

Cisco Network Convergence System 5500 Series Modular Chassis

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Cloud scale for WAN aggregation

The Cisco Network Convergence System 5500 Series offers industry-leading density of routed 400 Gigabit Ethernet (400GE), 100 GE ports for high-scale WAN aggregation. The NCS 5500 Series is designed to efficiently scale between data centers and large enterprise, web, and service provider WAN and aggregation networks.

Product overview

The Cisco Network Convergence System (NCS) 5500 modular chassis series includes the Cisco NCS 5504 modular chassis, Cisco NCS 5508 modular chassis and the Cisco NCS 5516 modular chassis (Figure 1). The Cisco NCS 5504 supports up to four line cards, six switch fabric cards, two route processors, two system controllers, three fan trays, and four power supplies. The Cisco NCS 5508 supports up to eight line cards, six switch fabric cards, two route processors, two system controllers, three fan trays, and eight power supplies. The Cisco NCS 5516 supports up to 16 line cards, 6 switch fabric cards, 2 route processors, 2 system controllers, 3 fan trays, and 10 power supplies.



Figure 1.
Cisco NCS 5504, Cisco NCS 5508 and NCS 5516 chassis

NCS5500 routers support 10, 25, 40, 50, 100 and 400 Gigabit Ethernet ports. The Cisco NCS 5504 supports upto 14.4 Tbps full duplex, the NCS 5508 supports upto 28.8 Tbps full duplex and the Cisco NCS 5516 supports upto 57.6 Tbps full duplex today. With the introduction of the new NCS 5700 400 GE line cards, the per slot forwarding capacity increases by 2.67 times on each of the modular chassis to a maximum of 153.6 Tbps full duplex on the Cisco NCS 5516.

Cisco NCS 5500 chassis components

The Cisco NCS 5500 chassis are built using the components illustrated in Figure 2, which are described in the following sections. Figure 2 shows components of a Cisco NCS 5508 chassis. The NCS 5504 and NCS 5516 uses the same components with the exception of chassis-specific fabric modules and chassis-specific fan trays. The Cisco NCS 5516 has 16 line cards and Cisco NCS 5504 has 4 line cards.

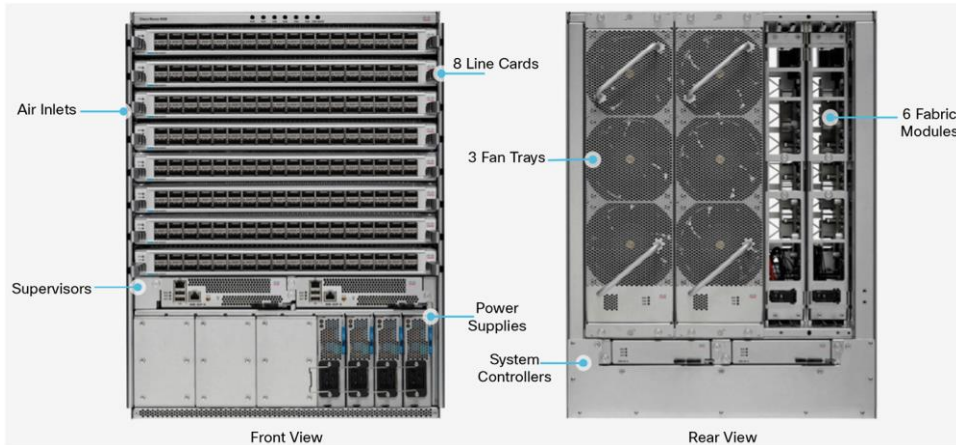









Figure 2.
Cisco NCS 5508 chassis components


Cisco NCS 5500 series line cards

The NCS 5500 chassis supports the Quad Small Form-Factor Pluggable (QSFP) Cisco NCS 5500 Series line cards described in Table 1.

Table 1. Cisco NCS 5500 series line cards

| NCS 5500 Line cards | Specification |
|---|--|
| <p>36-Port 100GE Line Card (part number: NC55-36X100G)</p>  <p>For more details: https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5000-series/datasheet-c78-739657.html.</p> | <ul style="list-style-type: none"> • 36-port 100 Gigabit Ethernet QSFP line card • 6 forwarding Application-Specific Integrated Circuits (ASICs) • On-chip tables for 256K IPv4 or 64K IPv6 routes • On-chip tables for 786K IPv4 host routes, MAC, and labels • On-chip Ternary Content-Addressable Memory (TCAM) for network Access Control Lists (ACLs) and QoS • Supports QSFP28 100GE and QSFP+ 40GE optics • Supports 4 x 10GE with breakout mode |
| <p>24-Port 100GE and 12-Port 40GE Scale Line Card (part number: NC55-24H12F-SB)</p>  <p>For more details: https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5500-series/datasheet-c78-737780.html.</p> | <ul style="list-style-type: none"> • 24 ports 100/40 Gigabit Ethernet and 12 ports 40GE QSFP28/QSFP+ line card with high scale • 4 forwarding ASICs • FIB scale up 2M IPv4 or 512K IPv6 routes (FIB scale up to 2.75M IPv4 routes if combined with memory below) • On-chip tables for 786K IPv4 host routes, MAC, and labels • On-chip TCAM for network ACLs and QoS • Supports QSFP28 100GE and QSFP+ 40GE optics • Supports 4 x 10GE with breakout mode |




