



## 20W Fanless Ext. C-Band 5.85-6.725 GHz Block Up Converter

### KEY FEATURES

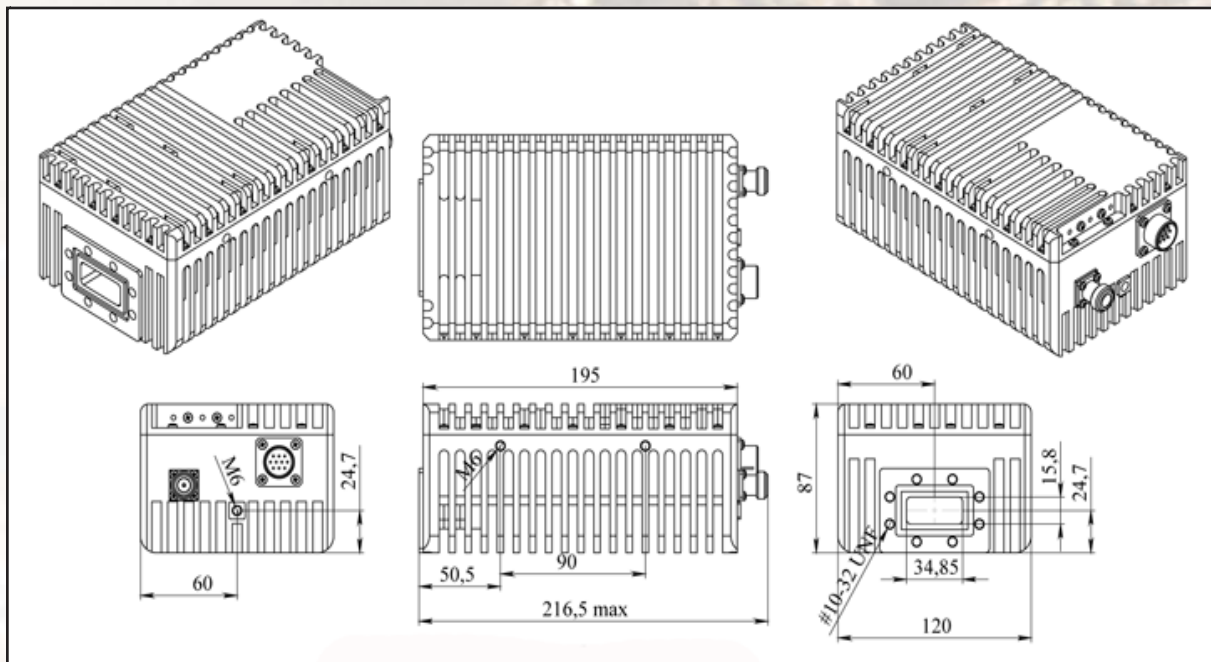
- ◆ 5.85 GHz - 6.725 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Incomparable low power consumption (75W at 43dBm)
- ◆ Auto-ranging powering option 15-60 VDC
- ◆ High power efficiency (20W min over temperature)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Power and lock status LED
- ◆ Advanced M&C RS-232/485, FSK (optional), Ethernet (optional)
- ◆ Internal 10MHz high stability  $10^{-8}$  reference (optional)
- ◆ RoHS compliant

### ABE20DC / ABE20DCF



This smallest and lightest fanless 20W L-To C-Band Block Up Converter is based on GaN technology. It could be mounted directly on a feed horn. The unit covers C-Band Frequencies: 5.85-6.725 GHz

### Mechanical Drawing





## 20W Fanless Ext. C-Band 5.85-6.725 GHz Block Up Converter

TECHNICAL SPECIFICATIONS	
RF frequency	5.850 to 6.725 GHz
Local oscillator	4.90 GHz
IF frequency	950 to 1,825 MHz
Output power	20 W (+43 dBm min.) 10W Linear (40dBm min.)
IF connector	N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector	15-60 VDC, 75 W @ 43dBm
Output interface	CPR 137 G
Internal 10MHz high stability reference	10 <sup>-8</sup>
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	<b>via IF cable</b> 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)
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 YELLOW	Summary alarm All OK All OK standard L.O. 4.90 GHz
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