PLAH Series

Remote Mounted, L-Band Line Amplifiers with slope compensation.

The **PLAH series** remote mounted L-Band line amplifier units from Peak Communications are designed to overcome the losses associated with cross-site installations, whilst incorporating user variable gain & slope controls for optimisation of the RF chain performance & providing ultimate flexibility during commissioning.

The units are DC powered and will accept a wide range of DC voltages, either multiplexed onto the IFL or via a separate connection & can be offered with the **OPS18a/OPS18b** outdoor AC/DC PSU's.

Constructed of high-grade components to give the ultimate gain flatness and stability performance, they are offered in a fully weatherproof sealed chassis designed for mounting in outdoor, exposed locations.

Provided with Ethernet based remote control as standard, they are available with the low-cost **PLAH-LC** plug-in hand-held local controller module for ease of adjustment at the antenna/ hub during commissioning/ maintenance.

High Grade Line Amplifier Products;

PLAH-Tx	950-2150MHz, single channel (output compression optimised for transmit systems)
PLAH-DTx	950-2150MHz, dual channel (output compression optimised for transmit systems)
PLAH-Rx	950-2150MHz, single channel (noise figure optimised for receive systems)
PLAH-DRx	950-2150MHz, dual channel (noise figure optimised for receive systems)
PLAH-Tx-Rx	950-2150MHz, dual channel, one transmit & one receive channel.

For other 'non-standard' frequency requirements, please contact the factory.
For multi-channel units in larger chassis, please consult the factory.
For equivalent rack mountable units, please see ILA, ILAH & DLA series datasheet.

Peak Features

- User variable gain & slope compensation, as standard
- High gain flatness and stability performance
- Amplifier low current alarm monitoring
- Comprehensive Ethernet control as standard plus optional hand-held local control module
- Rugged weatherproof housing
- Multi-channel units available in larger chassis
- Temperature compensated, for thermal stability and fast warm-up

PLAH series - Typical Specification

Input

Frequency	950-2150MHz
Connector	50Ω, N-Type (f)
Return loss;	
Tx;	18dB typ., 14dB min.
Rx;	16dB typ., 14dB min.

Output

Connector	50Ω, N-Type (f)
Return loss;	
Tx;	14dB typ., 12dB min.
Rx;	18dB typ., 16dB min.

RF Performance

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

Note: For other gain requirements please contact the factory.

Gain flatness	±0.5dB at slope setting 0dB
Active directivity	22dB typ., 20dB min.
RF input power	+10dBm max (no load, no damage)

Tx configuration (optimised for output compression)

Gain (dB)	Slope (dB)	Noise figure (dB)	1dBGCP (dBm)
20	0	12.5	+17
20	5	13.5	+17
20	10	17.5	+17
10	0	15.5	+16
10	5	19	+11
10	10	23.5	+10
0	0	23.0	+6
0	5	28.0	+1
0	10	33.0	0

Rx configuration (optimised for noise figure)

Gain (dB)	Slope (dB)	Noise figure (dB)	1dBGCP (dBm)
20	0	4	+6
20	5	4	+1
20	10	4.5	0
10	0	4.5	-4
10	5	4.5	-9
10	10	6.0	-10
0	0	6.0	-14
0	5	7.5	-19
0	10	11.5	-20

Linear Active Slope compensation

Compensates for internal circuitry & external primarily across-site cables

Note: Unit options chosen will determine 'surplus' available for external compensation (for details contact factory).

Compensation is user settable 0 to 8dB, positive slope (reduces to 0 to 6dB, over 950-1750MHz & 0 to 5dB, over 950-1450MHz)

Note: Includes variable attenuation facility 25dB range, 0.1dB step.

Electronically Variable Attenuation

Attenuation range	30dB
Step size	0.5dB

10MHz Reference Pass-through (Option 1, 1a)

Allows 10MHz reference fed into the unit (multiplexed onto L-Band) to 'pass-through'. For alternative configurations please contact the factory.

DC Pass-through for BUC/LNB powering (Option 1a)

Allows DC fed into the unit (multiplexed onto L-Band) to 'pass-through', typically to power an external BUC/ BDC/ LNB.

Mechanical

Width	123mm (4.85")
Height	172mm (6.8"), plus connections & mounting flanges
Depth	55mm (2.16")

Note: Size increases with options 1 & 2 to H223x W147x D56mm.

Construction	Die-cast Aluminium, IP66 rated
Weight	1.4kgs (3lbs) approx.

Environmental

Operating temp	-25°C to +55°C (less solar gain)
Option 12;	-40°C to +55°C (less solar gain), with extended warm-up time for cold start operation & higher current
Humidity	0-100% condensing
EMC	EN 55022, part B & EN 50082-1
Safety	EN 60950

Power Supply

Voltage	+16.5 to +35VDC
Current	500mA max
Connection	Fed in on 5-pin circular weatherproof (mating part supplied)
Option 2a;	Fed in on L-Band cable
Option 2b;	Fed in on the 5-pin control connection as well as the L-Band cable

Control System Interface

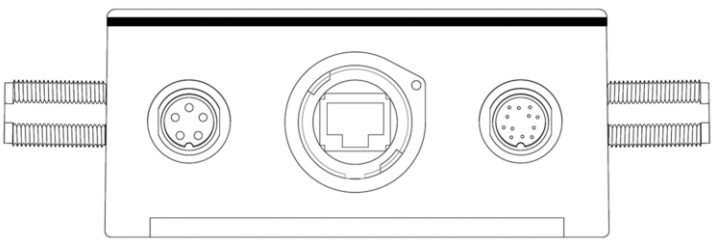
Remote control	Ethernet; embedded web server & SNMP network management support (RJ45, sealed, mating parts provided)
Local control	**PLAH-LC** plug-in unit for local control, allowing gain & slope adjustment
Alarms	Summary alarm contacts
Connection	multi-pin circular weatherproof (mating part supplied)

Options

1) 10MHz reference pass-through on the L-Band connection
1a) 10MHz reference & DC (2A max.) pass-through on the L-Band connection
2a) DC input connection multiplexed onto the L-Band cable replacing the wired connection to the 5-pin control interface connector
2b) DC input connection multiplexed onto the L-Band cable as well as the 5-pin control interface connector
4a) Increased gain to 30dB nom.
4b) Increased gain to 40dB nom.
12) Low temperature operation to -40°C
16) Factory pre-set IP address

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

Connector panel view (sample)



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