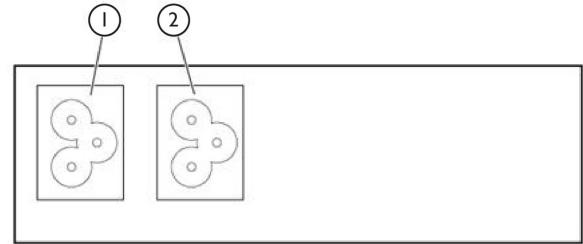
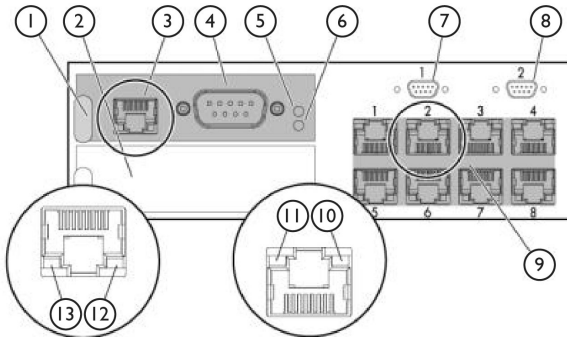


### Overview

The SL Advanced Power Manager is a rack level solution for the HP ProLiant SL6500, SL4500, and HP Moonshot1500 System, which enables server level power on and off, server metering, SL Rack Dynamic Power Capping, and Asset Management capabilities. In addition, the SL APM will automatically discover SL hardware components which are connected into the SL APM solution.



#### Front View:

1. SL-APM controller slot 1
2. SL-APM controller slot 2
3. 10/100 network interface
4. Serial console
5. Power (green) LED
6. Fault (red) LED
7. PDM1 for HP Intelligent Modular PDU Extension Bar
8. PDM2 for HP Intelligent Modular PDU Extension Bar
9. SL-APM Distribution Module ports
10. Network interface 100mb activity (amber) LED, indicates that the link is in 100Base-T mode and blinks when transmitting or receiving data. When the link is 10mb, the LED does not illuminate.
11. Network interface connection (green) LED, indicates that the Ethernet link is established
12. Distribution Module port connection (green) LED, indicates that SL-APM Distribution Module is connected to the port
13. Distribution Module port activity (green) LED, indicates that there is activity between the SL-APM and the SL-APM Distribution Module

#### Back View:

1. AC power input 1
2. AC power input 2

### Standard Features

#### Warranty

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners. Hardware diagnostic support and repair is available for one year from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. Hard drives have either a one year or three year warranty.

**NOTE:** Server Warranty includes 1 year Parts, 1 year Labor, 1-year on-site support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have HP replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:

<http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>.

### Optional Features

**Factory Express Portfolio for Servers and Storage** HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to: <http://www.hp.com/go/factory-express>.

### Service and Support

#### Service and Support

#### HP Technology Services

HP Technology Services offers you consultants and support experts to solve your most complex infrastructure problems. We help keep your business running, boost availability and avoid downtime.

#### Protect your business beyond warranty with HP Care Pack Services

When you buy HP Options, it's also a good time to think about what level of service you may need. HP Care Pack services provide total care and support expertise with committed response choices designed to meet your IT and business need.

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### Recommended HP Care Pack Services for optimal satisfaction with your HP product

#### Recommended Services

#### 3-Year HP 24x7 4 hour Response, Hardware Support Onsite Service

Provides you with rapid remote support and if required an HP authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EEE.pdf>

#### HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf>

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### Related HP Care Pack Services to enhance your HP product experience

#### Related Services

#### 3-Year HP 6 hour Hardware Support Onsite Call-to-Repair Service

Provides an IT manager with a team of support specialists who will quickly begin troubleshooting the system to help return the hardware to operating condition within 6 hours of the initial service request to the HP Global Solution Center

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EN.pdf>

#### HP Proactive Select Service

Provides a flexible way to purchase HP best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN.pdf>

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#### Insight Remote Support

Delivers secure remote monitoring and support for HP servers and storage, 24x7 at no additional cost. Available as part of HP Warranty, Care Pack and Service Contract offers.

