



# ALB229 Series

Compact 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 power detection
- 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 Compliance

## 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 Frequency	IF Frequency	LO Frequency
Standard	14.00 – 14.50GHz	950 – 1450MHz	13.05GHz
Extended	13.75 – 14.50GHz	950 – 1700MHz	128.0GHz

Output Power	P <sub>sat</sub>	P <sub>linear</sub>
300W	54.8dBm (300W)	51.0dBm (126W)

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 <sub>linear</sub>
Spurious	-60dBc max
Phase Noise	-95dBc/Hz @100KHz offset -85dBc/Hz @10KHz offset -75dBc/Hz @1KHz offset
VSWR	1.3:1 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
Power Consumption	2500VA

### Interface

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

### Reference

Frequency	10MHz
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 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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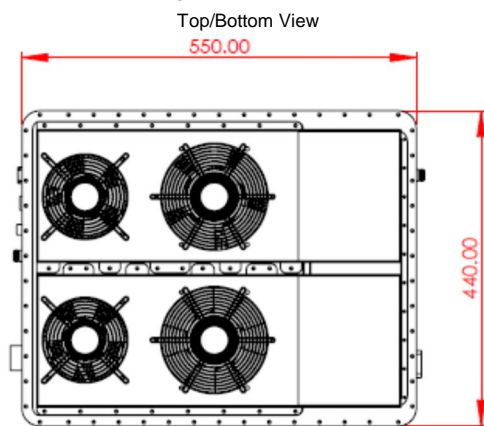
# ALB229 Series

## Compact 300W Ku Band Block-Up Converter

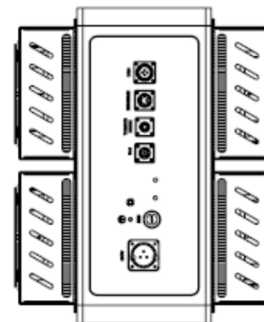
### Standard Part List for Standalone Configuration

ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			01	BUC
2	Prime Power Input Cable			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		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

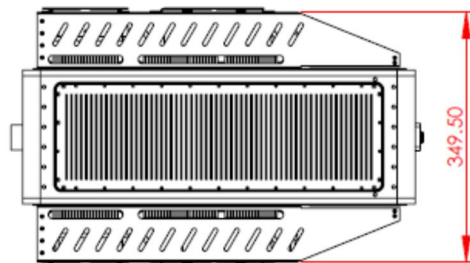
### Mounting Dimension Drawing



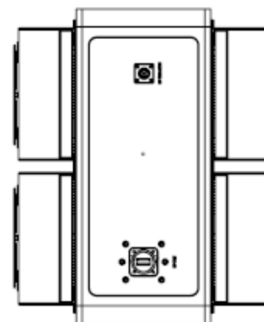
Side View



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

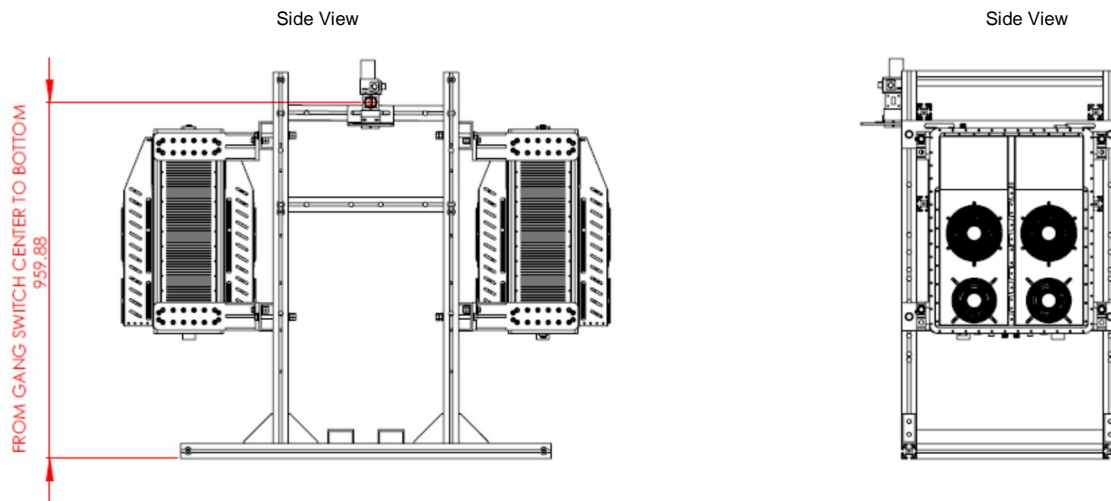
# ALB229 Series

## Compact 300W 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			02	Transient Protection Box 16A 22-9S to Unterminated 3M
3	Cable M&C	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	WG Flexible		4203490049	02	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1m
7	WG Switch			01	WG Switch WR75 Dual 10-15G 230Vac
8	Termination			01	Termination WR75
9	Termination			01	Termination N (M)
10	Cable RF		6202040155	02	Cable Assembly RF N (M) to N (M) 1.5M
11	Cable Switch Control		2502041006	01	Cable Assembly Switch Tx Control 10-6S to 10-6P 3M
12	Cable Status Link		2502041099	01	Cable Assembly Status Link 12-8P to 12-8P 1.8M
13	Cable Switch Control		2502040155	02	Cable Assembly Switch RCU Control 10-6S to 10-6P 3M
14	Mounting Accessory Set			01	Mounting brackets, screws, including gasket for flange WR75

### Mounting Dimension Drawing



### 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

NOTE: Part list and drawing subject to change without notice  
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