



ALB220 Series

20W Ka Band
Block-Up Converter

Designed to mount directly to the feedhorn, 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.

Easy installation with external redundancy control unit to work in 1+1 redundancy mode.

Features

- Feed mountable
- Input and 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
- Wide DC input ranging 21 to 60Vdc.
- Wide operating temperature -40°C to +60°C
- IP67 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

Freq Band	Transmit	IF	LO (Switchable)
Band 1	27.5 – 28.5GHz	950 – 1950MHz	26.55GHz
Band 2	28.25 – 29.25GHz	950 – 1950MHz	27.30GHz
Band 3	29.0 – 30.0GHz	950 – 1950MHz	28.05GHz

Output Power	P _{sat}	P _{linear}
20W	43.0dBm min <55degC 42.0dBm min ≥ 55deg C	41.0dBm (12.5W)

Conversion Gain	70dB min @ P _{linear}
Small Signal Gain	74dB min
Gain Flatness	4.0dB p-p max within band 2.5dB p-p max over 250MHz 1.5dB p-p max over 100MHz 1.0dB p-p max over 40MHz
Gain Variation	±1.5dB at any constant frequency over operating temperature
Spectral Regrowth	Plin 1: -25dBc max @2dB BO, 8PSK 1.5x SR (Commercial satellite) Plin 2: -30dBc max @3dB BO, QPSK at 1.5x SR and OQPSK at 1.0x SR (MIL-STD-188-164C, one-carrier)
Intermodulation	Plin 3: -25dBc max @3dB BO combined power with 2 carriers (MIL-STD-188-164C, two-carrier)
Spurious	-60dBc typ
Phase Noise	-95dBc/Hz max @100KHz offset -90dBc/Hz max @10KHz offset -80dBc/Hz max @1KHz offset
VSWR	1.5:1 max @input 1.25:1 max @output

DC Power Supply

Prime Power	21 to 60Vdc
Power Consumption	220VA max @P _{sat} 170VA typ @P _{linear}

Interface

IF Input	N-Type Female 50Ω
RF Output	WR28 Grooved

Reference

Source	External
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 IF Input Power Detection RF Forward Power Detection
Control	Gain adjustable 20dB with 0.25dB step RF Output Mute OpenBMIP ready
Protection	Over and under voltage Reverse voltage Over current In-rush current
Communication Port	Serial RS232/RS485/RS422 Ethernet (SNMP & HTTP)
Transmit Redundancy	Redundancy-Ready (with external controller unit)

Environmental

Operating Temperature	-40°C to +60°C
Relative Humidity	Up to 100%
Weatherproof	IP67
Operating Environment	ETSI EN 300 019-2-4 Class T4.1 (Land) ETSI EN 300 019-2-6 Class T6.1 (Maritime)

Mechanical

Dimension (excluding interface connectors)	L248 x W160 x H126mm L9.7" x W6.3" x H5.0"
Weight	4.1 Kg / 9 lbs

NOTE: All specifications subject to change without notice
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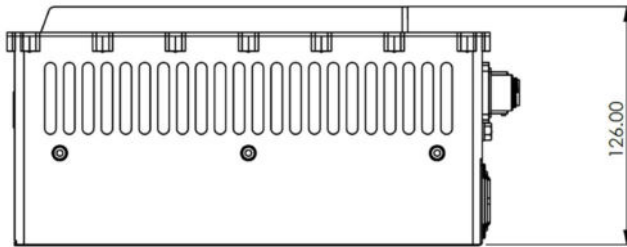
20W Ka Band Block-Up Converter

Standard Part List for Standalone Configuration

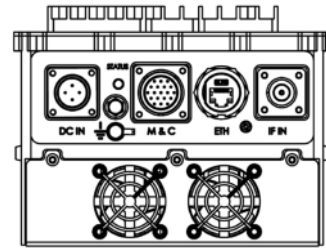
ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC		ALB220XGN-20M	01	BUC
2	Prime Power Input Cable	DC	E0004881-0001	01	C/A DC 12-4S to Unterminated 3M
3	Cable M&C	RS232 / RS485 / RS422	E0004882-0001	01	C/A M&C Serial 14-19P to DB9 (F) x3 3M
4	Connector	ETH	P0006973-0001	01	CONN ETH RJ45 Metal Screw Thread IP67
5	Converter	RS485 / RS422	6103480008	01	Converter USB to RS485/RS422
6	Mounting Screw		6308840310	04	Screw Hex M3x10 w Split & Flat Washer

Mounting Dimension Drawing

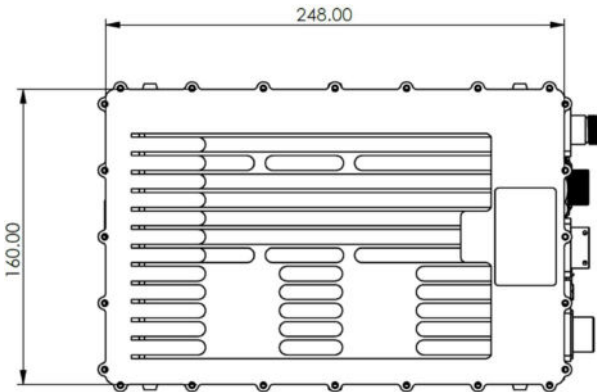
20W Side View



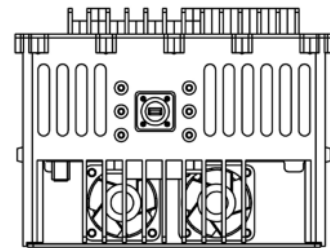
20W Side View



20W Top View



20W Side View RF Output



Option Items

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	DC Power Supply		APSVAC48-480	Outdoor Power Supply Unit 90-265VAC Input 48VDC Output

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Standard Part List for Redundancy 1+1 Configuration

ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC		ALB220XGN-20M	02	BUC
2	Redundancy Control Unit	Tx Only, In-Door	AAV613NJ04-T-RM	01	Tx Only No DC & 10MHz 96 to 264Vac RS232/485 ETH Rack Mount
3	Prime Power Input Cable	DC	E0004881-0001	02	C/A DC 12-4S to Unterminated 3M
4	Cable M&C	RS232 / RS485 / RS422	E0004882-0001	01	C/A M&C Serial 14-19P to DB9 (F) x3 3M
5	WG Switch Set			01	WG Switches including flange o-ring, brackets & screws, termination
6	Cable 1+1		2502042307	01	C/A M&C RCU 12-8S to 14-19P 50M
7	Cable 1+1		2502042308	01	C/A Sw Control 10-6S to 10-6P 50M
8	Cable RF		6202040286	02	C/A RG142 SMA-M to N-M RA 1.3M
9	Connector	ETH	P0006973-0001	02	CONN ETH RJ45 Metal Screw Thread IP67
10	Converter	RS485 / RS422	6103480008	01	Converter USB to RS485/RS422
11	Mounting Accessory Set			01	Mounting plate, handles, brackets & screws

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