

# ALB130/230 Series

Lite 12W/16W Ku Band  
Block-Up Converter

Designed to mount directly to the feedhorn, ideal for SOTM, fixed and maritime applications with option of IFL powered directly through modem via MS connector.

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
- 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 input DC voltage ranging 18 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 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
Standard	14.00 – 14.50GHz	950 – 1450MHz	13.05GHz
Extended	13.75 – 14.50GHz	950 – 1700MHz	12.80GHz

Output Power	P <sub>sat</sub>	P <sub>1dB</sub>	P <sub>linear</sub>
12W	-	40.8dBm (12W)	37.8dBm (6W)
16W	-	42.0dBm (16W)	39.0dBm (8W)

<b>Small Signal Gain</b>	66dB min
<b>Gain Flatness</b>	±2dB within band ±1dB over 40MHz
<b>Gain Variation</b>	±2dB within band over operating temperature
<b>Intermodulation</b>	-25dBc max @ P <sub>linear</sub>
<b>Spurious</b>	According to EN 301 428
<b>Phase Noise</b>	-93dBc/Hz max @100KHz offset -83dBc/Hz max @10KHz offset -73dBc/Hz max @1KHz offset
<b>VSWR</b>	1.5:1 max @input 1.25:1 max @output with optional external isolator
<b>Noise Power Density</b>	Tx Band : -70dBW/4KHz max Rx Band : -142dBW/4KHz max

### AC/DC Power

<b>Prime Power</b>	18 to 60Vdc
<b>Power Consumption</b>	120VA @12W 135VA @16W

### Interface

<b>IF Input</b>	N-Type Female 50Ω F-Type Female 75Ω (option)
<b>RF Output</b>	WR75 Square Grooved
<b>Power Supply Input</b>	ITT KPT02E12-3P Fischer UR03W07 F003S BK1 (Option)

### External Reference Requirement

<b>Frequency</b>	10MHz
<b>Power Level</b>	-5dBm to +5dBm
<b>Phase Noise</b>	-160dBc/Hz max @100KHz offset -155dBc/Hz max @10KHz offset -150dBc/Hz max @1KHz offset

### Monitor & Control

<b>Monitor</b>	BUC Temperature Status Alarm LED Indicator LO Unlock Alarm RF Forward Power Detection
<b>Control</b>	Gain adjustable 20dB with 0.5dB step RF Output On/Mute
<b>Communication Port</b>	Serial RS232/RS485 Ethernet (SNMP & HTTP)
<b>Transmit Redundancy</b>	Redundancy-Ready (with external controller unit)

### Environmental

<b>Operating Temperature</b>	-40°C to +60°C
<b>Relative Humidity</b>	Up to 100%
<b>Weatherproof</b>	IP65

### Mechanical

<b>Dimension</b> (excluding interface connectors)	L158 x W93 x H92mm L6.22" x W3.66" x H3.62"
<b>Weight</b>	1.5Kg / 3.3lbs

### Compliance Standard (Radio Equipment Directive 2014/53/EU)

<b>IEC 62368-1 2014</b>	Audio/video, information and communication technology equipment – Part 1: Safety requirements (IEC 62368-1:2014, modified)
<b>ESTI EN 301 428 V2.1.2</b>	Satellite Earth Stations and Systems (SES); Harmonised Standard for Very Small Aperture Terminal (VSAT); Transmit-only, transmit/receive or receive-only satellite earth stations operating in the 11/12/14 GHz frequency bands covering the essential requirements of article 3.2 of the Directive 2014/53/EU
<b>ESTI EN 301 489-1 V2.1.1</b>	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU
<b>ESTI EN 301 489-12 V2.2.2</b>	Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 12: Specific conditions for Very Small Aperture Terminal, Satellite Interactive Earth Stations operated in the frequency ranges between 4 GHz and 30 GHz in the Fixed Satellite Service (FSS)

NOTE: All specifications subject to change without notice  
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## Lite 12W/16W Ku Band Block-Up Converter

