



# ALB229 Series

Compact 250W  
Ku-Band Block-Up Converter

This small and lightweight BUC is ideal for mobile and satellite uplink applications.

The BUC has “Best in Class” efficiency and “lowest power consumption.” The unit works on a wide range AC power supply of 96VAC to 264VAC. Innovative and efficient thermal design makes this BUC one of the smallest, robust, reliable and rugged enough to withstand outdoor conditions in the industry.

Built-in redundancy feature eliminates the use of an external controller for 1:1 redundancy operation. This eliminates messy cabling at the antenna making this a very elegant solution.

Extensive M/C interface with RS232/RS485/Ethernet (SNMP & HTTP), Bluetooth and Wifi.

## Features

- Compact and lightweight
- Available in standard and extended Ku-Band
- Forward & reverse power detection
- Input power detection
- Intuitive monitoring & control through RS232/RS485 & Ethernet (SNMP & HTTP), Bluetooth and Wifi.
- Automatic fault identification & alarm generation
- Temperature compensation facility
- Built-in redundancy facility
- Built-in 10MHz reference with auto-detection
- Built-in receive reject filter
- Sample port for output monitoring
- Wide operating temperature range -40°C to +60°C
- RoHS Compliant
- Waterproof

## 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>	14.00GHz – 14.5GHz 13.75GHz – 14.5GHz
<b>IF Frequency Range</b>	950MHz – 1450MHz 950MHz – 1700MHz
<b>LO Frequency</b>	13.05GHz 12.80GHz
<b>Output Power <math>P_{sat}</math> / <math>P_{Linear}</math></b>	
<b>250W</b>	54dBm / 51dBm
<b>Spectral Re-growth</b>	30dBc @ $P_{Linear}$
<b>Third Order Intermod (two tone)</b>	-25dBc @ two signal 2MHz apart at $P_{Linear}$
<b>Small Signal Gain</b>	
<b>250W</b>	80dB Min
<b>Gain Flatness Full Band</b>	±2dB
<b>Gain Slope over 40MHz</b>	±1dB
<b>Gain Variation over temperature</b>	±2dB @ from -40°C to +60°C
<b>Gain Control</b>	20dB in step of 0.5dB
<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>	1.3:1
<b>O/P VSWR</b>	1.25:1
<b>Noise Power Density Tx BD</b>	70dBW/4KHz
<b>Rx BD</b>	142dBW/4KHz

### DC Power

<b>Prime Power</b>	230VAC (range 96V to 264VAC)
<b>Power Consumption</b>	
<b>250W</b>	2000VA

### 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>Internal reference</b>	Built-in (Auto detection)
<b>External reference phase noise</b>	
<b>Requirement @ frequency offset</b>	
<b>1KHz</b>	-150dBc/Hz
<b>10KHz</b>	-155dBc/Hz
<b>100KHz</b>	-160dBc/Hz

### Monitor And Control

<b>Monitor</b>	BUC temperature Status alarm Output power Reverse power Input power LED status indication
<b>Control</b>	Attenuation RF output mute
<b>Interface</b>	RS232/RS485 & Ethernet (SNMP & HTTP) Bluetooth (Optional) / Wifi (Optional)
<b>Tx Redundancy</b>	Built-in

### Environmental

<b>Operating Temperature</b>	-40°C to +60°C
<b>Humidity</b>	Up to 100% Weather protection sealed to IP65

### Mechanical

<b>Size</b>	
<b>250W</b>	550L x 440W x 350H mm
<b>Weight</b>	
<b>250W</b>	49kg
<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
<b>FCC Class A</b>	Two levels of radiation and conducted emissions Limits for unintentional radiators (FCC Mark)

Note: All specifications are subject to change without notice.  
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