



CHAPTER 1

Overview

This chapter provides an overview of the Cisco Nexus 7000 Series switches, which support end-to-end data center connectivity, consolidating IP, storage, and interprocess communication (IPC) networks onto a single Ethernet fabric.

The Cisco Nexus 7000 Series includes the following switches:

- Cisco Nexus 7004 switch—Provides four slots that include two supervisor modules and up to two I/O modules with 1.92 Terrabytes per second (Tbps) of forwarding capacity. You can access all supervisor and I/O modules, power supplies, and fan trays from the front. This switch does not include fabric modules. This switch uses side-to-back airflow.
- Cisco Nexus 7009 switch—Provides nine slots that include two supervisor modules and up to seven I/O modules with 8.8 Terrabytes per second (Tbps) of forwarding capacity. You can access the supervisor, I/O module, and fabric modules from the front, and you can access the power supply and fan modules from the rear. This switch uses side-to-side airflow.
- Cisco Nexus 7010 switch—Provides 10 slots that include two supervisor modules and up to eight I/O modules with 4.1 Tbps of forwarding capacity. You can access the supervisor and I/O modules from the front, and you can access the fabric modules, power supply, and fan modules from the rear. This switch uses front-to-back airflow.
- Cisco Nexus 7018 switch—Provides 18 slots that include two supervisor modules and up to 16 I/O modules with 7.8 Tbps of forwarding capacity. You can access the supervisor and I/O modules from the front, and you can access the fabric modules, power supplies, and fan modules from the rear. This switch uses side-to-side airflow.

Each type of switch uses the same supervisor modules, I/O modules, and power supply units (AC and DC models). The fan trays and fabric modules are unique to each type of chassis. To compare the features of these two switches, see [Table 1-1](#).

Table 1-1 Cisco Nexus 7000 Series Switch Features

Feature	Cisco Nexus 7004	Cisco Nexus 7009	Cisco Nexus 7010 ¹	Cisco Nexus 7018 ¹
Chassis	4-slot chassis	9-slot chassis	10-slot chassis	18-slot chassis
Supervisor Modules	1 to 2 modules shipped in the chassis.			
	Supervisor 2 (N7K-SUP2) or Supervisor 2E (N7K-SUP2E)	Supervisor 1 (N7K-SUP1), or Supervisor 2 (N7K-SUP2), or Supervisor 2E (N7K-SUP2E)		

Table 1-1 Cisco Nexus 7000 Series Switch Features (continued)

Feature	Cisco Nexus 7004	Cisco Nexus 7009	Cisco Nexus 7010 ¹	Cisco Nexus 7018 ¹
I/O Modules	1 or 2 modules shipped in the chassis	1 to 7 modules shipped in the chassis	1 to 8 modules shipped in the chassis	1 to 16 modules shipped in the chassis
	F2 Series modules <ul style="list-style-type: none"> 48-port 1- and 10-Gigabit Ethernet (N7K-F248XP-25 and N7K-F248XP-25E) 48-port 1- and 10-GBASE-T Ethernet (N7K-F248XT-25E) M1 Series modules <ul style="list-style-type: none"> 48-port 10/100/1000 Ethernet (N7K-M148GT-11L) 48-port 1-Gigabit Ethernet XL (N7K-M148GS-11L) 32-port 10-Gigabit Ethernet XL (N7K-M132XP-12L) 8-port 10-Gigabit Ethernet XL (N7K-M108X2-12L) M2 Series modules <ul style="list-style-type: none"> 24-port 10-Gigabit Ethernet SFP+ (N7K-M224XP-23L) 6-port 40-Gigabit Ethernet (N7K-M206FQ-23L) 2-port 100-Gigabit Ethernet (N7K-M202CF-22L) 	F1 Series modules <ul style="list-style-type: none"> 32-port 1- and 10-Gigabit Ethernet (N7K-F132XP-15) F2 Series modules <ul style="list-style-type: none"> 48-port 1- and 10-Gigabit Ethernet (N7K-F248XP-25 and N7K-F248XP-25E) 48-port 1- and 10-GBASE-T Ethernet (N7K-F248XT-25E) M1 Series modules <ul style="list-style-type: none"> 48-port 10/100/1000 Ethernet (N7K-M148GT-11) 48-port 10/100/1000 Ethernet (N7K-M148GT-11L) 48-port 1-Gigabit Ethernet (N7K-M148GS-11) 48-port 1-Gigabit Ethernet XL (N7K-M148GS-11L) 32-port 10-Gigabit Ethernet (N7K-M132XP-12) 32-port 10-Gigabit Ethernet XL (N7K-M132XP-12L) 8-port 10-Gigabit Ethernet XL (N7K-M108X2-12L) M2 Series modules <ul style="list-style-type: none"> 24-port 10-Gigabit Ethernet SFP+ (N7K-M224XP-23L) 6-port 40-Gigabit Ethernet (N7K-M206FQ-23L) 2-port 100-Gigabit Ethernet (N7K-M202CF-22L) 		
Fan Tray	1 fan tray (N7K-C7004-FAN) shipped in the chassis	1 fan tray (N7K-C7009-FAN) shipped in the chassis	2 system fan trays (N7K-C7010-FAN-S) shipped in the chassis	2 fan trays (N7K-C7018-FAN) shipped in the chassis
Fabric Fan Tray	—	—	2 fabric fan trays (N7K-C7010-FAN-F) shipped in the chassis	—

