



# 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 BUC is 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 & Ethernet (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  $\pm 0.5$  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  $0^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  (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.

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

### Power Supply

Operating Voltage	180V AC to 264V AC 47Hz ~ 63Hz
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### 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

Note: All Specifications are subject to changes without notice  
Ver. 300112

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