

# Refurbished CISCO A9K-DC-PEM-V2 Datasheet

CISCO > ROUTERS

## Cisco ASR 9000 Series Aggregation Services Routers

### Hardware Available for Cisco ASR 9000 & ASR 9900 Series

Cisco ASR 9000 & ASR 9900 Series Chassis	
Cisco ASR 9010 chassis	ASR-9010-AC-V2 ASR-9010-DC-V2 ASR-9010-SYS
Cisco ASR 9006 chassis	ASR-9006-AC-V2 ASR-9006-DC-V2 ASR-9006-SYS
Cisco ASR 9922 chassis	ASR-9922-AC ASR-9922-DC ASR-9922
Cisco ASR 9912 chassis	ASR-9912-AC ASR-9912-DC ASR-9912
Cisco ASR 9910 chassis	ASR-9910
Cisco ASR 9906 chassis	ASR-9906
Cisco ASR 9000 Series Power Infrastructure	
AC power supply, 6000W	PWR-6KW-AC-V3 PWR-6KW-AC-V3=
AC power entry module V3	A9K-AC-PEM-V3 A9K-AC-PEM-V3=
AC power supply, 3000W	PWR-3KW-AC-V2 PWR-3KW-AC-V2=
AC power entry module V2	ASR9K-AC-PEM-V2 A9K-AC-PEM-V2=
DC power supply, 4400W	PWR-4.4KW-DC-V3 PWR-4.4KW-DC-V3=
DC power entry module V3	A9K-DC-PEM-V3 A9K-DC-PEM-V3=
DC power supply, 2100W	PWR-2KW-DC-V2 PWR-2KW-DC-V2=
Cisco ASR 9000 Series Thermal Infrastructure	
Cisco ASR 9010 fan, 2 fan trays per chassis	ASR-9010-FAN ASR-9010-FAN-V2
Cisco ASR 9006 fan, 2 fan trays per chassis	ASR-9006-FAN ASR-9006-FAN-V2
Cisco ASR 9922 fan, 4 fan trays per chassis	ASR-9922-FAN ASR-9922-FAN-V2 ASR-9922-FAN-V3
Cisco ASR 9912 fan, 2 fan trays per chassis	ASR-9912-FAN A9K-9912-FAN
Cisco ASR 9910 fan, 2 fan trays per chassis	ASR-9910-FAN

Cisco ASR 9906 fan, 2 fan trays per chassis	ASR-9906-FAN
Cisco ASR 9904 fan, 1 fan tray per chassis	ASR-9904-FAN A9K-9904-FAN
Cisco ASR 9010 fan filter, 1 per chassis	ASR-9010-FILTER
Cisco ASR 9006 fan filter, 1 per chassis	ASR-9006-FILTER
Cisco ASR 9922 fan filter, 1 center and 2 side filters per chassis	ASR-9922-FLTR-CEN ASR-9922-FLTR-CV2 ASR-9922-FLTR-LR
Cisco ASR 9912 fan filter, 1 center and 2 side filters per chassis	ASR-9912-FLTR-CEN ASR-9900-FLTR-LR
Cisco ASR 9910 fan filter, 1 per chassis	ASR-9910-FILTER
Cisco ASR 9906 fan filter, 1 per chassis	ASR-9906-FILTER
Cisco ASR 9904 fan filter, 1 per chassis	ASR-9904-FILTER

## Cisco ASR 9006 and ASR 9010

### Environmental Specifications (All Entries Applicable to Cisco ASR 9006 and ASR 9010)

Operating temperature (nominal)	41 to 104°F (5 to 40°C)
Operating temperature (short-term)	ASR 9006: 23 to 131°F (-5 to 55°C) ASR 9010: 23 to 122°F (-5 to 50°C)
Operating humidity (nominal) (relative humidity)	5 to 90%
Storage temperature	-40 to 158°F (-40 to 70°C)
Storage (relative humidity)	5 to 93%