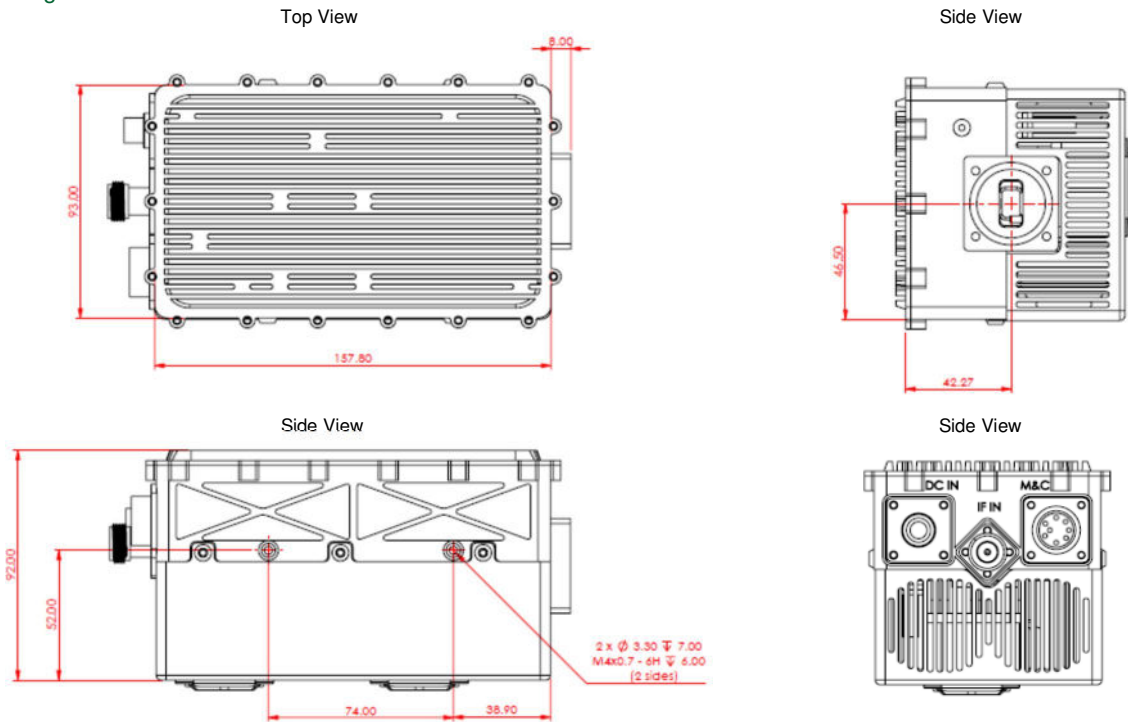
### Standard Part List for Standalone Configuration

ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			01	BUC
2	Prime Power Input Cable	Non-IFL	2502041298	01	C/A PS 12-3S to Unterminated 2M
3	Cable M&C	RS232 / RS485	2502042429 / 2502041169	01	C/A M&C SERIAL/ETH 12-8P TO DB9 (F) 2M
4	Cable M&C	ETH	2502041166	01	C/A M&C ETH/RJ45 DB9 (M) to RJ45 2M
5	Converter – USB/485	RS485	6103480008	01	Converter USB to RS485
6	Mounting Accessory Set			01	Mounting screws including brackets and gasket for flange WR75

### 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 1.0M
		1.5M	4203490014	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1.5M
2	Cable M&C	6M	2502041980	C/A M&C 485/ETH 12-8P to DB9 (F) 6M
		50M	2502041722	C/A M&C 485/ETH 12-8P to DB9 (F) 50M
		100M	2502042502	C/A M&C 485/ETH 12-8P to DB9 (F) 100M
3	Prime Power Input Cable	Non-IFL	2502041875	C/A PS 7-3P to Unterminated 3M

