

Block Up-Converter (BUC)

C-Band 400W



◆ 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

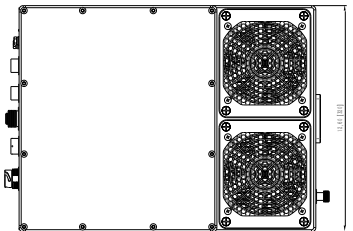
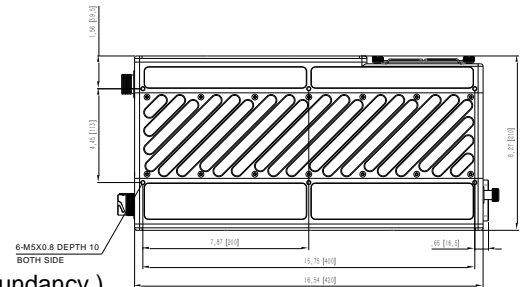
- Highly integrated RF technologies (RFIC and GaN)
- Designed for high volume production
- Linearity optimized for high order modulation and high data rate

◆ Product Features

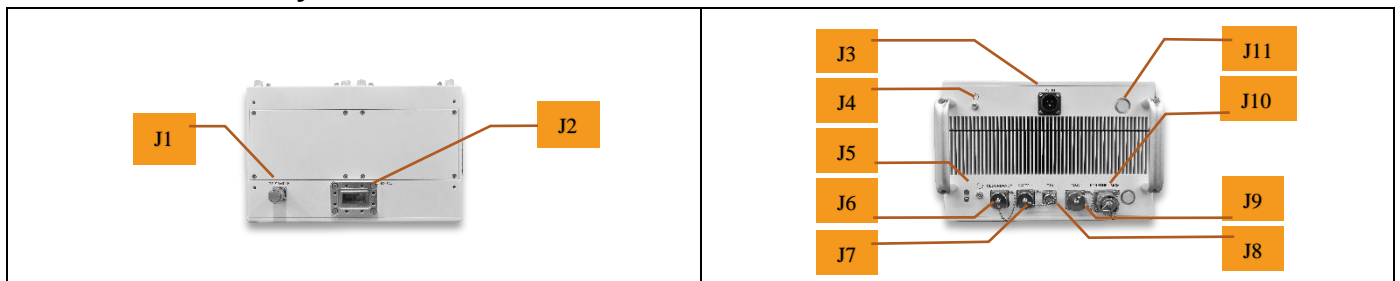
400W BUC

- Variable power consumption 1900 W @ 56 dBm
- Optional auto-sense reference (support internal and external reference)
- Optional equipment redundancy configurations(1:1 redundancy or 1:2 redundancy)
- Low phase noise (exceeds IESS308/309)
- Rugged design for extreme environments (-40 to +60°C)
- Fans independently removable without causing service interruption
- M&C with real-time clock, event log, web interface, Open-BMIP, ALC (BMIP calibration table is an option)

◆ Mechanical Diagram Unit: [mm]



◆ Interface Summary



No.	Interface	Type	Spec	Function
J1	RF Output Sample	N-type Female (50Ω)	Coupling coefficient : 60 dB	Output power sample
J2	RF Output	WR137-G	5.85-6.425 / 5.85-6.725 GHz	Built-in isolation filter , Reflected power detection
J3	Power Supply	ACS02E-16-10P	200 to 240 VAC (47-63 Hz)	Power for SSPB
J4	Grounding	Cross Screws	M5	Ensure that the equipment can be grounded
J5	LED Status	LED*2	LED (Red/Green)	Green On: Working Normal Green Flash: Tx Muted Red On: Alarm except for PLL Red Flash: PLL Alarm
J6	Link connector	PT02E-12-14S	/	1:1/1:2 redundant system control interface
J7	Switch connector	PT02E-12-14P	/	1:1/1:2 redundant system switch control interface
J8	IF Input	N-type Female (50Ω)	950-1525 / 950-1825 MHz	/
J9	M&C connector	PT02E-14-19P	RS232/RS485	RS232/RS485 between PC and BUC
J10	Ethernet connector	RJ45	Ethernet	M&C between PC and BUC, Remote firmware upgrade
J11	Breather valve	/	M12	Equalize pressure inside and outside of the BUC