| NCS 5500 Line cards | Specification |
|--|---|
| <p>24-Port 100GE Scale Line Card (part number: NC55-24X100G-SB)</p>  <p>For more details: https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5500-series/datasheet-c78-737779.html.</p> | <ul style="list-style-type: none"> • 24 ports 100 Gigabit Ethernet with high scale • 4 forwarding ASICs • FIB scale up 2M IPv4 or 512K IPv6 routes (FIB scale up to 2.75M IPv4 routes if combined with memory below) • On-chip tables for 786K IPv4 host routes, MAC, and labels • On-chip TCAM for network ACLs and QoS • Supports QSFP28 100GE and QSFP+ 40GE optics • Supports 4 x 10GE with breakout mode |
| <p>18-Port 100GE and 18-Port 40GE Line Card (part number: NC55-18H18F-BA)</p>  <p>For more details: https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5500-series/datasheet-c78-737776.html.</p> | <ul style="list-style-type: none"> • 18 ports 100/40 Gigabit Ethernet and 18 ports 40GE QSPF28/QSFP+ line card at base scale • 3 forwarding ASICs • FIB scale up 256K IPv4 or 64K IPv6 routes (FIB scale up to 1M IPv4 routes if combined with memory below) • On-chip tables for 786K IPv4 host routes, MAC, and MPLS labels • On-chip TCAM for network ACLs and QoS • Supports QSFP28 100GE and QSFP+ 40GE optics • Supports 4 x 10GE with breakout mode |
| <p>36-Port 100GE Scale Line Card (part number: NC55-36X100G-SB)</p>  <p>https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5500-series/datasheet-c78-739658.html.</p> | <ul style="list-style-type: none"> • 36-port 100 Gigabit Ethernet QSFP line card with high scale • 4 forwarding Application-Specific Integrated Circuits (ASICs) • FIB scale up 4M IPv4 or 3 M IPv6 routes • On-chip tables for 786K IPv4 host routes, MAC, and labels • On-chip TCAM for network ACLs and QoS • Supports QSFP28 100GE and QSFP+ 40GE optics • Supports 4 x 10GE with breakout mode |
| <p>6-Port 200GE IPoDWDM Line Card (part number: NC55-6X2H-DWDM-BM)</p>  <p>For more details: https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5500-series/datasheet-c78-739372.html.</p> | <ul style="list-style-type: none"> • 6 ports 100/150/200 CFP2-ACO linecard for IPoDWDM • 2 Forwarding ASICs • Supports MACsec on all ports at full line rate • Support for 96 channels with ITU-T 50-GHz channel spacing • Configurable SD-FEC • Flexspectrum support |
| <p>12X10, 2X40 and 2XMPA Base/Scale Line Card (part number: NC55-MOD-A-BM / NC55-MOD-A-SM)</p>  <p>For more details: https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5500-series/datasheet-c78-741081.html</p> | <ul style="list-style-type: none"> • 40GE, 10GE, 4X10GE and 1GE support (Fixed and 2 MPA ports) • 200GE, 100GE (MPA ports) • 4x25G breakout support (MPA ports) • 25G native support (Future MPA ports) • Base and Scale line cards • 1 forwarding ASIC • On-chip tables for minimum of 256k IPv4 or 64k IPv6 routes (350k IPv4 or 160k IPv6 Internet prefix distribution) • On-chip tables for 786K IPv4 host routes, MAC, and MPLS labels • FIB scale up 4M IPv4 or 2M IPv6 routes on scale LC |

| NCS 5500 Line cards | Specification |
|---|--|
| <p>32X10GE, 16X25GE and 4X100GE Base Line Card (part number: NC55-32T16Q4H-A)</p>  <p>For more details: https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5500-series/datasheet-c78-744777.html</p> | <ul style="list-style-type: none"> • 32 ports 10GE SFP+, 16 ports 25GE SFP28, 4 ports 100GE QSFP28 Base line card • 1 forwarding ASIC • On-chip tables for minimum of 256k IPv4 or 64k IPv6 routes (350k IPv4 or 160k IPv6 internet prefix distribution) • On-chip tables for 786K IPv4 host routes, MAC, and MPLS labels • On-chip Ternary Content-Addressable Memory (TCAM) for network Access Control Lists (ACLs) and QoS • Supports SyncE and IEEE1588 PTP in combination with route processor NC55-RP-E and NC55-RP2-E • Supports Class-C Timing in combination with route processor NC55-RP2-E |
| <p>NCS 5700 Line Cards</p>  <p>For more details: https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5500-series/datasheet-c78-742016.html</p> | <ul style="list-style-type: none"> • 400GE, 200 GE, 100GE, 40GE support • Breakout options 4x100GE, 2x100GE, 4x25GE, 4x10GE • Line cards with 2 forwarding ASICs and 1 forwarding ASIC • Supports QSFP+, QSFP28 and QSFP-DD optics • Scale and base variants • FIB scale up 5M IPv4 or 3M IPv6 routes • Requires Cisco NCS 5500 2nd generation fabric cards and fan trays. |
| <p>NCS 5700 Modular Line Card</p>  <p>For more details: https://www.cisco.com/c/en/us/products/collateral/routers/network-convergence-system-5500-series/datasheet-c78-742016.html</p> | <ul style="list-style-type: none"> • 400GE, 200 GE, 100GE, 50GE, 40GE, 25GE, 10GE support • Breakout options 4x100GE, 2x100GE, 4x25GE, 4x10GE • Line card with 1 forwarding ASIC • Supports QSFP+, QSFP28 and QSFP-DD, SFP+, SFP28 and SFP56 optics • Base variant only • FIB scale up 2.5M IPv4 or 1M IPv6 routes • Supports all NC55 and NC57 style MPAs • Requires Cisco NCS 5500 2nd generation fabric cards and fan trays. |

Cisco NCS 5500 series switch fabric cards

The 3 variants of Cisco NCS5500 modular chassis, NCS 5504, NCS 5508 and NCS 5516 chassis have a Clos fabric design that interconnects the line cards with rear-mounted fabric modules. It supports up to six switch fabric cards per system and all fabric cards are directly connected to all line cards. With load balancing across fabric cards, the architecture achieves optimal bandwidth distribution within the chassis. (See Table 2.)

