

## Use Raritan's Intelligent Rack PDUs to Efficiently Power Cisco's Nexus 7010

Cisco Nexus® 7000 Series Switches combine high levels of scalability with operational flexibility. The Cisco Nexus 7010 is a 10-slot chassis with 10 front-accessible vertical module slots and front-to-back airflow and an integrated cable management system.



## Cisco's Nexus 7010 Power Supply Options

You can install up to three power supplies in each Cisco Nexus 7010 Series chassis. If you leave any power supply slots empty, you must install a blank filler plate in those slots to maintain the designed airflow. For the Nexus 7010, up to (3) 6kW or up to (3) 7.5kW power supplies can be installed.

The 6.0-kW AC power supply module (Figure 1) for the Cisco Nexus 7000 Switches is a dual 20A AC input power supply with 2 x C20 input connectors. When both inputs are at high line nominal voltage (220 VAC), the power output is 6000W. You will need to order appropriate power cords depending on the type of intelligent rack power unit you want to connect to. In most cases, it will either be Power Cord, 250VAC, 16A, twist lock NEMA L6-20 plug, United States (Cisco p/n CAB-AC-C6KTWLK), or a Cabinet Jumper Power Cord, 250V AC, C20-C19 connector (Cisco p/n CAB-C19-CBN).



**Figure 1**  
Cisco Nexus 7000 6.0-kW  
AC Power Supply Module

The 7.5-kW AC power supply module (Figure 2) for the Cisco Nexus 7000 Switches is a dual 30A AC input unit. The AC power cords for the 7500W power supply are hard wired directly to the power supply. When both inputs are connected, the output power is 7500W. Two versions of the 7.5-kW AC power supply are available: United States and Japan, and International. The North American/US part will come with a NEMA L6-30P 30A plug type while the International part comes with an IEC 60309 32A plug type



**Figure 2**  
Cisco Nexus 7000 7.5-kW  
AC Power Supply Module

The Cisco Nexus 7000 chassis supports multiple load-sharing, fault-tolerant, and hot-swappable power supplies. As few as just one power supply can be used to operate a switch chassis. Use of multiple power supplies provides additional power capacity and resilience after failure of the power supply, the generating supply itself, or a facility component such as an uninterruptible power supply (UPS) or a circuit breaker.

For more information on power supply redundancy, please visit:

[http://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series-switches/Data\\_Sheet\\_C78-437761.html](http://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series-switches/Data_Sheet_C78-437761.html)