### Regulatory Compliance (All Entries Applicable to Cisco ASR 9006 and ASR 9010)

<b>Network Equipment Building Standards (NEBS)</b>	Cisco ASR 9006 and ASR 9010 Routers are designed to meet: SR-3580: NEBS Criteria Levels (Level 3) GR-1089-CORE: NEBS EMC and Safety GR-63-CORE: NEBS Physical Protection VZ.TPR.9205: Verizon TEEER
<b>ETSI standards</b>	Cisco ASR 9006 and ASR 9010 Routers are designed to meet: EN300 386: Telecommunications Network Equipment (EMC) ETSI 300 019 Storage Class 1.1 ETSI 300 019 Transportation Class 2.3 ETSI 300 019 Stationary Use Class 3.1
<b>EMC standards emission</b>	Cisco ASR 9006 and ASR 9010 Routers are designed to meet: FCC Class 47CFR15 A ICES 003 Class A AS/NZS CISRP22 Class A CISPR 22 (EN55022) Class A VCCI Class A BSMI Class A IEC/EN 61000-3-12: Power Line Harmonics IEC/EN 61000-3-11: Voltage Fluctuations and Flicker EN55022: Information Technology Equipment (Emissions) EN 50121-4: Railway EMC
<b>EMC standards immunity</b>	Cisco ASR 9006 and ASR 9010 Routers are designed to meet: IEC/EN-61000-4-2: Electrostatic Discharge Immunity (8kV Contact, 15kV Air) IEC/EN-61000-4-3: Radiated Immunity (10V/m) IEC/EN-61000-4-4: Electrical Fast Transient Immunity (2kV Power, 1kV Signal) IEC/EN-61000-4-5: Surge AC Port (4kV CM, 2kV DM) IEC/EN-61000-4-5: Signal Surge Ports (1kV) IEC/EN-61000-4-5: Surge DC Port (1kV CM, 1kV DM) IEC/EN-61000-4-6: Immunity to Conducted Disturbances (10Vrms) IEC/EN-61000-4-8: Power Frequency Magnetic Field Immunity (30A/m) IEC/EN-61000-4-11: Voltage DIPS, Short Interruptions, and Voltage Variations EN55024: Information Technology Equipment (Immunity) EN50082-1/EN-61000-6-1: Generic Immunity Standard EN 50121-4: Railway EMC
<b>Safety</b>	Cisco ASR 9006 and ASR 9010 Routers are designed to meet:

UL/CSA/IEC/EN 60950-1  
IEC/EN 60825 Laser Safety  
ACA TS001  
AS/NZS 60950  
FDA Code of Federal Regulations Laser Safety

## Cisco ASR 9904

### Categories

<b>Physical specifications</b>	Height: 10.38 in. (263.65x mm) (6 RU) Width: 17.57 in. (446.28 mm) Depth: 25.02 in. (635.51 mm) Weight: 62 lb (28.2 kg) (V2 PEM AND chassis) 114.05 lb (51.84 kg) (2 RSP, Fan Tray, PEM)
<b>Slot orientation</b>	Horizontal
<b>Cisco ASR 9000 Series RSP</b>	Dual redundant RSPs with integrated fabric in 2 slots
<b>Fabric</b>	-
<b>Cisco ASR 9000 Series line cards</b>	2 line-card slots
<b>Commons" components</b>	2 RSPs 1 fan tray 1 PEM (either DC or AC) 1 fan filter
<b>Reliability and availability</b>	Fabric redundancy Feed redundancy Power-supply redundancy Route processor redundancy Software redundancy
<b>Rack mounting</b>	19-in. 21- and 23-in. adapters available Note: Minimum 17.75-in. opening between posts is needed for proper operation.
<b>Cabinet mounting</b>	Yes
<b>Wall mounting</b>	No

### Performance

<b>Fabric</b>	One per RSP: Active/active nonblocking operation mode in dual-RSP redundant configuration Fully redundant in dual-RSP redundant configuration Built-in service-intelligence and traffic-prioritization capability
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### Power

<b>Modularity</b>	Pay-as-you-grow power for future scalability, available in AC and DC. Multiple power module types: 3 kW AC power module 2.1 kW DC power module Note: Mixing of AC and DC modules is not supported
<b>Redundancy</b>	AC: N+N redundancy DC: N+1 redundancy Power module redundancy A/B Feed redundancy
<b>Power zones</b>	No power zone restrictions Fully load-sharing power infrastructure
<b>Power input</b>	Worldwide ranging AC (200-240V; 50-60 Hz; 16A maximum) Worldwide ranging DC (-40 to -72V; 50A nominal, 60A maximum)

### Environmental Specifications

<b>Operating temperature (nominal)</b>	41 to 104°F (5 to 40°C)
<b>Operating temperature (short-term)</b>	23 to 131°F (-5 to 55°C) for ASR 9904 23 to 122°F (-5 to 50°C) for ASR 9910
<b>Operating humidity (nominal) (relative humidity)</b>	5 to 90%

