



# ALB129/229 Series

Compact 80W/100W/150W Plan/Low Ku  
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, input and reflected 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 redundancy ready
- Wide operating voltage 90 to 264Vac
- Wide operating temperature -40°C to +60°C
- IP65 Weatherproof
- RoHS Compliant

## Quality Assurance

100% thorough stringent quality checks in addition to well-defined Environmental 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
Plan Ku	12.75 - 13.25GHz	950 – 1450MHz	11.80GHz
Low Ku	13 – 13.25GHz	950 – 1200MHz	12.05GHz

Output Power	P <sub>sat</sub>	P <sub>1dB</sub>	P <sub>linear</sub>
80W (ALB229)	49.0dBm (80W)	-	45.2dBm (33.1W)
100W (ALB229)	50.0dBm (100W)	-	46.2dBm (41.7W)
150W (ALB229)	51.8dBm (150W)	-	48.0dBm (63W)
80W (ALB129)	-	49.0dBm (80W)	46.0dBm (39.8W)
100W (ALB129)	-	50.0dBm (200W)	47.0dBm (50W)

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

### AC/DC Power

<b>Prime Power</b>	90 to 264Vac, 47 to 63Hz
<b>Power Consumption</b>	650VA @80W P <sub>1dB</sub> / 100W P <sub>sat</sub> 1600VA @100W P <sub>1dB</sub> / 150W P <sub>sat</sub>

### Interface

<b>IF Input</b>	N-Type Female 50Ω
<b>RF Output</b>	WR75 Square Grooved

### Reference Requirement

<b>Frequency</b>	10MHz
<b>Source</b>	Internal Internal/External Auto Switching (Option)
<b>Power Level</b>	-5dBm to +5dBm
<b>Ext Ref Phase Noise</b>	-160dBc/Hz max @100KHz offset -155dBc/Hz max @10KHz offset -150dBc/Hz max @1KHz offset

### Monitor & Control

<b>Monitor</b>	BUC Temperature Status Alarm LED Indicator LO Unlock Alarm RF Forward and Input Power Detection Output Reflected Power Detection
<b>Control</b>	Gain adjustable 20dB with 0.5dB step (0.1dB step option) RF Output On/Mute
<b>Communication Port</b>	Serial RS232/RS485 Ethernet (SNMP & HTTP)
<b>Transmit Redundancy</b>	Built-In

### Environmental

<b>Operating Temperature</b>	-40°C to +60°C
<b>Relative Humidity</b>	Up to 100%
<b>Weatherproof</b>	IP65

### Mechanical

<b>Dimension</b> (excluding interface connectors)	L400 x W250 x H207mm (80W P <sub>1dB</sub> / 100W P <sub>sat</sub> ) L15.75" x W9.84" x H8.15" L400 x W250 x H233mm (100W P <sub>1dB</sub> / 150W P <sub>sat</sub> ) L15.75" x W9.84" x H9.17"
<b>Weight</b>	18Kg / 39.7lbs (80W P <sub>1dB</sub> / 100W P <sub>sat</sub> ) 19.5Kg / 43lbs (100W P <sub>1dB</sub> / 150W P <sub>sat</sub> )

NOTE: All specifications subject to change without notice  
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## Compact 80W/100W/150W Plan/Low Ku Band Block-Up Converter

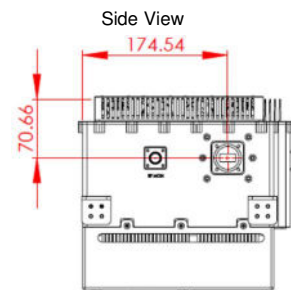
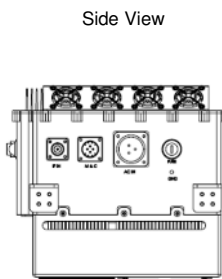
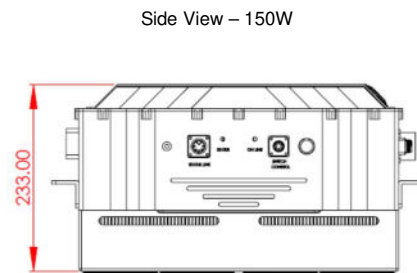
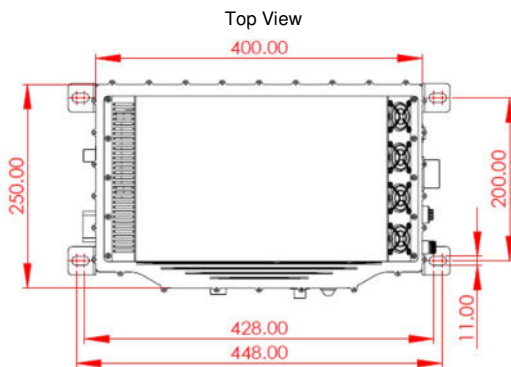
### Standard Part List for Standalone Configuration

ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			01	BUC
2	Prime Power Input Cable	AC 220V	1001522064	01	Transient Protection Box 22-9S to Unterminated 220Vac 16A 3M
3	M&C Cable	RS232 / RS485	2502041257 / 2502041256	01	C/A M&C Serial/ETH 14-19P to DB9 (F) 2M
4	Converter	ETH	2502041166	01	C/A M&C ETH-DB9 (M) 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

