



ALB129/229 Series

Compact 150W/200W/250W Ku Band
Block-Up Converter

Ideal for mobile and satellite uplink applications.

Innovative and excellent efficiency thermal design makes this BUC one of the most power efficient, robust and reliable to operate under harsh outdoor environment.

Simple and seamless 1+1 redundancy setup. Built-in redundancy-ready easily configured without need of external controller

Features

- Forward, reflected and input power detection
- Output sample port monitoring
- Monitoring and Control through Serial and Ethernet ports
- Fault identification and alarm generation
- LED status and alarm indicator
- Auto gain control throughout operating temperature
- Auto reference detection and switching option
- Built-in receive reject filter
- Built-in redundancy ready
- Wide operating temperature -40°C to +60°C
- IP65 Weatherproof
- RoHS Compliant

Quality Assurance

100% thorough stringent quality checks in addition to well-defined Electrical Stress Screening to ensure operation in harsh outdoor environment conditions. All subjected to seal test for water ingress verification.

Reliability

Field proven under harsh environment conditions. Agilis ODUs can withstand temperature ranging from -40°C to +60°C under 100% humidity.

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Technical Specifications

RF Specifications

| Band | Transmit | IF | LO |
|----------|------------------|---------------|----------|
| Standard | 14.00 – 14.50GHz | 950 – 1450MHz | 13.05GHz |
| Extended | 13.75 – 14.50GHz | 950 – 1700MHz | 12.80GHz |

| Output Power | P _{sat} | P _{1dB} | P _{linear} |
|---------------|------------------|------------------|---------------------|
| 150W (ALB229) | 51.8dBm (150W) | - | 48.0dBm (63W) |
| 200W (ALB229) | 53.0dBm (200W) | - | 49.2dBm (83W) |
| 250W (ALB229) | 54.0dBm (250W) | - | 50.2dBm (105W) |
| 150W (ALB129) | - | 51.8dBm (150W) | 48.8dBm (75W) |
| 200W (ALB129) | - | 53.0dBm (200W) | 50.0dBm (100W) |
| 250W (ALB129) | - | 54.0dBm (250W) | 51.0dBm (125W) |

| | |
|----------------------------|---|
| Small Signal Gain | 80dB min |
| Gain Flatness | ±2dB within band ±1dB over 40MHz |
| Gain Variation | ±2dB within band over operating temperature |
| Intermodulation | -25dBc max @ P _{linear} |
| Spurious | -60dBc max |
| Phase Noise | -95dBc/Hz max @100KHz offset -85dBc/Hz max @10KHz offset -75dBc/Hz max @1KHz offset |
| VSWR | 1.5:1 max @input 1.25:1 max @output |
| Noise Power Density | Tx Band : -70dBW/4KHz max Rx Band : -142dBW/4KHz max |

AC/DC Power

| | |
|--------------------------|-------------------------------------|
| Prime Power | 190 to 264Vac |
| Power Consumption | 1600VA @ 150W 2500VA @ 200W/250W |

Interface

| | |
|------------------|---------------------|
| IF Input | N-Type Female 50Ω |
| RF Output | WR75 Square Grooved |

Reference Requirement

| | |
|----------------------------|--|
| Frequency | 10MHz |
| Power Level | -5dBm to +5dBm |
| Ext Ref Phase Noise | -160dBc/Hz max @100KHz offset -155dBc/Hz max @10KHz offset -150dBc/Hz max @1KHz offset |

Monitor & Control

| | |
|----------------------------|---|
| Monitor | BUC Temperature Status Alarm with LED Indicator LO Unlock Alarm RF Forward and Input Power Detection Output Reflected Power Detection |
| Control | Gain adjustable 20dB with 0.5dB step RF Output On/Mute |
| Communication Port | Serial RS232/RS485 Ethernet (SNMP & HTTP) |
| Transmit Redundancy | Built-In |

Environmental

| | |
|------------------------------|----------------|
| Operating Temperature | -40°C to +60°C |
| Relative Humidity | Up to 100% |
| Weatherproof | IP65 |

Mechanical

| | |
|---|--|
| Dimension (excluding interface connectors) | L400 x W250 x H233mm (150W) L15.75" x W9.84" x H9.17" L600 x W310 x H205mm (200W/250W) L23.62" x W12.20" x H8.07" |
| Weight | 19.5Kg / 43lbs (150W) 28Kg / 62lbs (200W/250W) |