Table 1-1 Cisco Nexus 7000 Series Switch Features (continued)

Feature	Cisco Nexus 7004	Cisco Nexus 7009	Cisco Nexus 7010 ¹	Cisco Nexus 7018 ¹
Fabric-1 Modules	— (Fabric modules are not used)	—	3 to 5 modules (N7K-C7010-FAB-1) ship with the chassis. These modules deliver 230 Gbps per slot for up to 4.1 Tbps of forwarding capacity.	3 to 5 modules (N7K-C7018-FAB-1) shipped in the chassis. These modules deliver 230 Gbps per slot for up to 7.8 Tbps of forwarding capacity.
Fabric-2 Modules	— (Fabric modules are not used)	3 to 5 modules (N7K-C7009-FAB-2) shipped in the chassis. These modules deliver 550 Gbps per slot for up to 8.8 Tbps of forwarding capacity.	3 to 5 modules (N7K-C7010-FAB-2). These modules deliver 550 Gbps per slot for up to 8.8 Tbps of forwarding capacity.	3 to 5 modules (N7K-C7018-FAB-2). These modules deliver 550 Gbps per slot for up to 8.8 Tbps of forwarding capacity.
Power Supplies	Up to 4 power supply units shipped in the chassis	1 or 2 power supply units shipped with the chassis but boxed separately	2 to 3 power supply units shipped with the chassis but boxed separately	2 to 4 power supply units shipped with the chassis but boxed separately
	3-kW AC power supply units (N7K-AC-3KW) 6-kW DC power supply units (N7K-DC-3KW)	<ul style="list-style-type: none"> 6-kW AC power supply unit (N7K-AC-6.0KW) 7.5-kW AC power supply unit (N7K-AC-7.5KW-INT and N7K-AC-7.5KW-US) 6-kW DC power supply unit (N7K-DC-6.0KW) 		
DC Power Interface Unit	1 or 2 used when the DC power source is more than 15 feet (4.6 m) away from the DC power supply units			

1. The quantity of supervisors, I/O modules, fabric modules, and power supply units shipped with the chassis will vary depending on your order.

For information about preparing your site for the Nexus 7000 Series switches, see [Chapter 2, “Preparing the Site.”](#)

For information about installing the Cisco Nexus 7000 Series switches, see the *Cisco Nexus 7000 Series Hardware Installation and Reference Guide*. For translations of the warnings in that guide, see the *Cisco Nexus 7000 Series Regulatory Compliance and Safety Information* document.

