



25W Fanless X-Band Block Up Converter

KEY FEATURES

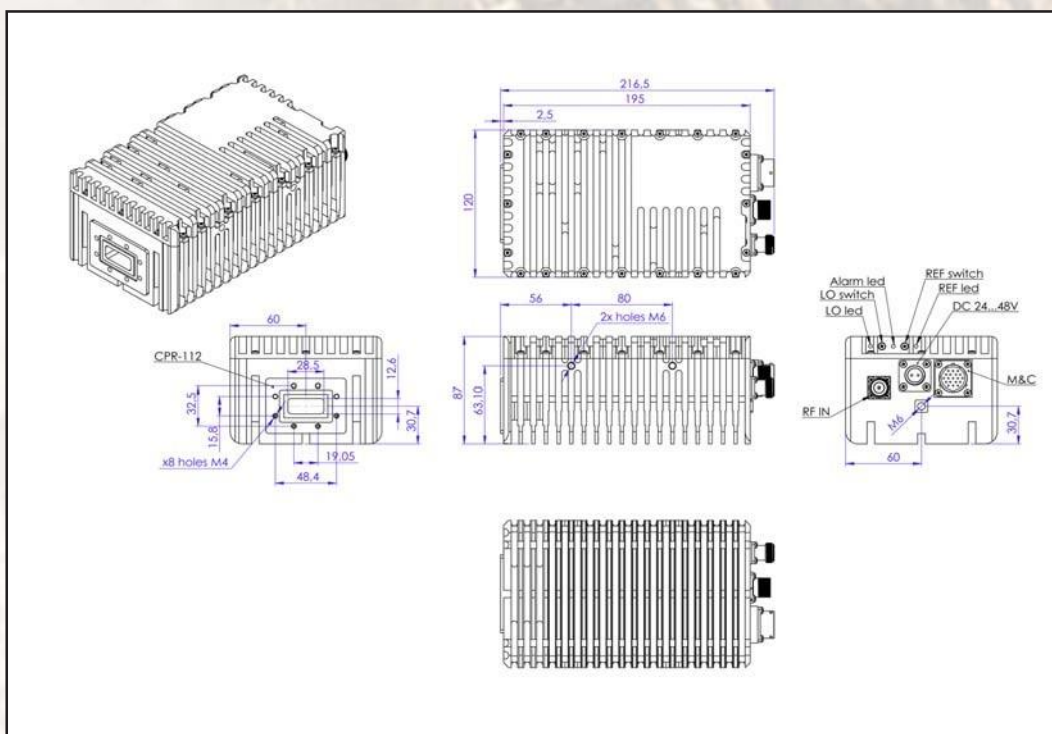
- ◆ 7.9 GHz - 8.4 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Incomparable low power consumption (87W max)
- ◆ Auto-ranging powering option 15-60VDC
- ◆ High power efficiency (25W min over temperature)
- ◆ Digital temperature 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

ABE25X / ABE25XF



This smallest and lightest fanless 25W 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





25W 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		25 W (+43.9 dBm min.)
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector		15-60 VDC, 87 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:		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 ± 1.8 dB over full band ± 1.5 dB typ., ± 1.8 dB max.
TX Gain stability over temperature range		
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 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	RED GREEN	Summary Alarm
10MHz LED	RED GREEN	All OK No 10MHz reference detected 10MHz reference detected within requirement
Temperature range (ambient)		
operating		-40 deg C to +55 deg C
storage		-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