<b>Storage temperature</b>	-40 to 158°F (-40 to 70°C)
<b>Storage (relative humidity)</b>	5 to 93%
<b>Regulatory Compliance</b>	
<b>Network Equipment Building Standards (NEBS)</b>	The Cisco ASR 9904 Router is designed to meet (qualification in progress): SR-3580: NEBS Criteria Levels (Level 3) GR-1089-CORE: NEBS EMC and Safety GR-63-CORE: NEBS Physical Protection VZ.TPR.9205: Verizon TEEER
<b>ETSI standards</b>	The Cisco ASR 9904 Router is designed to meet (qualification in progress): EN300 386: Telecommunications Network Equipment (EMC) ETSI 300 019 Storage Class 1.1 ETSI 300 019 Transportation Class 2.3 ETSI 300 019 Stationary Use Class 3.1
<b>EMC standards emission</b>	The Cisco ASR 9904 Router is designed to meet: FCC Class 47CFR15 A ICES 003 Class A AS/NZS CISRP22 Class A CISPR 22 (EN55022) Class A VCCI Class A BSMI Class A IEC/EN 61000-3-12: Power Line Harmonics IEC/EN 61000-3-11: Voltage Fluctuations and Flicker EN55022: Information Technology Equipment (Emissions) EN 50121-4: Railway EMC
<b>EMC standards immunity</b>	The Cisco ASR 9904 Router is designed to meet: IEC/EN-61000-4-2: Electrostatic Discharge Immunity (8kV Contact, 15kV Air) IEC/EN-61000-4-3: Radiated Immunity (10V/m) IEC/EN-61000-4-4: Electrical Fast Transient Immunity (2kV Power, 1kV Signal) IEC/EN-61000-4-5: Surge AC Port (4kV CM, 2kV DM) IEC/EN-61000-4-5: Signal Surge Ports (1kV) IEC/EN-61000-4-5: Surge DC Port (1kV CM, 1kV DM) IEC/EN-61000-4-6: Immunity to Conducted Disturbances (10Vrms) IEC/EN-61000-4-8: Power Frequency Magnetic Field Immunity (30A/m) IEC/EN-61000-4-11: Voltage DIPS, Short Interruptions, and Voltage Variations EN55024: Information Technology Equipment (Immunity) EN50082-1/EN-61000-6-1: Generic Immunity Standard EN 50121-4: Railway EMC
<b>Safety</b>	The Cisco ASR 9904 Router is designed to meet: UL/CSA/IEC/EN 60950-1 IEC/EN 60825 Laser Safety ACA TS001 AS/NZS 60950 FDA Code of Federal Regulations Laser Safety

## Cisco ASR 9906 and ASR 9910

### Environmental Specifications (All Entries Applicable to Cisco ASR 9906 and ASR 9910)

<b>Operating temperature (nominal)</b>	41 to 104°F (5 to 40°C)
<b>Operating temperature (short term)</b>	23 to 131°F (-5 to 55°C) for ASR 9906 23 to 122°F (-5 to 50°C) for ASR 9910
<b>Operating humidity (nominal) (relative humidity)</b>	5 to 90%
<b>Storage temperature</b>	-40 to 158°F (-40 to 70°C)
<b>Storage (relative humidity)</b>	5 to 93%

### Regulatory Compliance (All Entries Applicable to Cisco ASR 9906 and ASR 9910)

<b>Network Equipment Building Standards (NEBS)</b>	Cisco ASR 9906 and ASR 9910 Routers are designed to meet (qualification in progress): SR-3580: NEBS Criteria Levels (Level 3) GR-1089-CORE: NEBS EMC and Safety GR-63-CORE: NEBS Physical Protection VZ.TPR.9205: Verizon TEEER
<b>ETSI standards</b>	Cisco ASR 9906 and ASR 9910 Routers are designed to meet (qualification in progress): EN300 386: Telecommunications Network Equipment (EMC) ETSI 300 019 Storage Class 1.1 ETSI 300 019 Transportation Class 2.3 ETSI 300 019 Stationary Use Class 3.1

