

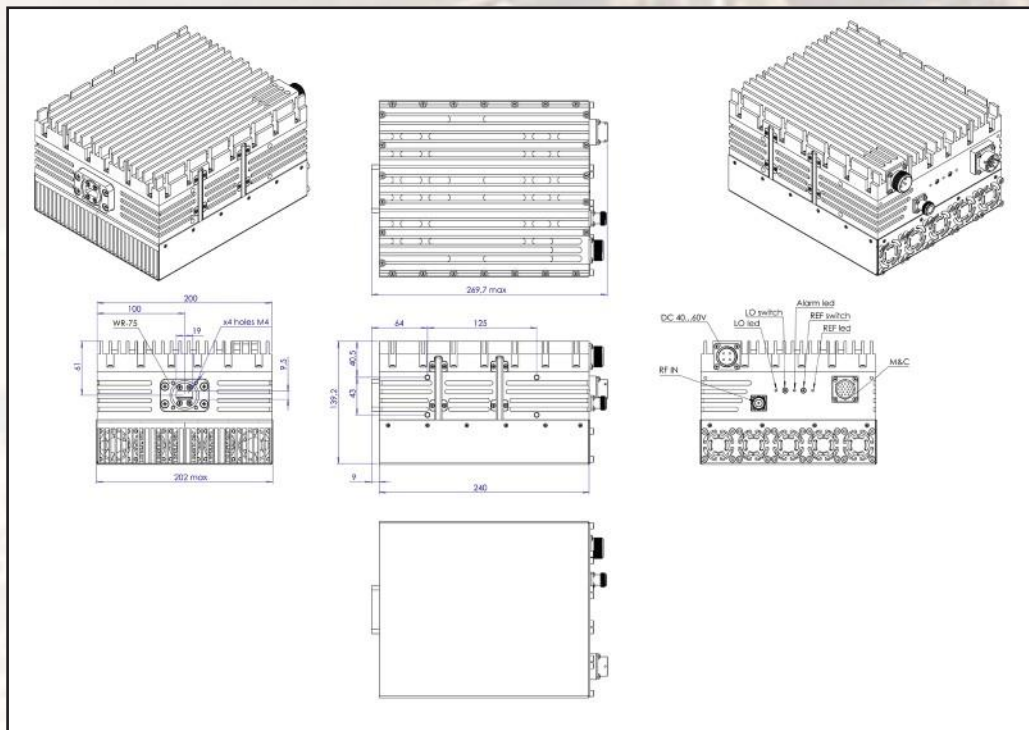


## 200W Ext. Ku-Band Block Up Converter

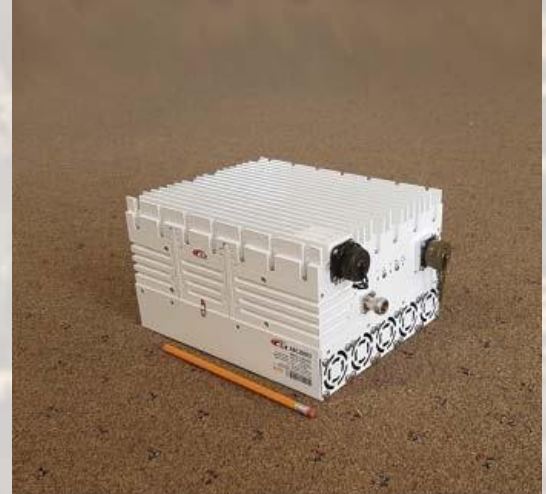
### KEY FEATURES

- ◆ 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 (1174 W typ.)
- ◆ Auto-ranging powering option 36 - 60 VDC
- ◆ Extreme P-Out GaN linearity (50.6 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 ver. 3)
- ◆ RoHS compliant

### Mechanical Drawing



### ABC200KX / ABC200KXF



This smallest and lightest 200W 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.



