



## 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” with less than 150W. 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
- Best in class efficiency with less than 150W power consumption for 16W RF output power and 250W power consumption for 25W RF output power
- Available in both standard and extended Ku-Band
- Forward power detection facility
- Intuitive monitoring & control through RS232/RS485 & Ethernet (SNMP & HTTP)
- Auto ranging 38 to 60VDC Power Supply
- 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

<b>Transmit Frequency</b>	13.75 – 14.5GHz (EXT Ku) 14.0 – 14.5GHz (STD Ku)
<b>IF Frequency Range</b>	950 – 1700MHz (EXT Ku) 950 – 1450MHz (STD Ku)
<b>L.O Frequency</b>	13.05GHz (STD Ku) 12.8GHz (EXT Ku)
<b>Output Power</b>	42dBm (16W), 43dBm (20W) & 44dBm (25W)
<b>Small Signal Gain</b>	68dB Min
<b>Gain Flatness</b>	±2dB over the O/P frequency band
<b>Gain Variation</b>	±2dB over the operating temperature range
<b>Gain Control</b>	20dB in steps of 0.5dB
<b>Inter modulation</b>	-25dBc @ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power
<b>O/P spurious</b>	According to EN301428
<b>Phase Noise @ Offset</b>	
<b>1KHz</b>	-73dBc/Hz
<b>10KHz</b>	-83dBc/Hz
<b>100KHz</b>	-93dBc/Hz
<b>I/P VSWR</b>	1.5:1
<b>O/P VSWR</b>	1.25:1 (with optional external isolator)
<b>Noise Power Density Tx BD</b>	70dBW/4KHz
<b>Rx BD</b>	142dBW/4KHz

### DC Power

<b>Prime Power</b>	48VDC (range 38 to 60VDC) via external MS connector
<b>Power Consumption</b>	150W (Typical for 16W) 200W (Typical for 20W) 250W (Typical for 25W)

### Interfaces

<b>IF Input Interface</b>	50Ohms N-type Female
<b>Output Interface</b>	WR 75G

### External Reference

<b>Frequency</b>	10MHz
<b>Power</b>	-5dBm to +5dBm

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

### Monitor & Control

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

### Environmental

<b>Operating Temperature</b>	-40°C to +60°C Optional (-40°C to +70°C for 16W)
<b>Relative Humidity</b>	Up to 100% Weather protection sealed to IP65

### Mechanical

<b>Size</b>	200L x 130W x 99H mm (16W, 20W & 25W)
<b>Weight</b>	3.5kg / 7.5lbs
<b>Color</b>	White Powder Coat

### Compliance Standard

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



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