Table 2. Cisco NCS 5500 series switch fabric card

| NCS 5500 Series Switch Fabric Card | Specification |
|---|--|
| <p>NCS 5504 Switch Fabric Card</p>  | <ul style="list-style-type: none"> • 6 fabric cards per chassis • Each fabric card provides 900 Gbps bandwidth to every line card slot in the chassis with a total of 5.4 Tbps combined with 6 fabrics • N+1 redundancy • Graceful bandwidth reduction if two or more are down • Single stage • Direct mate to line cards; no midplane |
| <p>NCS 5508 Switch Fabric Card</p>  | <ul style="list-style-type: none"> • 6 fabric cards per chassis • Each fabric card provides 900 Gbps bandwidth to every line card slot in the chassis with a total of 5.4 Tbps combined with 6 fabrics • N+1 redundancy • Graceful bandwidth reduction if two or more are down • Single stage • Direct mate to line cards; no midplane |
| <p>NCS 5516 Switch Fabric Card</p>  | <ul style="list-style-type: none"> • 6 fabric cards per chassis • Each fabric card provides 900 Gbps bandwidth to every line card slot in the chassis with a total of 5.4 Tbps combined with 6 fabrics • N+1 redundancy • Graceful bandwidth reduction if two or more are down • Single stage • Direct mate to line cards; no midplane |

Cisco NCS 5500 series fan trays

Three hot-swappable fan trays are supported on the NCS 5504, NCS 5508 and NCS 5516 chassis with front-to-back cooling. The fabric modules reside behind the fan trays and each fan tray covers two fabric modules. Fan trays provide N+1 redundancy and any one of the fan trays can be removed in-service at a time to access the underlying fabric cards.




Cisco NCS 5500 2nd Generation Fabric cards and Fan trays

IOS-XR release 6.6.25 introduces new generation of fabric cards and fan trays for NCS-5508 (NC55-5508-FC2 and NC55-5508-FAN2) and NCS-5516 (NC55-5516-FC2 and NC55-5516-FAN2). The newer generation of fabric cards and fan trays for NCS-5504 (NC55-5504-FC2 and NC55-5504-FAN2) is introduced in IOS-XR release 7.2.2 and 7.3.1. With the second generation of fabric cards and fan trays, NCS-5504, NCS-5508 and NCS-5516 get readiness to add NCS 5700 400 GE and 100GE line cards. For more details, refer the [datasheet](#) for the 2nd generation fabric cards and fan trays.

Cisco NCS 5500 series route processor

A pair of redundant route processor cards manages all routing operations on the Cisco NCS 5504, Cisco NCS 5508 and NCS 5516 chassis. (See Table 3.)

Table 3. Cisco NCS 5500 series route processor module


| NCS 5500 Series Route Processor Module | Specification |
|---|--|
| <p>NCS 5500 Series Route Processor (PID - NC55-RP)</p> <p>Note: NC55-RP is EOS. Refer EOS bulletin.</p>  | <ul style="list-style-type: none"> • 6 cores at 2.2 GHz • 24 GB DRAM • 256 GB flash • 2 USB • Console • Management Ethernet • Clock inputs |
| <p>NCS 5500 Series Route Processor with SyncE (PID - NC55-RP-E)</p>  | <ul style="list-style-type: none"> • 6 cores at 1.9 GHz • 32 GB DRAM • 240 GB flash • 2 USB • Console • Management Ethernet • Timing system <ul style="list-style-type: none"> ◦ Supports Class B Timing ◦ BITS: Two independent BITS ports, in/out - RJ48 connector port ◦ IEEE 1588 support: Copper 10/100/1000-Mbps RJ-45 Ethernet port • GPS <ul style="list-style-type: none"> ◦ ToD (RS422) ◦ 1-pps RS422 or 1.0/2.3 50-ohm RF connector, in/out ◦ 10MHz 1.0/2.3 50-ohm RF connector, in/out |
| <p>NCS 5500 Series Route Processor with SyncE (Class C Timing Support, PID - NC55-RP2-E)</p>  | <ul style="list-style-type: none"> • 3rd generation RP for NCS-5500 Modular chassis • Feature parity with currently shipping RP-E • Same CPU complex, memory and storage as RP-E • New tighter 1588 chassis clock distribution • Supports Class B and Class C Timing • Supported from IOS XR release 7.2.2 onwards. |

Note: Mixing of different Route Processor (RP) PIDs in the same chassis is not supported.

Cisco NCS 5500 series system controller

A pair of redundant system controllers offloads chassis management functions from the route processor cards. The controllers are responsible for managing power supplies and fan trays and monitoring the environmental conditions in the chassis. (See Table 4.)

