



ALB190/290 Series

Compact 80W/100W/150W/200W C Band
Block-Up Converter

Compact and lightweight, 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, reflected and input 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
- Wide AC input range 90 to 264Vac
- 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 Environmental Stress Screening to ensure operation in harsh outdoor environment conditions. All subjected to seal test for water ingress verification.

Reliability

Field proven to operate under harsh environment conditions. Designed and tested to withstand operating temperature -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
Gorizont C	5725 – 6525MHz	975 – 1775MHz	4750MHz

Output Power	P _{sat}	P _{1dB}	P _{linear}
100W (ALB290)	50.0dBm (100W)	-	46.2dBm (42W)
150W (ALB290)	51.8dBm (150W)	-	48.0dBm (63W)
200W (ALB290)	53.0dBm (200W)	-	49.2dBm (83W)
80W (ALB190)	-	49.0dBm (80W)	46.0dBm (40W)
100W (ALB190)	-	50.0dBm (100W)	47.0dBm (50W)
150W (ALB190)	-	51.8dBm (150W)	48.8dBm (75W)
200W (ALB190)	-	53.0dBm (200W)	50.0dBm (100W)

Small Signal Gain	70dB min (80W/100W) 75dB min (150W/200W)
Gain Flatness	±2dB within band ±1dB over 40MHz span
Gain Variation	±2dB 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, 47 to 63Hz
Power Consumption	650VA typ. @100W 850VA typ. @200W

Interface

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

Reference

Source	Internal/External Auto Sensing
Frequency	10MHz
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 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)	L284 x W210 x H165mm (80W/100W P _{sat}) L11.2" x W8.2" x H6.5" L296 x W210 x H175mm (100W P _{1dB} /150W/200W) L11.7" x W8.2" x H6.9"
Weight	9Kg / 19.8lbs (80W/100W P _{sat}) 10.5Kg / 23.1lbs (100W P _{1dB} /150W/200W)

Compliance Standard



Certification of products with radio technologies for the Brazilian market based on approval by the local authority Agência Nacional de Telecomunicações (Anatel).

The certification is based on national specifications for the testing and certification process and is a condition for market approval in Brazil.

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

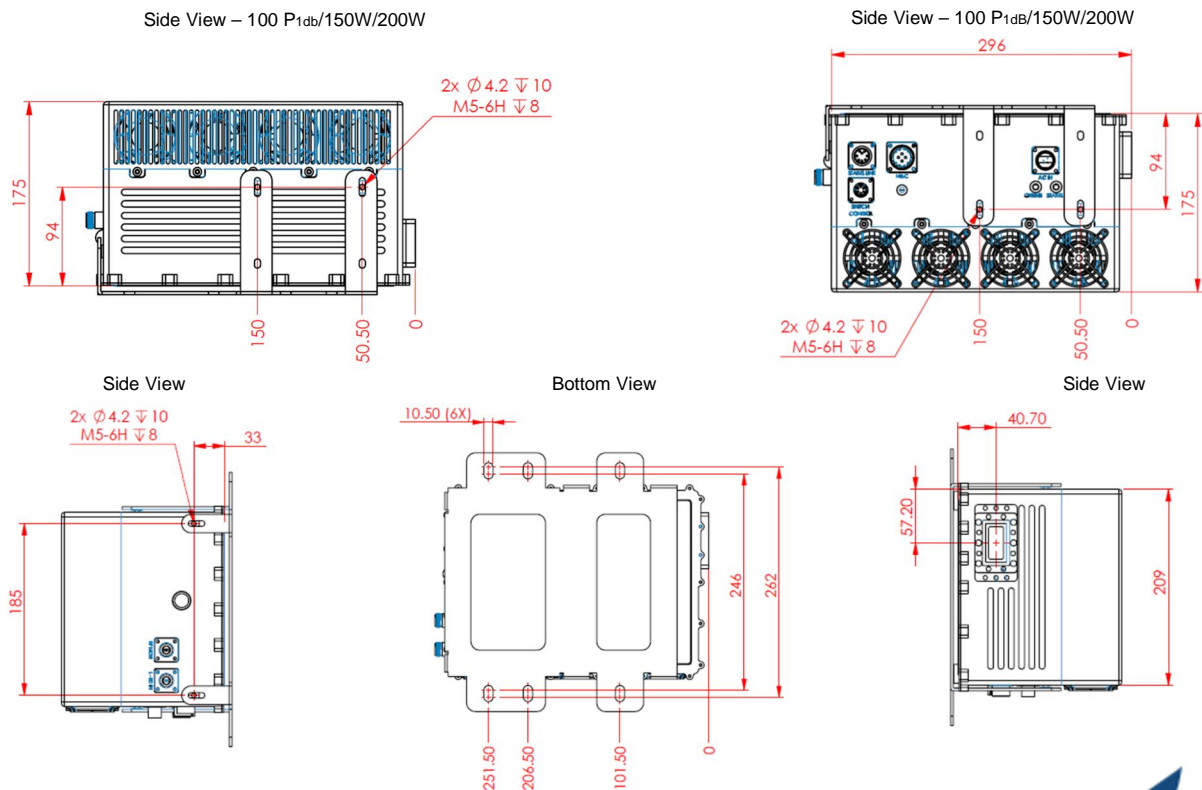
ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC		ALBx90xxx-xxx	01	BUC
2	Prime Power Input Cable	AC	1001522412	01	Transient Protection Box 12-3S to Underterminated 220Vac 10A 3M
3	Cable M&C	RS232 / RS485	2502041257 / 2502041256	01	C/A M&C Serial/ETH 14-19P to DB9 (F) 2M
4	Cable M&C	ETH	2502041166	01	C/A M&C ETH-DB9 (M) to RJ45 2M
5	Converter	RS485	6103480008	01	Converter USB to RS485
6	Mounting Accessory Set		2503160038	01	Mounting brackets, studs, screws, gasket flange WR137

