

# Block Up-Converter (BUC)

## Ku-Band 60/80W

### 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

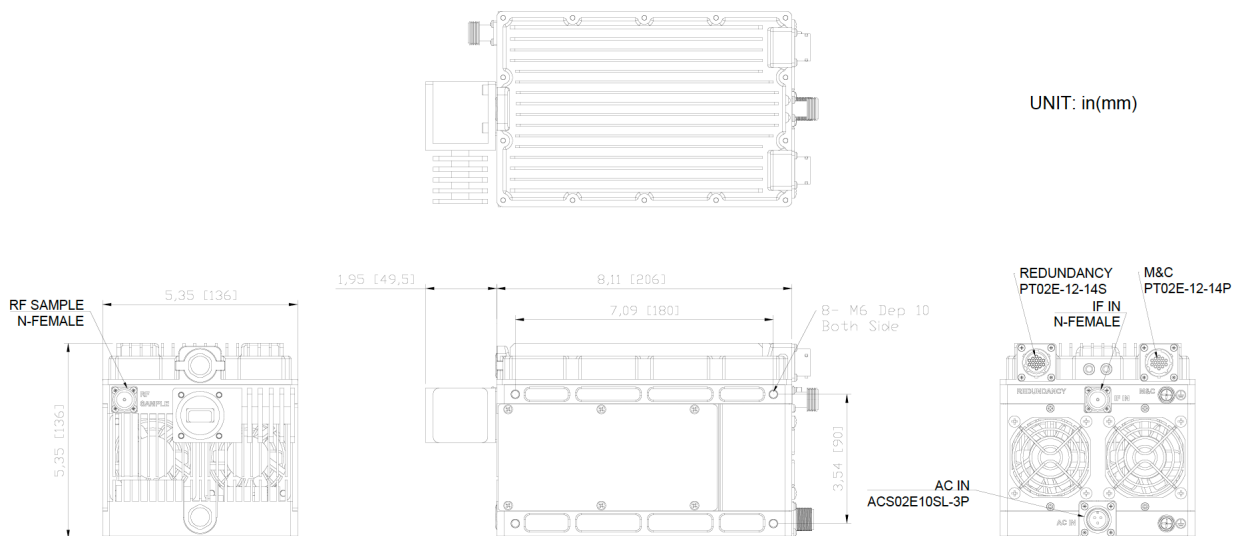
- Variable power consumption; **60W**: 380W (@47.5dBm) **80W**: 300W (@48.5dBm)
- Optional equipment redundancy configurations
- Low phase noise (exceeds IESS308/309)
- Rugged design for extreme environments (-40 to +65°C)

### Typical VSAT Applications

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



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



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### RF Specifications

	Standard	Extended
RF Frequency	14-14.50 MHz	13.75-14.50 GHz
IF Frequency	950-1450 MHz	950-1700 MHz
External Reference	10 MHz, 0 ± 5 dBm	
Output Power	<b>60W</b>	<b>80W</b>
Saturated	47.5 dBm	48.5 dBm
PLin <sup>1</sup>	46.5 dBm	47.5 dBm
PLin <sup>2</sup>	45.5 dBm	46.5 dBm
PLin <sup>3</sup>	44.5 dBm	45.5 dBm
IMD3 (33dBm)	-25 dBc	
Small Signal Gain	-70 dBc	
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: 0.1 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	

#### 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	<b>60W</b>	<b>80W</b>
@ PLin <sup>1</sup> Output	330W	400W
@ Rated Output	330W	450W

### 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-10SL-3P
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)	8.1*5.3*5.3
	(mm)	206*136*136
Weight	(lbs)	12.1
	(kg)	5.5
Operating Temperature	-40 to +60°C (guarantee)	
Humidity	0-100% (condensing)	
Altitude	0-10,000 feet ASL	

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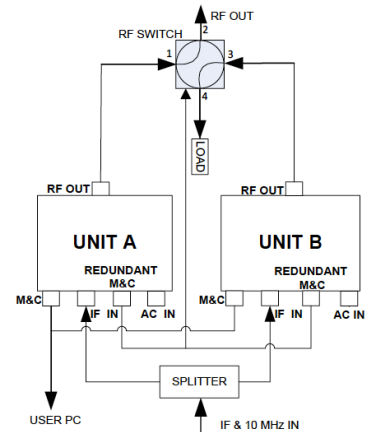
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#### Optional 1:1 Redundancy Configurations

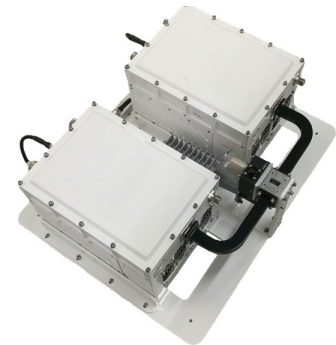
In the event of an equipment failure, the optional 1:1 redundancy kit switches traffic from the primary BUC to the standby BUC.

- Compatibility: **60, 80, 100, 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



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