

# ALB 128 Series Ku-Band VSAT Outdoor 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, QAM and FM.

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
- Low cost, compact
- Direct antenna mount
- Easy installation
- Excellent phase noise characteristics
- Temperature compensation
- Low spurious
- Higher power options
- Redundancy option
- RS232/485 M&C option
- Wide input D.C. voltage range

## Applications

- Hub and VSAT terminals
- DVB-RCS
- Video conferencing
- Broadcast
- Rural telephony
- Emergency link restoration
- Point-of-sales

## Monitoring and Control (Optional)

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

## Reliability

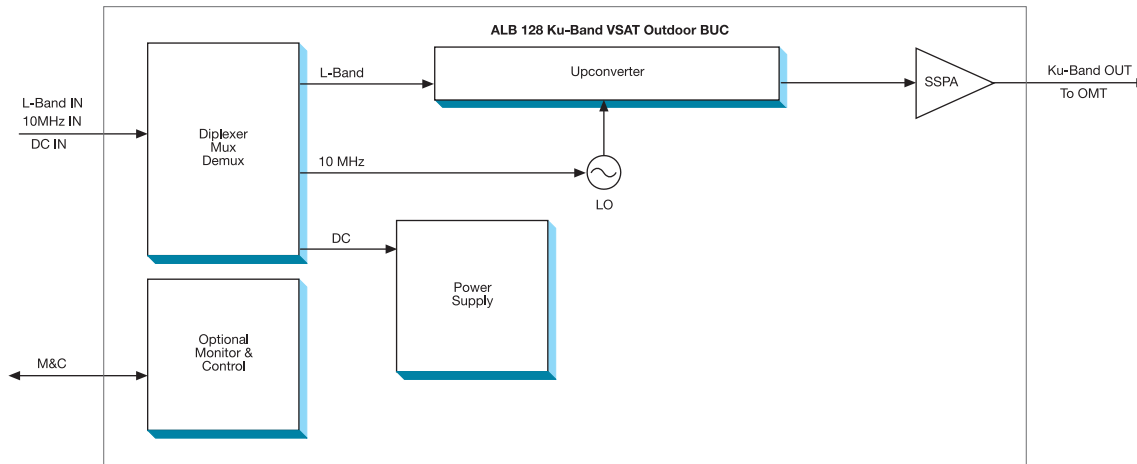
Field proven under harsh environmental conditions. Agilis ODUs can withstand temperature ranging from  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  with up to 100% humidity.

## 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.

# TECHNICAL SPECIFICATIONS

# ALB 128 Series Ku-Band VSAT Outdoor Block-Up Converter



Ku-Band BUC

## 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
Plan	950 to 1450	12.75 to 13.25	11.80

## Transmit

Power	Output P1dB (dBm) min	Gain (dB)	Power Consumption (Typ)
4W	36	57 - 61	53W
8W	39	60 - 64	85W
16W	42	63 - 67	284VA
25W	44	65 - 69	334VA
40W	46	67 - 71	834VA
80W	49	70 - 74	1200VA
100W	50	71 - 75	1200VA

Input Power @P1dB Output	-25 dBm
Gain Flatness for Full BW	±2.0 dB max
Gain Stability Over Temperature	±2.0 dB max
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
Intermodulation Product (with 2 carriers, 1MHz apart, at 6dB backoff from Output @P1dB)	-27 dBc max

Frequency Inversion	Non-inverted
Input VSWR	1.5:1 max
IF Input Interface	50Ω N-Type Female F-Type Female (Optional)
Output Interface	WR 75G

## Environmental

Operating Temperature	-40°C to +55°C -40°C to +60°C (Optional)
Relative Humidity	up to 100%

## External Reference

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

## Monitor And Control (optional)

Interface	RS232/485
SSPA Output Power Detect	Yes
SSPA On/Off Control	Yes

## Power Supply

DC Input Voltage for BUC 4W, 8W	+18Vdc to +60Vdc
AC Input Voltage for BUC 16W above	220Vac or 110Vac (Factory preset)

## Mechanical

Dimensions	280L x 140W x 60H mm	(4W)
	289L x 158W x 99H mm	(8W)
	397L x 230W x 207H mm	(16W, 25W)
	500L x 280W x 220H mm	(40W)
	574L x 420W x 223H mm	(80W, 100W)
Weight	3.2 kg	(4W)
	3.5 kg	(8W)
	14.0 kg	(16W, 25W)
	18.0 kg	(40W)
Colour	32.0 kg	(80W, 100W)
	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 Standard
MIL-STD-810F	Environmental Engineering Considerations and Laboratory Tests

Note: All specifications are subject to changes without notice.