



ALB129/229 Series

Compact 250W/300W Ku Band
Block-Up Converter

Ideal for satellite uplink applications.

Robust, rugged, and reliable design to operate under harsh outdoor environment.

Simple and seamless redundancy setup, built-in redundancy-ready can be easily configured without need of external controller 1+1 setup.

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	Standard	13.05GHz
Extended	13.75 – 14.50GHz	Extended	12.80GHz

Output Power	P _{sat}	P _{1dB}	P _{linear}
250W (ALB129)	-	54.0dBm (250W)	51.0dBm (125W)
300W (ALB229)	54.8dBm (300W)	-	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 @100KHz offset -85dBc/Hz @10KHz offset -75dBc/Hz @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	180 to 264Vac, 47 to 63Hz
Power Consumption	2500VA

Interface

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

Reference

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

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)	L550 x W440 x H350mm L21.6" x W17.3" x H13.8"
Weight	50Kg / 110lbs

NOTE: All specifications subject to change without notice
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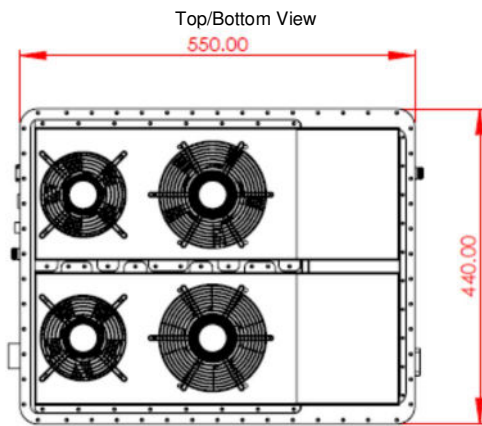
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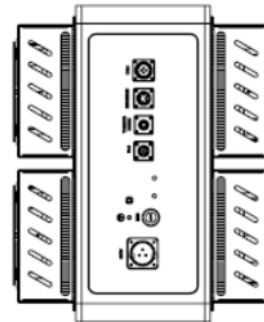
Standard Part List for Standalone Configuration

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 16A 22-9S to Unterminated 3M
3	M&C Cable	RS232 / RS485	2502041257 / 2502041256	01	Cable Assembly Serial/ETH 14-19P to DB9 2M
4	M&C Cable	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 brackets, screws, including gasket for flange WR75

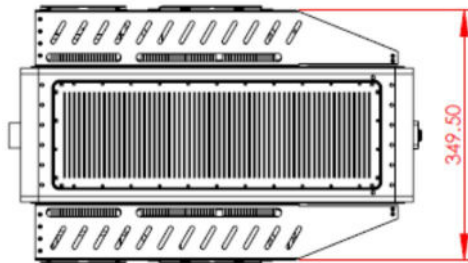
Mounting Dimension Drawing



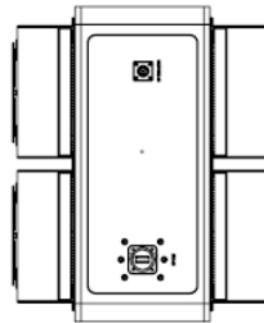
Side View



Side View



Side View



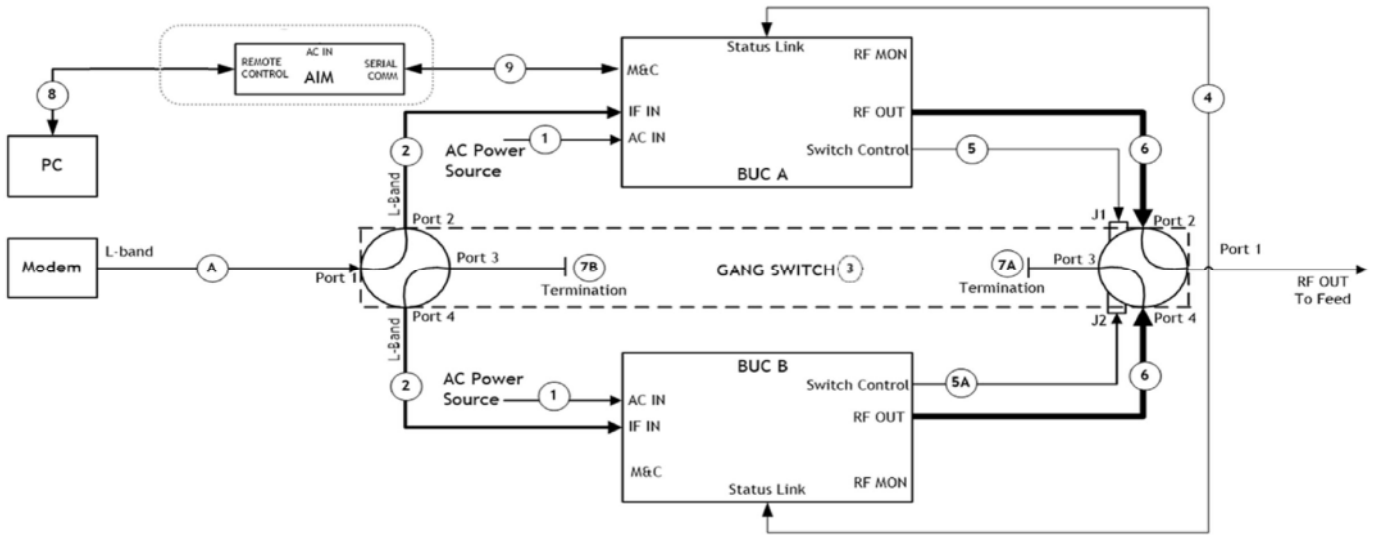
Option Items

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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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
1	Mounting Frame		4004430024	Mounting Frame w 2 Vertical Frames H1040 x W580mm, Base 1000 x 580mm
2	AIM		AIM281xx	System Status Monitoring Unit

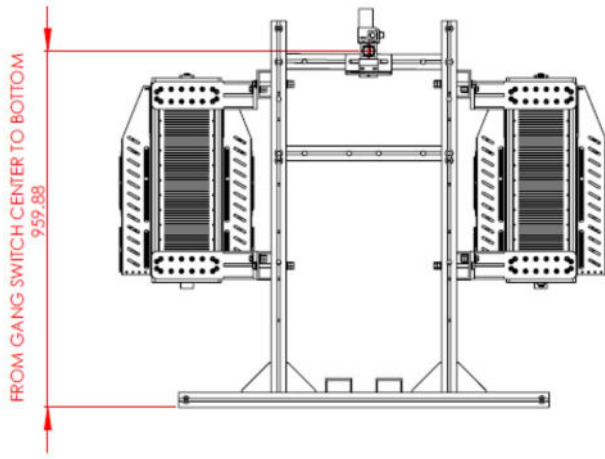
NOTE: Part list and drawing subject to change without notice
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1:1 System Mounting Dimension Drawing

Side View



Side View