# Cisco's Nexus 7010 With 3 6.0 KW Power Supplies

## Setup Details

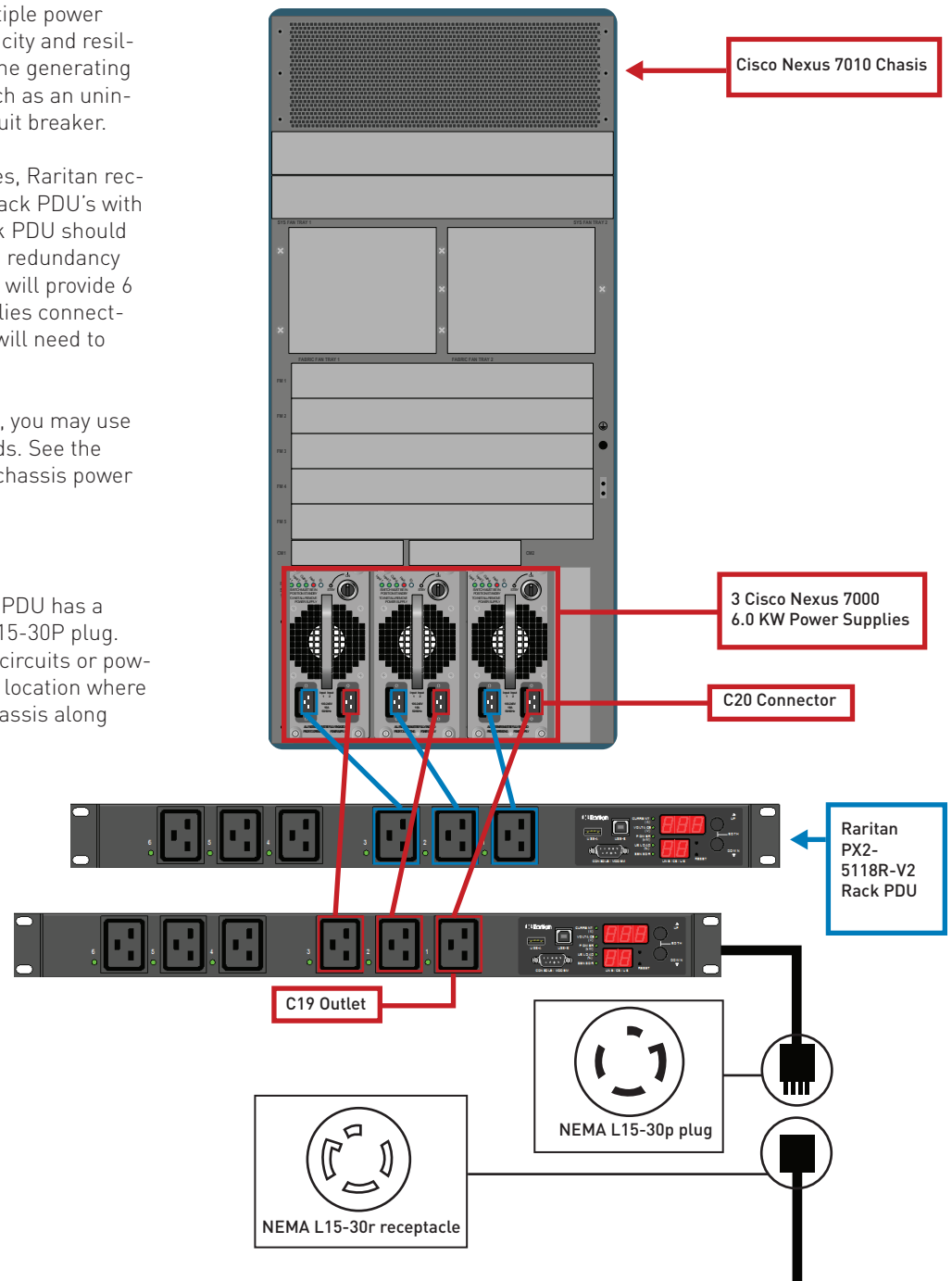
The Cisco Nexus 7010 chassis supports multiple load-sharing, fault-tolerant, and hot-swappable power supplies. As few as just one power supply can be used to operate a switch chassis. Use of multiple power supplies provides additional power capacity and resilience after failure of the power supply, the generating supply itself, or a facility component such as an uninterruptible power supply (UPS) or a circuit breaker.

For the 7010 with 3 x 6kW power supplies, Raritan recommends Qty 2 PX2-5118R intelligent rack PDU's with 30A 208V 3 phase input feeds. Each rack PDU should get a separate dedicated feed to provide redundancy in case of circuit failure. Each rack PDU will provide 6 x C19 outlets for your Cisco power supplies connected via C19 to C20 power cords that you will need to source.

To maintain a more fail-safe connection, you may use also use Raritan's SecureLock plug cords. See the diagram for more details on wiring the chassis power supplies to the rack PDU.

## What to Tell Your Electrician

The Raritan PX2-5118R intelligent rack PDU has a 208V 3 phase input feed with a NEMA L15-30P plug. Please tell your electrician to provide 2 circuits or power feeds with L15-30R receptacle at the location where you will install the Cisco Nexus 7010 chassis along with the Raritan intelligent rack PDU.



