



ALB110 Series

Compact 8W
Dual 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 50V. 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
- Feed mountable
- 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

Transmit Frequency	29GHz to 31GHz (Refer Table 1)
IF Frequency Range	950MHz to 2000MHz (Refer Table 1)
LO Frequency	Switchable (Refer Table 1)
Output Power @ Psat	39dBm
Output Power @ Plinear	37dBm for Band1 / 36dBm for Band2
Small Signal Gain	60dB (min)
Spectral Re-Growth	-30dBc @ Plinear
Gain Flatness	±2.5dB (Band1) / ±2.0 dB (Band2)
Gain Flatness over 40MHz	±0.75dB typ
Gain Variation	±2dB over the operating temperature range
Phase Noise @ Offset	
1KHz	-75dBc/Hz max
10KHz	-85dBc/Hz max
100KHz	-95dBc/Hz max
Spurious	-60dBc typ
Harmonics	-60dBc typ
I/P VSWR	1.5:1 max
O/P VSWR	1.8:1 max

DC Power

Prime Power	48VDC (range 18 to 51VDC)
Power Consumption	42W @ Plinear 60w @ Psat

Interfaces

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

External Reference

Frequency	50 MHz Band 1 10 MHz Band 2
Power	-5dBm to +5dBm

External reference phase noise requirement @ frequency offset	
1KHz	-150dBc/Hz
10KHz	-155dBc/Hz
100KHz	-160dBc/Hz

Table 1

Band	RF Band (GHz)	IF Band (MHz)	LO Frequency (GHz)
Band 1	29.0 – 30.0	950 – 1950	28.05
Band 2	30.0 – 31.0	1000 – 2000	29.05

Other operating bands available

Monitor & Control

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

Environmental

Operating Voltage	-40°C to +60°C
Power Supply Interface	Up to 100% Weather protection sealed to IP65

Mechanical

Size	229L x 991W x 61H mm
Weight	1.6kg
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 4 GHz and 30 GHz 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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