



ALB180 Series

2W/5W/10W BUC
C-Band VSAT Outdoor Block-Up Converter

Agilis ALB180 K-Series C-Band BUC (Block-up Converter) is a highly cost effective outdoor RF 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 for 5W and 10W models.

Agilis C-Band BUC is designed for high reliability operation in various applications such as flyaway antenna. The BUC also has one of the best 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 C-Band BUC offers a wide range of distinctive advantages and enhanced features for satellite communications systems based in remote or challenging geographic regions. The equipment employs L-Band interface to the indoor unit. Agilis ALB180 K-Series C-Band BUC is an ideal solution suitable for broadband application (such as DVB-RCS) in satellite IP networks.

Features

- Available for all C-Band frequencies
- Direct antenna mount
- Wide operating temperature range -40°C to +60°C
- Wide input D.C voltage range 18V to 60V for 5W and 10W C-BUC
- 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

Monitoring and Control

- 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/HTTP (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 outdoor 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 (MHz)

	Output	Input	LO
Intelsat	5850 to 6425	950 to 1525	4900
Insat	6725 to 7025	1100 to 1400	5625
Measat 3	5925 to 6725	950 to 1750	4975
ST-1/Palapa-C	6425 to 6725	1150 to 1450	5275
Full C	5850 to 6725	950 to 1825	4900

Transmit

Power	Output P1dB (dBm) min	Gain (dB)	Power Consumption	
			(Typ)	(Max)
2W	33	55 – 63	25W	28.8W
5W	37	56 – 64	50W	43.2W
10W	40	63 – 71	80W	91.2W

Input Power @P1dB Output -25dBm (Typ)
Gain Flatness over Full Bandwidth ± 2.0 dB max
Gain stability Over Temp ± 2.0 dB max

Spurious @ P1dB Output -55dBc max

Phase Noise @ 100Hz offset -63dBc/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

Input Interface 50 Ω N-Type Female/F-Type Female (Optional)

Output Interface CPRG137

Current @ 24VDC input voltage 1.2A max (for 2W)
1.8A max (for 5W)
3.8A max (for 10W)

Environmental

Operating Temperature -40°C to +60°C

Relative Humidity up to 100%
Weather Protection sealed to IP65

External Reference Requirement

Frequency 10MHz
Phase Noise External Reference Dependent
Power -5 to +5dBm @ 50 Ω

Monitor & Control

Monitor BUC Temperature
LO unlocked alarm
Status alarm
RF Input and RF Output Power

Control Adjustable gain with 0.5dB step size
RF output mute

Interface RS232/485 (Standard)
SNMP/HTTP (Optional)

Environmental

Operating Voltage +15VDC to +36VDC (2W)
+15VDC to +60VDC (5W to 10W)

Power Supply Interface Common input via IFL (N-type connector/F-type Female connector)

Mechanical

Size 187L x 131W x 54H mm / 7.4L x 5.2W x 2.1H in (for 2W)
248L x 128W x 56H mm / 9.8L x 5.0W x 2.2H in (for 5W)
250L x 128W x 94H mm / 9.8x 5.0W x 3.7H in (for 10W)

Weight 1.8kg / 4.0lbs (2W)
2.5kg / 6.0lbs (5W)
3.0kg / 6.6lbs (10W)

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 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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