



# ALB110 Series

Compact 30W/40W  
Ka-Band Block-Up Converter

This small and light weight new Ka-Band BUC is ideal for mobile and satellite uplink applications. Designed to be mounted on the feed horn, the BUC has excellent efficiency. The unit works on a wide range input DC power supply from 38V to 60V. Innovative and efficient thermal design makes this BUC one of the smallest, lightest and most reliable in the industry.

With redundancy-ready feature, the unit can be easily configured to work in 1:1 redundant mode.

## Features

- Compact and lightweight
- Excellent linearity
- Extremely reliable
- High power efficiency
- Excellent phase noise characteristics
- Low spurious
- Forward power detection function
- Remote monitor & control through RS232/RS485 and Ethernet (SNMP & HTTP)
- Wide input DC voltage range
- Automatic fault identification & alarm generation
- Automatic temperature compensation feature
- Redundancy option
- Wide operating temperature range -40°C to +60°C
- RoHS compliant
- Waterproof
- LED indicator for BUC status

## 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>	27.5GHz to 31.0GHz (Multiple operating Bands Selection are available. Please refer to the Table 1 below)
<b>Input Frequency</b>	950MHz to 1950MHz
<b>LO frequency</b>	Switchable (Refer Table 1)
<b>Output Power @ Psat</b>	44.8dBm (30W)/ 46dBm (40W)
<b>Output @ P Linear</b>	41.8dBm (for 30W) 43dBm (for 40W)
<b>Small Signal Gain</b>	65dB (min)
<b>Gain Flatness</b>	±2.0dB typ
<b>Gain Flatness over 40MHz</b>	±1.0dB typ
<b>Gain Variation</b>	±2dB over the operating temperature range
<b>Spectral Re-Growth</b>	-30dBc at PLinear
<b>Phase Noise @ Offset</b>	
<b>1KHz</b>	-73dBc/Hz typ
<b>10KHz</b>	-83dBc/Hz typ
<b>100KHz</b>	-93dBc/Hz typ
<b>Spurious</b>	-60dBc typ
<b>I/P VSWR</b>	1.87 typ
<b>O/P VSWR</b>	2.0:1 typ

### Power Supply

<b>Prime Power</b>	48VDC (range 38 to 60VDC) Optional AC supply	
<b>Power Consumption</b>		
	Plinear	Psat
30W	160W	215W
40W	210W	285W

### Interfaces

<b>IF Input Interface</b>	50Ohms N-type Female / 75Ohms F-type Female (optional)
<b>Output Interface</b>	WR28 grooved

### External Reference

<b>Frequency</b>	10 MHz (50MHz optional)
<b>Power</b>	-5dBm to +5dBm

#### External reference phase noise requirement @ frequency offset

<b>1KHz</b>	-150dBc/Hz
<b>10KHz</b>	-155dBc/Hz
<b>100KHz</b>	-160dBc/Hz

**Table 1**

Band	RF Band (GHz)	IF Band (MHz)	LO Frequency (GHz)
Band 1	27.5 – 29.5	950 – 1950	26.55/27.55
Band 2	29.0 – 30.0	950 – 1950	28.05
Band 3	29.0 – 31.0	950 – 1950	28.05/29.05

*Other operating bands available*

### Monitor & Control

<b>Monitor</b>	BUC temperature LO unlocked alarm Status alarm RF Output Power detection / OpenBMIP (optional) LED indication
<b>Control</b>	30dB adjustable gain with 0.25dB step size RF output mute
<b>Interface</b>	RS232/RS485, Ethernet (SNMP & HTTP) , OpenBMIP (optional)
<b>Tx Redundancy</b>	Redundancy-ready (with external RCU)

### 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>	295L x 135W x 115H mm
<b>Weight</b>	5.9 Kg
<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 4 GHz and 30 GHz 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 Part 15 Class B</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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