NOTE: All specifications subject to change without notice
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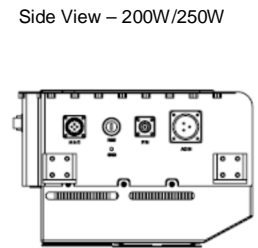
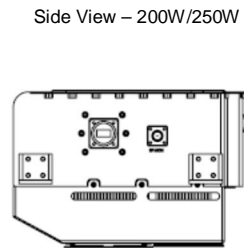
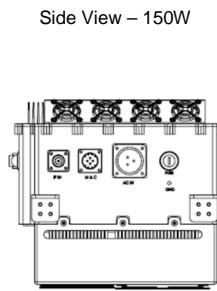
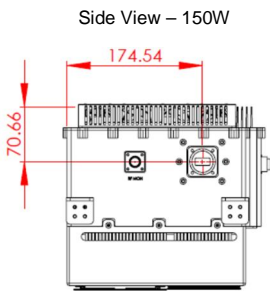
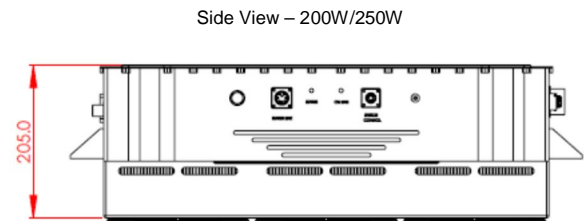
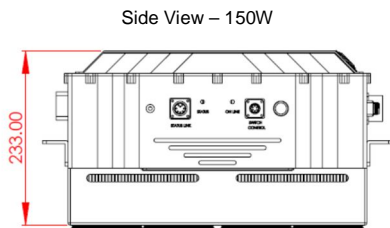
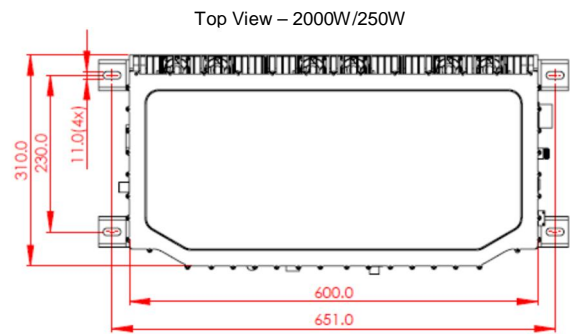
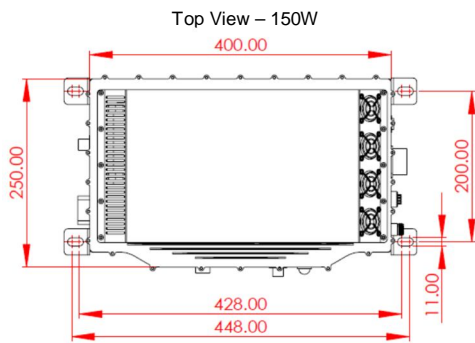
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Compact 150W/200W/250W Ku Band Block-Up Converter

Standard Part List for Standalone Configuration

| ITEM | PRODUCT NAME | OPTION | PART NUMBER | QTY | DESCRIPTION |
|------|-------------------------|---------------|-------------|-----|---|
| 1 | BUC | | | 01 | BUC |
| 2 | Prime Power Input Cable | AC | | 01 | Transient Protection Box 16A 22-9S to Unterminated 3M |
| 3 | M&C Cable | RS232 / RS485 | | 01 | Cable Assembly Serial/ETH 14-19P to DB9 2M |
| 4 | Converter | ETH | 2502041166 | 01 | Cable Assembly ETH-DB9 to RJ45 2M |
| 5 | Converter | RS485 | 6103480008 | 01 | Converter USB to RS485 |
| 7 | Mounting Accessory Set | | | 01 | Mounting screws including brackets and gasket for flange WR75 |

Mounting Diagram



Option Items

| ITEM | PRODUCT NAME | OPTION | PART NUMBER | DESCRIPTION |
|------|--------------|--------|-------------|---|
| 1 | WG Flexible | 0.6m | 4203490010 | Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 0.6m |
| | | 1.0m | 4203490049 | Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1m |
| | | 1.5m | 4203490014 | Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1.5m |

