

## ILA Series

### IF (70/ 140MHz), L-Band & SHF Line Amplifier, Rack Mounted.



#### High Grade Line Amplifier Products;

<b>ILA70</b>	IF 70±20MHz & 140±40MHz frequencies
<b>ILAL1450</b>	L-Band 950-1450MHz frequencies
<b>ILAL1750</b>	L-Band 950-1750MHz frequencies
<b>ILAL2150</b>	L-Band 950-2150MHz frequencies
<b>ILAS2400</b>	S-Band 2.0-2.4GHz frequencies
<b>ILAC4200</b>	C-Band 3.4-4.2GHz receive frequencies
<b>ILAC6725</b>	C-Band 5.85-6.725GHz transmit frequencies
<b>ILAKu1275</b>	Ku-Band 10.7-12.75GHz receive frequencies
<b>ILAKu1450</b>	Ku-Band 13.75-14.5GHz transmit frequencies
<b>ILAD1840</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 units with full user interface, remote control and digital attenuation please see ILAH series datasheet.

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

The 19-inch, 1U rack mounted, **ILA 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 **ILA series** units are mains powered and are constructed of high grade components to give the ultimate Gain flatness and stability performance.

For redundancy the **ILA series** units are fully compatible with the Peak **RCU103/ RCUH103** (1+1), **RCU203/ RCUH203** (2+1) and **RCU1001** (N+1) systems.

#### Peak Features

- High gain flatness and stability performance.
- Amplifier low current alarm monitoring
- Manually Variable Attenuator options for local control of Gain
- Slope compensation options
- Integral 1+1 & 2+1 CANBUS® redundancy control & N+1 switch systems available
- Monitor and Fibre Optic L-Band interface options available
- Fully compatible with **RCU100/ RCU200 series** 1+1/ 2+1 redundancy controllers and **RCU1001 series** for N+1 redundancy units



## ILA series - Typical Specification

### Input

<b>ILA70;</b>	50-200MHz
<b>ILAL1450;</b>	950-1450MHz
<b>ILAL1750;</b>	950-1750MHz
<b>ILAL2150;</b>	950-2150MHz
<b>ILAS2400;</b>	2.0-2.4GHz
<b>ILAC4200;</b>	3.4-4.2GHz
<b>ILAC6725;</b>	5.85-6.725GHz
<b>ILAKu1275;</b>	10.7-12.75GHz
<b>ILAKu1450;</b>	13.75-14.5GHz
<b>ILAD1840;</b>	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 of the unit. 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 of the unit. 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

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 GCP options please contact the factory

Noise figure	7 to 9dB (frequency dependent)
--------------	--------------------------------

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

Connector	SMA (f), 50Ω on rear panel
Level	-20dBc ±3dB

Note; for other connection types please contact the factory



### Variable L-Band Attenuation (Option 10)

Attenuation range	30dB
Control	Local, continuously variable, front panel

Note; can degrade gain flatness performance

### 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).

### 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).

### 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

Discrete 'alarms interface'	PSU fail Amplifier fail (current detection)
-----------------------------	------------------------------------------------

### 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
- 10a) Manual variable attenuator, 30dB at L-Band
- 10b) Manual variable attenuator, 30dB at SHF
- 15) 5dB slope compensation (L-Band only)

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

### Rear panel view



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

Peak Communications Ltd., Unit 1, The Woodvale Centre, Woodvale Road, Brighouse, West Yorkshire, HD6 4AB, U.K.

Tel; +44 (0)1484 714200 Sales; +44 (0)1484 714229 Fax; +44 (0)1484 723666 Email; [sales@peakcom.co.uk](mailto:sales@peakcom.co.uk) Web; [www.peakcom.co.uk](http://www.peakcom.co.uk)