# ALB 280-RM Series

400W
C-Band Block Up Converter

Agilis ALB 180 Series C-Band BUC (Block-Up converter) is a highly cost effective indoor / outdoor RF transmitter for satellite communication. Easy to install, it is redundancy-ready and field-proven for any harsh operating environment. The BUCis suitable for both data and voice communication operating in different modulation formats including BPSK, QPSK, QAM and FM

Agilis C-Band BUC is designed for the SCPC (Single Channel Per Carrier) network configurations and for the low or Intermediate data rate for MCPC (Multi-Channel Per Carrier), DAMA (Demand Assigned Multiple Access) or TDMA (Time Division Multiple Access) applications

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 ALB 180 series C-Band BUC is a low cost solution suitable for broadband application (such as DVB-RCS) in satellite IP networks.

## Features

- Available for all C-Band frequencies
- L-Band Interface
- Easy installation
- Temperature compensation
- Redundancy option
- RS 232/485, FSK & Etthernet (SNMP & FTTP) M&C interface option
- Excellent phase noise characteristics
- Low spurious
- Low power consumption
- Built-in isolator & harmonics reject filter
- RF output monitor port

## Enhanced Monitoring and Control

- SSPA On/Off control
- Automatic level control with level stability accuracy better than ± 0.5 dB
- Adjustable gain
- Temperature sensor reading
- LO unlocked alarm
- Input Power Detection
- Output Power Detection
- Ethernet (SNMP & HTTP)

## Reliability

Field proven under harsh environment conditions. Agilis ODUs can withstand temperature ranging from 0°C to +50°C (IDU) with up to 100% humidity.

## Quality Assurance

All Agilis IDU / ODU 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 during tropical, cold and harsh environment.

Agilis

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## Technical Specifications

### Frequency Range (MHz)

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

### Transmit

| Power | Output P1dB (dBm) min | Gain (dB) | Power Consumption (Typ) |
|---|---|---|---|
| **400W** | 56.0 (Psat) | 85 Min | 2500 VA |

| | |
|---|---|
| **Input Power @P1dB Output** | -25 dBm (Typ) |
| **Gain Flatness over Full Bandwidth** | 4 dB max |
| **Gain Control Range** | 20dB min step 0.1dB |
| **Gain stability Over Temp** | ±2 dB max (0°C to + 55°C) |
| **Spurious @ rated power** | -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** | -25 dBc @ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power |
| **Frequency Inversion** | Non inverting |
| **Input VSWR** | 1.5:1 typ |
| **Output VSWR** | 1.5:1 typ |
| **Input Interface** | 50Ω N-Type Female |
| **Output Interface** | WR137G (2W to 500W) |
| **Display (for IDU)** | 24 x 2 LCD |

### Environmental

| | |
|---|---|
| **Operating Temperature** | 0°C to + 50°C |
| **Relative Humidity** | up to 100%<br>Weather Protection sealed to IP65 |

### External Reference

| | |
|---|---|
| **Frequency** | 10 MHz |
| **Phase Noise** | External Reference Dependent |
| **Power** | -5 to +5 dBm @ 50Ω |
| **Internal 10MHz** | (Optional) |

### Monitor And Control

| | |
|---|---|
| **Monitor** | SSPA Temperature<br>Status Alarm<br>RF Output Power<br>Reflected power |
| **Control** | SSPA On/Off<br>Gain Control |
| **Protection** | Over temperature SSPA shutdown<br>Reflected power shutdown |
| **M&C interface** | RS485 / RS232<br>Optional - Ethernet RJ-45<br>(SNMP + HTTP) |
| **Redundancy Control Unit** | In-Built |

### Power Supply

| | |
|---|---|
| **Operating Voltage** | 180V AC to 264V AC<br>47Hz ~ 63Hz |

### Mechanical

| | |
|---|---|
| **Dimensions** | 19" rack, 5RU height |
| **Weight** | 35kg |
| **Colour** | Grey |

### 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 |


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