

DLA200

Dual, modular, 'hot-swappable' Line Amplifier with optional 1+1 redundancy for IF (70/ 140MHz), L-band & SHF signals



Available line amplifier modules for the DLA200 chassis;

| | |
|-------------------|--|
| MLA70 | IF 70±20MHz & 140±40MHz frequencies |
| MLAU240 | UHF 240-323MHz frequencies |
| MLAL1450 | L-Band 950-1450MHz frequencies |
| MLAL1750 | L-Band 950-1750MHz frequencies |
| MLAL2150 | L-Band 950-2150MHz frequencies |
| MLAL2450 | Extended L-Band 950-2450MHz frequencies |
| MLAS2400 | S-Band 2.0-2.4GHz frequencies |
| MLAC4200 | C-Band 3.4-4.2GHz receive frequencies |
| MLAC6725 | C-Band 5.85-6.725GHz transmit frequencies |
| MLAKu1275 | Ku-Band 10.7-12.75GHz receive frequencies |
| MLAKu1450 | Ku-Band 13.75-14.5GHz transmit frequencies |
| MLAKu1450B | Ku-Band 12.75-14.5GHz transmit frequencies |
| MLAKu1480 | Ku-Band 13.75-14.8GHz transmit frequencies |
| MLAD1840 | DBS-Band 17.3-18.4GHz transmit frequencies |






For other 'non-standard' frequency requirements, please contact the factory.
For equivalent remote mountable units, please see PLA series datasheet.

The 19-inch 1U rack mounted **DLA200** chassis unit is designed to accept two, line amplifier modules. Modules can be inserted/ replaced in the **DLA200** unit from the rear without the need to remove power or disturb the other channel in any way.

The **DLA200** chassis units are mains powered (redundant power supplies as standard) and are constructed of high-grade components to give the ultimate gain flatness and stability performance.

The **DLA200** unit is available with optional integral 1+1 redundancy switching and control for use when two identical modules are used.

Peak Features

-  High gain flatness and stability performance
-  Amplifier low current alarm monitoring
-  Slope compensation options
-  Redundant power supplies with dual mains input
-  Integral 1+1 redundancy option for module switching



DLA200 Chassis - Typical Specification

Mechanical

| | |
|--------------|--------------------------------|
| Width | 19" standard rack mountable |
| Height | 1U (1.75") |
| Depth | 400mm (15.7"), plus connectors |
| Construction | Aluminium chassis |
| Weight | 4.5kgs (10lbs) |

Environmental

| | |
|----------------|-------------------------------|
| Operating temp | 0°C to +50°C |
| EMC | EN 55022, part B & EN 50082-1 |
| Safety | EN 60950 |

Power Supply (2off in redundant configuration)

| | |
|-------------|---------------|
| Voltage | 90-264VAC |
| Option 11; | 48VDC |
| Frequency | 47-63Hz |
| Total power | 50 Watts max. |

Control System Interface

| | |
|-----------------|---|
| Local interface | Front panel key switches (for option 6) |
| Remote control | RS232/ RS485 port |
| Option 9; | Ethernet; embedded web server & SNMP network management support |
| Alarms | PSU fail Amplifier current detection |

Integral 1+1 'Module' Redundancy (Option 6)

| | |
|------------------|--|
| Connections | SMA (f), 50Ω |
| Switching speed | <150ms (from fault to switch completion) |
| Switch isolation | >60dB input to output |
| Cables | Includes high grade rear panel links |

Note: The connection to the internal redundancy circuitry is made via SMA (f) RF links on the rear panel, this allows for by-pass wiring should the need arise. High grade coaxial linking cables are provided.

10MHz Reference Pass-through (Option 5)

| | |
|---|--|
| Allows 10MHz reference fed into the unit (multiplexed onto input connection) to 'pass-through' to output (L-Band only). | |
| Option 5a; | for use with option 6, fitted between system input and output connections |
| Option 5b; | for use without option 6, fitted between module input and output connections |

L-Band Linear Slope Compensation (Option 15a)

Compensates for internal circuitry & external primarily across-site cables
Notes: Only applicable with option 6, fitted to main chassis common signal path. Unit options chosen will determine 'surplus' available for external compensation (for details contact factory).

| | |
|--------------|---|
| Frequency | 950-2150MHz |
| Compensation | Passive, fixed 5dB nom., positive slope |

Integral Input Combiner /Output Splitter (Option 16a /b)

| | |
|-------------|--------------|
| Option 16a; | 2-way |
| Option 16b; | 4-way |
| Connections | SMA (f), 50Ω |

Notes: Only applicable with option 6, fitted to main chassis common signal path. Typical 7dB insertion loss can be expected. Includes connection spanner.