Table 4. Cisco NCS 5500 series system controller

| NCS 5500 Series System Controller | Specification |
|---|--|
| <p>NCS 5500 Series System Controller</p>  | <ul style="list-style-type: none"> • Dual core at 1.3GHz • Ethernet Out-of-Band Channel (EOBC) for internal connection between line cards, fabric cards, and supervisors • Ethernet Protocol Channel (EPC) for traffic punted to the RP |


Cisco NCS 5500 series power supply




The Cisco NCS 5500 Series supports hot-swappable, front-panel-accessible power supplies. N+1 and N+N (grid) redundancy modes are supported for a fully loaded Cisco NCS 5504 and NCS 5508, and N+1 and N+M redundancy modes are supported for a fully loaded Cisco NCS 5516. The 3000W AC and DC power supplies are 80 Plus Platinum rated, providing more than 92 percent efficiency across typical workloads. (See Table 5.)

With the new 4.4KW DC power supply (NC55-PWR-4.4KW-DC), N+1 and N+N feed redundancy are supported on NCS 5504, NCS 5508 and NCS 5516.

The additional unused power-supply slots are not needed with existing line cards, but they offer headroom to support higher-bandwidth line cards in the future.

Table 5. Cisco NCS 5500 series power supplies

| NCS 5500 Series Power Supplies | Specification |
|---|---|
| <p>NCS 5500 Series 3kW AC Power Supply (PID - NC55-PWR-3KW-AC)</p>  | <ul style="list-style-type: none"> • 3000W AC power supply, single 20A input, 220V • N+1 or N+N grid redundancy supported for Cisco NCS 5508 • N+1 or N+M redundancy supported for Cisco NCS 5516 • Hot swappable • Front-panel-accessible • 50 to 60 Hz frequency • 92% or greater efficiency (20 to 100% load) • RoHS compliant |

| NCS 5500 Series Power Supplies | Specification |
|--|--|
| <p>NCS 5500 Series 3kW DC Power Supply (PID - NC55-PWR-3KW-DC)</p>  | <ul style="list-style-type: none"> • 3000W DC power supply • Input voltage: -40V to -72V DC (min-max), -48V to -60V DC (nominal) • N+1 or N+N grid redundancy supported for Cisco NCS 5508 • N+1 or N+M redundancy supported for Cisco NCS 5516 • Hot swappable • Front-panel-accessible • 92% or greater efficiency (20 to 100% load) • RoHS compliant |
| <p>NCS 5500 Series 3.15kW Universal AC/DC Power Supply (PID - NC55-PWR-3KW-2HV)</p>  | <ul style="list-style-type: none"> • 3150W High Voltage Dual Inputs AC/DC power supply • Input voltage: 180V to 305V (AC), 192V to 400V (DC) • N+1 or N+N grid redundancy supported for Cisco NCS 5508, 5504 and 5516 (for AC) • N+1 or N+M redundancy supported for Cisco NCS 5516 (DC) • Hot swappable • Front-panel-accessible • 50 to 60 Hz frequency • 92% or greater efficiency (20 to 100% load) • RoHS compliant |
| <p>NCS 5500 Series 4.4 kW DC Power Supply (PID - NC55-PWR-4.4KW-DC)</p>  | <ul style="list-style-type: none"> • 4400W DC Power Supply • Input Voltage: -48V to -60V DC • Three DC inputs with 2.2KW 12V DC output max from each input • Delivers 2200W when only 1 input is active, 4400W when 2 inputs or 3 inputs are active for 12VDC output. • N+1 PSU redundancy and N+N Grid/Feed redundancy for NCS 5504, NCS 5508 and NCS 5516. • With A-bus and B-bus inputs alternated between PSU inputs. with the loss of a redundant bus, two power supplies will supply 6.6KW, with one PSU at 4.4KW and other at 2.2KW of 12V DC Power • Supported from IOS XR release 7.3.1 onwards. |

Software requirements

The Cisco NCS 5508 supports Cisco IOS® XR Software Release 6.0 and later, and the Cisco NCS 5516 supports Cisco IOS XR Software Release 6.1 and later, Cisco NCS 5504 supports Cisco IOS XR Software Release 6.3 and later.

For a complete list of supported features, refer to the [Cisco Feature Navigator](#).

Specifications

Tables 6 through 8 list key specifications for the Cisco NCS 5500 Series. (Check software release notes for feature support information.)

Supported optics modules

A detailed list of all supported optics by the NCS 5500 Series is posted at <https://www.cisco.com/c/en/us/support/interfaces-modules/transceiver-modules/products-device-support-tables-list.html>.

Environment

Table 6. Environmental properties

| Property | Cisco NCS 5500 Series |
|--|---|
| Physical (H x W x D) <ul style="list-style-type: none"> • Cisco NCS 5504 • Cisco NCS 5508 • Cisco NCS 5516 | <ul style="list-style-type: none"> • 12.25 x 17.50 x 33.15 in. (31.1 x 44.50 x 84.20 cm) • 22.70 x 17.50 x 31.76 in. (57.78 x 44.50 x 80.67 cm) • 36.70 x 17.50 x 31.76 in. (93.41 x 44.50 x 80.67 cm) |
| Operating temperature | 32 to 104° F (0 to 40° C) |
| Operating temperature (short-term)^[1] | 23 to 131° F (-5 to 55° C) |
| Nonoperating (storage) temperature | -40 to 158° F (-40 to 70° C) |
| Humidity | 5 to 95% (noncondensing) |
| Altitude | 0 to 9842 ft (0 to 3000m) |

^[1] Short-term refers to a period of not more than 96 consecutive hours and a total of not more than 15 days in 1 year. (This number refers to a total of 360 hours in any given year, but no more than 15 occurrences during that 1-year period.)