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SPECIFICATIONS

RF Specifications

RF Frequency	<u>Standard</u>	<u>Extended</u>
	5.850-6.425 GHz	5.850-6.725 GHz
IF Frequency	950-1525 MHz	950-1825 MHz
LO Frequency	4.90 GHz	
External Ref	10 MHz, 0 ± 5 dBm	
Internal Ref (optional)	10 MHz	
Oscillator accuracy	±100 ppb	
Oscillator stability	± 5 ppb	
Output Power	<u>400W BUC</u>	
Rated	56 dBm	
Plin ¹	55 dBm	
Plin ²	54 dBm	
Plin ³	53 dBm min.	
IMD3 @Plin ²	-25 dBc	
Small Signal Gain	75 dB	
Gain Variation	1.0 dB p-p / 40 MHz	
	3.0 dB p-p / 575 MHz	
	4.0 dB p-p / 875 MHz	
Gain stability	3.0 dB p-p	
Gain Adjustment	20 dB (55-75 dB, Step: 0.1 dB)	
TX noise density	-76 dBm/Hz	
RX noise density	-150 dBm/Hz @3.4-4.2 GHz	
Phase Noise	-68 dBc / Hz @ 100 Hz	
	-80 dBc / Hz @ 1 KHz	
	-90 dBc / Hz @ 10 KHz	
	-95 dBc / Hz @ 100 KHz	
	-115 dBc / Hz @ 1MHz	
Output Spurious	-60 dBc max. -65 dBc typ.	

Notes:

- Plin¹: -25 dBc regrowth, 1.5 SR (commercial satellite)
- Plin²: -28 dBc regrowth, 1.0 SR (MIL-STD-188-164B, one-carrier)
- Plin³: <-25 dBc IMD3

Model / Ordering Information

RGUC-Ca400-ACRbN-Cc	
a: Frequency Range	b: Reference
1 = 5.850-6.425 GHz	E = External reference
2 = 5.850-6.725 GHz	L = Internal reference
c: OpenBmip	
0 = Without openBMIP tables	
p = With openBMIP tables	

Power Supply

Input Power	200 to 240 VAC (47-63 Hz)
Power Consumption	<u>400W BUC</u>
@ Rated Output	1900 W

Interfaces

RF Output Connector	WR137-G (Grooved)
RF Output VSWR	1.25:1
IF Connector	N-Type
IF Input VSWR	1.5:1
RF Sample connector	N-Type
Power Connector	ACS02E-16-10P
M&C Connector	PT02E-14-19P
Ethernet Connector	RJ45 (Ethernet, 100/1000 MHz)
	SNMPv2
Redundancy Connector	
Link connector	PT02E-12-14S
Switch connector	PT02E-12-14P
Alarm Status Indicator	Green ON Red Flash
LED*2	Normal PLL Alarm

Physical Parameters

Size (inch)	16.53*12.60*8.27
(mm)	420*320*210
Weight (lbs)	55.11
(kg)	25
Operating Temperature	-40 to +60°C (guarantee)
Humidity	0-100% (condensing)
Altitude	0-15,000 feet ASL

Contact Information

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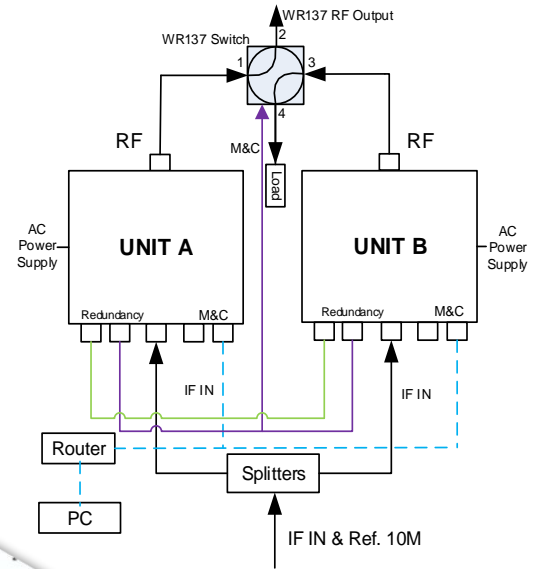
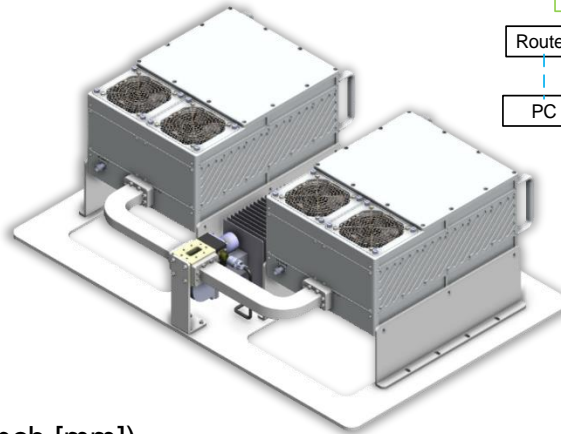
Optional 1:1/1:2 Redundancy Configuration

