



ALB128 Series

Klassic 6W/8W Ku Band IFL
Block-Up Converter

Suitable for broadband applications in flyaway and satellite IP networks for both voice and data communication of different modulation mode,

Excellent output linearity and phase noise with full monitor and control (M&C) features. Auto input voltage ranging between 16Vdc to 60Vdc. Designed to operate between -40°C to +60°C under harsh outdoor environment.

Easy installation with redundancy ready features to work in 1+1 redundancy mode.

Features

- Feed mountable
- Monitoring and Control through Serial and Ethernet ports
- Excellent output power linearity and phase noise
- Fault identification and alarm generation
- Auto gain control throughout operating temperature
- Auto input DC ranging 16 to 60Vdc
- Wide operating temperature -40°C to +60°C
- Fanless 8W option available with operating temperature up to +55°C
- IP65 Weatherproof
- RoHS Compliant

Quality Assurance

100% thorough stringent quality checks in addition to well-defined Environmental Stress Screening to ensure operation in harsh outdoor environment conditions. All 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 under 100% humidity.

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Technical Specifications

RF Specifications

| Freq Band | Transmit | IF | LO |
|-----------|------------------|---------------|----------|
| Plan | 12.75 – 13.25GHz | 950 – 1450MHz | 11.80GHz |
| Standard | 14.00 – 14.50GHz | 950 – 1450MHz | 13.05GHz |
| Extended | 13.75 – 14.50GHz | 950 – 1700MHz | 12.80GHz |

| Output Power | P _{1dB} | P _{linear} |
|--------------|------------------|---------------------|
| 6W | 37.8dBm (6W) | 34.8dBm (3W) |
| 8W | 39.0dBm (8W) | 36.0dBm (4W) |

| | |
|----------------------------|---|
| Small Signal Gain | 62dB min (6W) 64dB min (8W) |
| Gain Flatness | ±2dB within band ±1dB over 40MHz |
| Gain Variation | ±2dB within band over operating temperature |
| Intermodulation | -25dBc max @ P _{linear} |
| Spurious | According to EN 301 428 |
| Phase Noise | -93dBc/Hz max @100KHz offset -83dBc/Hz max @10KHz offset -73dBc/Hz max @1KHz offset |
| VSWR | 2.0:1 max @input 2.0:1 max @output with optional external isolator |
| Noise Power Density | Tx Band : -70dBW/4KHz max Rx Band : -142dBW/4KHz max |

AC/DC Power

| | |
|--------------------------|----------------------|
| Prime Power | 16 to 60Vdc |
| Power Consumption | 60VA @6W 80VA @8W |

Interface

| | |
|------------------|---|
| IF Input | N-Type Female 50Ω F-Type Female 75Ω (option) |
| RF Output | WR75 Square Grooved |

External Reference Requirement

| | |
|--------------------|--|
| Frequency | 10MHz |
| Power Level | -5dBm to +5dBm |
| Phase Noise | -155dBc/Hz max @100KHz offset -145dBc/Hz max @10KHz offset -135dBc/Hz max @1KHz offset |

Monitor & Control

| | |
|----------------------------|---|
| Monitor | BUC Temperature Status Alarm with LED Indicator LO Unlock Alarm RF Input and Forward Power Detection |
| Control | Gain adjustable 15dB with 0.5dB step RF Output On/Mute |
| Communication Port | Serial RS232/RS485 Ethernet (SNMP & HTTP) |
| Transmit Redundancy | Redundancy-Ready (with external controller unit) |

Environmental

| | |
|------------------------------|----------------|
| Operating Temperature | -40°C to +60°C |
| Relative Humidity | Up to 100% |
| Weatherproof | IP65 |

Mechanical

| | |
|---|--|
| Dimension (excluding interface connectors) | L282 x W142 x H98mm L11.10" x W5.59" x H3.86" |
| Weight | 4.1Kg / 9.0lbs |

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); Electro Magnetic 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); Electro Magnetic Compatibility Standard for Radio Equipment and Services |
| ETSI EN 301 428 | Satellite Earth Stations and Systems (SES); Harmonized EN for Very Small Aperture Terminal (VSAT); Transmit-only, transmit/receive or receive-only satellite earth stations operating in the 11/12/14 GHz frequency bands covering essential requirements under article 3.2 of the R&TTE directive |
| FCC Part 15 Class B | Two levels of radiation and conducted emissions limits for unintentional radiators (FCC Mark) |