## Sources:

[http://www.cisco.com/c/en/us/td/docs/switches/datacenter/hw/nexus7000/installation/guide/n7k\\_hig\\_book/n7k\\_installation\\_psu.html#wp1273132](http://www.cisco.com/c/en/us/td/docs/switches/datacenter/hw/nexus7000/installation/guide/n7k_hig_book/n7k_installation_psu.html#wp1273132)

[http://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series-switches/Data\\_Sheet\\_C78-437761.html](http://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series-switches/Data_Sheet_C78-437761.html)

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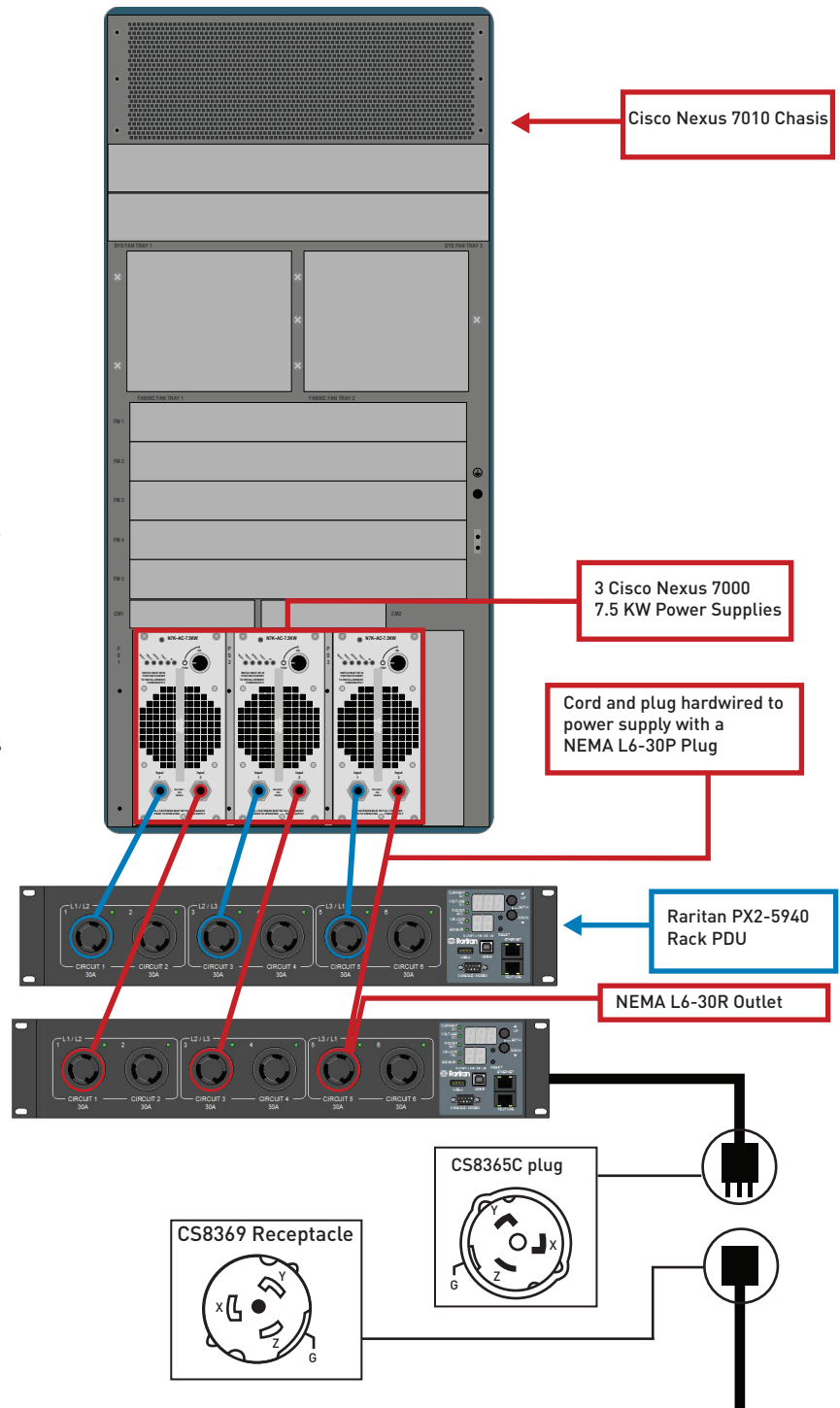
The Cisco Nexus 7010 chassis supports multiple load-sharing, fault-tolerant, and hot-swappable power supplies. As few as just one power supply can be used to operate a switch chassis. Use of multiple power supplies provides additional power capacity and resilience after failure of the power supply, the generating supply itself, or a facility component such as an uninterruptible power supply (UPS) or a circuit breaker.