Weight and typical power

Table 7. Weight and power consumption

| Component | Weight | Typical Power | Maximum Power |
|---|--|---------------|---------------|
| Chassis <ul style="list-style-type: none"> • Cisco NCS 5504 Chassis • Cisco NCS 5508 Chassis • Cisco NCS 5516 Chassis | <ul style="list-style-type: none"> • 84 lbs (38.2 kg) • 150 lbs (68.2 kg) • 192 lbs (87.3 kg) | - | - |
| Power supply <ul style="list-style-type: none"> • NCS 5500 AC 3kW Power Supply • NCS 5500 DC 3kW Power Supply • NCS 5500 Universal 3.15kW High Voltage AC/DC Power Supply • NCS 5500 DC 4.4kW Power Supply | <ul style="list-style-type: none"> • 6.2 lbs (2.8 kg) • 6.4 lbs (2.9 kg) • 8.2 lbs (3.7 kg) • 7.9 lbs (3.6 kg) | - | - |

| Component | Weight | Typical Power | Maximum Power |
|--|--|--|---|
| Fan tray (3 maximum) <ul style="list-style-type: none"> NCS 5504 Fan Tray NCS 5508 Fan Tray NCS 5516 Fan Tray | <ul style="list-style-type: none"> 6.38 lbs (2.9 kg) 8.25 lbs (3.7 kg) 10.0 lbs (4.54 kg) | <ul style="list-style-type: none"> 30W 75W 120W | <ul style="list-style-type: none"> 158W per fan tray 290W per fan tray 580W per fan tray |
| Switch Fabric card (6 maximum) <ul style="list-style-type: none"> NCS 5504 Fabric Card NCS 5508 Fabric Card NCS 5516 Fabric Card | <ul style="list-style-type: none"> 6.2 lbs (2.8 kg) 9.59 lbs (4.4 kg) 11.5 lbs (5.2 kg) | <ul style="list-style-type: none"> 115W 240W 650W | <ul style="list-style-type: none"> 130W per fabric card 250W per fabric card 775W per fabric card |
| 2nd Gen Fan tray (3 maximum) <ul style="list-style-type: none"> NCS 5504 Fan Tray NCS 5508 Fan Tray NCS 5516 Fan Tray | <ul style="list-style-type: none"> 8.43 lbs (3.83 kg) 10.11 lbs (4.59 kg) 18.44 lbs (8.37 kg) | <ul style="list-style-type: none"> 79W 150W 300W | <ul style="list-style-type: none"> 387W per fan tray 775W per fan tray 1550W per fan tray |
| 2nd Gen Switch Fabric card (6 maximum) <ul style="list-style-type: none"> NCS 5504 Fabric Card NCS 5508 Fabric Card NCS 5516 Fabric Card | <ul style="list-style-type: none"> 7.37 lbs (3.35 kg) 12.51 lbs (5.68 kg) 24.5 lbs (11.11 kg) | <ul style="list-style-type: none"> 160W 280W 670W | <ul style="list-style-type: none"> 167W per fabric card 320W per fabric card 790W per fabric card |
| Route Processor (2 maximum) <ul style="list-style-type: none"> NCS 5500 Route Processor NCS 5500 Route Processor with SyncE NCS 5500 Route Processor with SyncE (Class C Timing Support) | <ul style="list-style-type: none"> 6.00 lbs (2.72 kg) 6.00 lbs (2.72 kg) 5.36 lbs (2.44 kg) | <ul style="list-style-type: none"> 35W 40W 40W | <ul style="list-style-type: none"> 90W per route processor 80W per route processor 80W per route processor |
| System controller (2 maximum) <ul style="list-style-type: none"> NCS 5500 System Controller | <ul style="list-style-type: none"> 1.91 lbs (0.9 kg) | <ul style="list-style-type: none"> 15W | <ul style="list-style-type: none"> 35W per system controller |

Regulatory standards compliance

Table 8. Regulatory standards compliance: Safety and EMC

| Specification | Description |
|------------------------------|--|
| Regulatory compliance | Products should comply with CE Markings according to directives 2004/108/EC and 2006/95/EC |
| Safety | <ul style="list-style-type: none"> UL 60950-1 Second Edition CAN/CSA-C22.2 No. 60950-1 Second Edition EN 60950-1 Second Edition IEC 60950-1 Second Edition AS/NZS 60950-1 GB4943 |

| Specification | Description |
|-----------------------|---|
| EMC: Emissions | <ul style="list-style-type: none"> • 47CFR Part 15 (CFR 47) Class A • AS/NZS CISPR22 Class A • CISPR22 Class A • EN55022 Class A • ICES003 Class A • VCCI Class A • EN61000-3-2 • EN61000-3-3 • KN22 Class A • CNS13438 Class A |
| EMC: Immunity | <ul style="list-style-type: none"> • EN55024 • CISPR24 • EN300386 • KN 61000-4 series |
| RoHS | The product is RoHS-6 compliant with exceptions for leaded-ball grid-array (BGA) balls and lead press-fit connectors. |

Ordering information

Table 9 provides ordering information.

