

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)
950-2150MHz, dual channel (output compression optimised for transmit systems)
950-2150MHz, dual channel (noise figure optimised for receive systems)
950-2150MHz, dual channel (noise figure optimised for receive systems)
950-2150MHz, dual channel (noise figure optimised for receive systems)
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

Provides user settable positive slope compensation for internal circuitry & external primarily cross-site cables.

Note; option 4 gain choice will determine 'surplus' available for external compensation (for details contact factory).

Pivot point 2150MHz

Range -2 to +10dB nom., user adjustable

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.
- 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)