In the event of an equipment failure, the optional 1:1 redundancy kit switches traffic from the primary BUC to the standby BUC. 1:2 configuration is supported

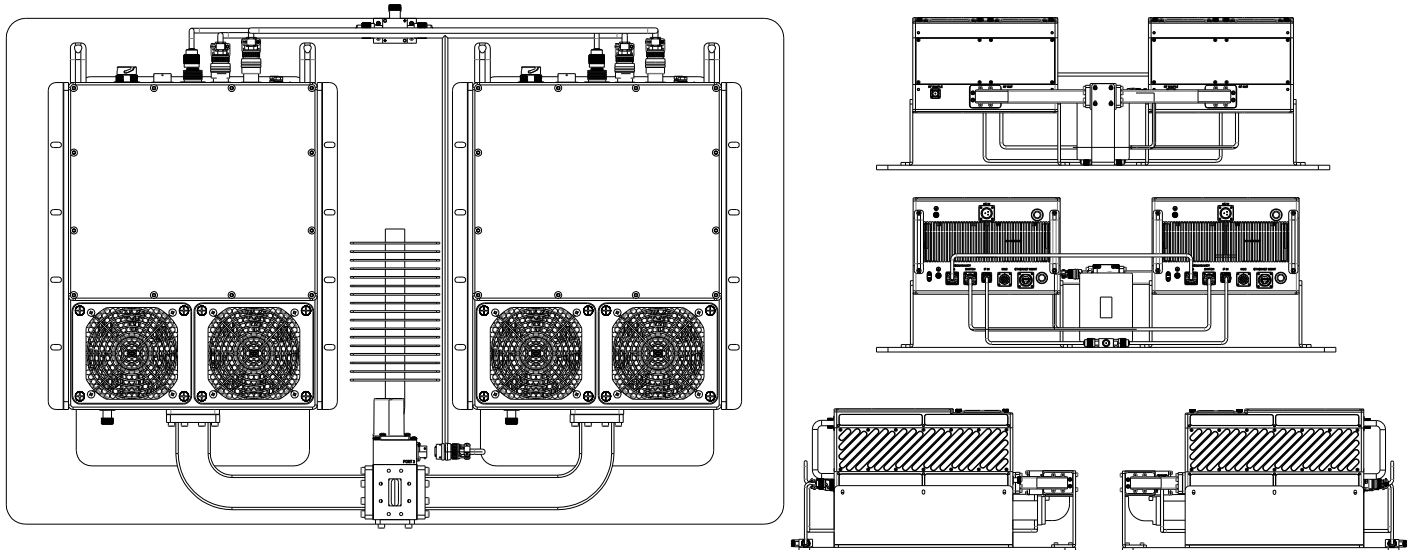
- Compatibility: 400W BUCs
- Switching Function: Auto or Manual
- Type of Standby: Cold-backup (ECO) or Hot-backup
- Rugged design for extreme environments
- Touch screen control panel (1U, optional)

◆ Items Included in Kit

- WR-137 waveguide switch *1
- WR-137 Hi Power Load *1
- Waveguide *2
- Splitter *1
- Interconnection cabling
- Mounting Frame x1



◆ Mechanical Diagram (Unit: inch [mm])



◆ Part Number / Ordering Information

RGXA – CB500RK - C0
Optional 1:1 Redundancy Kit

RGXA – BUCKRCU - A0
Optional touch screen control panel (1U)

◆ Contact Information

Website:	www.revgo-global.com	
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