

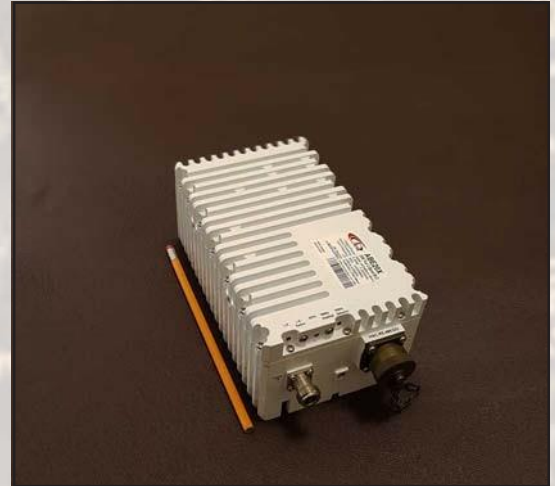


20W Fanless X-Band Block Up Converter

KEY FEATURES

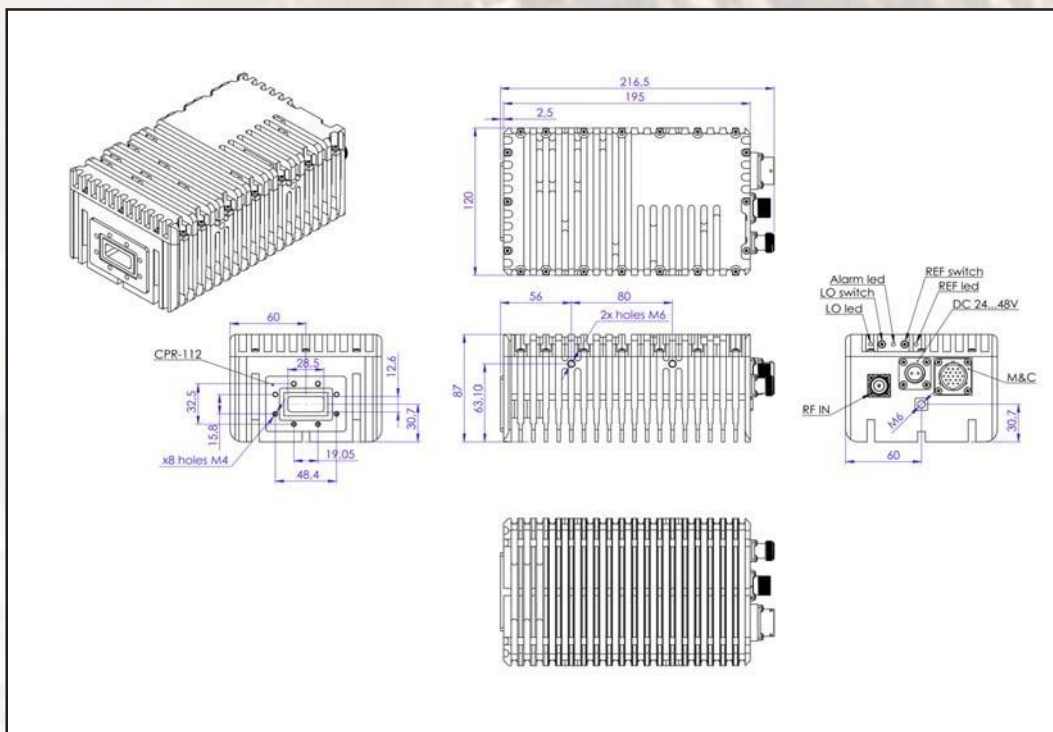
- ◆ 7.9 GHz - 8.4 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Incomparable low power consumption (85W max)
- ◆ Auto-ranging powering option 15-60VDC
- ◆ High power efficiency (20W min over temperature)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Status and 10MHz detection LED
- ◆ Advanced M&C RS-232/485, FSK (optional), Ethernet (optional)
- ◆ Internal 10MHz high stability reference (optional)
- ◆ RoHS compliant

ABE20X / ABE20XF



This smallest and lightest fanless 20W L-To X-Band Block Up Converter is based on GaN technology. It could be mounted directly on a feed horn. The unit can be powered either with 24VDC or 48VDC. Unit can use either external or internal 10MHz reference.

Mechanical Drawing





20W Fanless X-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
RF frequency		7.90 to 8.4 GHz
Local oscillator		6.95 GHz
IF frequency		950 to 1,450 MHz
Output power @ P3dB		20 W (+43 dBm min.)
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector		15-60 VDC, 85 W max
Output interface		CPR-137G, CPR-112G, WR-90, WR-112G
Gain		68 dB nominal
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)		-30dBc
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 ± 1.5 dB typ., ± 1.8 dB max.
TX Gain stability over temperature range		
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 Interface		RS-232 and RS-485, Ethernet
FSK		Multiplexed on TX IFL, compatible with Comtech and Paradigm
Noise figure		15 dB max
Input V.S.W.R.		1.5 : 1 max
Output V.S.W.R.		1.5 : 1 max.
Mute		Shut off the HPA if L.O. unlocked
Status LED 10MHz LED	RED GREEN RED GREEN	Summary Alarm All OK No 10MHz reference detected 10MHz reference detected within requirement
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		2.76 kg (6.1 lbs) max