

# Block Up-Converter (BUC)

## Ku-Band 100 / 120W



### ◆ Company Overview

RevGo designs and manufactures satellite earth station RF from low to medium 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

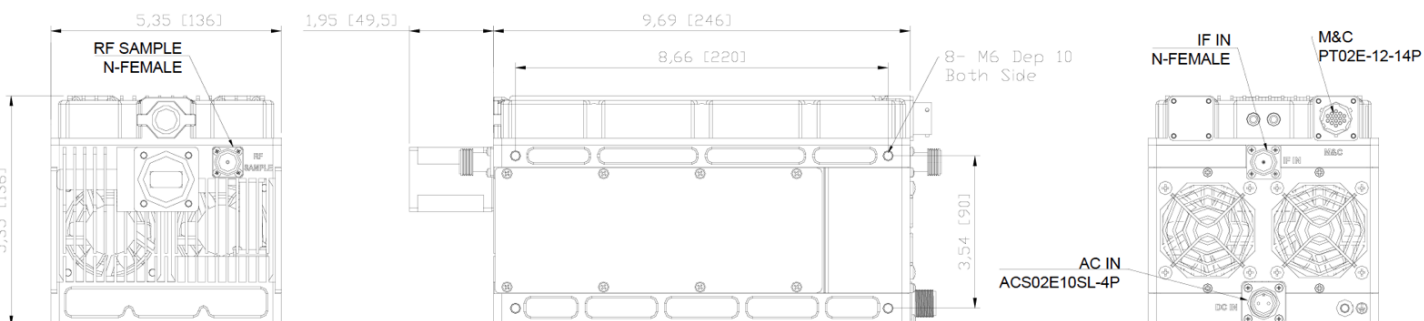
### ◆ Product Features

**100W**

**120W**

- Variable power consumption 650W (@49dBm) 750W (@50dBm)
- Optional equipment redundancy configurations
- Low phase noise (exceeds IESS308/309)
- Rugged design for extreme environments (-40 to +65°C)

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



UNIT: in(mm)

### ◆ Typical VSAT Applications

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



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### SPECIFICATIONS

#### ◆ RF Specifications

RF Frequency	<u>Standard</u>	<u>Extended</u>
	14-14.50 MHz	13.75-14.50 GHz
IF Frequency	950-1450 MHz	950-1700 MHz
External Ref	10 MHz, 0 ± 5 dBm	
Output Power	<u>100W</u>	<u>120W</u>
Rated/Saturated	50 dBm	50.8 dBm
PLin <sup>1</sup>	49 dBm	49.8 dBm
PLin <sup>2</sup>	48 dBm	48.8 dBm
PLin <sup>3</sup>	47 dBm	47.8 dBm
IMD3 (3dB from rated)	- 25 dBc	
Small Signal Gain	75 dB	
Gain Variation	1 dB p-p / 36 MHz 3 dB p-p / 500 MHz 4 dB p-p / 750 MHz	
Gain stability	3 dB p-p	
Gain Adjustment	20 dB (Step: 0.5 dB)	
Phase Noise	-65 dBc / Hz @ 100 Hz -75 dBc / Hz @ 1 KHz -85 dBc / Hz @ 10 KHz -95 dBc / Hz @ 100 KHz	
Output Spurious	-60 dBc	

#### Notes:

- 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<sup>3</sup>: <-25 dBc IMD3 (MIL-STD-188-164B, two-carrier)

#### ◆ Power Supply

Input Power	85 to 265 VAC (47-63 Hz)	
Power Consumption	<u>100W</u>	<u>120W</u>
@ PLin <sup>1</sup> Output	500W	570W
@ Rated Output	550W	620W

#### ◆ Interfaces

RF Output Connector	WR75-G (Grooved)
RF Output VSWR	1.25:1
IF Connector	N-Type Female
IF Input VSWR	1.5:1
Power Connector	ACS02E-14S-7P
M&C Connector	PT02E-12-14P (RS485/RS232/Eth) SNMPv2
Redundancy Connector	PT02E-12-14S
Alarm Status Indicator	LED (green/red)

#### ◆ Physical Parameters

Size	(inches)	9.7*5.3*5.3
	(mm)	246*136*136
Weight	(lbs)	12.5
	(kg)	5.7
Operating Temperature	-40 to +60°C (guarantee)	
Humidity	0-100% (condensing)	
Altitude	0-10,000 feet ASL	

