ILAH Series

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

High Grade Line Amplifier Products;

ILAH70	IF 70±20MHz & 140±40MHz frequencies
ILAHU240	UHF 240-323MHz frequencies
ILAHL1450	L-Band 950-1450MHz frequencies
ILAHL1750	L-Band 950-1750MHz frequencies
ILAHL2150	L-Band 950-2150MHz frequencies
ILAHL2450	Extended L-Band 950-2450MHz frequencies
ILAHS2400	S-Band 2.0-2.4GHz frequencies
ILAHC4200	C-Band 3.4-4.2GHz receive frequencies
ILAHC6725	C-Band 5.85-6.725GHz transmit frequencies
ILAHKu1275	Ku-Band 10.7-12.75GHz receive frequencies
ILAHKu1450	Ku-Band 13.75-14.5GHz transmit frequencies
ILAHKu1450B	Ku-Band 12.75-14.5GHz transmit frequencies
ILAHKu1480	Ku-Band 13.75-14.8GHz transmit frequencies
ILAHD1840	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 IF to 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 system 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.
- Optional input signal power detector with user settable input & 'compression alarm' threshold level
- Electronically variable attenuator options for both local & remote control of gain
- Active & passive slope compensation options
- Integral 1+1 & 2+1 CANBUS® redundancy control, N+1 switch system available
- Monitor, mute and fibre optic L-Band interface options available
- Amplifier low current alarm monitoring

ILAH series - Typical Specification

Input

ILAH70;	50-200MHz
ILAHU240;	240-323MHz
ILAHL1450;	950-1450MHz
ILAHL1750;	950-1750MHz
ILAHL2150;	950-2150MHz
ILAHL2450;	950-2450MHz
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
ILAHKu1450B;	12.75-14.5GHz
ILAHKu1480;	13.75-14.8GHz
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

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 performance. F-Type connector performance cannot be guaranteed.

Return loss	18 to 22dB (frequency dependent)

RF Performance

Gain	20dB min
Option 4a;	30dB nom
Option 4b;	40dB nom
Option 4c;	50dB 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 1dBGCP options please contact the factory.

Noise figure	7 to 9dB (frequency dependent)
S-Band	<1.7dB

Monitor (Input Option 2a/c, Output Option 2b/d)

Connector	SMA (f), 50Ω, on rear panel

Note: For other connection types please contact the factory.

Level	-20dBc ±3dB

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

10MHz Reference Pass-through (Option 5)

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

DC Feed for BUC/LNB powering (Option 5b)

DC feed multiplexed onto L-Band interface to power an external BUC/ LNB, with current monitoring & alarms. Please contact factory with V&I requirements.

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

Notes: 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 cross-site cables.

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

Frequency	950-2150MHz
Passive (Option 15);	Passive, fixed 5dB nom., positive slope
Active (Option 15b);	Active, user settable 0 to 8dB nom., positive slope (reduces to 0 to 6dB nom., over 950-1750MHz)

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

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

Notes: Typical 7dB insertion loss can be expected.

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

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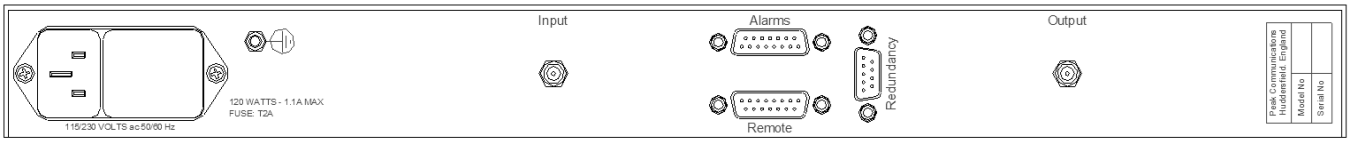
Options

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.
4c) Increased gain to 50dB nom.
5) 10MHz reference pass-through on L-Band interface
5b) DC feed for BUC/LNB powering 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 (0.1dB steps), at Ku-Band
10d) Electronic attenuator, 0-30dB (0.1dB steps), at C-Band
13) RF mute option
14) Input signal power detector and alarms
14b) Output signal power detector and alarms
15) 5dB passive, fixed, slope compensation (L-Band only)
15b) 0-8dB active, user settable, slope compensation (L-Band only)
16a) Passive input combiner or output splitter, 2-way
16b) Passive input combiner or output splitter, 4-way

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

Rear panel view *(sample)*



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