

Block Up-Converter (BUC)

Ka-Band 40W



◆ Company Overview

RevGo designs and manufactures satellite earth station RF from low to high power. RevGo was founded in 2002 with its headquarters in the Washington DC corridor. RevGo's broad VSAT product line is produced to stringent quality standards using an ISO9001:2015 quality system:

- Block upconverter (BUC)
- Low noise block (LNB)
- Transceiver (Tx/Rx/OMT/filters)
- C-, Ku-, DBS-, Ka-bands
- 2 to 300W output power

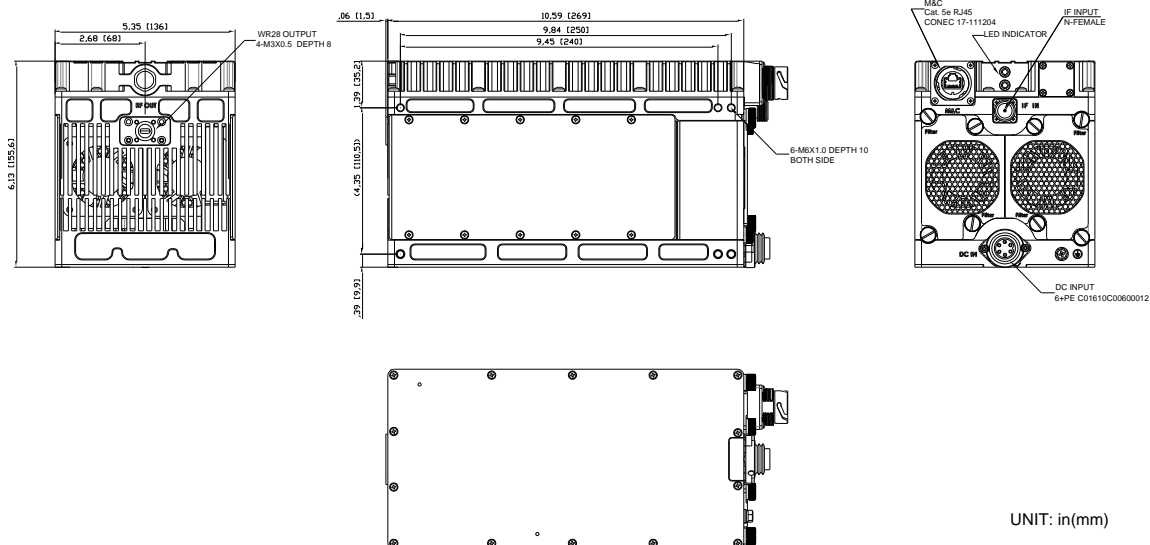
◆ Reliability

- Highly integrated RF technologies (RFIC and GaN)
- Designed for high volume production
- Linearity optimized for high order modulation and high data rate
- Strict quality control processes resulting in <0.25% field failure rates

◆ Product Features

- Software selectable sub-band 27.5-31 GHz (single-, dual- and tri-band)
- Independently removable fans without causing service interruption
- Variable power consumption 350W (@46dBm)
225W (@43dBm)
- Compact and light weight 12 lbs / 5.8 kg
- Low phase noise (exceeds IESS308/309)
- Stable linearity to 500 MHz bandwidth
- Independently removable fans
- Rugged design for extreme environments (-40 to +60°C)
- M&C with real-time clock, event log, web interface, SNMP, and O-BMIP

◆ Mechanical Diagram (Unit: inch (mm))



◆ Typical VSAT Applications

- Maritime
- 5G Backhaul
- SNG Vehicle
- Terminals
 - Fixed
 - Portable
 - Transportable

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SPECIFICATIONS

◆ RF Specifications

RF Frequency	General 27.5 -31 GHz (Available in many band options)
IF Frequency	950-1950 MHz (Exact range depends on band option)
External Ref	10 MHz, 0 ± 5 dBm
Output Power	
Rated/Saturated	46 dBm
PLin¹	45 dBm
PLin²	44 dBm
PLin³	43 dBm
IMD3 (3dB from rated)	- 25 dBc
Small Signal Gain	67-77 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	10 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	-60 dBc

Notes:

- PLin¹:** -26 dBc regrowth, 1.5 SR (commercial satellite)
- PLin²:** -30 dBc regrowth, 1.0 SR (MIL-STD-188-164B, one-carrier)
- PLin³:** <-25 dBc IMD3 (MIL-STD-188-164B, two-carrier)

FREQUENCY LIST			
BUC FREQ BAND ID	BUC TX RF FREQ GHz	BUC IF FREQ MHz	BUC LO FREQ GHz
1 =	29.0 – 30.0	950 – 1950	28.05
2 =	29.5 – 30.0	950 – 1450	28.55
3 =	30.0 – 31.0	950 – 1950	29.05
4 =	Band 1=29.0 – 30.0	950 – 1950	28.05
	Band 2=30.0 – 31.0	950 – 1950	29.05
5 =	27.652 – 28.388	1052 – 1788	26.60
6 =	28.172 – 29.071	972 – 1871	27.20
7 =	Band 1=27.652 – 28.388	1052 – 1788	26.60
	Band 2=28.172 – 29.071	972 – 1871	27.20
T =	Band 1=27.5 – 28.5	950 – 1950	26.55
	Band 2=28.25 – 29.25	950 – 1950	27.30
	Band 3=29.0 – 30.0	950 – 1950	28.05

◆ Part Number / Ordering Information.

RGUC – A <u>a</u> 40 – 48 <u>bb</u> – M	
a: Frequency Band	bb = M&C Interface
1 = 29.00-30.00 GHz	NE = Ethernet
2 = 29.50-30.00 GHz	RE = Eth & RS485/232
3 = 30.00-31.00 GHz	
4 = 29.00-31.00 GHz, dual-band	
5 = 27.652-28.388 GHz	
6 = 28.172-29.071 GHz	
7 = 27.652-29.071 GHz, dual-band	
T = 27.50-30.00 GHz, tri-band	

◆ Power Supply

Input Power	+36 to +60 V DC
Power Consumption	
@ PLin ³ Output	225W
@ Rated Output	350W

◆ Interfaces

RF Output Connector	WR28-G (Grooved)
RF Output VSWR	1.25:1
IF Connector	N-Type Female
IF Input VSWR	1.5:1
Power Connector	C01610C00600012
M&C Connector	RJ45 PT02E-12-14P (optional)
Alarm Status Indicator	LED (Yellow & Red)

◆ Physical Parameters

Size (inches)	10.6*5.4*6.1
(mm)	269*136*156
Weight (lbs)	12 lbs
(kg)	5.8 kg
Operating Temperature	-40 to +60°C
Humidity	0-100% (condensing)
Altitude	0-10,000 feet ASL

◆ Contact Information

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