

## ILAH Series

IF (70/ 140MHz), L-Band & SHF Line Amplifiers, Rack Mounted with user interface.



### High Grade Line Amplifier Products;

<b>ILAH70</b>	IF 70±20MHz & 140±40MHz frequencies
<b>ILAHL1450</b>	L-Band 950-1450MHz frequencies
<b>ILAHL1750</b>	L-Band 950-1750MHz frequencies
<b>ILAHL2150</b>	L-Band 950-2150MHz frequencies
<b>ILAHS2400</b>	S-Band 2.0-2.4GHz frequencies
<b>ILAHC4200</b>	C-Band 3.4-4.2GHz receive frequencies
<b>ILAHC6725</b>	C-Band 5.85-6.725GHz transmit frequencies
<b>ILAHKu1275</b>	Ku-Band 10.7-12.75GHz receive frequencies
<b>ILAHKu1450</b>	Ku-Band 13.75-14.5GHz transmit frequencies
<b>ILAHD1840</b>	DBS-Band 17.3-18.4GHz transmit frequencies

For other 'non-standard' frequency requirements, please contact the factory.

For multiple-channel units in a single chassis (Dual, Triple, Quad), please consult the factory.

For equivalent lower cost units without the full user interface please see ILA series datasheet.

For equivalent remote mount units, please see PLA series datasheet.

The 19-inch, 1U rack mounted, **ILAH series** of L-Band & SHF Line Amplifier units from Peak Communications are designed to provide high quality signal amplification, primarily for satellite Earth station cross-site applications.

The **ILAH series** units are mains powered and are constructed of high grade components to give the ultimate Gain flatness and stability performance.

For redundancy the **ILAH series** units use a simple CANBUS® interface and have an integral redundancy controller for 1+1 & 2+1 operation (for use with external **A1000L**, **A2000L** switch units), for N+1 systems a separate external control and switch unit is provided (**RCU1002 series**).

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.

### Peak Features

- ☒ High gain flatness and stability performance.
- ☒ Amplifier low current alarm monitoring
- ☒ Electronically Variable Attenuator options for both local & remote control of Gain
- ☒ Slope compensation options
- ☒ Integral 1+1 & 2+1 CANBUS® redundancy control & N+1 switch systems available
- ☒ Monitor, mute and fibre optic L-Band interface options available
- ☒ Optional input signal power detector with user settable input & 'compression alarm' threshold level



## ILAH series - Typical Specification

### Input

ILAH70;	50-200MHz
ILAHL1450;	950-1450MHz
ILAHL1750;	950-1750MHz
ILAHL2150;	950-2150MHz
ILAHS2400;	2.0-2.4GHz
ILAHC4200;	3.4-4.2GHz
ILAHC6725;	5.85-6.725GHz
ILAHKu1275;	10.7-12.75GHz
ILAHKu1450;	13.75-14.5GHz
ILAHD1840;	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 performance. F-Type connector performance cannot be guaranteed.

Return loss	16dB
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### 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)

Note; some connector options may lower the overall performance. F-Type connector performance cannot be guaranteed.

Return loss	18 to 22dB (frequency dependent)
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### 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 1dB GCP options please contact the factory

Noise figure	7 to 9dB (frequency dependent)
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### Monitor (Input Option 2a/c, Output Option 2b/d)

Connector	SMA (f), 50Ω, on rear panel
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Note; for other connection types please contact the factory

Level	-20dBc ±3dB
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### Electronically Variable Attenuation (Option 10)

Attenuation range	30dB
Step size	0.1dB or 0.5dB (frequency dependent)
Control	Via local (front panel) & remote control

### RF Mute (Option 13)

Isolation	60dB min
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### Slope compensation (Option 15)

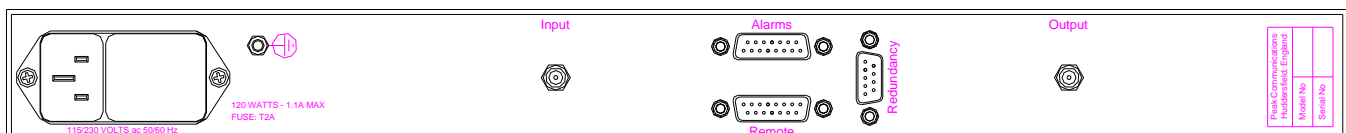
Provides linear positive slope compensation of nominally 5dB across the full L-Band range (950-2150MHz), to compensate for internal circuitry & external primarily cross-site L-Band cables.

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

### 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).

### Rear panel view



### Input Power Detector & Alarms (Option 14)

Detection range	0 to -50dBm
Display	Actual input and calculated output power, graphical via front panel and available via remote control
Low power Alarm	Input power alarm, user settable via front panel interface
Compression Alarm	Automatic 'preset' warning alarm for input/ output compression point, user settable via front panel interface

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

### Mechanical

Width	19" standard rack mountable
Height	1U (1.75")
Depth	400mm (15.7"), plus connectors
Construction	Aluminium chassis
Weight	5.5kgs (12lbs)

### Environmental

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

### Power Supply

Voltage	90-264VAC
Frequency	47-63Hz
Total power	50 Watts max
Option 7;	Redundant PSU; provides a 1+1 redundant power supply configuration with separate prime power inputs

### Control System Interface

Remote control	RS232/RS485 port
Option 9;	Ethernet; embedded web server & SNMP network management support
Redundancy	CANBUS® interface for N+1 system
	In-built 1+1 & 2+1 controller
Discrete 'alarms'	Summary alarm

### Options

- 1a) N-Type (f), 50Ω input interface connection
- 1b) N-Type (f), 50Ω output interface connection
- 1c) BNC (f), 50Ω input interface connection
- 1d) BNC (f), 50Ω output interface connection
- 1e) BNC (f), 75Ω input interface connection
- 1f) BNC (f), 75Ω output interface connection
- 1g) F-Type (f), 75Ω input interface connection
- 1h) F-Type (f), 75Ω output interface connection
- 2a) -20dBc input L-Band monitor on rear panel
- 2b) -20dBc output L-Band monitor on rear panel
- 2c) -20dBc input SHF monitor on rear panel
- 2d) -20dBc output SHF monitor on rear panel
- 4a) Increased gain to 30dB nom.
- 4b) Increased gain to 40dB nom.
- 5) 10MHz reference pass-through on L-Band interface
- 6a) Fibre optic L-band output interface connection
- 6b) Fibre optic L-band input interface connection
- 7) Redundant power supplies
- 9) Ethernet interface with embedded web server & SNMP
- 10a) Electronic attenuator, 0-30dB (0.5dB steps), at L-Band
- 10b) Electronic attenuator, 0-30dB (0.1dB steps), at L-Band
- 10c) Electronic attenuator, 0-30dB (0.5dB steps), at Ku-Band
- 10d) Electronic attenuator, 0-30dB (0.5dB steps), at C-Band
- 13) RF mute option
- 14) Input signal power detector and alarms.
- 15) 5dB slope compensation (L-Band only)

Note; the addition of options can modify the typical specification, for details please consult the factory

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COMMUNICATIONS

Peak Communications reserves the right to alter the specifications of this equipment without prior notice. ILAHseries-210218.

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