



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

Transmit Frequency	13.75 – 14.5GHz (EXT Ku) 14.0 – 14.5GHz (STD Ku)
IF Frequency Range	950 – 1700MHz (EXT Ku) 950 – 1450MHz (STD Ku)
L.O Frequency	13.05GHz (STD Ku) 12.8GHz (EXT Ku)
Output Power	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	1.5:1
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
Power Consumption	150W (Typical for 16W) 200W (Typical for 20W) 250W (Typical for 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 Optional (-40°C to +70°C for 16W)
Relative Humidity	Up to 100% Weather protection sealed to IP65

Mechanical

Size	200L x 130W x 99H mm (16W, 20W & 25W)
Weight	3.5kg / 7.5lbs
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



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