



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 $+60^{\circ}\text{C}$
- 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 $+60^{\circ}\text{C}$ 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 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 | 43.2W | 50W |
| 10W | 40 | 63 – 71 | 80W | 91.2W |

| | |
|-----------------------------------|---|
| Input Power @P1dB Output | -25dBm (Typ) |
| Gain Flatness over Full Bandwidth | ±2.0dB max |
| Gain stability Over Temp | ±2.0dB 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 | 50Ω 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 @ 50Ω |

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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