



30W Fanless Full C-Band Block Up Converter

KEY FEATURES

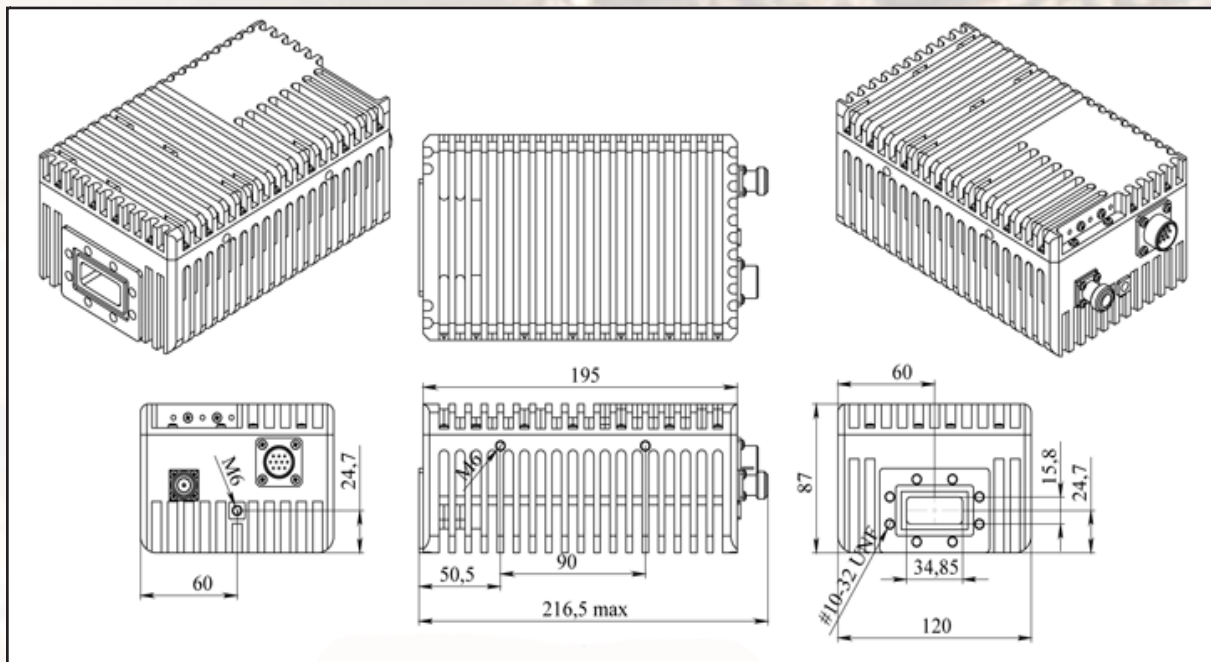
- ◆ 5.85 GHz - 7.05 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Double L.O. (electronically and manually switchable 4.9 & 5.5 GHz)
- ◆ Incomparable low power consumption (89W @ 45dBm)
- ◆ Auto-ranging powering option 15-60VDC
- ◆ High power efficiency (30W 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)

ABE30XC / ABE30XCF



This smallest and lightest fanless 30W(min) L-To C-Band Block Up Converter is based on GaN technology. It could be mounted directly on a feed horn. The unit covers all three C-Band sub-bands: Standard (5.85-6.425 GHz), Palapa (6.365-6.725 GHz) and Insat (6.725-7.05 GHz).

Mechanical Drawing





30W Fanless Full C-Band Block Up Converter

TECHNICAL SPECIFICATIONS	
RF frequency	5.850 to 7.05 GHz
Dual local oscillator	4.90 and 5.50 GHz
IF frequency	950 to 1,550 MHz
Output power	30W (+45 dBm min.)
IF connector	N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector	15-60 VDC, 89 W max
Output interface	CPR 137 G
Internal 10MHz high stability reference	10 ⁻⁸
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
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 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 Summary alarm GREEN All OK YELLOW All OK standard L.O. 4.90 GHz YELLOW blinking All OK extended L.O. 5.50 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