DLAH200

Dual, Modular, ‘Hot-swappable’ Variable Gain, Line Amplifier with optional 1+1 redundancy

Available line amplifier modules for the DLAH200 chassis;

MLAH70	IF 50-200MHz frequencies
MLAHU240	UHF 240-323MHz frequencies
MLAHL1450	L-Band 950-1450MHz frequencies
MLAHL1750	L-Band 950-1750MHz frequencies
MLAHL2150	L-Band 950-2150MHz frequencies
MLAHL2450	Extended L-Band 950-2450MHz frequencies
MLAHS2400	S-Band 2.0-2.4GHz frequencies
MLAHC4200	C-Band 3.4-4.2GHz receive frequencies
MLAHC6725	C-Band 5.85-6.725GHz transmit frequencies
MLAHKu1275	Ku-Band 10.7-12.75GHz receive frequencies
MLAHKu1450	Ku-Band 13.75-14.5GHz transmit frequencies
MLAHKu1450B	Ku-Band 12.75-14.5GHz transmit frequencies
MLAHKu1480	Ku-Band 13.75-14.8GHz transmit frequencies
MLAHD1840	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 **DLAH200** chassis unit is designed to accept two, line amplifier modules. Modules can be inserted/ replaced in the unit from the rear without the need to remove power or disturb the other channel in any way.

The unit incorporates a graphics display module, membrane keyboard and features a clear and intuitive control and configuration menu fully utilising the unique graphics display.

The **DLAH200** chassis units are mains powered (redundant power supplies offered as standard) and are constructed of high-grade components to give the ultimate gain flatness and stability performance.

Peak Features

- High gain flatness and stability performance
- Supports variable attenuator, ‘chassis mute’ & slope compensation options
- Amplifier module low current alarm monitoring
- Active & passive slope compensation options
- Redundant power supplies with dual mains input
- Integral 1+1 redundancy option for module switching

DLAH200 Chassis - Typical Specification

Mechanical

Width	19”, standard rack mount
Height	1U (1.75”)
Depth	568mm (22.4”), plus connectors
Construction	Aluminium chassis
Weight	Approx. 9kgs (20lbs)

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
Frequency	47-63Hz
Total power	50 Watts typ.

Control System Interface

Local interface	Graphics display & keypad
Remote control	RS232/ 485 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
Option 13;	Output ‘chassis mute’ facility (>80dB)
Cables	Includes high grade rear panel links

Notes: 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 co-axial 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 cross-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 (dependent upon ‘ways’). Includes connection spanner.

MLAH Modules - Typical Specification

Input

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.

Option 7;	Adjustment; 30dB range, 0.1 or 0.5dB steps
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, at minimum attenuation)
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

Power Detector & Alarms (Option 14, 14b)

Detection range	0 to -50dBm
Display	graphical via front panel & remote control
Input (Option 14);	Displays actual input & calculated output power
Output (Option 14b);	Displays actual output & calculated input power
Power alarm	User settable
Compression alarm	Automatic ‘pre-set’ warning alarm for input/ output compression point, user settable

Note: For single carrier power monitoring only. For use with multiple carriers, only the highest is displayed & cannot be used for compression point warning.

L-Band Linear Slope Compensation (Option 15, 15b)

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	
Option 15;	Passive, fixed 5dB nom., positive slope
Option 15b;	Active, user settable 0 to 8dB, positive slope (reduces to 0 to 6dB, over 950-1750MHz & 0 to 5dB, over 950-1450MHz)

Note: Option 15b includes variable attenuation facility 25dB range, 0.1dB step.

DLAH Chassis 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
13) Output 'chassis mute' facility (with option 6)
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

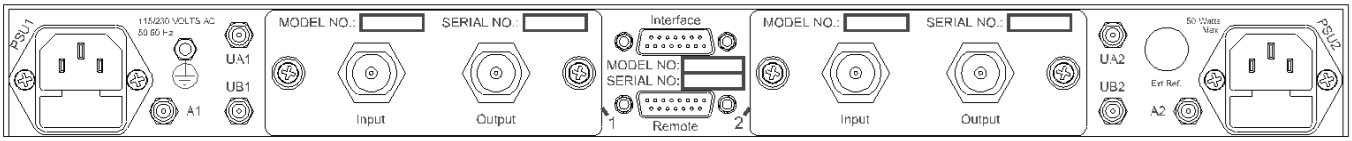
Note: The addition of options can modify the typical specification, for details please consult the factory.

MLAH Module Options

1a) N-Type (f), 50Ω MLAH module input connector
1b) N-Type (f), 50Ω MLAH module output connector
1c) BNC (f), 50Ω MLAH module input connector
1d) BNC (f), 50Ω MLAH module output connector
1e) BNC (f), 75Ω MLAH module input connector
1f) BNC (f), 75Ω MLAH module output connector
1g) F-Type (f), 75Ω MLAH module input connector
1h) F-Type (f), 75Ω MLAH 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
7) Variable gain, 30dB range, 0.1dB steps
7a) Variable gain, 30dB range, 0.5dB steps
14) Input signal power detector and alarms
14b) Output signal power detector and alarms
15) 5dB passive, fixed, slope compensation (L-Band only)
15b) Active, user settable, slope compensation (L-Band only), including variable gain facility

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)*



PEAK COMMUNICATIONS

Peak Communications Ltd., Unit 1, The Woodvale Centre, Woodvale Road, Brighouse, West Yorkshire, HD6 4AB, U.K.
Tel; +44 (0)1484 714200 Email; sales@peakcom.co.uk Web; www.peakcom.co.uk