#### ◆ Part Number / Ordering Information

RGUC – U <u>a</u> <u>b</u> <u>b</u> - A C R E - C	
<u>U</u> : Frequency Band U = Ku-Band	<u>b b</u> : Output Power 100 = 100W 120 = 120W
<u>a</u> : Frequency Range 1 = 14.0-14.5 GHz 2 = 13.75-14.5 GHz	

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

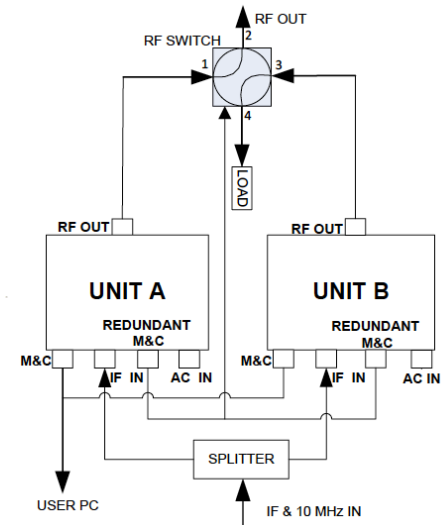
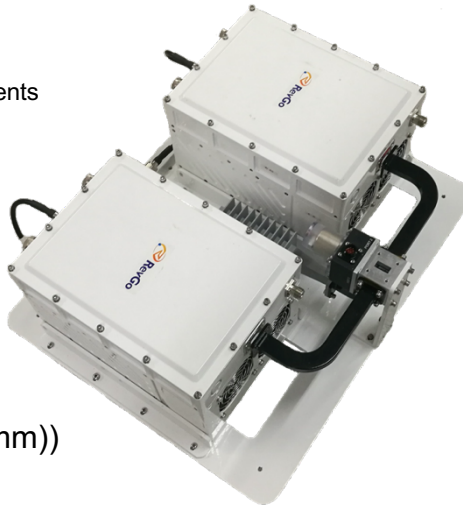
#### Optional 1:1 Redundancy Configuration

In the event of an equipment failure, the optional 1:1 redundancy kit switches traffic from the primary BUC to the standby BUC.

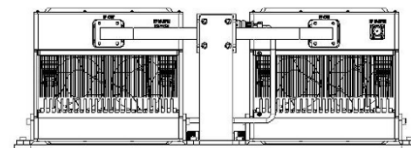
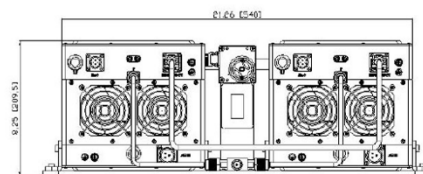
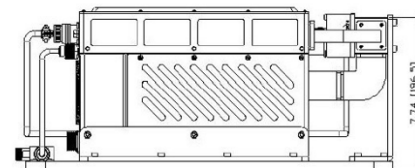
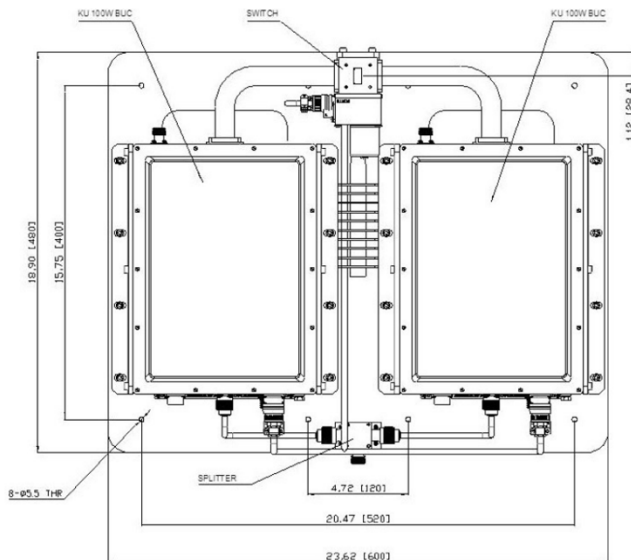
- Compatibility: 100W and 120W BUCs
- Switching Function: Auto or Manual
- Type of Standby: Cold-backup
- Rugged design for extreme environments

### ◆ Items Included in Kit

- WR-75 waveguide switch
- WR-75 Hi Power Load
- Splitter
- Interconnection cabling
- Mounting Frame x1



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



### ◆ Part Number / Ordering Information

**RGXA - U 1 HRK - A0**

Optional 1:1 Redundancy Kit