NOTE: All specifications subject to change without notice
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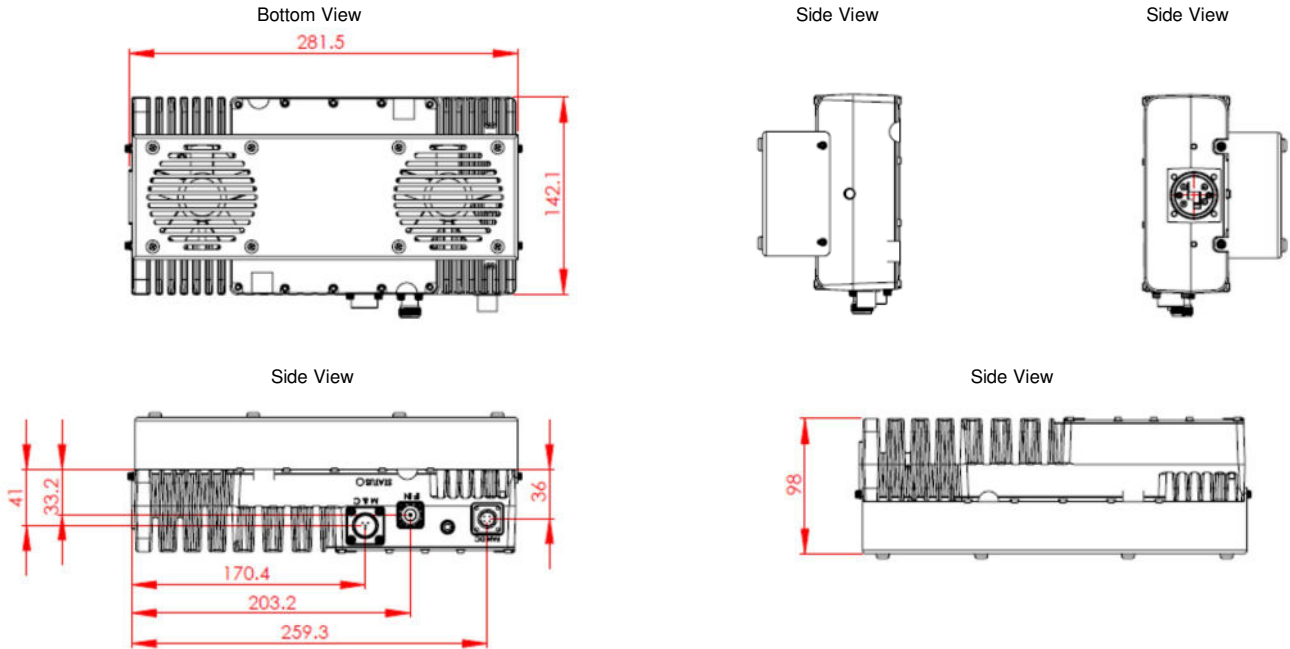
Standard Part List for Standalone Configuration

| ITEM | PRODUCT NAME | OPTION | PART NUMBER | QTY | DESCRIPTION |
|------|------------------------|-----------|-------------|-----|---|
| 1 | BUC | | | 01 | BUC |
| 2 | Cable M&C | RS485/ETH | 2502041169 | 01 | C/A M&C 485/ETH 12-8P to DB9 (F) 2M |
| 3 | Cable M&C | ETH | 2502041166 | 01 | Cable Assembly ETH-DB9 to RJ45 2M |
| 4 | Cable M&C | RS485 | 6103480008 | 01 | Converter USB to RS485 |
| 5 | Mounting Accessory Set | | | 01 | Mounting screws including brackets and gasket for flange WR75 |

