. @ 10 Hz
(Exceeds Intelsat's standard IESS308/309)		-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	-157 dBm/Hz (max.)
FSK		Multiplexed on TX IFL, compatible with Compech and Paradigm
M&C Interface		RS-232, RS-485 and Ethernet (HTTP and SNMP ver.2 and 3)
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		Summary alarm
Amplifier	RED	All OK
	GREEN	All OK L.O. is set to 6.95 GHz
L.O.	GREEN	External 10MHz reference
10MHz	GREEN blinking	Internal 10MHz reference
	RED	No 10MHz reference detected
Temperature range (ambient)		-40 deg C to +55 deg C
operating		-55 deg C to +85 deg C
storage		
Vibration and shock		Complies with MIL-STD-810E
IP rating		IP67
Dimensions & housing		195 (L) x 120 (W) x 109 (H) mm
		7.67"(L) x 4.72"(W) x 4.29" (H)
Weight		3.2 kg (7.05 lbs) max.