Table 9. Ordering information

| Part Number | Product Description |
|--|--|
| Cisco NCS 5500 Series Common Hardware | |
| NC55-RP | NCS 5500 Route Processor |
| NC55-RP= | NCS 5500 Route Processor Spare |
| NC55-RP-E | NCS 5500 Route Processor with SyncE |
| NC55-RP-E= | NCS 5500 Route Processor with SyncE Spare |
| NC55-RP2-E | NCS 5500 Route Processor with SyncE (Class C Timing) |
| NC55-RP2-E= | NCS 5500 Route Processor with SyncE (Class C Timing) Spare |
| NC55-SC | NCS 5500 System Controller |
| NC55-SC= | NCS 5500 System Controller Spare |
| NC55-PWR-3KW-AC | NCS 5500 AC 3KW Power Supply |
| NC55-PWR-3KW-AC= | NCS 5500 AC 3KW Power Supply Spare |
| NC55-PWR-3KW-DC | NCS 5500 DC 3KW Power Supply |
| NC55-PWR-3KW-DC= | NCS 5500 DC 3KW Power Supply Spare |

| Part Number | Product Description |
|--|--|
| NC55-PWR-3KW-2HV | NCS 5500 Dual Input High Voltage Universal AC and DC HV 3.15KW Power Supply |
| NC55-PWR-3KW-2HV= | NCS 5500 Dual Input High Voltage Universal AC and DC HV 3.15KW Power Supply, Spare |
| NC55-PWR-4.4KW-DC | NCS 5500 DC 4.4 KW Power Supply |
| NC55-PWR-4.4KW-DC= | NCS 5500 DC 4.4 KW Power Supply Spare |
| NC55-RP-BLNK | NCS 5500 Route Processor Blank Filler |
| NC55-RP-BLNK= | NCS 5500 Route Processor Blank Filler Spare |
| NC55-5500-LC-BLNK | NCS 5500 Line Card Blank Filler |
| NC55-5500-LC-BLNK= | NCS 5500 Line Card Blank Filler Spare |
| NC55-PS-BLNK | NCS 5500 Power Supply Blank Filler |
| NC55-PS-BLNK= | NCS 5500 Power Supply Blank Filler Spare |
| NC55-5500-RMK-E | NCS 5500 Extended Rack Mounting Kit (Supports depth of 4-post rack from 36" ~42) |
| NC55-5500-RMK-E= | NCS 5500 Extended Rack Mounting Kit Spare (Supports depth of 4-post rack from 36" ~42) |
| NC55-5500-ACC-KIT | NCS 5500 Accessory Kit |
| NC55-5500-ACC-KIT= | NCS 5500 Accessory Kit Spare |
| Cisco NCS 5504 Chassis Hardware | |
| NCS-5504 | NCS5500 4 Slot Single Chassis. |
| NCS-5504= | NCS5500 4 Slot Single Chassis, Spare |
| NC55-5504-FC | NCS 5504 Fabric Card |
| NC55-5504-FC= | NCS 5504 Fabric Card, Spare |
| NC55-5504-FAN | NCS 5504 Fan Tray |
| NC55-5504-FAN= | NCS 5504 Fan Tray, Spare |
| NC55-5504-FC2 | NCS 5504 2 nd generation Fabric Card |
| NC55-5504-FC2= | NCS 5504 2 nd generation Fabric Card, Spare |
| NC55-5504-FAN2 | NCS 5504 2 nd generation Fan Tray |
| NC55-5504-FAN2= | NCS 5504 2 nd generation Fan Tray, Spare |
| NC55-5504-RMK | NCS 5504 Rack Mounting Kit (Supports depth of 4-post rack from 24" ~32") |
| NC55-5504-RMK= | NCS 5504 Rack Mounting Kit Spare (Supports depth of 4-post rack from 24" ~32") |

| Part Number | Product Description |
|--|--|
| NC55-5504-RMK-E | NCS 5504 Extended Rack Mounting Kit (Supports depth of 4-post rack from 36" ~42) |
| NC55-5504-RMK-E= | NCS 5504 Extended Rack Mounting Kit Spare (Supports depth of 4-post rack from 36" ~42) |
| Cisco NCS 5508 Chassis Hardware | |
| NCS-5508 | NCS5500 8 Slot Single Chassis, Spare |
| NCS-5508= | NCS5500 8 Slot Single Chassis, Spare |
| NC55-5508-FC | NCS 5508 Fabric Card |
| NC55-5508-FC= | NCS 5508 Fabric Card, Spare |
| NC55-5508-FAN | NCS 5508 Fan Tray |
| NC55-5508-FAN= | NCS 5508 Fan Tray, Spare |
| NC55-5508-FC2 | NCS 5508 2 nd generation Fabric Card |
| NC55-5508-FC2= | NCS 5508 2 nd generation Fabric Card, Spare |
| NC55-5508-FAN2 | NCS 5508 2 nd generation Fan Tray |
| NC55-5508-FAN2= | NCS 5508 2 nd generation Fan Tray, Spare |
| NC55-5508-RMK | NCS 5508 Rack Mounting Kit (Supports depth of 4-post rack from 24" ~32") |
| NC55-5508-RMK= | NCS 5508 Rack Mounting Kit Spare (Supports depth of 4-post rack from 24" ~32") |
| Cisco NCS 5516 Chassis Hardware | |
| NCS-5516 | NCS5500 16 Slot Single Chassis, Spare |
| NCS-5516= | NCS5500 16 Slot Single Chassis, Spare |
| NC55-5516-FC | NCS 5516 Fabric Card |
| NC55-5516-FC= | NCS 5516 Fabric Card, Spare |
| NC55-5516-FAN | NCS 5516 Fan Tray |
| NC55-5516-FAN= | NCS 5516 Fan Tray, Spare |
| NC55-5516-FC2 | NCS 5516 2 nd generation Fabric Card |
| NC55-5516-FC2= | NCS 5516 2 nd generation Fabric Card, Spare |
| NC55-5516-FAN2 | NCS 5516 2 nd generation Fan Tray |
| NC55-5516-FAN2= | NCS 5516 2 nd generation Fan Tray, Spare |
| NC55-5516-RMK | NCS 5516 Rack Mounting Kit (Supports depth of 4-post rack from 24" ~32") |

