



ALB 128 Series

25W/40W/50W
Ku-Band Block-Up Converter

Agilis ALB 128 Series Ku-Band BUC (Block-Upconverter) is a highly cost effective RF outdoor transmitter for satellite communication. It is suitable for both data and voice communication operating in different modulation formats including BPSK, QPSK, 8-PSK / 8-QAM / 16-QAM, 16-APSK and 32-APSK.

Agilis Ku-Band BUC is also suitable for SCPC (Single Channel Per Carrier) network configurations and can be used in low or intermediate data rate for MCPC (Multi-Channel Per Carrier), DAMA (Demand Assigned Multiple Access) or TDMA (Time Division Multiple Access) applications.

Agilis Ku-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. Agilis ALB 128 Ku-Band BUC is a low cost design suitable for broadband applications (such as DVB-RCS) in satellite IP networks.

Features

- Available for all Ku-Band frequencies
- L-Band Interface
- Easy installation
- Excellent phase noise characteristics
- Temperature compensation
- Low spurious
- Higher power options
- In-built Redundancy
- Monitoring and control via RS232/RS485
- Optional Ethernet interface

Monitoring and Control (Optional)

- SSPA On/Off Control
- Automatic level control with level stability accuracy better than ± 0.5 dB
- Adjustable gain
- Temperature sensor reading
- LO unlocked alarm

Reliability

Field proven under harsh environment conditions. Agilis ODU's can withstand temperature ranging from -40°C to $+60^{\circ}\text{C}$ 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 during tropical, cold and harsh environment.

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Technical Specifications

Frequency Range

	Input (MHz)	Output (GHz)	LO (GHz)
Standard	950 to 1450	14.0 to 14.50	13.05
Offset	950 to 1450	13.75 to 14.25	12.80
Extended	950 to 1700	13.75 to 14.50	12.80
Low	950 to 1200	13.00 to 13.25	12.05
Plain	950 to 1450	12.75 to 13.25	11.80
High	1000 to 1300	14.50 to 14.80	13.50

Transmit

Power	Output Power (dBm) min	Typical Gain (dB)	Power Consumption (Typ)
25W	44	65 - 75	210VA
40W	46	65 - 75	400VA
50W	47	75 - 85	500VA

Input Power @P1dB Output -25 dBm
Gain Flatness for Full BW ± 1.25 dB max
Gain Stability Over Temperature ± 2.0 dB max
Gain Control 20 dB in steps of 0.5 dB
Spurious @P1dB Output -55 dBc max
Phase Noise @ 100Hz offset -63 dBc/Hz
@ 1kHz offset -73 dBc/Hz
@ 10kHz offset -83 dBc/Hz
@ 100kHz offset -93 dBc/Hz

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

Frequency Inversion Non-inverted
Input VSWR 1.2:1 max
Output VSWR 1.3:1 max
IF Input Interface 50 Ω N-Type Female
F-Type Female (Optional)
Output Interface WR 75G

Environmental

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

External Reference

Frequency 10MHz
Phase Noise External Reference Dependent
Power -5 to +5 dBm
In-built Internal 10MHz reference Optional

Monitor And Control (optional)

Interface RS232/485
Optional Ethernet (HTTP / SNMP)
SSPA Output Power Detect Yes
SSPA On/Off Control Yes
Redundancy option In-built

Power Supply

AC Input Voltage 220 V AC
110 V AC (Optional)

Mechanical

Dimensions 397L x 230W x 207H mm (25W to 50W)
Weight 10 kg (25W to 50W)
Colour White powder coat

Compliance Standard

IEC 60950 International Safety Standard for Information Technology Equipment
ETSI EN 300 673 Electromagnetic Compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) Standard for Very Small Aperture Terminal (VSAT)
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)
IEC 60068 Environmental Testing
MIL-STD-810F Standard Environmental Engineering Considerations and Laboratory Tests

Note: All specifications are subject to change without notice.
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