

Block Up Converter

Ka-Band 40W



Overview

RevGo designs and manufactures satellite earth station RF systems with well over 500,000 transceivers deployed in the Ku-, Ka-, C-, and DBS-bands. With headquarters located in Reston, Virginia USA and established in 2003, RevGo has created a broad product line of highly reliable block up converters (BUCs), low noise block (LNBs), and full transceivers with:

- Frequencies from Ku-, Ka-, C-, DBS-, to X-Bands
- Output powers from 3 to 200 Watts
- Standalone (1+0) and redundant (1+1) operation



Reliability

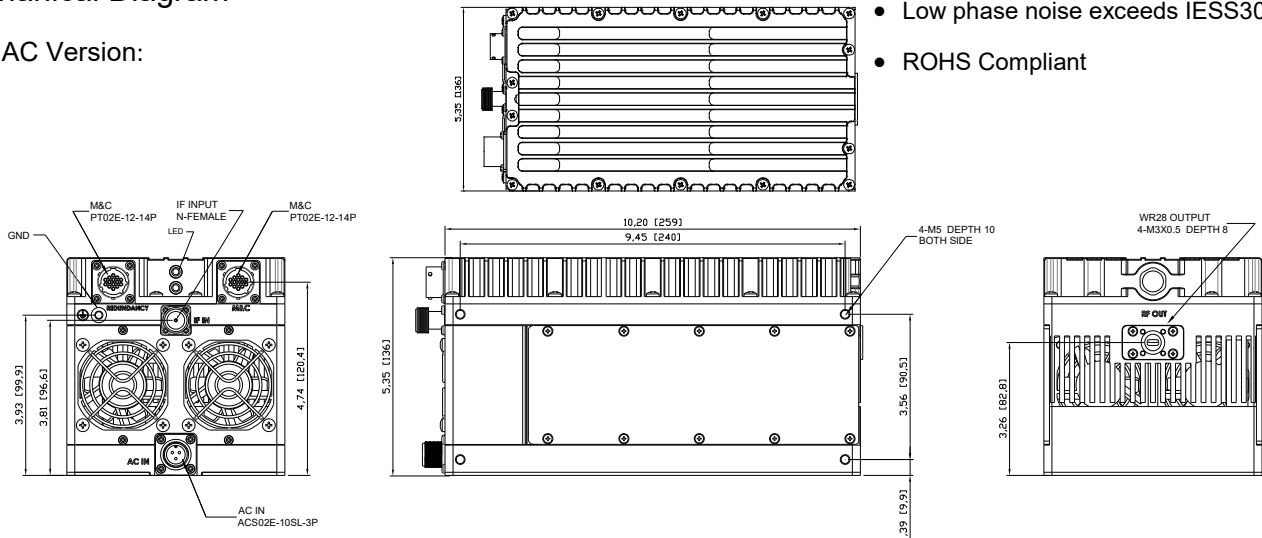
- Highly integrated RF technologies (RFIC and GaN)
- High volume annual production (>80,000 transceivers)
- Design experience with linearity and phase noise up to 4096QAM
- Strict quality control processes resulting in extremely low field failure rates

Features

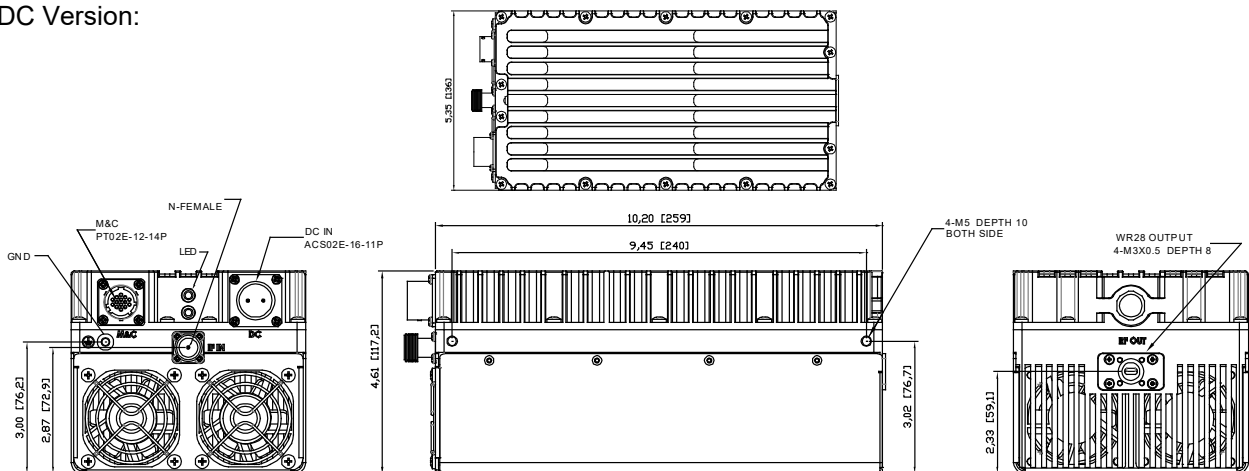
- Dual bands are switchable
- GaN technology
- Low power consumption
- Compact size and light weight
- User interfaces: RS232, RS485, and Ethernet
- Low phase noise exceeds IESS308/309
- ROHS Compliant