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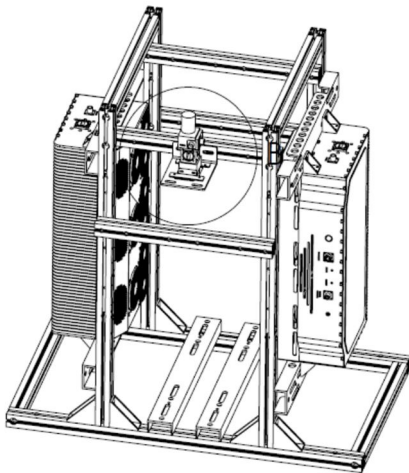
Compact 150W/200W/250W Ku Band Block-Up Converter

Standard Part List for Redundancy 1+1 Configuration

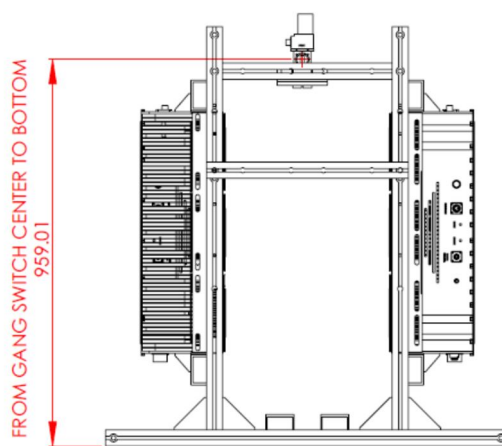
| ITEM | PRODUCT NAME | OPTION | PART NUMBER | QTY | DESCRIPTION |
|------|-------------------------|---------------|-------------|-----|--|
| 1 | BUC | | | 02 | BUC |
| 2 | Prime Power Input Cable | AC | | 02 | Transient Protection Box 16A 22-9S to Unterminated 3M |
| 3 | M&C Cable | RS232 / RS485 | | 02 | Cable Assembly Serial/ETH 14-19P to DB9 2M |
| 4 | Converter | ETH | 2502041166 | 02 | Cable Assembly ETH-DB9 to RJ45 2M |
| 5 | Converter | RS485 | 6103480008 | 02 | Converter USB to RS485 |
| 6 | Mounting Accessory Set | | | 01 | Mounting screws including brackets, plates, and gasket for flange WR75 |
| 7 | WG Flexible | | | 02 | Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1m |
| 8 | WG Switch | | | 01 | WG Switch Ku band WR75 |
| 9 | WG Filter | | | 01 | WG Filter Ku band WR75 Rx Reject |
| 10 | Cable Status Link | | 2502041099 | 01 | Cable Assembly Status Link 12-8P to 12-8P 1.8M |
| 11 | Cable Switch Control | | 2502041006 | 01 | Cable Assembly Switch Tx Control 10-6S to 10-6P 3M |
| 12 | Cable RF | | 6202040155 | 02 | Cable Assembly RF N (M) to N (M) 1.5M |
| 13 | WG E-bend | | | 01 | WG E-Bend Ku band WR75 30mm |
| 14 | WG H-Bend | | | 01 | WG H-Bend Ku band WR75 |
| 15 | Termination Load | | | 01 | Termination Ku band WR75 |

Mounting Diagram

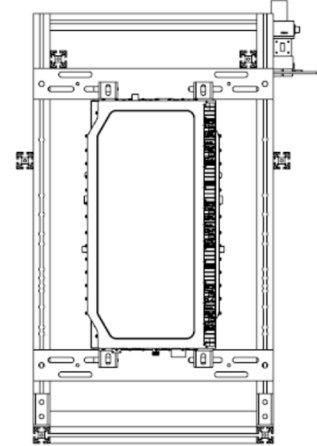
2D View – 200W/250W



Side View – 200W/250W



Side View – 200W/250W



Option Items

| ITEM | PRODUCT NAME | OPTION | PART NUMBER | DESCRIPTION |
|------|----------------|-----------|-------------|--|
| 01 | Mounting Frame | 150W | 4004430053G | Mounting Frame w 1 Vertical Frame H1040 x W580mm, Base 840 x 580mm |
| | | 200W/250W | 4004430024 | Mounting Frame w 2 Vertical Frames H1040 x W580mm, Base 1000 x 580mm |

NOTE: Part list and drawing subject to change without notice
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