### Mounting Diagram

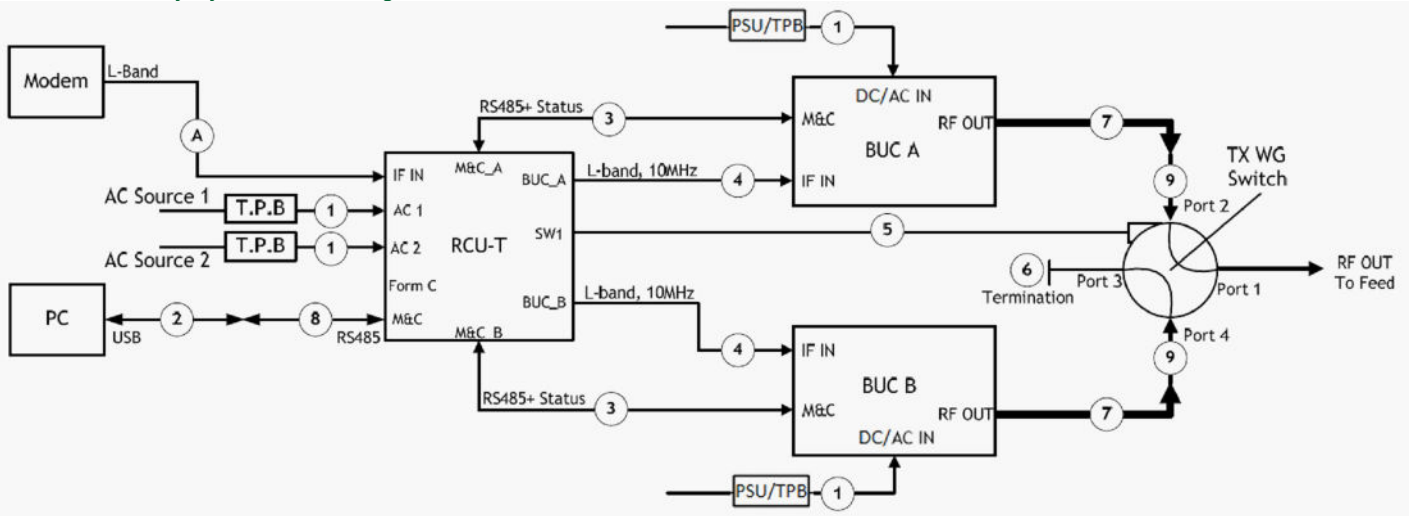


NOTE: Part list and drawing subject to change without notice  
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## Lite 12W/16W Ku Band Block-Up Converter

### 1:1 Redundancy System Block Diagram



### Standard Part List for 1:1 System Configuration

ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			02	BUC
2	Prime Power Input Cable	Non-IFL	2502041298	02	C/A PS 12-3S to Unterminated 2M
3	Cable M&C	RS485	2502041169	02	C/A M&C SERIAL/ETH 12-8P TO DB9 (F) 2M
4	Cable M&C	ETH	2502041166	01	C/A M&C ETH-DB9 (M) to RJ45 2M
5	Converter – USB/485	RS485	6103480008	01	Converter USB to RS485
6	Redundancy Control Unit		AAV6103804-T	01	RCU w 10MHz Tx ETH
7	Cable RCU Power Supply		1001520980	02	Transient Protection Box 12-3S to Unterminated 220Vac 5A 3M
8	WG Flexible		4203490049	02	WG Flexible Ku Band WR75 Sq Grooved to WR75 Sq Cover 1.0M
9	WG Rx Rej Filter		4203490081	01	WG Filter Ku band WR75 Rx Reject
10	WG Termination		4203490015	01	WG Termination Ku Band WR75 75W
11	WG Switch		5903290009	01	WG Switch Ku Band WR75 Single 230Vac
12	Cable M&C		2502041313	01	C/A M&C S/PLUG 12-8P TO ETH RJ45
13	Cable RCU		2502040561	02	C/A RCU to BUC 2M
14	Cable Switch Control		2502040155	01	C/A Sw Control 10-6S to 10-6P 3M
15	Cable RF		2502040137	02	C/A RF N (M) to N (M) 3M
16	Isolator RF		2503160298	01	ACCS WR75 Ku-Band ISOLATOR 60W W/ O-RING
17	Mounting Accessory Set			01	RCU Mounting brackets including screws and studs

### Option Items

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	Prime Power Input Cable	Non-IFL	2502041875	C/A PS 7-3P to Unterminated 3M