

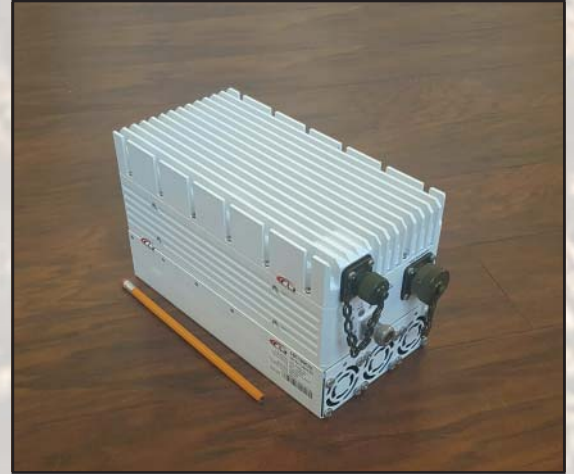


100W Ext. Ku-Band Block Up Converter

KEY FEATURES

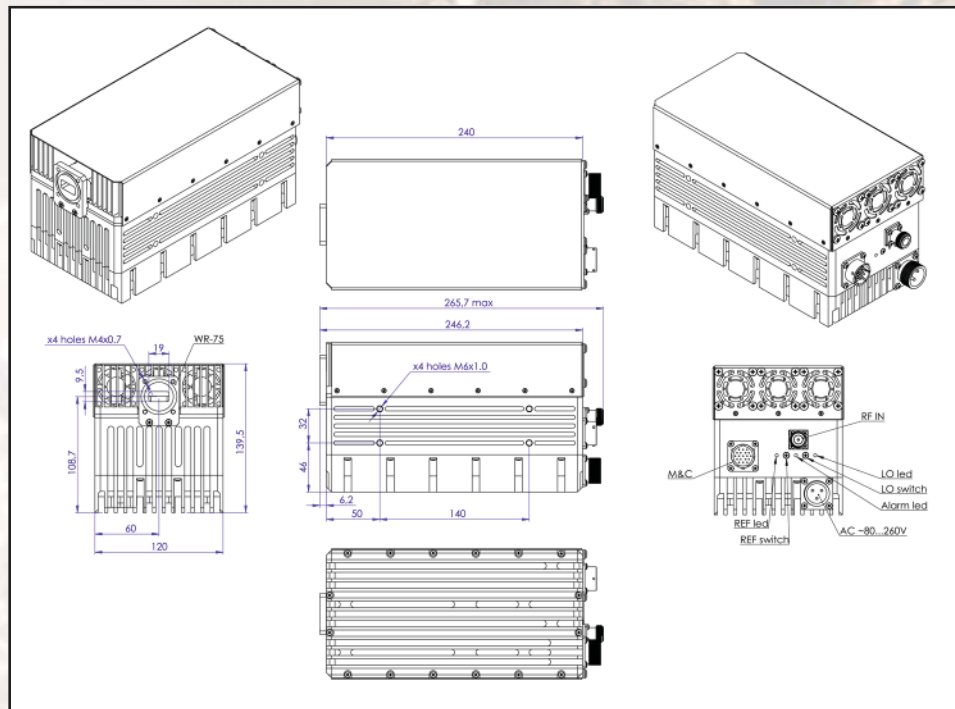
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Double- L.O. (switchable 12.80 & 13.05 GHz)
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (497W typ.)
- ◆ Auto-ranging powering option 36 - 58 VDC
- ◆ Extreme P-Out GaN linearity (47 dBm)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal auto-sensing and controllable 10MHz high stability reference
- ◆ Built-in redundancy option
- ◆ M&C - combined RS-232/485 and optional FSK
- ◆ Ethernet control (HTTP and SNMP)
- ◆ RoHS compliant

ABC100KX / ABC100KXF



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, and auto-ranging 48 VDC powering features 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 | | |
|---|--|--|
| RF frequency | | 14.00 to 14.50 GHz 13.75 to 14.50 GHz |
| Dual local oscillator | | 13.05 GHz and 12.80 GHz |
| IF frequency | | 950 to 1,700 MHz |
| Output power | | 100W (+50 dBm min.) 50W (+47 dBm min.) P-Linear |
| IF connector | | N-type or F-type (field-exchangeable) |
| Power supply auto-ranging | | +36 ~ +58 VDC via MS connector, 497W typ. |
| Output interface | | WR-75 G |
| Gain | | 68 dB min., 72 dB nominal |
| IMD3 (two tones) | | -26 dBc max. 2 signal 5 MHz apart at P-LINEAR |
| L.O. leakage | | -45 dBm max |
| Spurious | | -50 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 |
| Noise power density | Transmit Receive | -80 dBm/Hz (max) -125 dBm/Hz (max) |
| Noise figure | | 15 dB max |
| Input V.S.W.R. | | 2 : 1 max |
| Output V.S.W.R. | | 2 : 1 max. |
| M&C | | RS-232 and RS-485, Ethernet (HTTP and SNMP), FSK |
| Mute | | Shut off the HPA if L.O. unlocked |
| Status LED Amplifier L.O. 10MHz | RED GREEN GREEN GREEN blinking GREEN GREEN blinking RED | Summary alarm All OK All OK standard L.O. 13.05 GHz All OK extended L.O. 12.80 GHz External 10MHz reference Internal 10MHz reference No 10MHz reference detected |
| 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 | | 246.2 (L) x 120 (W) x 139.5 (H) mm 9.84" (L) x 4.72" (W) x 5.5" (H) |
| Weight | | 7.53 kg (16.0 lbs) max |