ALB290 Series

Compact 300W/400W C Band Block-Up Converter

Ideal for 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 power monitoring port
- Monitoring and Control through Serial and Ethernet ports option
- Fault identification and alarm generation
- LED status and alarm indicator
- Auto gain control throughout operating temperature
- Built-in redundancy ready
- Built-in harmonics rejection filter
- 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 ingression 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

Freq Band	Transmit	IF	LO
Intelsat C	5850 – 6425MHz	950 – 1525MHz	4900MHz
Full C	5850 – 6725MHz	950 – 1825MHz	4900MHz

Output Power	P_{sat}	P_{linear}
300W	54.8dBm (300W)	51.0dBm (126W)
400W	56.0dBm (400W)	52.2dBm (166W)

Small Signal Gain	75dB min
Gain Flatness	±2dB within band
Gain Variation	±1.5dB within band over operating temperature
Intermodulation	-25dBc max @ P_{linear}
Spurious	According to EN 301 443
Phase Noise	-100dBc/Hz max @100KHz offset
	-90dBc/Hz max @10KHz offset
	-80dBc/Hz max @1KHz offset
VSWR	1.5:1 max @input
	1.5:1 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 typical

Interface

IF Input	N-Type Female 50Ω
RF Output	WR137 Grooved

External Reference

Frequency	10MHz
Power Level	-5dBm to +5dBm
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 Input & Forward Power Detection
	Output Reflected Power Detection
Control	Gain adjustable 30dB 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)	L535 x W300 x H168mm L21.06" x W11.81" x H6.61"
Weight	23Kg / 50.7lbs

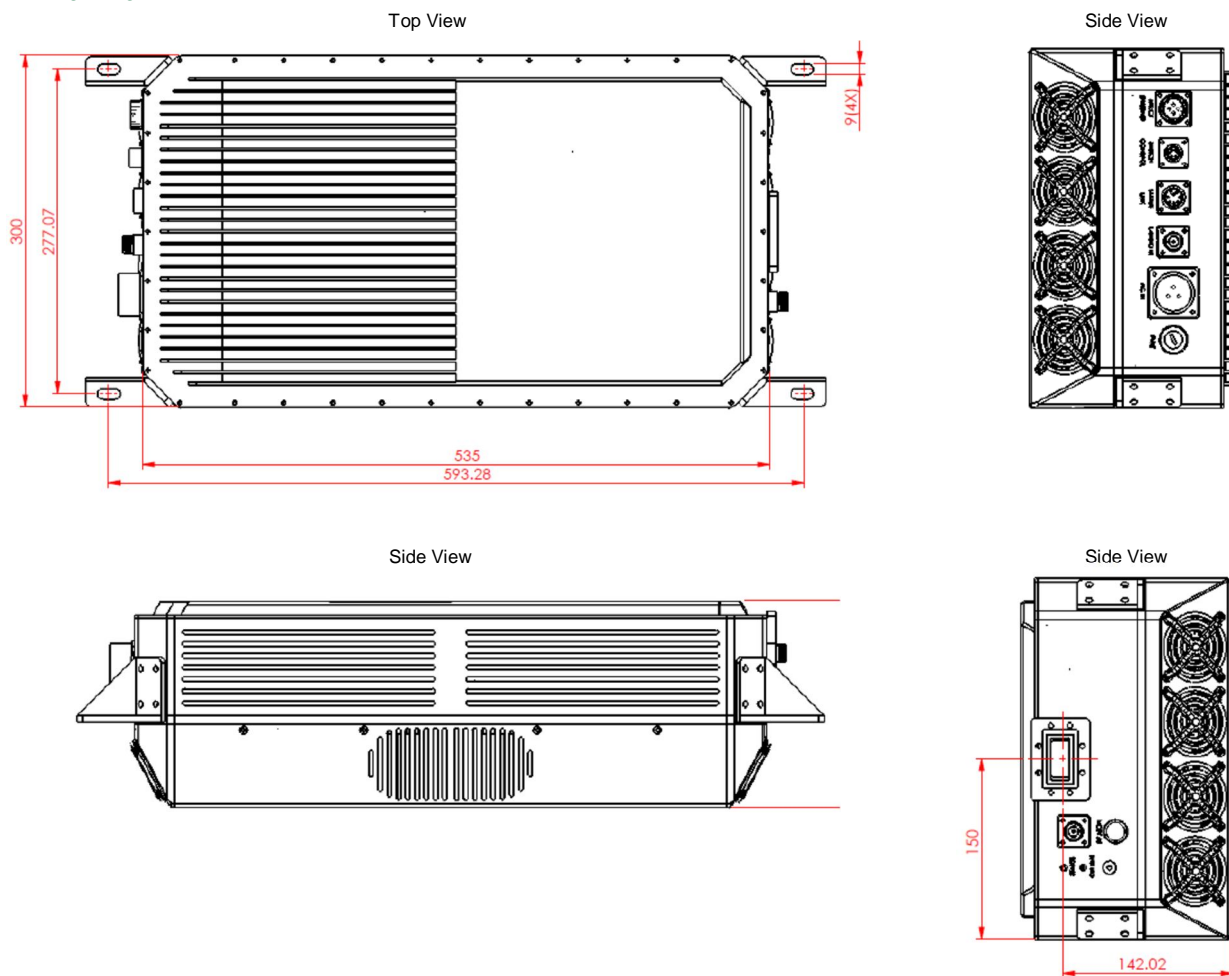NOTE: All specifications subject to change without notice
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Standard Part List for Standalone Configuration

ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			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		2502041166	01	Cable Assembly ETH-DB9 to RJ45 2M
5	Converter	RS485	6103480008	01	Converter USB to RS485
6	Mounting Accessory Set			01	Mounting screws including gasket for flange WR137

Mounting Diagram

Top View

Side View

Side View

Side View

Option Items

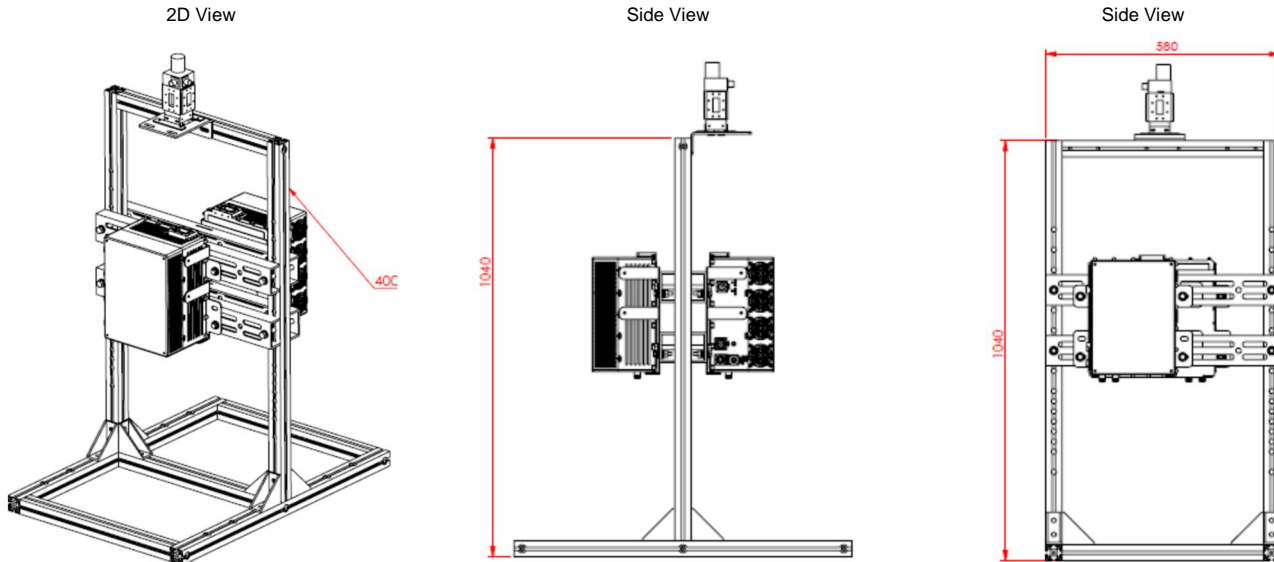| ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	WG Flexible		4203490309	Flexible WG C band WR137 CPRG to WR137 CPRF 0.6m
			4203490057	Flexible WG C band WR137 CPRG to WR137 CPRF 1m
			4203490289G	Flexible WG C band WR137 CPRG to WR137 CPRF 1.5m

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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	110 / 220Vac		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		2502041166	02	Cable Assembly ETH-DB9 to RJ45 2M
5	Converter	RS485	6103480008	02	Converter USB to RS485
6	Mounting Accessory Set		2503160038	02	Mounting screws including gasket for flange WR137
7	Mounting Accessory Set		2503160140	01	Mounting brackets including screws and studs
8	WG Flexible		4203490057	02	Flexible WG C band WR137 CPRG to WR137 CPRF 1m
9	Switch RF			01	Switch WR137 Type N Dual 230VAC
10	Termination			01	Termination C band WR137 CPRF
11	WG H-Bend			01	H-Bend C band WR137 CPRF to WR137 CPRF
12	Cable Status Link		2502041099	01	Cable Assembly Status Link 12-8P to 12-8P 1.8M
13	Cable Switch Control		2502040155	01	Cable Assembly Switch RCU Control 10-6S to 10-6P 3M
14	Cable Switch Control		2502041006	01	Cable Assembly Switch Tx Control 10-6S to 10-6P 3M
15	Cable RF		6202040155	02	Cable Assembly RF N (M) to N (M) 1.5M

Mounting Diagram

2D View — Side View — Side View

Option Item

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
01	Mounting Frame	80 to 200W	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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