



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 ± 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 $+50^{\circ}\text{C}$ (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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