GaN Based Product

150W Ext. C-Band Block Up Converter

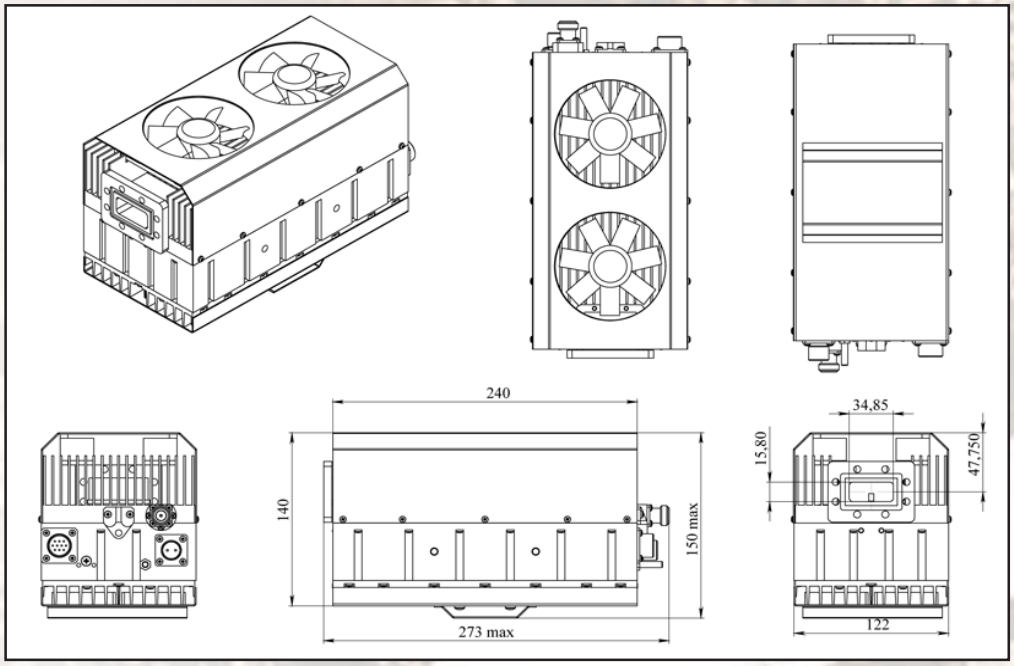
KEY FEATURES

- 5.850 GHz - 6.725 GHz output frequency
- Based on GaN technology: high efficiency, low power consumption and high reliability
- Smallest package size and weight
- High power efficiency (150W min over temperature)
- Digital temperature compensation
- Field-exchangeable (F/N) IF connector
- 80 - 240 VAC auto-ranging powering (600W max) and optional 48VDC
- Power and lock status LED
- Advanced M & C interface - combined RS-232/485, Ethernet and optional FSK
- Internal 10MHz high stability 10^{-8} reference (optional)
- RoHS compliant
- Three-year warranty

ABD150DC / ABD150DCF

This is a unique Ext. C-Band (5.850-6.725 GHz) 150W Block Up Converter powered with auto-ranging 80-240 VAC unit, designed for mobile applications especially when an earth station needs to be able to use different C-Band (Standard or Palapa) transponders or satellites. It's light enough to be mounted on a feed horn of most antennas.

Mechanical Drawing



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TECHNICAL SPECIFICATIONS

RF frequency	5.850 to 6.725 GHz
Local oscillator	4.90 GHz
IF frequency	950 to 1,825 MHz
Output power @ PSAT @ P-LINEAR	150W (+52 dBm min) 70W (+48.5 dBm min)
IF connector	N-type or F-type (field-exchangeable)
Power supply via MS connector ABD150DC-auto-ranging	80-240 VAC, 600 W max Optional 48 VDC
Output interface	CPR 137 G
Gain	77 dB nominal Adjustable in 1dB steps, Gain range 20dB
IMD3 (two tones)	-26 dBc max. 2 signal 5MHz apart at P-LINEAR
L.O. leakage	-45 dBm max
Spurious	-55 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
M&C Interface	RS-232/ RS-485 and Ethernet
FSK	Multiplexed on TX IFL, compatible with Comtech and Paradigm
Noise power density **Transmit** **Receive**	-66 dBm/Hz (max) -157 dBm/Hz (max)
Noise figure	15 dB max
Input V.S.W.R.	2 : 1 max
Output V.S.W.R.	2 : 1 max
Mute	Shut off the HPA if L.O. unlocked
Status LED **RED** **GREEN**	Power OK, L.O unlocked L.O locked and amplifier functioning normally
Temperature range (ambient) operating storage	 -40 deg C to +55 deg C -55 deg C to +85 deg C
Dimensions & housing	240 (L) x 120 (W) x 140 (H) mm
	9.45" (L) x 4.72" (W) x 5.5" (H)
Weight	3.5 kg (7.7 lbs) max