



## 100W Full C-Band Block Up Converter

### KEY FEATURES

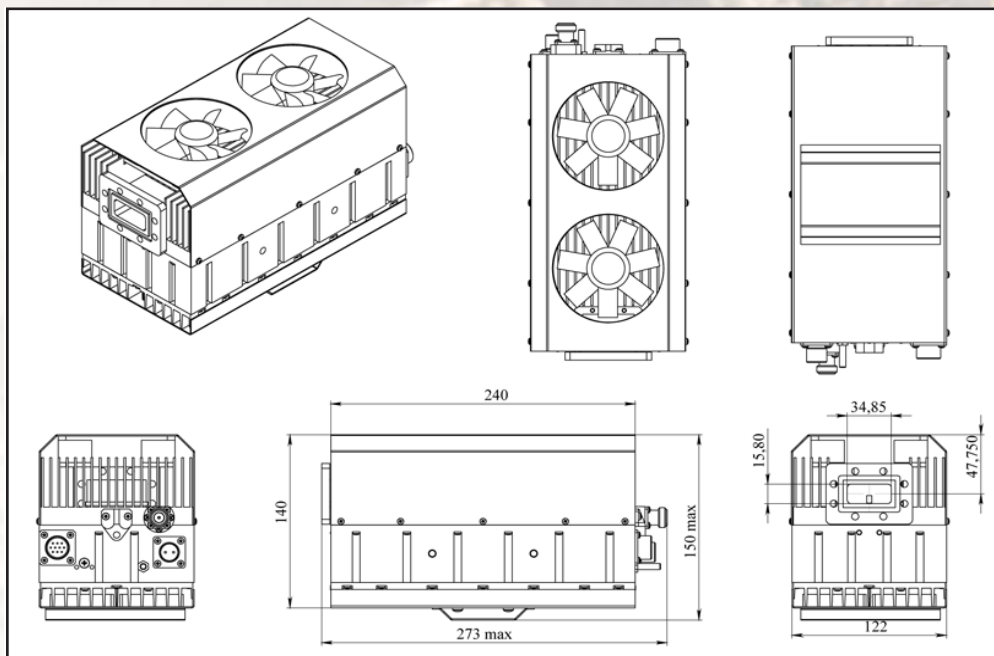
- ◆ 5.850 GHz - 7.05 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Double- L.O. (electronically and manually switchable 4.9 & 5.5 GHz)
- ◆ Smallest package size and weight
- ◆ High power efficiency (100W min @P3dB over temperature)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ 80 - 240 VAC auto-ranging power (375W max)
- ◆ Power and lock status LED
- ◆ Advanced M & C interface - combined RS-232/485 and optional FSK
- ◆ RoHS compliant
- ◆ Three-year warranty

### ABD100XC / ABD100XCF



This smallest and lightest 100W L-To C-Band Block Up Converter is based on GaN technology. Incomparable low power consumption, double L.O., Field-Exchangeable connector and auto-ranging (80-240 VAC) powering features make unit universal for any C-Band application. M&C (FSK) capability enables troubleshooting, monitoring and controlling the BUC. The user can choose internal 10MHz high stability reference if the corresponding modulator does not provide it.

### Mechanical Drawing





## 100W Full C-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
<b>RF frequency</b>	5.850 to 7.05 GHz	
<b>Local oscillator</b>	4.90 and 5.50 GHz	
<b>IF frequency</b>	950 to 1,550 MHz	
<b>Output power @ P3dB</b>	100W (+50 dBm min.)	
<b>IF connector</b>	N-type or F-type (field-exchangeable)	
<b>Power supply via MS connector ABD100XC-auto-ranging</b>	80-240 VAC, 375 W max	
<b>Output interface</b>	CPR 137 G	
<b>Gain</b>	67 dB min., 75 dB max	
<b>IMD3 (3dB back off P1dB)</b>	-28 dBc max	
<b>L.O. leakage</b>	-45 dBm max	
<b>Spurious</b>	-53 dBc max	
<b>Spectral regrowth</b> (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power)	-30dBc	
<b>Requirement for external reference:</b> frequency input power	<b>via IF cable</b> 10 MHz (sine-wave) -5 to +5 dBm @ input port	
<b>Gain variation</b> <b>over 40 MHz</b> <b>over 500 MHz</b>	1.1 dB p_p 1.6 dB p_p	
<b>Over operating temperature</b>	1.2 dB p_p @ fixed frequency	
<b>Phase noise</b> (Exceeds Intelsat's standard IESS308/309)	-53 dBc/Hz max. @ 10 Hz	
	-63 dBc/Hz max. @ 100 Hz	
	-73 dBc/Hz max. @ 1 KHz	
	-83 dBc/Hz max. @ 10 KHz	
	-93 dBc/Hz max @ 100 KHz -113 dBc/Hz max @ 1 MHz	
<b>Noise power density</b>	<b>Transmit</b> -66dBm/Hz (max) <b>Receive</b> -157dBm/Hz (max)	
<b>M&amp;C Interface</b>	RS-232 and RS-485	
<b>FSK</b>	Multiplexed on TX IFL, compatible with Comtech and Paradigm	
<b>Noise figure</b>	15 dB max	
<b>Input V.S.W.R.</b>	2 : 1 max	
<b>Output V.S.W.R.</b>	2 : 1 max.	
<b>Mute</b>	Shut off the HPA if L.O. unlocked	
<b>Status LED</b>	<b>RED</b> Summary alarm <b>GREEN</b> All OK <b>YELLOW</b> All OK standard L.O. 4.90 GHz <b>YELLOW blinking</b> All OK extended L.O. 5.50 GHz	
<b>Temperature range (ambient)</b>	operating	-45 deg C to +65 deg C
	storage	-55 deg C to +85 deg C
<b>Vibration and shock</b>	Complies with MIL-STD-810E	
<b>Dimensions &amp; housing</b>	240 (L) x 120 (W) x 140 (H) mm 9.45" (L) x 4.72" (W) x 5.5" (H)	
<b>Weight</b>	3.5 kg (7.7 lbs) max	