Cisco C9K-PWR-650WAC-R

Datasheet

Product Overview

- The Cisco C9K-PWR-650WAC-R is a 650W AC power supply for selected Cisco Catalyst 9500 Series switches.
- It provides a field-replaceable power source for high-performance Catalyst 9500 deployments and supports the power capacity required by compatible chassis configurations.
- The module uses an AC input range of 90 to 264 VAC at 47 to 63 Hz and delivers regulated 12V system power.
- Cisco documents the power supply with a 94% typical efficiency and a 20 ms minimum system holdup time.
- Its 12V main output is rated at 54A, with a 12V standby output rated at 3A.
- The C9K-PWR-650WAC-R is an ordering option in the Catalyst 9500 power-supply family and should be matched to the supported switch model and power design.

Product Highlights

- **650W AC Capacity:** Provides up to 650W of AC power for compatible Cisco Catalyst 9500 Series high-performance switches.
- **Catalyst 9500 Compatibility:** Cisco lists the module in the Catalyst 9500 power-supply ordering information for supported chassis configurations.
- **Wide AC Input Range:** Accepts 90 to 264 VAC at 47 to 63 Hz for flexible facility power deployment.
- **High-Efficiency Power Conversion:** Cisco documents 94% typical efficiency, 12V main output at 54A, 12V standby output at 3A, and 20 ms minimum system holdup time.

Detailed Features



C9K-PWR-650WAC-R

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Component	Specification
Product Type	650W AC power supply
Compatible Platform	Cisco Catalyst 9500 Series high-performance switches
Power Capacity	650W
Input	90 to 264 VAC, 47 to 63 Hz
Output	12V main at 54A; 12V standby at 3A

650W Power Delivery

The C9K-PWR-650WAC-R provides a 650W maximum power rating for supported Catalyst 9500 Series switch configurations. The rating is intended for the switch power budget and should be checked against the selected chassis and installed modules.

AC Input Flexibility

The power supply accepts 90 to 264 VAC over a 47 to 63 Hz frequency range. This broad input range supports common enterprise AC power systems without requiring a different PSU voltage class.

12V Main and Standby Rails

Cisco specifies a 12V main output rated at 54A and a 12V standby output rated at 3A. The separate standby rail supports the chassis control and standby power requirements documented for the platform.

94% Typical Efficiency

The documented 94% typical efficiency helps reduce conversion losses during normal operation. Actual system consumption depends on the switch model, installed modules, traffic, and power configuration.

20 ms System Holdup

The AC output holdup time is documented as a minimum of 20 ms for the system. This supports continuity during short input disturbances within the documented power design.

Field-Replaceable Power Module

The module is installed as a replaceable power-supply unit in compatible Catalyst 9500 chassis. Replacement planning should confirm the chassis model, airflow direction, connector, and approved Cisco PSU list.

Catalyst 9500 Ordering Option

Cisco lists C9K-PWR-650WAC-R in the Catalyst 9500 ordering guide alongside 650W AC, 1600W AC, DC, and alternate power options. This makes it easier to match a spare or secondary PSU to the selected switch family.

Power-Cable Planning

The PSU uses an IEC 60320 C14 input receptacle and a 10A power-cord rating. Select the regional Cisco AC power cord that matches the installation country and cabinet power distribution.

Technical Specifications

Product Specifications

Feature	Value
Product Model	C9K-PWR-650WAC-R
Product Family	Cisco Catalyst 9500 Series power supply
Power Type	AC
Maximum Power Rating	650W
Input Voltage Range	90 to 264 VAC
Input Frequency	47 to 63 Hz
Input Current	6.8A maximum at 115 VAC; 3.4A maximum at 230 VAC when fully loaded
Output Ratings	12V main at 54A; 12V standby at 3A
Power Supply Efficiency	94% typical
Output Holdup Time	20 ms minimum for system
Input Receptacle	IEC 60320 C14
Power Cord Rating	10A
Supported Switch Family	Cisco Catalyst 9500 Series

Feature	Value
Documented High-Performance Models	C9500-32QC, C9500-48Y4C, C9500-24Y4C

Product Comparison

Feature	C9K-PWR-650WAC-R	C9K-PWR-650WACL-R	C9K-PWR-1600WAC-R
Product type	650W AC power supply	650W AC power supply	1600W AC power supply
Maximum power rating	650W	650W	1600W
Input voltage	90 to 264 VAC	90 to 264 VAC	90 to 140 VAC and 180 to 264 VAC
Input frequency	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz
Input current	6.8A max at 115 VAC; 3.4A max at 230 VAC	6.8A max at 115 VAC; 3.4A max at 230 VAC	10.5A max at 115 VAC; 7.8A max at 230 VAC
Output rating	12V main at 54A; 12V standby at 3A	12V main at 54A; 12V standby at 3A	12V main at 133A; 12V standby at 3A
Typical efficiency	94%	94%	94%
Output holdup time	20 ms minimum for system	12 ms minimum at maximum load	20 ms minimum for system
Input receptacle	IEC 60320 C14	IEC 60320 C14	IEC 60320 C16
Power cord rating	10A	10A	15A
Ordering role	650W AC PSU	650W AC PSU variant	Higher-capacity AC PSU

Accessories

Category	Accessories
Included Accessories	- No separately listed included accessory in the consulted official documentation
Optional Accessories	- CAB-C15-CBN cabinet jumper power cord
- CAB-TA-EU, CAB-TA-UK, or CAB-TA-NA regional AC power cord	

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References

[1] Cisco. (2026). Cisco Catalyst 9500 Series Switches Data Sheet. https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9500-series-switches/nb-06-cat9500-ser-data-sheet-cte-en.html

[2] Cisco. (2026). Cisco Catalyst 9500 Series Switches Ordering Guide. https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9500-series-switches/nb-06-cat9500-swit-ser-cte-en.html