<b>EMC standards emission</b>	Cisco ASR 9906 and ASR 9910 Routers are designed to meet: FCC Class 47CFR15 A ICES 003 Class A AS/NZS CISRP22 Class A CISPR 22 (EN55022) Class A VCCI Class A BSMI Class A IEC/EN 61000-3-12: Power Line Harmonics IEC/EN 61000-3-11: Voltage Fluctuations and Flicker EN55022: Information Technology Equipment (Emissions) EN 50121-4: Railway EMC
<b>EMC standards immunity</b>	Cisco ASR 9906 and ASR 9910 Routers are designed to meet: IEC/EN-61000-4-2: Electrostatic Discharge Immunity (8kV Contact, 15kV Air) IEC/EN-61000-4-3: Radiated Immunity (10V/m) IEC/EN-61000-4-4: Electrical Fast Transient Immunity (2kV Power, 1kV Signal) IEC/EN-61000-4-5: Surge AC Port (4kV CM, 2kV DM) IEC/EN-61000-4-5: Signal Surge Ports (1kV) IEC/EN-61000-4-5: Surge DC Port (1kV CM, 1kV DM) IEC/EN-61000-4-6: Immunity to Conducted Disturbances (10Vrms) IEC/EN-61000-4-8: Power Frequency Magnetic Field Immunity (30A/m) IEC/EN-61000-4-11: Voltage DIPS, Short Interruptions, and Voltage Variations EN55024: Information Technology Equipment (Immunity) EN50082-1/EN-61000-6-1: Generic Immunity Standard EN 50121-4: Railway EMC
<b>Safety</b>	Cisco ASR 9904 and ASR 9910 Routers are designed to meet: UL/CSA/IEC/EN 60950-1 IEC/EN 60825 Laser Safety ACA TS001 AS/NZS 60950 FDA Code of Federal Regulations Laser Safety

## Cisco ASR 9912 and ASR 9922

### Environmental Specifications (All Entries Applicable to Cisco ASR 9912 and ASR 9922)

<b>Operating temperature (nominal)</b>	41 to 104°F (5 to 40°C)
<b>Operating temperature (short-term)</b>	23 to 131°F (-5 to 55°C)
<b>Operating humidity (nominal) (relative humidity)</b>	5 to 90%
<b>Storage temperature</b>	-40 to 158°F (-40 to 70°C)
<b>Storage (relative humidity)</b>	5 to 93%

### Regulatory Compliance (All Entries Applicable to Cisco ASR 9912 and ASR 9922)

<b>Network Equipment Building Standards (NEBS)</b>	Cisco ASR 9912 and ASR 9922 Routers are designed to meet: SR-3580: NEBS Criteria Levels (Level 3) GR-1089-CORE: NEBS EMC and Safety GR-63-CORE: NEBS Physical Protection VZ.TPR.9205: Verizon TEEER
<b>ETSI standards</b>	Cisco ASR 9912 and ASR 9922 Routers are designed to meet: EN300 386: Telecommunications Network Equipment (EMC) ETSI 300 019 Storage Class 1.1 ETSI 300 019 Transportation Class 2.3 ETSI 300 019 Stationary Use Class 3.1
<b>EMC standards emission</b>	Cisco ASR 9912 and ASR 9922 Routers are designed to meet: FCC Class 47CFR15 A ICES 003 Class A AS/NZS CISRP22 Class A CISPR 22 (EN55022) Class A VCCI Class A BSMI Class A IEC/EN 61000-3-12: Power Line Harmonics IEC/EN 61000-3-11: Voltage Fluctuations and Flicker EN55022: Information Technology Equipment (Emissions) EN 50121-4: Railway EMC
<b>EMC standards immunity</b>	Cisco ASR 9912 and ASR 9922 Routers are designed to meet: IEC/EN-61000-4-2: Electrostatic Discharge Immunity (8kV Contact, 15kV Air) IEC/EN-61000-4-3: Radiated Immunity (10V/m) IEC/EN-61000-4-4: Electrical Fast Transient Immunity (2kV Power, 1kV Signal) IEC/EN-61000-4-5: Surge AC Port (4kV CM, 2kV DM) IEC/EN-61000-4-5: Signal Surge Ports (1kV)

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IEC/EN-61000-4-5: Surge DC Port (1kV CM, 1kV DM)  
IEC/EN-61000-4-6: Immunity to Conducted Disturbances (10Vrms)  
IEC/EN-61000-4-8: Power Frequency Magnetic Field Immunity (30A/m)  
IEC/EN-61000-4-11: Voltage DIPS, Short Interruptions, and Voltage Variations  
EN55024: Information Technology Equipment (Immunity)  
EN50082-1/EN-61000-6-1: Generic Immunity Standard  
EN 50121-4: Railway EMC

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**Safety**

Cisco ASR 9912 and ASR 9922 Routers are designed to meet:  
UL/CSA/IEC/EN 60950-1  
IEC/EN 60825 Laser Safety  
ACA TS001  
AS/NZS 60950  
FDA Code of Federal Regulations Laser Safety

## The next steps...

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