| Part Number | Product Description |
|---|--|
| NC55-5516-RMK= | NCS 5516 Rack Mounting Kit Spare (Supports depth of 4-post rack from 24" ~32") |
| Cisco NCS 5500 Series Line Cards | |
| NC55-36X100G-BA | NCS 5500 36x100G Base |
| NC55-36X100G-BA= | NCS 5500 36x100G Base Spare |
| NC55-24H12F-SB | NCS 5500 24X100G and 12X40G Scale |
| NC55-24H12F-SB= | NCS 5500 24X100G and 12X40G Scale Spare |
| NC55-24X100G-SB | NCS 5500 24x100G Scale |
| NC55-24X100G-SB= | NCS 5500 24x100G Scale Spare |
| NC55-18H18F-BA | NCS 5500 18X100G and 18X40G Base |
| NC55-18H18F-BA= | NCS 5500 18X100G and 18X40G Base Spare |
| NC55-6X2H-DWDM-BM | NCS 5500 6X200G DWDM MACsec Base |
| NC55-6X2H-DWDM-BM= | NCS 5500 6X200G DWDM MACsec Base Spare |
| NC55-2H-DWDM-BM | NCS 5500 6X200G DWDM MACsec PAYG Base |
| NC55-2H-DWDM-BM= | NCS 5500 6X200G DWDM MACsec PAYG Base Spare |
| NC55-36X100G-SB | NCS 5500 36x100G Scale |
| NC55-36X100G-SB= | NCS 5500 36x100G Scale Spare |
| NC55-36X100G-U-SB | NCS 5500 36x100G PAYG Scale |
| NC55-36X100G-U-SB= | NCS 5500 36x100G PAYG Scale Spare |
| NC55-MOD-A-BM | NCS 5500 12X10, 2X40 and 2XMPA Line Card Base, MACSec |
| NC55-MOD-A-BM= | NCS 5500 12X10, 2X40 and 2XMPA Line Card Base, MACSec Spare |
| NC55-MOD-A-SM | NCS 5500 12X10, 2X40 and 2XMPA Line Card Scale, MACSec |
| NC55-MOD-A-SM= | NCS 5500 12X10, 2X40 and 2XMPA Line Card Scale, MACSec Spare |
| NC57-24X400G-BA | NCS 5700 Series 24 ports of 400 GE base line card bundle |
| NC57-24X400G-BA= | NCS 5700 Series 24 ports of 400 GE base line card bundle spare |
| NC57-18D12TH-SB | NCS 5700 Series 18 ports of 400 GE or 30 ports of 200 GE / 100 GE scale line card bundle. |
| NC57-18D12TH-SB= | NCS 5700 Series 18 ports of 400 GE or 30 ports of 200 GE / 100 GE scale line card bundle spare |
| NC57-36H-SB | NCS 5700 Series 36 ports of 100 GE scale line card bundle |

| Part Number | Product Description |
|--------------------|---|
| NC57-36H-SB= | NCS 5700 Series 36 ports of 100 GE scale line card bundle spare |
| NC57-36H6D-BM | NCS 5700 Series 36 ports of 100 GE or 24 ports of 100 GE and 6 ports of 400GE base line card bundle |
| NC57-36H6D-BM= | NCS 5700 Series 36 ports of 100 GE or 24 ports of 100 GE and 6 ports of 400GE base line card bundle spare |
| NC57-MOD-BM | NCS 5700 8x50GE, 2x400GE, 2xMPA Base Macsec LC |
| NC57-MOD-BM= | NCS 5700 8x50GE, 2x400GE, 2xMPA Base Macsec LC spare |
| NC55-32T16Q4H-BA | NCS 5500 32X10G, 16X25G and 4X100G Line Card Base |
| NC55-32T16Q4H-BA= | NCS 5500 32X10G, 16X25G and 4X100G Line Card Base spare |
| NC55-100G-SE-LIC | NCS 5500 40G to 100G (60G RTU) Scale Upgrade License |
| NC55-100G-SE-LIC= | NCS 5500 40G to 100G (60G RTU) Scale Upgrade License Spare |
| NC55-100G-LIC | NCS 5500 40G to 100G (60G RTU) Base Upgrade License |
| NC55-100G-LIC= | NCS 5500 40G to 100G (60G RTU) Base Upgrade License Spare |
| NC55-50G-DWDM-LIC | NCS 5500 Series 50G Bandwidth DWDM license |
| NC55-50G-DWDM-LIC= | NCS 5500 Series 50G Bandwidth DWDM license, Spare |
| NC55-50G-MAC-LIC | NCS 5500 Series 50G Bandwidth MACsec license |
| NC55-50G-MAC-LIC= | NCS 5500 Series 50G Bandwidth MACsec license, Spare |
| Software | |
| XR-NC55-P-06.00 | IOS-XR 6.0 Release Software License |
| XR-NC55-PK9-06.00 | IOS-XR 6.0 Release Software License |
| XR-NC55-P-06.01 | IOS-XR 6.1 Release Software License |
| XR-NC55-PK9-06.01 | IOS-XR 6.1 Release Software License |
| XR-NC55-P-06.02 | IOS-XR 6.2 Release Software License |
| XR-NC55-PK9-06.02 | IOS-XR 6.2 Release Software License |
| XR-NC55-P-06.03 | IOS-XR 6.3 Release Software License |
| XR-NC55-PK9-06.03 | IOS-XR 6.3 Release Software License |
| XR-NC55-P-06.05 | IOS-XR 6.5 Release Software License |
| XR-NC55-PK9-06.05 | IOS-XR 6.5 Release Software License |
| XR-NC55-P-06.06 | IOS-XR 6.6 Release Software License |

