



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 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 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 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
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)

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	90 to 264Vac, 47 to 63Hz (150W) 180 to 264Vac, 47 to 63Hz (200W/250W)
Power Consumption	1600VA max. @150W 2500VA max. @200W/250W

Interface

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

Reference Requirement

Frequency	10MHz
Source	Internal Internal/External Auto Switching (Option)
Ext Ref 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 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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Standard Part List for Standalone Configuration

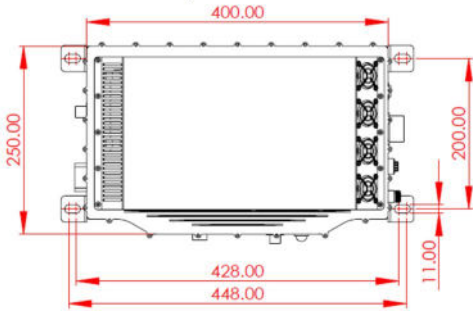
ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC		ALBx29xxx-xxx	01	BUC
2	Prime Power Input Cable	AC 220V	1001522064	01	Transient Protection Box 22-9S to Underterminated 220Vac 16A 3M
3	Cable M&C	RS232 / RS485	2502041257 / 2502041256	01	C/A M&C Serial/ETH 14-19P to DB9 (F) 2M
4	Cable M&C	ETH	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

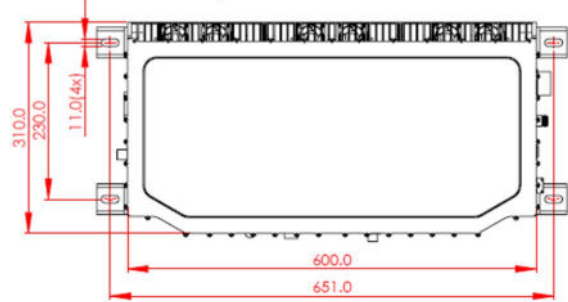
ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	WG Flexible	0.6M	4203490010	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 0.6M
		1.0M	4203490049	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1M
		1.5M	4203490014	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1.5M
2	Cable RF	3M	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

