Product Overview

To meet the ever-increasing demands of metro networks, service providers and content providers are requiring high-capacity, compact, and easy-to-manage next-generation DWDM solutions. Juniper’s Optical Inline Amplifier provides high-capacity coherent DWDM transport with industry-leading performance and automation.

Product Description

Juniper Networks® Optical Inline Amplifier is a standalone 1U bidirectional erbium-doped fiber amplifier (EDFA) that provides periodic amplification of coherent dense wavelength-division multiplexing (DWDM) signals to enable long-distance transmission as it travels along a fiber span.

The Optical Inline Amplifier is a switched gain inline amplifier that provides a fully automatic and dynamic amplifier range (0-35 dB) supporting up to 120 channels in the C-band. Combined with Juniper’s integrated Coherent DWDM PICs (PTX-5-100G-WDM) and MICs (MIC3-100G-DWDM), as well as the Integrated Photonics Line Card (IPLC-E-32), Juniper provides a true end-to-end packet optical solution. The Optical Inline Amplifier automatically provisions all photonic layer parameters and discovers the optical topologies across a DWDM network. Junos® Space Connectivity Services Director is used to provision, monitor, and troubleshoot Juniper’s end-to-end packet optical solution, including the Optical Inline Amplifier.

Features and Benefits

Juniper Networks Optical Inline Amplifier provides the following benefits:

- Bidirectional amplification in a compact 1U form factor
- Automatic gain control for ease of use
- Optical supervisory channel (OSC) capabilities
- Intuitive and efficient GUI-based provisioning
- Detailed performance monitoring statistics for optical signals
- Redundant and hot-swappable fan modules
- Redundant and hot-swappable power supplies
Features and Benefits

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Condition</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operative input power range</td>
<td>Full channel load with maximum value of signal output power [assuming 96 channels]</td>
<td>-15.2</td>
<td>9.8</td>
<td>dBm</td>
</tr>
<tr>
<td></td>
<td>Single channel with minimum value of signal output power</td>
<td>-35</td>
<td>-10</td>
<td>dBm</td>
</tr>
<tr>
<td>Signal output power range</td>
<td>Full channel load</td>
<td>19.8</td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td></td>
<td>Single channel</td>
<td>0</td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td>Standard gain range</td>
<td>Output gain tilt = 0 dB</td>
<td>10</td>
<td>30</td>
<td>dB</td>
</tr>
<tr>
<td>Extended gain range</td>
<td>Output gain tilt ≠ 0 dB</td>
<td>30</td>
<td>35</td>
<td>dB</td>
</tr>
</tbody>
</table>

Specifications

Capacity

- 19.2 Tbps

Dimensions (HxWxD)

- AC version: 1.72 x 17.24 x 9.6 in. (4.36 x 43.78 x 24.38 cm)
- DC version: 1.72 x 17.4 x 9.8 in. (4.36 x 44.19 x 24.89 cm)

Weight

- 11.7 lb (5.3 kg)

Power Consumption

- Typical: 75 W
- Max: 115.5 W

AC Input Voltage

- 100 to 240 V AC

DC Input Voltage

- -40 to 72 VDC

Management

- CLI and SNMP

Standards Compliance and Interoperability

Safety and Compliance

Compliance

- Telecordia GR-1312-CORE: Generic requirements for optical fiber amplifiers and proprietary dense wavelength-division multiplexed systems

Safety requirements:

- CAN/CSA-C22.2 No.60950-1-03-/UL 60950-1, Safety of Information Technology Equipment
- UL 60950-1 Safety of Information Technology Equipment—Safety
- EN 60950-1 Safety of Information Technology Equipment—Safety

Electromagnetic Compatibility

- FCC 47CFR Part 15—Class A
- ICES-003 Class A
- EN 55022 Class A
- EN 55032
- CISPR 22 Class A
- CISPR 32
- EN 55024
- CISPR 24
- EN 300 386
- VCCI Class A
- AS/NZS CISPR 32
- Korea KN32 and KN35
- CNS 13438 Class A
- EN 61000-3-2
- EN 61000-3-3

Environmental Compliance

- Restriction of Hazardous Substances (ROHS) 6/6
- Silver PSU Efficiency
- Recycled material
- Waste Electronics and Electrical Equipment (WEEE)
- Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- China Restriction of Hazardous Substances (ROHS)

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit [www.juniper.net/us/en/products-services](http://www.juniper.net/us/en/products-services).
## Ordering Information

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>PTX-ILA-M-DC</td>
<td>Standalone 1 U bidirectional EDFA inline amplifier; 0-35 dB dynamic range; redundant AC power; redundant FAN</td>
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<tr>
<td>PTX-ILA-M-AC</td>
<td>Standalone 1 U bidirectional EDFA inline amplifier; 0-35 dB dynamic range; redundant AC power; redundant FAN</td>
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<tr>
<td>FAN-ILA-S</td>
<td>Spare fan tray</td>
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<tr>
<td>JPSU-150-AC-AFO</td>
<td>AC power supply</td>
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<tr>
<td>JPSU-150-DC-AFO</td>
<td>DC power supply</td>
</tr>
</tbody>
</table>

## About Juniper Networks

Juniper Networks challenges the status quo with products, solutions and services that transform the economics of networking. Our team co-innovates with customers and partners to deliver automated, scalable and secure networks with agility, performance and value. Additional information can be found at [Juniper Networks](https://www.juniper.net) or connect with Juniper on [Twitter](https://twitter.com/JuniperNetworks) and [Facebook](https://www.facebook.com/junipernetworks).