| Part Number | Product Description |
|---|---|
| XR-NC55-PK9-06.06 | IOS-XR 6.6 Release Software License |
| XR-NC55-P-07.00 | IOS-XR 7.0 Release Software License |
| XR-NC55-PK9-07.00 | IOS-XR 7.0 Release Software License |
| XR-NC55-P-07.01 | IOS-XR 7.1 Release Software License |
| XR-NC55-PK9-07.01 | IOS-XR 7.1 Release Software License |
| XR-NC55-P-07.02 | IOS-XR 7.2 Release Software License |
| XR-NC55-PK9-07.02 | IOS-XR 7.2 Release Software License |
| XR-NC55-P-07.03 | IOS-XR 7.3 Release Software License |
| XR-NC55-PK9-07.03 | IOS-XR 7.3 Release Software License |
| XR-NC55-P-07.04 | IOS-XR 7.4 Release Software License |
| XR-NC55-PK9-07.04 | IOS-XR 7.4 Release Software License |
| XR-NC55-P-07.05 | IOS-XR 7.5 Release Software License |
| XR-NC55-PK9-07.05 | IOS-XR 7.5 Release Software License |
| XR-NC55-P-07.06 | IOS-XR 7.6 Release Software License |
| XR-NC55-PK9-07.06 | IOS-XR 7.6 Release Software License |
| Flexible Consumption Software Licenses | |
| NCS 5500 Series | |
| ESS-100G-RTU-1 | NCS 5500 Core and Aggregation Essentials SW RTU v1.0 100G |
| ADV-100G-RTU-1 | NCS 5500 Core and Aggregation Advantage w/o Essentials SW RTU v1.0 100G |
| ADN-100G-RTU-1 | NCS 5500 Core and Aggregation Advantage w/ Essentials SW RTU v1.0 100G |
| ESS-100G-SIA-3 | NCS 5500 Core and Aggregation Essentials SIA v1.0 per 100G 3-5 Year Term |
| ADV-100G-SIA-3 | NCS 5500 Core and Aggregation Advantage w/o Essentials SIA per 100G 3-5 Year Term |
| ADN-100G-SIA-3 | NCS 5500 Core and Aggregation Advantage w/ Essentials SIA v1.0 per 100G 3-5 Year Term |
| ESS-100G-SIA-5 | NCS 5500 Core and Aggregation Essentials SIA v1.0 per 100G 5-10 Year Term |

| Part Number | Product Description |
|------------------------|--|
| ADV-100G-SIA-5 | NCS 5500 Core and Aggregation Advantage w/o Essentials SIA per 100G 5-10 Year Term |
| ADN-100G-SIA-5 | NCS 5500 Core and Aggregation Advantage w/ Essentials SIA v1.0 per 100G 5-10 Year Term |
| NCS 5700 Series | |
| ESS-100G-RTU-2 | NCS 5700 Core and Aggregation Essentials SW RTU v2.0 100G |
| ADN-100G-RTU-2 | NCS 5700 Core and Aggregation Advantage w/ Essentials SW RTU v2.0 100G |
| ESS2-100G-SIA-3 | NCS 5700 Core and Aggregation Essentials SIA v2.0 per 100G 3-5 Year Term |
| ADN2-100G-SIA-3 | NCS 5700 Core and Aggregation Advantage w/ Essentials SIA v2.0 per 100G 3-5 Year Term |
| ESS2-100G-SIA-5 | NCS 5700 Core and Aggregation Essentials SIA v2.0 per 100G 5-10 Year Term |
| ADN2-100G-SIA-5 | NCS 5700 Core and Aggregation Advantage w/ Essentials SIA v2.0 per 100G 5-10 Year Term |

For details on the Cisco Network Convergence System 5500 Series Perpetual Software Licenses, refer to this [data sheet](#) and details on the flexible consumption model for the NCS 5500 Series are available in the [data sheet](#) for the IOS XR Software flexible consumption model.

Warranty

The Cisco NCS 5500 Series has a 1-year limited hardware warranty. The warranty includes hardware replacement with a 10-day turnaround from receipt of a Return Materials Authorization (RMA).

Service and support

Cisco offers a wide range of services to help accelerate your success in deploying and optimizing the Cisco NCS 5500 Series. These innovative Cisco Services offerings are delivered through a unique combination of people, processes, tools, and partners, and they are focused on helping you increase operating efficiency and improve your data center network. Cisco Advanced Services use an architecture-led approach to help you align your data center infrastructure with your business goals and achieve long-term value. Cisco SMARTnet™ Service helps you resolve mission-critical problems with direct access at any time to Cisco network experts and award-winning resources.

With this service, you can take advantage of the Cisco Smart Call Home service, which offers proactive diagnostics and real-time alerts on your Cisco NCS 5500 Series. Spanning the entire network lifecycle, Cisco Services offerings help increase investment protection, optimize network operations, support migration operations, and strengthen your IT expertise.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. [Learn more](#).

For more information

[Learn more](#) about the Cisco NCS 5500 Series.

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