

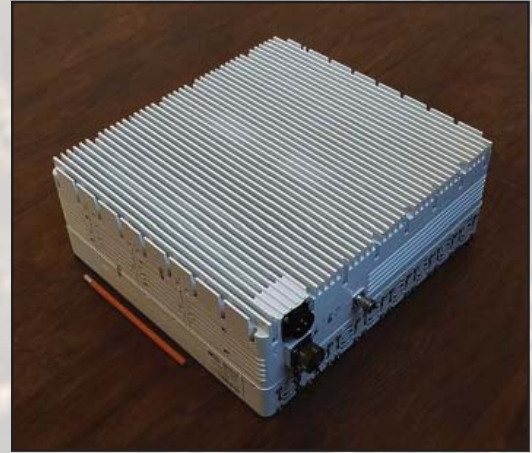


100W Universal Ka-Band (27.5-31.0 GHz) BUC

KEY FEATURES

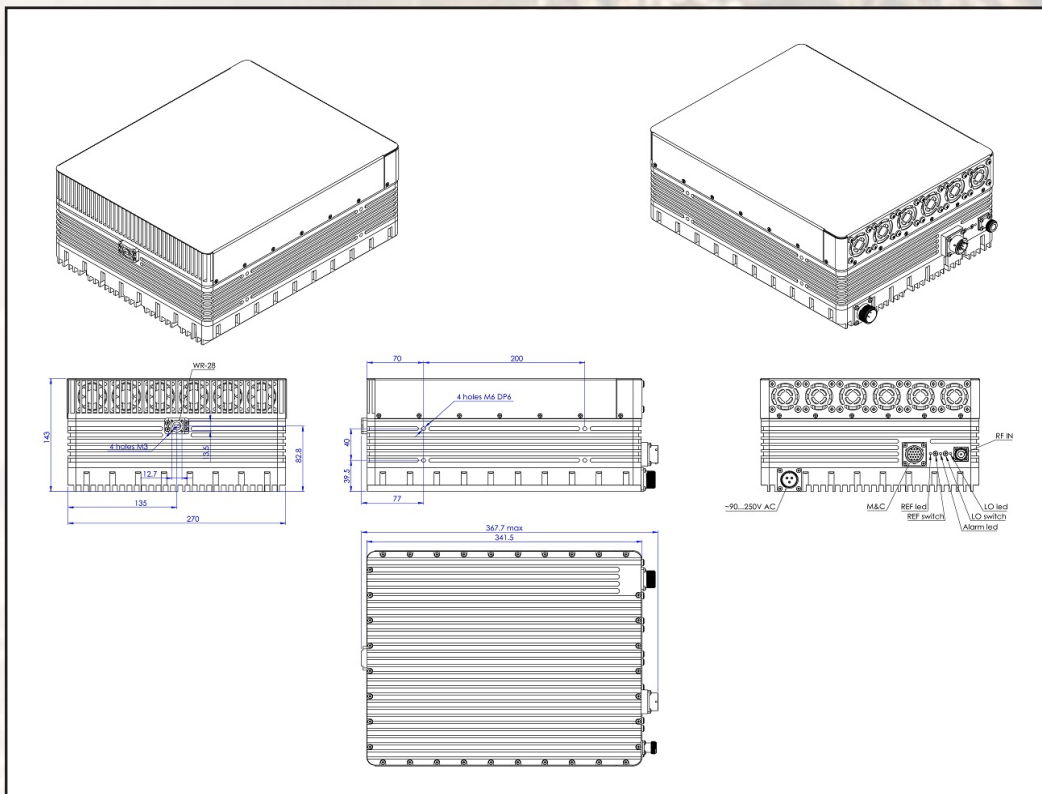
- ◆ Output frequency 27.5-31.0 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Quad L.O. (electronically and manually switchable 26.55, 27.4, 28.05, and 29.05 GHz)
- ◆ Low power consumption (990W max)
- ◆ M&C - combined RS-232/485, FSK and Ethernet control (HTTP and SNMP)
- ◆ L.O. lock, amplifier and 10MHz LEDs
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal 10MHz high stability reference autosensing and controllable (optional)
- ◆ RoHS compliant

ABD100UKA / ABD100UKAF



This unique first ever 100W L-To Full Ka-Band Block Up Converter covers the O3B (27.65-29.1 GHz), Commercial (29.0-30.0 GHz) and Military (30.0-31.0 GHz) frequency bands. M&C (FSK) capability enables trouble shooting, monitoring and controlling the BUC. Unit provides 10MHz reference autosensing feature.

Mechanical Drawing





100W Universal Ka-Band (27.5-31.0 GHz) BUC

TECHNICAL SPECIFICATIONS	
RF frequency	27.5 - 31.0 GHz
Quad local oscillator	26.55, 27.4, 28.05 and 29.05 GHz
IF frequency	950 to 1,950 MHz
Output power	100W (+50 dBm min.) 57W (+47.56 dBm min.) P-linear
IF connector	N-type or F-type (field-exchangeable)
Power supply : auto-ranging via MS connector	+90 ~ +250 VAC, 990W max.
Output interface	WR-28 G
Linear Gain	72 typ.
IMD3 (two tones)	-25 dBc max. 2 signal 5 MHz apart at P-LINEAR
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)	-52 dBc/Hz max. @ 10 Hz -62 dBc/Hz max. @ 100 Hz -72 dBc/Hz max. @ 1 KHz -82 dBc/Hz max. @ 10 KHz -92 dBc/Hz max. @ 100 KHz -102 dBc/Hz max. @ 1 MHz
Noise power density	Transmit Receive
	-60 dBm/Hz (max.) -150 dBm/Hz (max.)
FSK	Multiplexed on TX IFL, compatible with Compech and Paradigm
M&C Interface	RS-232 and RS-485, Ethernet (HTTP and SNMP)
Noise figure	15 dB max.
Input V.S.W.R.	1.5 : 1 max.
Output V.S.W.R.	1.5 : 1 max.
Mute	Shut off the HPA if L.O. unlocked
Status LED	RED GREEN GREEN BLINKING
L.O.	GREEN GREEN BLINKING YELLOW YELLOW BLINKING
Status REF LED	GREEN GREEN BLINKING RED
	ALARM SSPA OK SSPA MUTED All OK L.O. 26.55 GHz All OK L.O. 27.4 GHz All OK L.O. 28.05 GHz All OK L.O. 29.05 GHz EXTERNAL 10 MHz DETECTED INTERNAL 10 MHz NO EXTERNAL REFERENCE
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
IP rating	IP67
Dimensions & housing	341.5 (L) x 270(W) x 143 (H) mm 13.44" (L) x 10.62" (W) x 5.62" (H)
Weight	14.5 kg (32 lbs) max.