

# Block Up-Converter (BUC)

## Ku-Band 30/16/8W

### Company Overview

The Global Skyware BUC is a cutting edge Ku-Band product for VSAT applications. A BUC suitable for GEO/MEO/LEO constellations and design ready for standard and extended Ku band satellite frequencies.

- Low noise block (LNB)
- 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

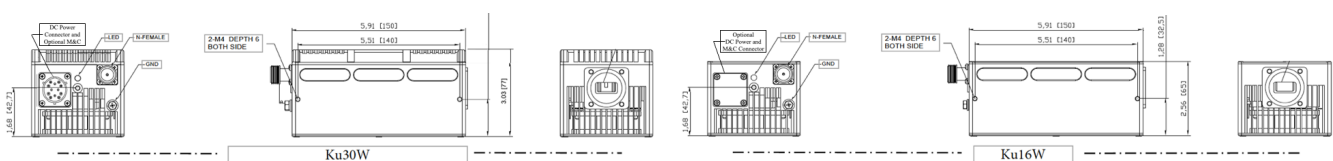
- |  | <b>16W</b>          | <b>30W</b>           |
|--|---------------------|----------------------|
| • Variable power consumption                                 | 70W (@43dBm)        | 135W (@45dBm)        |
|  | <b>65W (@42dBm)</b> | <b>110W (@44dBm)</b> |
|  | 45W @39dBm)         | 105W (@43dBm)        |
|  | 35W (@36dBm)        | 85W (@42dBm)         |
| • Compact and light weight                                   | 2.2lbs / 1.0kg      | 2.9lbs / 1.3kg       |
| • Operates without fan when output power set to 8W output    |                     |                      |
| • IFL input power or separate DC connector                   |                     |                      |
| • Low phase noise (exceeds IESS308/309)                      |                     |                      |
| • Stable linearity to 500 MHz bandwidth (Multi-Transponders) |                     |                      |
| • Rugged design for extreme environments (-40 to +60°C)      |                     |                      |
| • Optional: 1 RU Indoor AC power supply L-Band DC injector   |                     |                      |



### Typical VSAT Applications

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

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



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### RF Specifications

RF Frequency	Standard	Extended	
	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	8W	16W	30W
Saturated	+39	+43	+46 dBm
PLin <sup>1</sup>	38	42	45 dBm
PLin <sup>2</sup>	37	41	44 dBm
PLin <sup>3</sup>	36	40	43 dBm
IMD3 (33dBm)	-25 dBc		
Small Signal Gain			
No M&C (fixed)	65	70	70dB
With M&C (1dB steps)	50-65	50-70	50-70dB
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		
Phase Noise	-65 dBc / Hz @ 100 Hz		
	-75 dBc / Hz @ 1 KHz		
	-85 dBc / Hz @ 10 KHz		
	-95 dBc / Hz @ 100 KHz		
Output Spurious	-55 dBc		

#### Notes:

PLin<sup>1</sup>: -26 dBc regrowth, 1.5 SR

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	8/16W	30W
	+18 to +56	+36 to +56 vDC
Power Consumption @ PLin <sup>1</sup> Output	45/65W	135W

### Interfaces

RF Output Connector	WR75-G (Grooved)
IF Connector	N-Type Female F-Type Female
RF Output VSWR	1.5:1
Power	IFL or Separate DC Connector
LED Alarm Indicator	Green = Normal Red on = PLL alarm Red flashing = Temp alarm

### Physical Parameters

Size	(Inches)	8/16W	30W
	(mm)	5.9*3.15*2.56	5.9*3.03*2.99
Weight	(lbs)	2.2	2.9
	(kg)	1.0	1.3
Operating Temperature		-40 to +60°C	
Humidity		0-100% (condensing)	
Altitude		0-10,000 feet ASL	