



# ALB150 Series

4W  
X-Band VSAT Outdoor Block-Up Converter

ALB150 Series X-Band BUC (Block-Up Converter) is a highly cost-effective RF outdoor transmitter for satellite communication. The BUC has very high output power linearity and works well from -40°C up to 60°C. The BUC also has a wide input voltage range which allows it to work from 18V to 60V.

Agilis X-Band BUC is designed for high reliability operation in various applications such as flyaway antenna. The BUC also has the most complete M&C features in the industry.

Easy to install, it is redundancy-ready and field-proven for any harsh operating environment. It is suitable for both data and voice communication operating in different modulation formats.

Agilis X-Band BUC is a compact design that comprises of Upconverter, Solid State Power Amplifier, Phase Locked Oscillator and DC-DC power converter. It employs L-Band IF interface to the indoor unit.

## Features

- Direct antenna mount
- Wide operating temperature range -40°C to +60°C
- Wide input D.C voltage range 18V to 60V
- Standard RS232/485 interface & optional SNMP/HTTP M&C option
- Excellent linearity
- Extremely reliable
- High power efficiency
- Excellent phase noise characteristics
- Low spurious
- Automatic temperature compensation feature
- RoHS compliant
- Waterproof with IP65 standard
- Easy installation
- Redundancy option
- LED indicator for BUC status

## Monitoring and Control (Optional)

- SSPA on/off Control
- Automatic gain control with level stability accuracy better than  $\pm 0.5\text{dB}$
- Adjustable gain
- Temperature sensor reading
- LO unlocked alarm
- Input power detection
- Output power detection
- SNMP/Ethernet (Optional)

## Reliability

Field proven under harsh environment conditions, Agilis ODUs can withstand temperature ranging from -40°C to +60°C with up to 100% humidity.

## Quality Assurance

All Agilis ODUs go through intensive active electrical stress screening with performance being monitored during screening. In addition, all units undergo 100% waterproof test equivalent to IP65 to ensure normal operation in tropical, cold and harsh environments.



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## Technical Specifications

### Frequency Range

Standard	Output (GHz)	Input (MHz)	LO (GHz)
	7.9 to 8.4	950 to 1450	6.95

### Transmit

Power	Output P1dB (dBm) min	Gain (dB)	Power Consumption (Typ)	Power Consumption (Max)
4W	36	61 – 69	42W	52.8W

Input Power @P1dB Output - 25dBm  
Gain Flatness for Full BW  $\pm 2.0$ dB max  
36MHz Gain Flatness (at max slope)  $\pm 1.0$ dB max  
Gain Stability Over Temperature  $\pm 2.0$ dB max

Spurious @P1dB Output -55dBc max

Phase Noise @ 100Hz offset -65dBc/Hz max  
@ 1kHz offset -73dBc/Hz max  
@ 10kHz offset -83dBc/Hz max  
@ 100kHz offset -93dBc/Hz max

Inter Modulation -27dBc @ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power

Frequency Inversion Non-inverted

Input VSWR 2.0:1 max  
Output VSWR 2.0:1 max

IF Input Interface 50 $\Omega$  N-Type Female/75Ohms F-type Female (optional)

Output Interface WR 112G

Current @ 24V DC input voltage 2.2A max (for 4W)

### Environmental

Operating Temperature -40°C to + 60°C  
Relative Humidity up to 100%

### External Reference Requirement

Frequency 10MHz  
Phase Noise External Reference Dependent  
Power -5 to +5dBm

### Monitor And Control (optional)

Monitor BUC temperature  
LO unlocked alarm  
Status alarm  
RF Input and RF Output Power  
LED status indicator

Control Adjustable gain with 0.5dB step size  
RF output mute

Interface RS232/485  
Optional Ethernet (SNMP + HTTP)

### Power Supply Requirement

DC Input Voltage for BUC 4W, 6W & 8W +18VDC to +60VDC  
Power Supply Interface Common input via IFL (N-type connector/ F-type Female connector)

### Mechanical

Dimensions 282L x 140W x 60H mm / 11.1L x 5.5W x 2.4H in (4W)

Weight 3.3kg / 7.27lbs (4W)

Colour 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

FCC Part 15 Class 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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