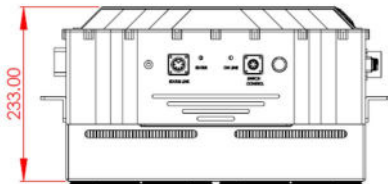
Top View – 150W



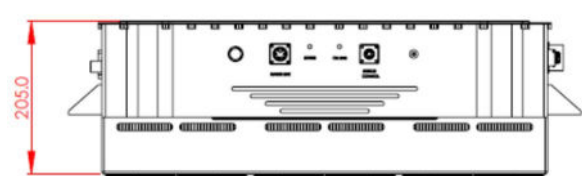
Top View – 200W/250W



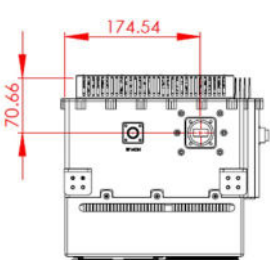
Side View – 150W



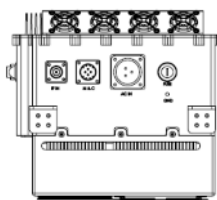
Side View – 200W/250W



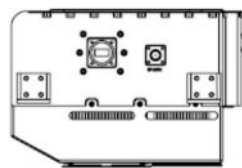
Side View – 150W



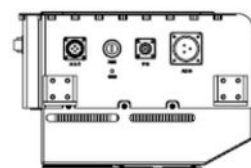
Side View – 150W



Side View – 200W/250W



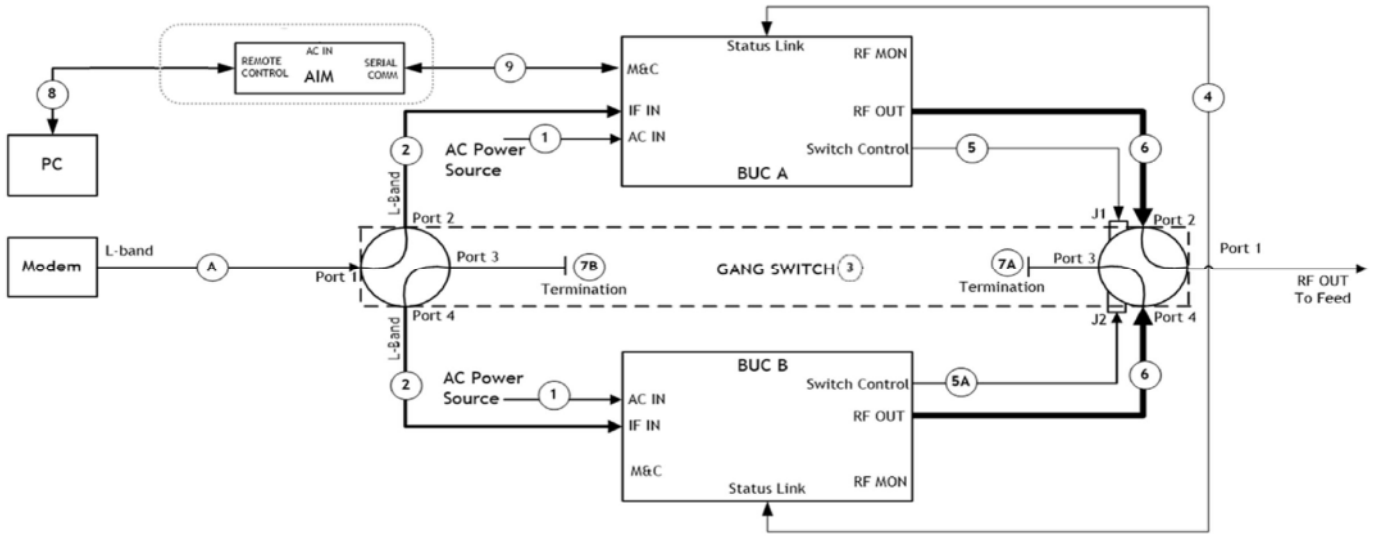
Side View – 200W/250W



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1:1 Redundancy System Block Diagram



Standard Part List for Redundancy 1+1 Configuration

ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	Prime Power Input Cable	AC	1001522064	02	Transient Protection Box 22-9S to Unterminated 220Vac 16A 3M
2	Cable RF	1.5M	6202040155	02	C/A RF N (M) to N (M) 1.5M
3	WG Switch		5903290036	01	WG Switch Ku band WR75
4	Cable Status Link	1.8M	2502041099	01	C/A Status Link 12-8P to 12-8P 1.8M
5	Cable Switch Control	3M	2502040155	01	C/A Switch RCU Control 10-6S to 10-6P 3M
5A	Cable Switch Control	3M	2502041006	01	C/A Switch Tx Control 10-6S to 10-6P 3M
6	WG Flexible	1M	4203490049	02	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1m
7A	WG Termination		4203490087	01	Termination Ku band WR75
7B	N-Type Termination		5704090015	01	Termination Coaxial N (M)
8	Converter	RS485	6103480008	02	Converter USB to RS485
9	Cable M&C	RS485	2502041256	02	C/A M&C Serial/ETH 14-19P to DB9 (F) 2M
10	BUC		ALBx29xxx-xxx	02	Ku BUC
11	Cable M&C	ETH	2502041166	02	C/A M&C ETH-DB9 (M) to RJ45 2M
12	Mounting Accessory Set			01	Mounting screws including brackets and gasket for flange WR75

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
2	AIM		AIM281xx	System Status Monitoring Unit

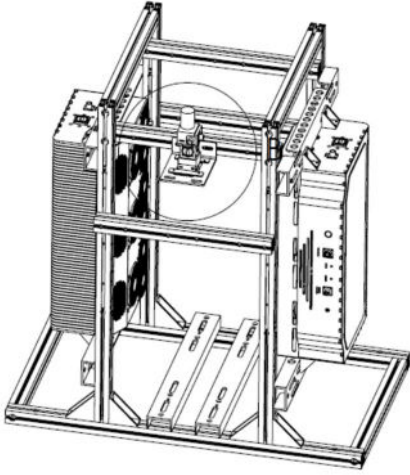
NOTE: Part list and drawing subject to change without notice
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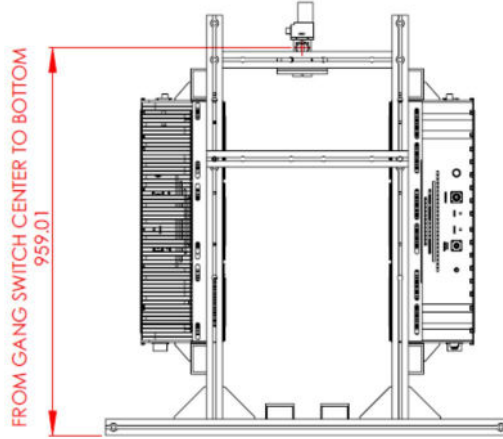
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1:1 System Mounting Diagram

2D View – 200W/250W



Side View – 200W/250W



Side View – 200W/250W

