



## 100W Ext. Ku-Band Block Up Converter

### KEY FEATURES

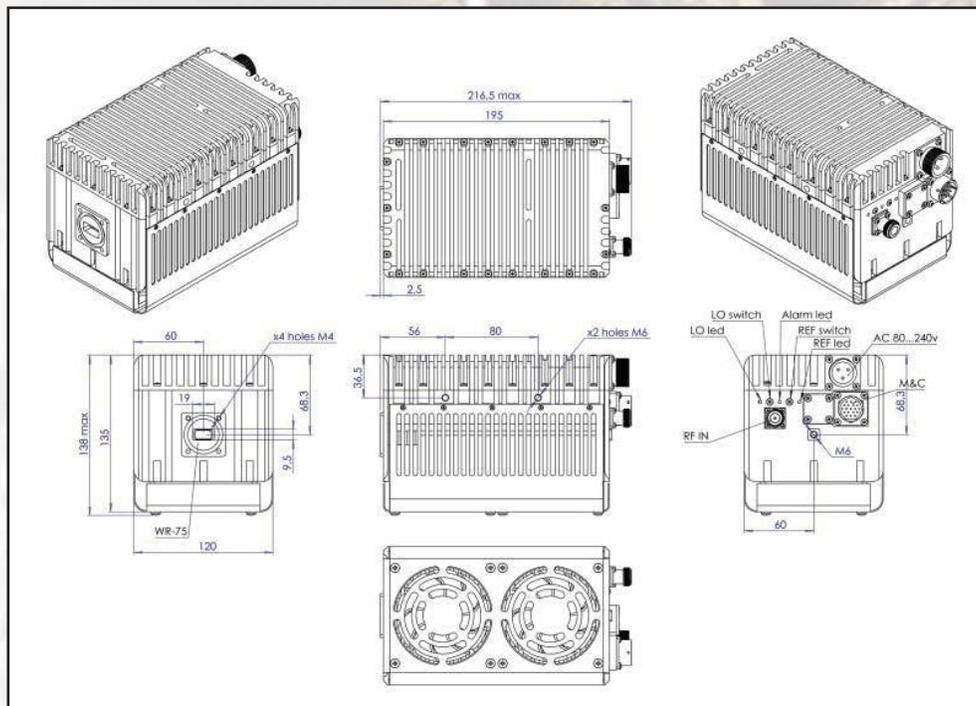
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Double L.O. (switchable 12.80 & 13.05 GHz)
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (499W max.)
- ◆ Auto-ranging powering option 80 - 240 VAC
- ◆ Extreme P-Out GaN linearity
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal auto-sensing and controllable 10MHz high stability reference (optional)
- ◆ Built-in redundancy option
- ◆ Advanced M&C - combined RS-232/485 / Ethernet (HTTP and SNMP ver. 2 & 3) / FSK (optional)
- ◆ RoHS compliant

### ABDN100KX / ABDN100KXF



This smallest and lightest 100W L-To Ku-Band Block Up Converter is based on GaN technology. Incomparable low power consumption, double L.O., field-exchangeable connector, auto-sensing and controllable internal 10 MHz reference make this unit universal for any Ku-Band application. M&C (FSK) capability enables troubleshooting, monitoring and controlling the BUC.

### Mechanical Drawing





## 100W Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
<b>RF frequency</b>		14.00 to 14.50 GHz 13.75 to 14.50 GHz
<b>Dual local oscillator</b>		12.80 GHz and 13.05 GHz
<b>IF frequency</b>		950 to 1,700 MHz
<b>Output power</b>		100W (+50 dBm min.) 51.3W (+47.1 dBm min.) P-Linear
<b>IF connector</b>		N-type or F-type (field-exchangeable)
<b>Power supply auto-ranging</b>		80 ~ 240 VAC via MS connector, 499W max.
<b>Output interface</b>		WR-75 G
<b>Gain</b>		68 dB min., 72 dB nominal
<b>IMD3 (two tones)</b>		-26 dBc max. 2 signal 5 MHz apart at P-LINEAR
<b>L.O. leakage</b>		-45 dBm max.
<b>Spurious</b>		-50 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)		-30 dBc
<b>Requirement for external reference:</b>		via IF cable
frequency		10 MHz (sine-wave)
input power		-5 to +5 dBm @ input port
<b>TX Gain variation</b>		± 0.5 dB over 40 MHz
<b>TX Gain stability over temperature range</b>		± 1.8 dB over full band ± 1.5 dB typ., ± 1.8 dB max.
<b>Phase noise</b>		-55 dBc/Hz max. @ 10 Hz
(Exceeds Intelsat's standard IESS308/309)		-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
<b>Noise power density</b>	<b>Transmit</b>	-80 dBm/Hz (max.)
	<b>Receive</b>	-125 dBm/Hz (max.)
<b>Noise figure</b>		15 dB max.
<b>Input V.S.W.R.</b>		1.5 : 1 max.
<b>Output V.S.W.R.</b>		1.5 : 1 max.
<b>M&amp;C</b>		RS-232/485 / Ethernet / FSK (optional)
<b>Mute</b>		Shut off the HPA if L.O. unlocked
<b>Status LED</b>		
<b>Amplifier</b>	<b>RED</b>	Summary alarm
	<b>GREEN</b>	All OK
<b>L.O.</b>	<b>GREEN</b>	All OK standard L.O. 13.05 GHz
	<b>GREEN blinking</b>	All OK extended L.O. 12.80 GHz
<b>10MHz</b>	<b>GREEN</b>	External 10MHz reference
	<b>GREEN blinking</b>	Internal 10MHz reference
	<b>RED</b>	No 10MHz reference detected
<b>Temperature range (ambient)</b>		
operating		-40 deg C to +55 deg C
storage		-55 deg C to +85 deg C
<b>Vibration and shock</b>		Complies with MIL-STD-810E
<b>IP rating</b>		IP67
<b>Dimensions &amp; housing</b>		195 (L) x 120 (W) x 135 (H) mm. 7.67" (L) x 4.72" (W) x 5.31" (H)
<b>Weight</b>		3.4 kg (7.49 lbs) max.