## 200W Ext. Ku-Band Block Up Converter

| TECHNICAL SPECIFICATIONS                                                                                              |                                                                                             |                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RF frequency                                                                                                          |                                                                                             | 14.00 to 14.50 GHz<br>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                                                                                                          |                                                                                             | 200W (+53.2 dBm min.)                                                                                                                                                                  |
| IF connector                                                                                                          |                                                                                             | N-type or F-type (field-exchangeable)                                                                                                                                                  |
| Power supply auto-ranging                                                                                             |                                                                                             | 36 ~ 60 VDC via MS connector, 1174 W typ.                                                                                                                                              |
| Output interface                                                                                                      |                                                                                             | WR-75 G                                                                                                                                                                                |
| Gain                                                                                                                  |                                                                                             | 68 dB min., 72 dB nominal                                                                                                                                                              |
| L.O. leakage                                                                                                          |                                                                                             | -45 dBm max                                                                                                                                                                            |
| Spurious                                                                                                              |                                                                                             | -50 dBc max                                                                                                                                                                            |
| Spectral regrowth<br>(QPSK at 1.5x and OQPSK at 1.0x symbol rate offset<br>with 2dB back-off from rated output power) |                                                                                             | -30 dBc                                                                                                                                                                                |
| Requirement for external reference:<br>frequency<br>input power                                                       |                                                                                             | <b>via IF cable</b><br>10 MHz (sine-wave)<br>-5 to +5 dBm @ input port                                                                                                                 |
| TX Gain variation                                                                                                     |                                                                                             | $\pm 0.5$ dB over 40 MHz                                                                                                                                                               |
| TX Gain stability over temperature range                                                                              |                                                                                             | $\pm 1.8$ dB over full band<br>$\pm 1.5$ dB typ., $\pm 1.8$ dB max.                                                                                                                    |
| Phase noise<br><br>(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<br>Receive                                                                         | -80 dBm/Hz (max)<br>-125 dBm/Hz (max)                                                                                                                                                  |
| Noise figure                                                                                                          |                                                                                             | 15 dB max                                                                                                                                                                              |
| Input V.S.W.R.                                                                                                        |                                                                                             | 1.5 : 1 max                                                                                                                                                                            |
| Output V.S.W.R.                                                                                                       |                                                                                             | 1.5 : 1 max.                                                                                                                                                                           |
| M&C                                                                                                                   |                                                                                             | RS-232 and RS-485, Ethernet (HTTP and SNMP ver.3)                                                                                                                                      |
| Mute                                                                                                                  |                                                                                             | Shut off the HPA if L.O. unlocked                                                                                                                                                      |
| Status LED<br>Alarm LED<br><br>L.O.<br><br>10MHz Reference LED                                                        | RED<br>GREEN<br>GREEN blinking<br>GREEN<br>GREEN blinking<br>GREEN<br>GREEN blinking<br>RED | Summary Alarm<br>OK<br>MUTE<br>All OK standard L.O. 13.05 GHz<br>All OK extended L.O. 12.80 GHz<br>External 10MHz reference<br>Internal 10MHz reference<br>No 10MHz reference detected |
| Temperature range (ambient)                                                                                           |                                                                                             |                                                                                                                                                                                        |
| operating                                                                                                             |                                                                                             | -40 deg C to +55 deg C                                                                                                                                                                 |
| storage                                                                                                               |                                                                                             | -55 deg C to +85 deg C                                                                                                                                                                 |
| Vibration and shock                                                                                                   |                                                                                             | Complies with MIL-STD-810E                                                                                                                                                             |
| Dimensions & housing                                                                                                  |                                                                                             | 240 (L) x 202 (W) x 139.2 (H) mm<br>9.4" (L) x 7.9" (W) x 5.48" (H)                                                                                                                    |
| Weight                                                                                                                |                                                                                             | 8.5 kg (18.7 lbs) max                                                                                                                                                                  |