



## ALB129 Series

Compact 16W/20W/25W  
Ku-Band Block-Up Converter

This small and lightweight BUC is ideal for SOTM applications while also offering benefits for fixed and maritime applications.

Designed to be mounted on the feed horn, the BUC has “Best in Class” efficiency and “lowest power consumption”. The unit works on a wide range DC power supply of 38V to 60V.

Innovative and efficient thermal design makes this BUC one of the smallest, robust, reliable and rugged enough to withstand outdoor conditions in the industry.

The unit can be configured to work in 1:1 redundant mode by adding on a simple redundancy option to the basic unit.

### Features

- Compact and lightweight
- Feed mountable
- Available in all Ku band frequency
- Best in class efficiency with less power consumption
- Forward power detection facility
- Intuitive monitoring & control through RS232/RS485 & Ethernet (SNMP & HTTP)
- Auto ranging 38 to 60VDC Power Supply
- Optional input AC Voltage
- Automatic fault identification & alarm generation
- Wide operating temperature range -40°C to +60°C
- IP65 rated housing (weather proof construction)
- RoHS compliant

### Quality Assurance

100% of all BUCs go through stringent quality checks in addition to well defined Electrical Stress Screening to ensure operation in harsh outdoor environments. The BUCs are also 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 with up to 100% humidity.

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## Technical Specifications

### RF Specifications

Transmit Frequency	13.75 – 14.5GHz 14.0 – 14.5GHz 12.75 – 13.25GHz	(EXT Ku) (STD Ku) (Appendix 30B)
IF Frequency Range	950 – 1700MHz 950 – 1450MHz 950 – 1450MHz	(EXT Ku) (STD Ku) (Appendix 30B)
L.O Frequency	13.05GHz 12.8GHz 11.8GHz	(STD Ku) (EXT Ku) (Appendix 30B)
Output Power (P <sub>1dB</sub> )	42dBm (16W), 43dBm (20W) & 44dBm (25W)	
Small Signal Gain	68dB Min	
Gain Flatness	±2dB over the O/P frequency band	
Gain Variation	±2dB over the operating temperature range	
Gain Control	20dB in steps of 0.5dB	
Inter modulation	-25dBc @ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power	
O/P spurious	According to EN301428	
Phase Noise @ Offset		
1KHz	-73dBc/Hz	
10KHz	-83dBc/Hz	
100KHz	-93dBc/Hz	
I/P VSWR	2.0:1	
O/P VSWR	1.25:1 (with optional external isolator)	
Noise Power Density Tx BD	-70dBW/4KHz	
Rx BD	-142dBW/4KHz	

### DC Power

Prime Power	48VDC (range 38 to 60VDC) via external MS connector (Both IFL and External DC connector power supply options are available for 16W) Optional 230VAC (range 96 to 264VAC)
Power Consumption	177.6W (max for 16W/20W/25W)

### Interfaces

IF Input Interface	50Ohms N-type Female
Output Interface	WR 75G

### External Reference

Frequency	10MHz
Power	-5dBm to +5dBm

External reference phase noise requirement @ frequency offset	
1 KHz	-135dBc/Hz
10 KHz	-145dBc/Hz
100 KHz	-155dBc/Hz

### Monitor & Control

Monitor	BUC temperature Status alarm RF output power LED status indication
Control	Attenuation RF output mute
Interface	RS232/RS485 & Ethernet (SNMP & HTTP) via external MS connector
Tx Redundancy	External RCU (optional for 1+1 redundancy system requirement)

### Environmental

Operating Temperature	-40°C to +60°C
Relative Humidity	Up to 100% Weather protection sealed to IP65

### Mechanical

Size	200L x 130W x 112.5 H mm (16W & 20W ) 200L x 130W x 130H mm (25W) 200L x 130W x 192.5H mm (AC option for 16W & 20W ) 200L x 130W x 210H mm (AC option for 25W)
Weight	3.5kg / 7.5lbs 4.7kg / 10.36lbs (AC option)
Color	White Powder Coat

### Compliance Standard

IEC 609501-2nd Edition	International Safety Standard for Information Technology Equipment
ETSI EN 301 489-12	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 4GHz and 30GHz in the Fixed Satellite Service (FSS)
ETSI EN 301 489-1	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility Standard for Radio Equipment and Services

Note: All specifications are subject to change without notice.  
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