DLA Options

- 5a) 10MHz reference pass-through (with option 6)
- 6) Integral 1+1 redundancy module switching
- 9) Ethernet interface with embedded web server & SNMP, replaces RS232/485 port
- 11) 48VDC prime power supply
- 15a) 5dB passive, fixed, slope compensation (L-Band only)
- 16a) Passive system input combiner or system output splitter, 2-way
- 16b) Passive system input combiner or system output splitter, 4-way

Note: The addition of options can modify the typical specification, for details please consult the factory.

MLA Modules - Typical Specification

Input

| | |
|-------------|---------------------------------|
| MLA70; | 50-200MHz |
| MLAU240; | 240-323MHz |
| MLAL1450; | 950-1450MHz |
| MLAL1750; | 950-1750MHz |
| MLAL2150; | 950-2150MHz |
| MLAL2450; | 950-2450MHz |
| MLAS2400; | 2.0-2.4GHz |
| MLAC4200; | 3.4-4.2GHz |
| MLAC6725; | 5.85-6.725GHz |
| MLAKu1275; | 10.7-12.75GHz |
| MLAKu1450; | 13.75-14.5GHz |
| MLAKu1450B; | 12.75-14.5GHz |
| MLAKu1480; | 13.75-14.8GHz |
| MLAD1840; | 17.3-18.4GHz |
| Connector | SMA (f), 50Ω |
| Option 1a; | N-Type (f), 50Ω |
| Option 1c; | BNC (f), 50Ω (<2150MHz only) |
| Option 1e; | BNC (f), 75Ω (<2150MHz only) |
| Option 1g; | F-Type (f), 75Ω (<2150MHz only) |

Notes: Some connector options may lower the overall unit performance. F-Type performance cannot be guaranteed.

Return loss 16dB

Output

| | |
|------------|---------------------------------|
| Connector | SMA (f), 50Ω |
| Option 1b; | N-Type (f), 50Ω |
| Option 1d; | BNC (f), 50Ω (<2150MHz only) |
| Option 1f; | BNC (f), 75Ω (<2150MHz only) |
| Option 1h; | F-Type (f), 75Ω (<2150MHz only) |

Notes: Some connector options may lower the overall unit performance. F-Type performance cannot be guaranteed.

Return loss 18 to 22dB (frequency dependent)

RF Performance

| | |
|------------|----------|
| Gain | 20dB min |
| Option 4a; | 30dB nom |
| Option 4b; | 40dB nom |

Note: For other gain requirements please contact the factory.

Gain flatness ±0.25dB (bandwidths <500MHz)
±0.5dB (bandwidths <800MHz)
±1dB (bandwidths <1200MHz)

| | |
|--------------------|---------------------------------|
| Active directivity | 22dB typ., 20dB min |
| RF Input power | -10dBm max (no load, no damage) |
| TOIP | +25dBm (+20dBm >2150MHz) |
| 1dB output GCP | +13dBm (+8dBm >2150MHz) |

Note: For higher GCP options please contact the factory.

| | |
|--------------|---|
| Noise figure | 7 to 9dB (frequency dependent) |
| S-Band | <1.7dB (degrades input return loss to 12dB) |

Note: For improved S-Band RL configurations (with higher NF), please contact factory.

Monitor Ports (Option 2)

| | |
|------------|-----------------------------|
| Option 2a; | Input monitor |
| Option 2b; | Output monitor |
| Connector | SMA (f), 50Ω, on rear panel |
| Level | -20dBc ±3dB |

L-Band Linear Slope Compensation (Option 15)

Compensates for internal circuitry & external primarily across-site cables
Note: Unit options chosen will determine 'surplus' available for external compensation (for details contact factory).

| | |
|--------------|---|
| Frequency | 950-2150MHz |
| Compensation | Passive, fixed 5dB nom., positive slope |

MLA Options

- 1a) N-Type (f), 50Ω MLA module input connector
- 1b) N-Type (f), 50Ω MLA module output connector
- 1c) BNC (f), 50Ω MLA module input connector
- 1d) BNC (f), 50Ω MLA module output connector
- 1e) BNC (f), 75Ω MLA module input connector
- 1f) BNC (f), 75Ω MLA module output connector
- 1g) F-Type (f), 75Ω MLA module input connector
- 1h) F-Type (f), 75Ω MLA module output connector
- 2a) -20dBc input monitor on rear panel
- 2b) -20dBc output monitor on rear panel
- 4a) higher gain to 30dB nom
- 4b) higher gain to 40dB nom
- 5b) 10MHz reference pass-through
- 15) 5dB passive, fixed, slope compensation (L-Band only)

Note: The addition of options can modify the typical specification, for details please consult the factory.

Rear panel view (sample, shown with 1+1 redundancy option fitted)

