



20W Fanless X-Band Block Up Converter

KEY FEATURES

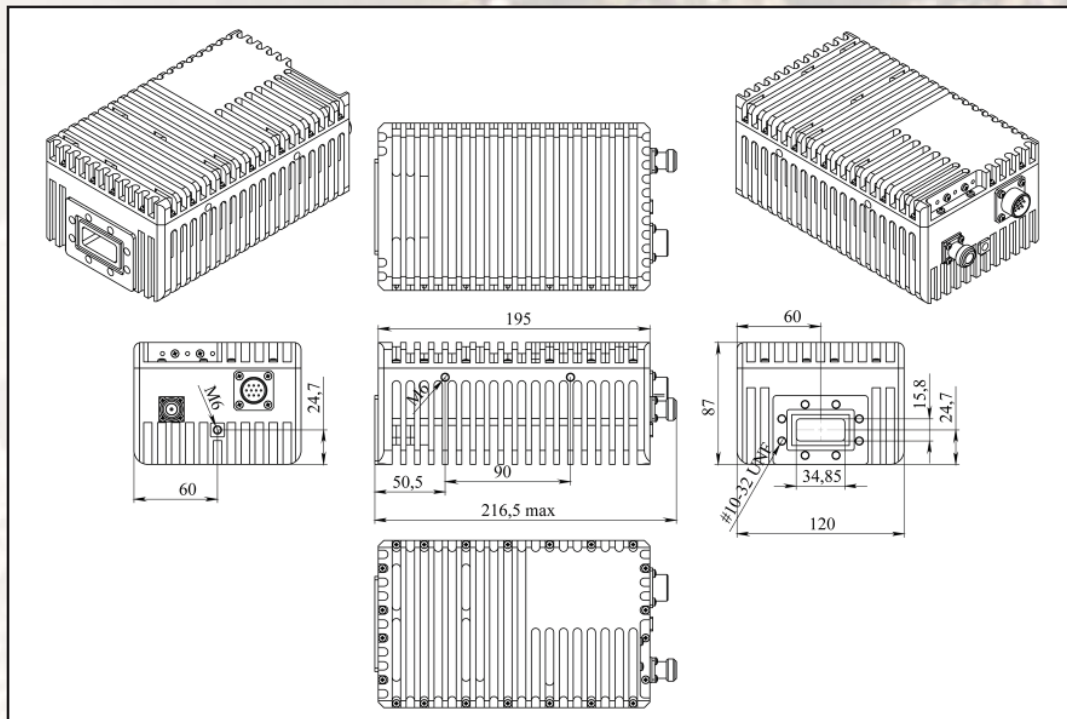
- ◆ Output frequency 7.90 - 8.4 GHz
- ◆ L.O. 6.95 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Incomparable low power consumption (85W max)
- ◆ Auto-ranging powering 15 - 60 VDC
- ◆ High power efficiency (20W min over temperature)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Optional 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)

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 8.40 GHz
Local oscillator		6.95 GHz
IF frequency		950 to 1,450 MHz
Output power		20 W (+43 dBm min.)
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector		+15 ~ +60 VDC, 85W max.
Output interface		CPR-137G, CPR-112G, WR-90, WR-112G
Gain		68 dB min.
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	-66 dBm/Hz (max.)
	Receive	-157 dBm/Hz (max.)
M&C (optional)		RS-232/485 / Ethernet / FSK (optional)
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		
Amplifier	RED	Summary alarm
	GREEN	All OK
L.O.	GREEN	All OK L.O. is set to 6.95 GHz
10MHz	GREEN	External 10MHz reference
	GREEN blinking	Internal 10MHz reference
	RED	No 10MHz reference detected
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
IP rating		IP67
Dimensions & housing		195 (L) x 120 (W) x 87 (H) mm 7.67" (L) x 4.72" (W) x 3.42" (H)
Weight		2.76 kg (6.1 lbs) max.