Mechanical Diagram

- AC Version:



- DC Version:



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Specifications

RF Specifications

RF Frequency	General Ka Bands:	29.0-30.0 GHz 29.5-30.0 GHz 30.0-31.0 GHz
	Ka O3B Bands:	27.652-28.388 GHz 28.172-29.071 GHz
IF Frequency	General Ka Bands:	950-1950 MHz 950-1450 MHz 1000-2000 MHz
	Ka O3B Bands:	1052-1788 GHz 972-1871 GHz
LO Frequency	General Ka Bands:	28.05 GHz 28.55 GHz 29.05 GHz
	Ka O3B Bands:	26.6 GHz 27.2 GHz
External Reference		10 MHz, 0 ± 5 dBm
Output Power		<u>40W BUC</u>
Saturated		46 dBm min.
PLin ¹		45 dBm
PLin ²		44 dBm
PLin		43 dBm
IMD3 at Linear Output Power		-25 dBc max.
Small Signal Gain		70 dB
Gain Variation		1 dB p-p/ 36 MHz 3 dB p-p/ 500 MHz 4 dB p-p/ 1000 MHz
Gain Stability		3 dB p-p
Gain Adjustment Range		20 dB (Step: 0.1 dB)
Phase Noise		-63 dBc/Hz @100 Hz, -73 dBc/Hz @1 KHz, -83 dBc/Hz @10 KHz, -93 dBc/Hz @100 KHz
Output Spurious		-55 dBc max.
Notes:		PLin ¹ : -26 dBc regrowth, 1.5 SR PLin ² : -30 dBc regrowth, 1.0 SR (MIL-STD-188-164B, one-carrier) PLin: <-25 dBc IMD3 (MIL-STD-188-164B, two-carrier)

Power Supply

Power Supply	<u>AC Version</u>	<u>DC Version</u>
	85-265 VAC (47-63Hz)	36-72VDC
Power Supply Draw @Prated	380W typ. @46 dBm	350W typ. @46 dBm

Interfaces

RF Output Connector	WR28-G (Grooved)
RF Output VSWR	1.25:1
IF Input Connector	N-Type Female
IF Input VSWR	1.5:1
Power Supply Connector	ACS02E-10SL-3P (AC version) ACS02E-16-11P (DC version)
M & C Connector	PT02E-12-14P, RS-485, RS-232 & Ethernet
LED Indicators	LEDs off: Equipment function properly Yellow: PLL unlock alarm

Physical Parameters

	<u>AC Version</u>	<u>DC Version</u>
Size	259*136*136 mm 10.2*5.4*5.4 inch	259*136*118 mm 10.2*5.4*4.6 inch
Weight	6 kg 13.2 lbs	4.8 kg 10.5 lbs
Operating Temperature	-40 to +60 °C	
Humidity	0-100% (Condensing)	
Altitude	0-10000 F ASL	

Ordering Number

RGUC - A a 0 4 0 - b B R E N - A 0	
a: Frequency Range	bb: Power Supply
*1: 29-30 GHz	*AC: 85 to 265 VAC (47-63 Hz)
*2: 29.5-30 GHz	*48: 36 to 72 VDC
*3: 30-31 GHz	
*4: 29-30 GHz & 30-31 GHz	
*5: 27.652-28.388 GHz	
*6: 28.172-29.071 GHz	
*7: 27.652-28.388 GHz & 28.172-29.071 GHz	

Contact RevGo Global Inc.



Tel: +1 (703) 348-9933
E-mail: sales@revgotech.com
Website: www.revgotech.com
Address: 12007 Sunrise Valley Drive.
Suite 450 Reston, Virginia 20191 USA