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#### Parts and materials

HP will provide HP-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Supplies and consumable parts will not be provided as part of this service; standard warranty terms and conditions apply. Parts and components that have exceeded their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual or the technical product data sheet will not be provided, repaired or replaced as part of this service.

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### Service and Support

**Coverage**

For ProLiant servers and storage systems, this service covers HP-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22" and tower UPS products; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HP due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by HP as consumable parts and/or that have exceeded maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option.

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**For more information**

To learn more on services for HP ESSN Options, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: <http://www.hp.com/services/proliant> or [www.hp.com/services/bladessystem](http://www.hp.com/services/bladessystem)

### Configuration Information - Factory Integrated Models

**NOTE:** This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

**NOTE:** FIO indicates that this option is only available as a factory installable option.

#### **Step 1: Base Configuration (choose one from each list unless otherwise noted)**

<b>HP SL Advanced Power Manager</b>	HP SL Advanced Power Manager Kit	538084-B21
	<b>NOTE:</b> Each SL-APM can connect to 8 SL-APMD	
	HP SL Advanced Power Manager Distribution Module Kit	620002-B21
	<b>NOTE:</b> Each SL-APMD can connect to 10 s6500 chassis, 10 SL454x chassis, or 10 HP Moonshot 1500 chassis.	

### Technical Specifications

<b>System Unit</b>	<b>Chassis Dimensions</b> (H x W x D)	1.7" x 5.5" x 9" (4.3 x 14 x 22.9cm)		
	<b>Weight</b> (approximate)	3.25 lbs		
	<b>Input Requirements</b> (per power supply)	Rated Line Voltage	100 to 240 VAC	
		Rated Input Current	1.0A at 115VAC 1.0A at 230VAC	
		Rated Input Frequency	50 to 60 Hz	
		Rated Input Power	12W (at 100 VAC), 12W (at 200 VAC)	
	<b>Power Specifications</b>	To review typical system power ratings use the HP Power Advisor which is available via the online tool located at URL: <a href="http://www.hp.com/go/proliant-energy-efficient">www.hp.com/go/proliant-energy-efficient</a>		
	<b>System Inlet Temperature</b>	Operating	653.10W (at 100 VAC), 653.08W (at 200 VAC) 50° to 95° F (10° to 35° C) at sea level with an altitude derating of 1.8°F per every 1000 ft (1.0°C per every 305 m) above sea level to a maximum of 10,000 ft (3050 m), no direct sustained sunlight. Maximum rate of change is 18°F/hr (10°C/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 86°F (30°C).	
		Non-operating	-22° to 140° F (-30° to 60° C) Maximum rate of change is 36°F/hr (20°C/hr).	
	<b>Relative Humidity</b> (non-condensing)	Operating	10% to 90% relative humidity (Rh), 82.4°F (28°C) maximum wet bulb temperature, non-condensing.	
Non-operating		5% to 95% relative humidity (Rh), 101.7°F (38.7°C) maximum wet bulb temperature, non-condensing.		
<b>Altitude</b>	Operating	10,000 ft (3050 m). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 1500 ft/min (457 m/min).		
	Non-operating	30,000 ft (9144 m). Maximum allowable altitude change rate is 1500 ft/min (457 m/min).		
<b>Acoustic Noise</b>	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).			
	<b>Idle</b>			
		LWAd	N/A	
	LpAm	N/A		

### Technical Specifications

		<b>Operating</b>	
		LWAd	N/A
		LpAm	N/A
<b>Emissions Classification (EMC)</b>	FCC Rating	Class A	
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1	

**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

#### **Environment-friendly Products and Approach**

#### **End-of-life Management and Recycling**

Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <http://www.hp.com/go/green>. To recycle your product, please go to: <http://www.hp.com/go/green> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.