For the 7010 with **3 x 7.5kW** power supplies, Raritan recommends Qty 2 PX2-5940 intelligent rack PDU's with 50A 208V 3 phase input feeds. Each rack PDU should get a separate dedicated feed to provide redundancy in case of circuit failure. Each rack PDU will provide 6 x NEMA L6-30R receptacles for your Cisco 7.5kW power supplies.

The 7.5kW Cisco power supply for North America will be hardwired with a NEMA L6-30P 30A twist-lock plug. See the diagram for more details on wiring the chassis power supplies to the rack PDU.

## What to Tell Your Electrician

The Raritan PX2-5940 intelligent rack PDU has a 208V 3 phase input feed with a 50A CS8365C plug. Please tell your electrician to provide 2 circuits or power feeds with CS8369 receptacles at the location where you will install the Cisco Nexus 7010 chassis along with the Raritan intelligent rack PDU.



### Tip:

Use Raritan's un-balanced load feature in our intelligent rack PDU's to help with load balancing your 3 phase lines. Also consider Power IQ DCIM Monitoring software for power trending, energy management, and event management/alerts.

## A List of Raritan Products

Raritan Rack PDU Part Number	Remote Outlet Switching	Form Factor	Input Voltage	Input Current per Phase	Input Phase	Input Plug Type	Outlet Count	Outlet Type	Output Voltage	KVA
PX2-5118R-V2	Yes	1U	208 - 240	24	3	NEMA L15-30P	6	(6) IEC 60320 C19	208 - 240	8.6
PX2-5939R	Yes	2U	208 - 240	40	3	CS8365C	6	NEMA L6-20R (6)	208 - 240	14.4
PX2-5940	Yes	2U	208 - 240	40	3	CS8365C	6	NEMA L6-30R (6)	208 - 240	14.4
PX2-4931R-A5	No	2U	208 - 240	48	3	IEC 60309 3P+E 9h 60A	6	NEMA L6-30R (6)	208 - 240	17.3



### Powerful Smart Controller

Built-in connectivity for environment sensors, serial, KVM, USB, wired or wireless network, and asset management tagging makes this the smartest iPDU controller available today.



### Accurate Rack Metering

Check power on PDUs, lines, circuit breakers and individual outlets and make informed capacity planning decisions and efficiently utilize power resources with 1% billing grade accuracy.

## 400V

### High Power & 60C Models

400V 3 phase high power models supporting up to 55kW per rack PDU, plus 60C for high-heat environments such as hot aisle containment and blade racks



### Circuit Breaker Monitoring

Monitor voltage and current of breakers within the PDU to understand status (open or closed) and real-time loads to improve uptime and capacity planning.



### Receive Advanced Alerts

Users can define thresholds and receive alerts via SNMP, email, and syslog when thresholds are crossed for both power and environmental events.



### Sensors to Optimize Your Equipment

Optional sensor ports for plug-and-play environmental sensors that allow you to monitor temperature, humidity, airflow and other environmental conditions.



### Easy Power Cord Dressing

Special V2 3-phase models with sequenced line pairs of outlets simplify load balancing and dramatically improves cord management.



### Certified and UL Listed

Certifications include FCC Part 15, A; UL Listed and cUL, CE, PSE, SAA, RoHS/WEEE compliant.



### Secure and Encrypted

Directory services support providing advanced authorization options, including permissions, LDAP/S, RADIUS and Active Directory®. 256-bit AES encryption and strong passwords keep you safe.



### Choice of iPDU Colors

Available in eleven colors that help reduce errors and make it easier to identify power feeds, and perform troubleshooting to minimize downtime.



### SecureLock Outlets and Cables

Ensure that IEC power cords don't accidentally come unplugged from servers when technicians are working on racks.



### Industry's Most Flexible USB Port

The PX series comes equipped with USB ports to support Wi-Fi networking, PDU to PDU cascading, webcams, quick setup and iPad integration.

Ready to find out more? Contact Raritan today.  
Call 1.800.724.8090 or visit [www.raritan.com](http://www.raritan.com)

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