

ALB210 Series

Compact 12W/16W/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 redundancy ready features to work in 1+1 redundancy mode.

Features

- Feed mountable
- Forward power detection
- L band 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 DC input ranging 36 to 60Vdc
- 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 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	RF	IF	LO(switchable)
Band 1	27.5 – 28.5GHz	950 – 1950MHz	26.55GHz
Band 2	28.5 – 29.5GHz	950 – 1950MHz	27.55GHz
Band 3	29.0 – 30.0GHz	950 – 1950MHz	28.05GHz
Band 4	30.0 – 31.0GHz	1000 – 2000MHz	29.00GHz

Output Power	P _{sat}	P _{linear}
12W	40.8dBm (12W)	37.8dBm (6W)
16W	42.0dBm (16W)	39.0dBm (8W)
20W	43.0dBm (20W)	40.0dBm (10W)

Small Signal Gain	65dB min
Gain Flatness	±2dB over 1GHz ±0.75dB over 40MHz
Gain Variation	±2dB within band over operating temperature
Spectral Regrowth	-30dBc max @ P _{linear} at 1.0x symbol rate offset for single OQPSK or at 1.5x symbol rate offset for single QPSK
Spurious	-60dBc max
Phase Noise	-93dBc/Hz max @100KHz offset -83dBc/Hz max @10KHz offset -73dBc/Hz max @1KHz offset
VSWR	1.5:1 max @input 2.0:1 max @output

AC/DC Power

Prime Power	36 to 60Vdc
Power Consumption	130VA max @12W P _{sat} 145 VA max @16W P _{sat} 200VA max @20W P _{sat}

Interface

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

Reference Requirement

Frequency	10MHz/50MHz auto detect
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 L-Band Input Power Detection RF Forward Power Detection
Control	Gain adjustable 25dB with 0.25dB step RF Output On/Mute
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	IP65

Mechanical

Dimension (excluding interface connectors)	L240 x W100 x H107mm L9.5" x W3.9" x H4.2"
Weight	3.3Kg / 7.28lbs

NOTE: All specifications subject to change without notice
B01C22

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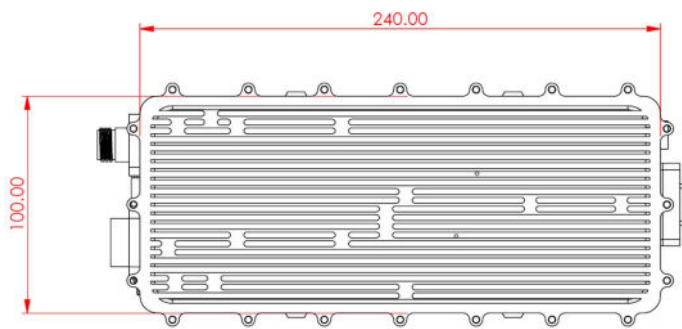
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Standard Part List for Standalone Configuration

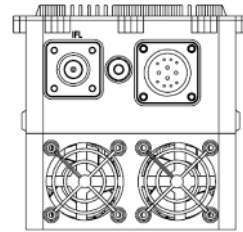
ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			01	BUC
2	Prime Power Input Cable	Non-IFL Models	2502041296	01	C/A M&C + DC Unterminated 2M
3	Cable M&C	ETH	2502041166	01	C/A M&C ETH/RJ45 DB9 (M) to RJ45 2M
4	Cable M&C	RS485	6103480008	01	Converter USB to RS485
5	Mounting Accessory Set			01	Mounting screws including O-Ring

Mounting Dimension Drawing

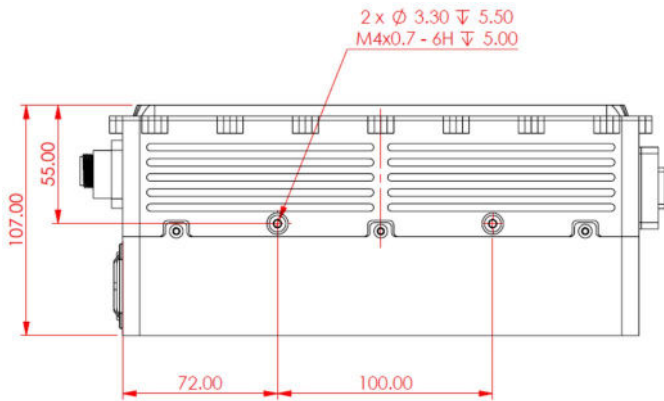
Top View



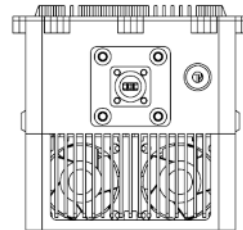
Side View



Side View



Side View



NOTE: Part list and drawing subject to change without notice
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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	Redundancy Control Unit	TX Only	AAV6103804-T	01	VSAT RCU WITH 10MHz TX ONLY W ETHERNET
3	Prime Power Input Cable		1001520980	02	TPB 12-3S to Unterminated 220V 5A 3M
4	WG Switch Set			01	WG Switches including flange o-ring, brackets & screws, termination
5	Cable M&C		2502041208	02	C/A COMPACT KU 40W PWR AND M&C FOR RCU
6	Cable Switch Control	3M	2502040155	01	C/A SW CONTROL 10-6S TO 10-6P 3M
7	Cable RF	3M	2502040137	02	C/A N(M) TO N(M) 3M
8	Cable M&C	ETH	2502041166	01	C/A ETH-DB9 (M) to RJ45 2M
9	Converter	RS485	6103480008	01	Converter USB to RS485
10	Mounting Accessory Set			01	Mounting plate, handles, brackets & screws

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Change History

Rev	Date	Changes	Reason of Change	Change By
A_00	22 Mar 2021	Initial version	Customer requested	James Wang
A_01	16 Sep 2022	Added "switchable" to LO	Switchable LO	James Wang