



20W Fanless Full C-Band Block Up Converter

KEY FEATURES

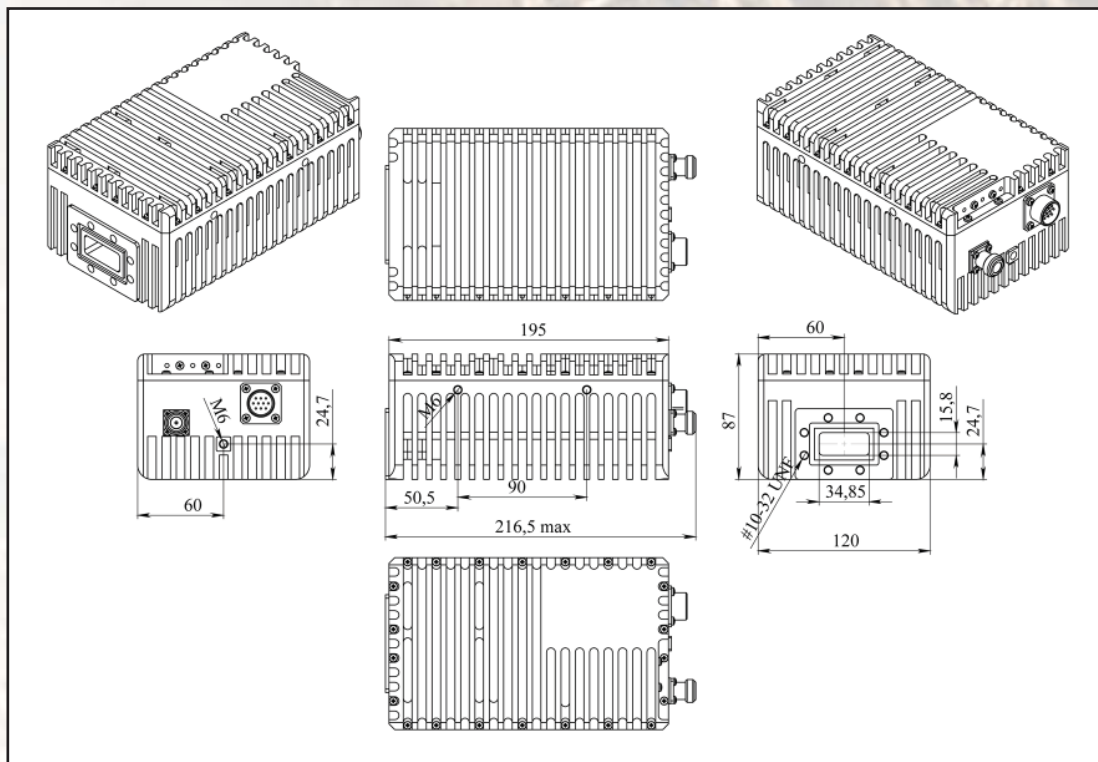
- ◆ Output frequency 5.850 GHz - 7.025 GHz
- ◆ Double L.O. 4.9 & 5.2 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (85W max.)
- ◆ Auto-ranging powering option 15 - 60 VDC
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Power and lock status LED
- ◆ Built-in redundancy option
- ◆ Optional M&C - combined RS-232/485 / Ethernet (HTTP and SNMP ver. 2 & 3) / FSK (optional)
- ◆ Internal auto-sensing and controllable 10MHz high stability reference (optional)
- ◆ RoHS compliant

ABE20XC / ABE20XCF



This smallest and lightest fanless 20W L-To C-Band Block Up Converter is based on GaN technology. It is designed to be mounted on the feed horn. The unit covers all three C-Band sub-bands: Standard (5.850-6.425 GHz) and Palapa (6.365-6.725 GHz) and Insat (6.725-7.025 GHz).

Mechanical Drawing





20W Fanless Full C-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
RF frequency		5.850 to 7.025 GHz
Dual local oscillator		4.90 and 5.20 GHz
IF frequency		950 to 1,825 MHz
Output power		20W (+43 dBm min.), P-Linear 11.2W (40.49 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 137 G
Gain		68 dB nominal
IMD3		-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 Receive	-66 dBm/Hz (max.) -157 dBm/Hz (max.)
Noise figure		15 dB max.
Input V.S.W.R.		1.5 : 1 max.
Output V.S.W.R.		1.5 : 1 max.
M&C (optional)		RS-232/485 / Ethernet / FSK (optional)
Mute		Shut off the HPA if L.O. unlocked
Status LED Amplifier L.O. 10MHz	RED GREEN GREEN GREEN blinking GREEN GREEN blinking RED	Summary alarm All OK All OK standard L.O. 4.90 GHz All OK extended L.O. 5.20 GHz External 10MHz reference Internal 10MHz reference No 10MHz reference detected
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
Altitude		Up to 23,000 feet
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 (6.08 lbs) max.