

# Block Up-Converter (BUC)

## Ka-Band 10/20W



### ◆ 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 up converter (BUC)
- Low noise block (LNB)
- Transceiver (Tx/Rx/OMT/filters)
- C-, Ku-, DBS-, Ka-bands
- 3 to 1000W 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

- Power consumption
 

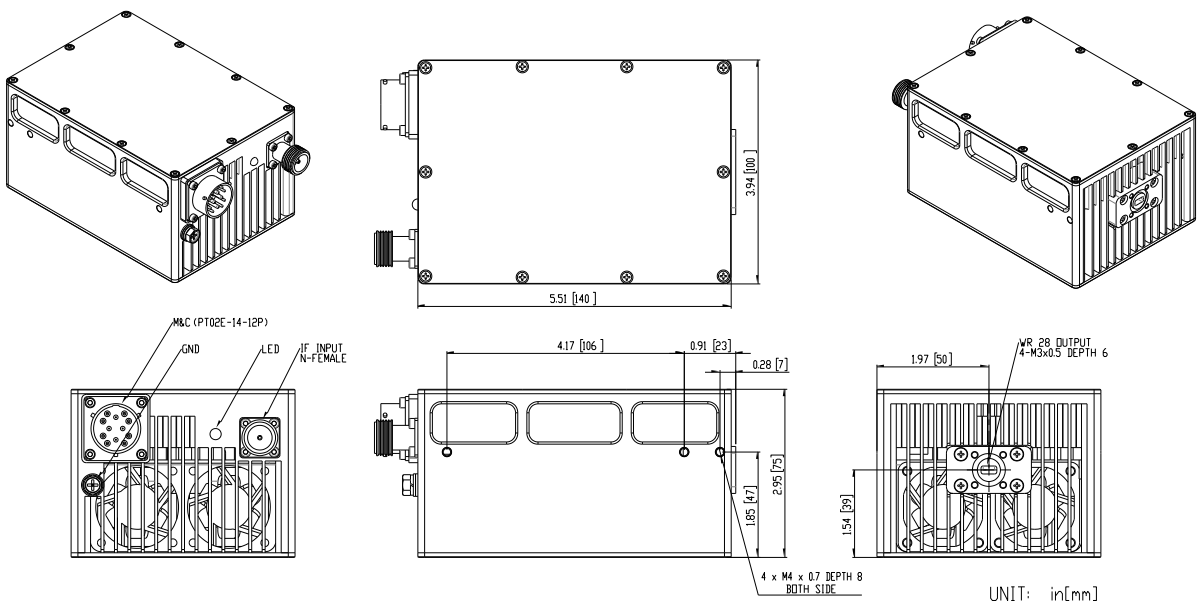
	<b>10W BUC</b>	<b>20W BUC</b>
	70 W (@40dBm)	120 W (@43 dBm)
	55 W (@37dBm)	90 W (@40 dBm)
- Software selectable sub-band (single, dual, tri, quad-band options)
- Compact and light weight (2.64 lbs / 1.2 kg)
- Low phase noise (exceeds IESS308/309)
- Rugged design for extreme environments (-40 to +60°C)

### ◆ Typical Applications

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



### ◆ Mechanical Diagram (Unit: inch [mm])



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## SPECIFICATIONS

### RF Specifications

<b>RF Frequency</b>	(Optional)	
LO Freq. @28.05 GHz	29.00-30.00 GHz	
LO Freq. @29.05 GHz	30.00-31.00 GHz	
LO Freq. @28.05/29.05 GHz	29.00-31.00 GHz	
LO Freq. @26.55/27.30/28.05 GHz	27.50-30.00 GHz	
LO Freq. @26.55/27.30/28.05/29.05GHz	27.50-31.00 GHz	
<b>IF Frequency</b>	950-1950 MHz	
<b>External Ref</b>	10 MHz, 0 ± 5 dBm	
<b>Output Power</b>	<b>10W BUC</b>	<b>20W BUC</b>
Rated/Psat	40 dBm	43 dBm
PLin <sup>1</sup>	39 dBm	42 dBm
PLin <sup>2</sup>	38 dBm	41 dBm
PLin	37 dBm	40 dBm
<b>IMD3</b> (3dB from rated)	-25 dBc	
<b>Small Signal Gain</b>	70 dB	
<b>Gain Variation</b>	1 dB p-p / 36 MHz	
	3 dB p-p / 500 MHz	
	4 dB p-p / 1000 MHz	
<b>Gain stability</b>	3 dB p-p	
<b>Gain Adjustment</b>	20 dB (Step: 0.25 dB)	
<b>Phase Noise</b>	-63 dBc / Hz @ 100 Hz	
	-73 dBc / Hz @ 1 KHz	
	-83 dBc / Hz @ 10 KHz	
	-93 dBc / Hz @ 100 KHz	
<b>Output Spurious</b>	-55 dBc	

#### Notes:

- P<sub>sat</sub>**: Retreats by 0.5 dB @60°C from 30 to 31 GHz
- PLin<sup>1</sup>**: -26 dBc regrowth, 1.5 SR (commercial satellite)
- PLin<sup>2</sup>**: -30 dBc regrowth, 1.0 SR (MIL-STD-188-164B, one-carrier)
- PLin** : <-25 dBc IMD3

### Part Number / Ordering Information

RGUC-A**abbb**-DC4EN-D0

<b>a:</b> Frequency Range	<b>bbb:</b> Output Power
1 = 29.00-30.00 GHz	010 = 10W
3 = 30.00-31.00 GHz	020 = 20W
4 = 29.00-31.00 GHz	
T = 27.50-30.00 GHz	
Q = 27.50-31.00 GHz	

### Power Supply

<b>Input Power</b>	+18 to +55 vDC	
<b>Power Consumption</b>	<b>10W BUC</b>	<b>20W BUC</b>
@ PLin Output	55 W	90 W
@ Rated Output	70 W	120 W

### Interfaces

<b>RF Output Connector</b>	WR28 (Grooved)
<b>RF Output VSWR</b>	1.3:1
<b>IF Connector</b>	N-Type Female
<b>IF Input VSWR</b>	2:1
<b>Power Connector</b>	PT02E-14-12P 4 pins for Power supply
<b>M&amp;C Connector</b>	PT02E-14-12P 8 pins for M&C (RS422/Ethernet)
<b>LED Alarm Indicator</b>	<b>ON</b>
	Green Normal
	Red PLL alarm

### Physical Parameters

<b>Size</b> (inches)	5.5*3.94*2.95
(mm)	140*100*75
<b>Weight</b> (lbs)	2.64 lbs
(kg)	1.2 kg
<b>Operating Temperature</b>	-40 to +60°C
<b>Humidity</b>	0-100% (condensing)
<b>Altitude</b>	0-10,000 feet ASL

### Contact Information

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