Option Items

| ITEM | PRODUCT NAME | OPTION | PART NUMBER | DESCRIPTION |
|------|--------------|--------|-------------|---|
| 1 | WG Flexible | 0.6M | 4203490010 | Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 0.6M |
| | | 1.0M | 4203490049 | Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1.0M |
| | | 1.5M | 4203490014 | Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1.5M |
| 2 | RF Cable | 3M | 2502040137 | C/A RF N (M) to N (M) 3M |
| | | 7M | 2502040109 | C/A RF N(M) TO N(M) 7M |
| | | 10M | 2502041952 | C/A RF N(M) TO N(M) 10M |
| 3 | Cable M&C | 6M | 2502041980 | C/A M&C 485/ETH 12-8P to DB9 (F) 6M |
| | | 50M | 2502041722 | C/A M&C 485/ETH 12-8P to DB9 (F) 50M |

Mounting Diagram

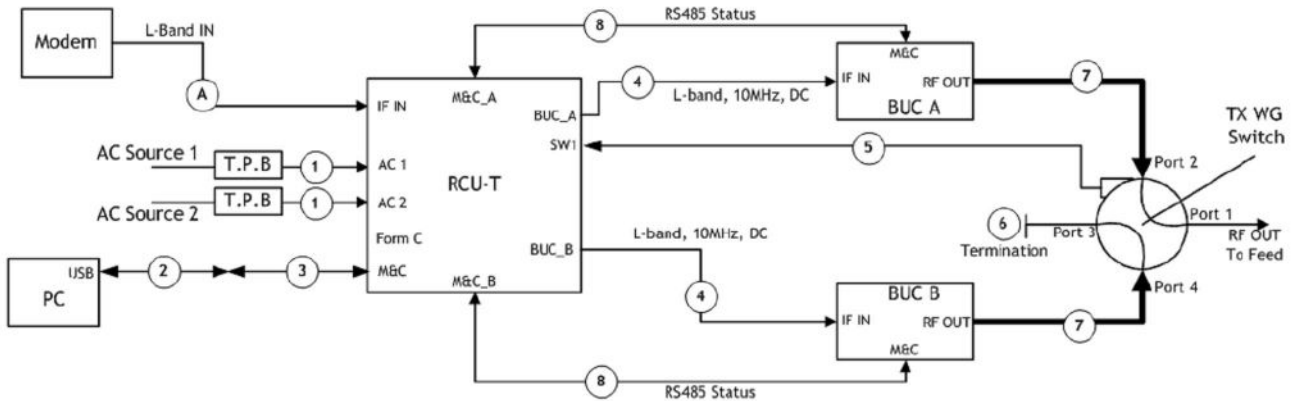


NOTE: Part list and drawing subject to change without notice
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1:1 Redundancy System Block Diagram



Standard Part List for 1:1 Configuration

| ITEM | PRODUCT NAME | OPTION | PART NUMBER | QTY | DESCRIPTION |
|------|-------------------------|------------|--------------|-----|--|
| 1 | RCU | Transmit | AAV6103204-T | 01 | Redundancy Control Unit |
| 2 | BUC | | | 02 | BUC Output Power 6W or 8W |
| 3 | Prime Power Input Cable | 220Vac | 1001520980 | 02 | Transient Protection Box 12-3S to Underterminated 220Vac 5A 3M |
| 4 | Cable M&C | Serial/ETH | 2502041169 | 01 | C/A M&C Serial/ETH 12-8P to DB9 (F) 2M |
| 5 | Cable M&C | ETH | 2502041166 | 01 | C/A M&C ETH-DB9 (M) to RJ45 2M |
| 6 | Converter | RS485 | 6103480008 | 01 | Converter USB to RS485 |
| 7 | Cable Control | | 2502040155 | 01 | C/A Switch RCU Control 10-6S to 10-6P 3M |
| 8 | Cable Control | | 2502040561 | 02 | C/A Straight 12-8S to 12-8P 2M |
| 9 | Cable RF | | 2502040137 | 02 | C/A RF N (M) to N (M) 3M |
| 10 | WG Flexible | | 4203490049 | 02 | Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1.0M |
| 11 | WG S/W & Accessory Set | | 5903290009 | 01 | Wave guide switch and accessories including E-bend/H-bend and termination load |
| 12 | Mounting Accessory Set | | | 01 | Mounting accessories including brackets, screws, studs, gasket for flange WR75 |

NOTE: Part list and drawing subject to change without notice
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