### 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
2	Cable RF	3M	2502040137	C/A RF N (M) to N (M) 3M
		7M	2502040109	C/A RF N(M) TO N(M) 7M
		10M	2502041952	C/A RF N(M) TO N(M) 10M

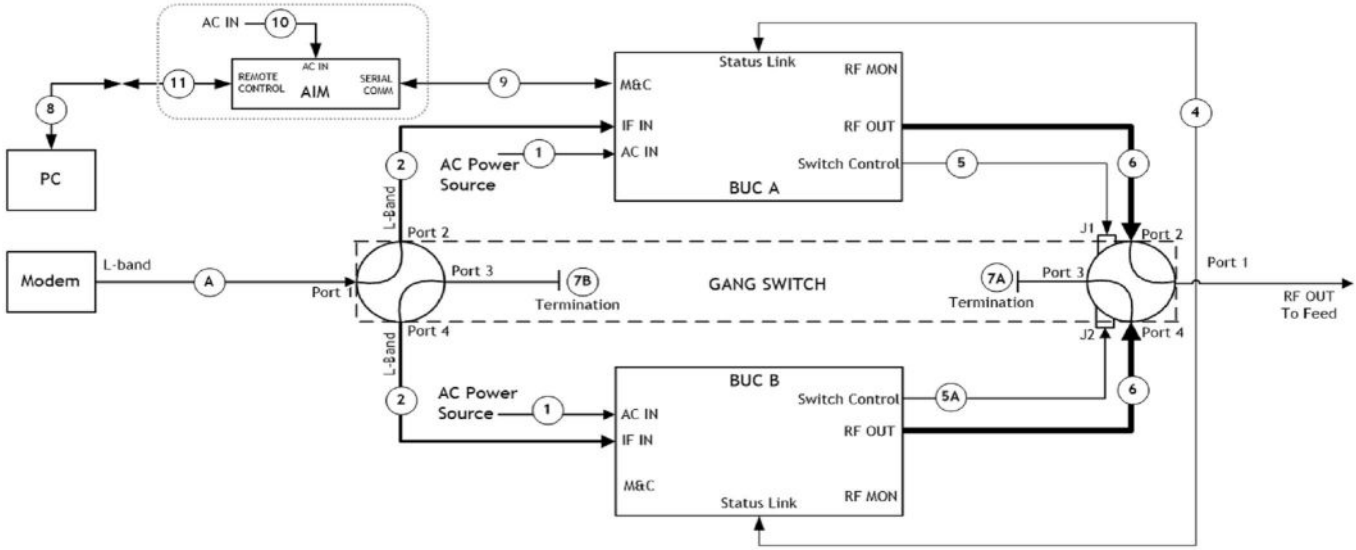
### Mounting Diagram



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## Compact 80W/100W/150W Plan/Low Ku Band Block-Up Converter

### 1:1 Redundancy System Block Diagram



### 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 220V	1001522064	02	Transient Protection Box 22-9S to Underterminated 220Vac 16A 3M
3	Cable M&C	RS232 / RS485	2502041257 / 2502041256	02	C/A M&C Serial/ETH 14-19P to DB9 (F) 2M
4	Cable M&C	ETH	2502041166	02	C/A M&C ETH-DB9 (M) 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		4203490049	02	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1m
8	WG Switch		5903290036	01	WG Switch Ku band WR75
9	Cable Status Link		2502041099	01	C/A Status Link 12-8P to 12-8P 1.8M
10	Cable Switch Control		2502041006	01	C/A Switch Tx Control 10-6S to 10-6P 3M
11	Cable Switch Control		2502040155	01	C/A Switch RCU Control 10-6S to 10-6P 3M
12	Cable RF		6202040155	02	C/A RF N (M) to N (M) 1.5M
13	Termination Load		4203490087	01	Termination Ku band WR75
14	Termination		5704090015	01	Termination N (M)

### Option Item

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
01	Mounting Frame		4004430053G	Mounting Frame w 1 Vertical Frame H1040 x W580mm, Base 840 x 580mm

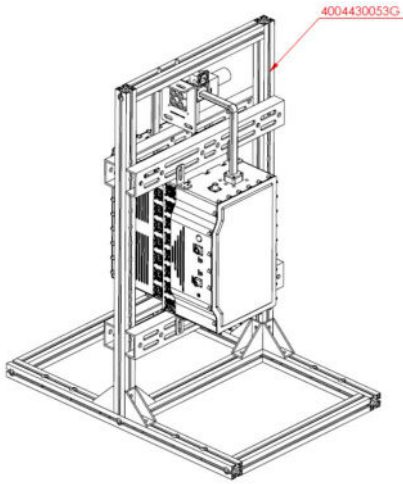
NOTE: Part list and drawing subject to change without notice  
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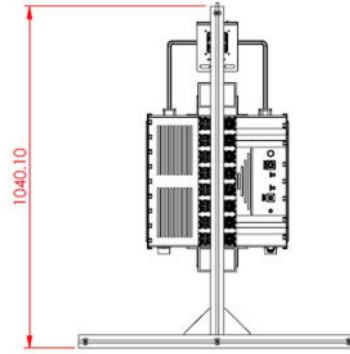
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1:1 System Mounting Diagram

2D View



Side View



Side View

