



## ALB190 Series

Compact 400W  
C-Band High Power Block-Up Converter

This small and lightweight BUC is ideal for mobile and satellite uplink applications.

The BUC has excellent efficiency and consumes less power for 400W. Innovative and efficient thermal design makes this BUC one of the smallest in the industry.

Built-in redundancy-ready feature eliminates the use of an external controller for 1:1 redundancy operation. This eliminates messy cabling at the antenna making this a very elegant solution.

Extensive M/C interface with RS232/485, Ethernet (SNMP & HTTP) and Wifi.

### Features

- Compact and lightweight
- Available for all C-Band frequencies
- Forward & reverse power detection facility
- Input power detection facility
- Intuitive monitoring & control through RS232/485, Ethernet (SNMP & HTTP)
- Automatic fault identification & alarm generation
- Temperature compensation facility
- Built-in redundancy facility
- Built-in 10MHz reference with auto-detection
- Built-in harmonics reject filter
- Sample port for output monitoring
- Wide operating temperature range -40°C to +60°C
- RoHS Compliant
- Waterproof

### Quality Assurance

100% of all BUCs go through stringent quality checks in addition to well defined Electrical Stress Screening to ensure operation in harsh outdoor environments. The BUCs are also subjected to seal test for water ingress verification.

### Reliability

Field proven under harsh environment conditions, Agilis ODUs can withstand temperature ranging from -40°C to +60°C with up to 100% humidity.

### Frequency Band

#### INTELSAT

LO : 7375MHz / 4900MHz  
IF : 950 to 1525MHz  
Tx : 5.850 to 6.425GHz

#### INSAT

LO : 8125MHz / 5625MHz  
IF : 1100 to 1400MHz  
Tx : 6.725 to 7.025GHz

#### PALAPA / ST1

LO : 7900MHz / 5275MHz  
IF : 1150 to 1450MHz  
Tx : 6.425 to 6.725GHz

#### FULL C

LO : 7675MHz / 4900MHz  
IF : 950 to 1825MHz  
Tx : 5.850 to 6.725GHz

#### EXTENDED

LO : 4750MHz / 5000MHz  
(Switchable)  
IF : 950 to 1725MHz  
Tx : 5.725 to 6.725GHz



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## Technical Specifications

### RF Specifications

<b>Transmit Frequency</b>	Intelsat / Full C/ Insat/ Palapa C/Extended
<b>IF Frequency Range</b>	Refer to Table 1
<b>Output Power @ P1dB</b>	56dBm (400W)
<b>Small Signal Gain</b>	75dB Min
<b>Gain Flatness</b>	±2dB over the O/P frequency band
<b>Gain Variation</b>	±1.5dB over the operating temperature range
<b>Gain Control</b>	30dB in step of 0.5dB
<b>Inter Modulation</b>	-25dBc @ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power
<b>O/P spurious</b>	According to EN301443
<b>Phase Noise @ Offset</b>	
1KHz	-80dBc/Hz
10KHz	-90dBc/Hz
100KHz	-100dBc/Hz
<b>I/P VSWR</b>	1.5:1
<b>O/P VSWR</b>	1.5:1
<b>Noise Power Density Tx BD</b>	70dBm/ 4KHz
<b>Rx BD</b>	142dBm/ 4KHz

### DC Power Requirement

<b>Prime Power</b>	90 – 264VAC, 50 – 60Hz
<b>Power Consumption</b>	2.5kVA (Typical)

### Interfaces

<b>IF Input Interface</b>	50Ohms N-type Female
<b>Output Interface</b>	CPRG 137G

### External Reference Requirement

<b>Frequency</b>	10MHz
<b>Power</b>	-5dBm to +5dBm
<b>Internal 10MHz Ref</b>	Built-in (auto-detection )
<b>External reference phase noise requirement @frequency offset</b>	
1kHz	-150dBc/Hz
10kHz	-155dBc/Hz
100kHz	-160dBc/Hz

### Monitor & Control

<b>Monitor</b>	BUC Temperature Status Alarm RF Output Power/RF Input Power RF Reflected Output Power LED Status Indication
<b>Control</b>	Attenuation RF output mute
<b>Interface</b>	RS232/485, Ethernet (SNMP & HTTP) & Wifi (Optional)
<b>Tx Redundancy</b>	Built-in

### Environmental

<b>Operating Temperature</b>	-40°C to +60°C
<b>Humidity</b>	Up to 100% Weather protection sealed to IP65

### Mechanical

<b>Size</b>	535L x 300W x 168H mm
<b>Weight</b>	18kg
<b>Color</b>	White Powder Coat

### Compliance Standard

<b>IEC 609501-2nd Edition</b>	International Safety Standard for Information Technology Equipment
<b>ETSI EN 301 489-12</b>	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 4 GHz and 30 GHz in the fixed Satellite Service (FSS)
<b>ETSI EN 301 489-1</b>	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility Standard for Radio Equipment and Services
<b>FCC Class A</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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