Option Items

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	Prime Power Input Cable	AC 110V 3M	1001522818	Transient Protection Box 12-3S to Underterminated 110Vac 10A 3M
		AC 220V / 10M	1001523741	Transient Protection Box 12-3S to Underterminated 220Vac 10A 10M
2	WG Flexible	0.6M	4203490309	WG Flexible C Band WR137 CPRG to WR137 CPRF 0.6M
		1.0M	4203490057	WG Flexible C Band WR137 CPRG to WR137 CPRF 1.0M
		1.5M	4203490289G	WG Flexible C Band WR137 CPRG to WR137 CPRF 1.5M
3	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
4	Cable M&C	RS485 / 5M	2502041751	C/A M&C - 485/ETH 14-19P to DB9 (F) 5M
		RS485 / 30M	2502041714	C/A M&C 485/ETH 14-19P to DB9 (F) 30M

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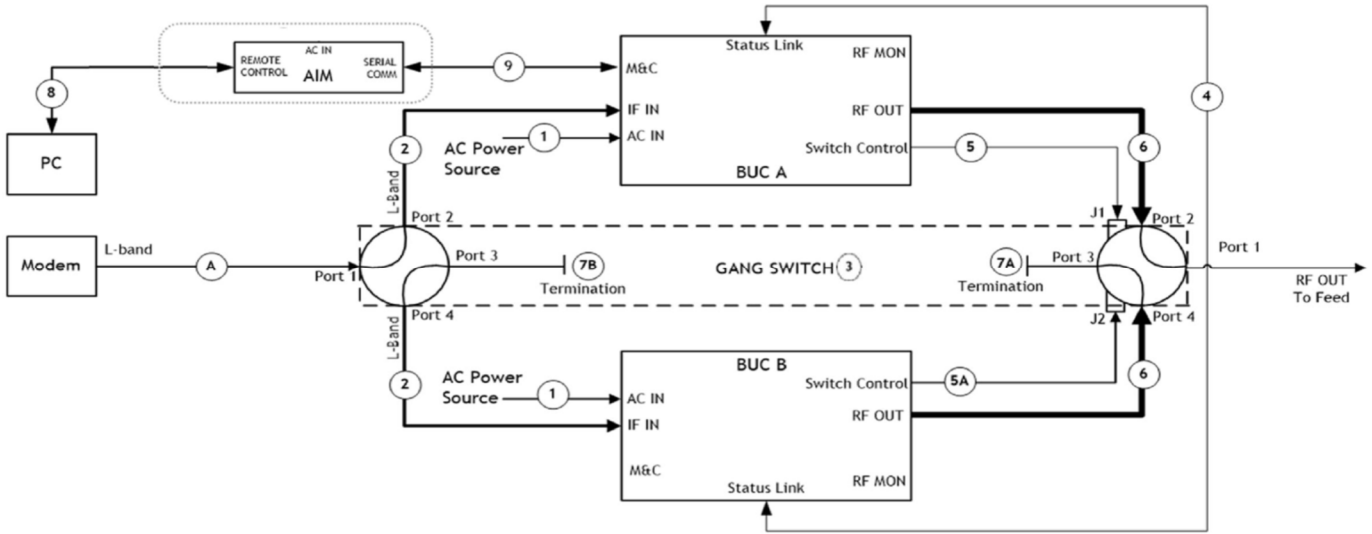
Mounting Diagram



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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	1001522412	02	Transient Protection Box 12-3S to Underterminated 220Vac 10A 3M
2	Cable RF	1.5M	6202040155	02	C/A RF N (M) to N (M) 1.5M
3	WG Switch		5903290101	01	WG Switch C Band WR137 Dual 230Vac
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	4203490057	02	WG Flexible C Band WR137 CPRG to WR137 CPRF 1M
7A	WG Termination		4203490042	01	WG Termination C Band WR137 CPRF 150W 120mm
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		ALBx90xxx-xxx	02	C BUC
11	Cable M&C	ETH	2502041166	02	C/A M&C ETH-DB9 (M) to RJ45 2M
12	Mounting Accessory Set		2503160038	02	Mounting brackets, studs, screws, gasket flange WR137

Option Item

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	Mounting Frame		4004430053G	Mounting Frame w 1 Vertical Frame H1040 x W580mm, Base 840 x 580mm
2	AIM		AIM281xx	System Status Monitoring Unit

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