




NSS4330 Series L3 Aggregation Switch Datasheet






Product Overview

NSS4330 series switch is a wire-speed non-blocking high-performance stackable L3 aggregation routing switch developed by Maipu. It is applied in enterprise campus network and easy to deploy Layer3 switching solution that offers enhanced security and 10GE/40GE uplinks, RIP/OSPF/BGP/IS-IS, L2&L3 Multicast, VST/M-LAG stacking enabled and flexible management.

NSS4330 series switch can be used as L3 access devices on large-sized campus networks. They can also be used as aggregation devices on small and medium-sized campus networks. The switches help build highly reliable enterprise campus networks that are easy to expand and manage.

NSS4330 series switch includes NSS4330-32TXF, NSS4330-32TXP, NSS4330-56TXF, NSS4330-56TXP, NSS4330-36GXF, NSS4330-60GXF, NSS4330-36TXF, NSS4330-60TXF eight models.

Modem Name	Specification
 <p>NSS4330-32TXF(V2)</p>	<ul style="list-style-type: none"> ● 24*10/10/100/1000M Base-T + 6*10G SFP+ ● One Extension Slot (4-Port 10G or 2-Port 40G Card) ● Dual Power Slots ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 328Gbps
 <p>NSS4330-32TXP(V2)</p>	<ul style="list-style-type: none"> ● 24*10/10/100/1000M Base-T + 6*10G SFP+ ● One Extension Slot (4-Port 10G or 2-Port 40G Card) ● Dual Power Slots ● 380W/760W PoE+ (802.3af/802.3at) ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 328Gbps
 <p>NSS4330-56TXF(V2)</p>	<ul style="list-style-type: none"> ● 48*10/10/100/1000M Base-T + 6*10G SFP+ ● One Extension Slot (4-Port 10G or 2-Port 40G Card) ● Dual Power Slots ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 376Gbps

 <p>NSS4330-56TXP(V2)</p>	<ul style="list-style-type: none"> ● 48*10/100/1000M Base-T + 6*10G SFP+ ● One Extension Slot (4-Port 10G or 2-Port 40G Card) ● Dual Power Slots ● RJ45 Console/RJ45 Management/USB2.0 Port ● 380W/760W/1440W PoE+ (802.3af/802.3at) ● Switching Capacity: 376Gbps
 <p>NSS4330-36GXF(V2)</p>	<ul style="list-style-type: none"> ● 24*1G SFP + 4*10G SFP+ ● Two Extension Slots (4-Port 10G or 2-Port 40G Card) ● Dual Power Slots ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 448Gbps
 <p>NSS4330-60GXF(V2)</p>	<ul style="list-style-type: none"> ● 48*1G SFP + 4*10G SFP+ ● Two Extension Slots (4-Port 10G or 2-Port 40G Card) ● Dual Power Slots ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 496Gbps
 <p>NSS4330-36TXF(V3)</p>	<ul style="list-style-type: none"> ● 24*10/100/1000M Base-X + 4*10G SFP+ ● Two Extension Slots (4-Port 10G or 2-Port 40G Card) ● Dual Power Slots ● Dual FAN Slots ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 448Gbps
 <p>NSS4330-60TXF(V3)</p>	<ul style="list-style-type: none"> ● 48*10/100/1000M Base-X + 4*10G SFP+ ● Two Extension Slots (4-Port 10G or 2-Port 40G Card) ● Dual Power Slots ● Dual FAN Slots ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 496Gbps

Key Features

Intelligent stacking technology

NSS4330 series switch supports Maipu VST stacking function. Multiple switches supporting stacking feature are combined to form a virtual switch logically. VST stacking system improves the device-class reliability by redundant backup among multiple member devices and improves the link-class reliability by the link aggregation function across devices. VST provides a powerful network expansion capability. By adding member devices, it can easily expand the number of ports, bandwidth and processing capacity of the stacking system. VST simplifies the configuration and management. After stacking is formed, many physical devices become a virtual device, and users can log into the master switch to configure and manage all member devices of the stacking system in a unified manner.

NSS4330 series also support multi-chassis link aggregation group (M-LAG), which enables links of multiple switches to aggregate into one to implement cross-device link backup. The rest of switches in the M-LAG group are working actively regardless any switch failure. During the upgrade, other switches in the system take over traffic forwarding to ensure uninterrupted services.

High availability

NSS4330 series switch not only supports the traditional STP/RSTP/MSTP spanning tree protocol, but also supports the G.8032 international standard G.8032 protocol issued by ITU-T. This standard can realize 50ms millisecond fast protection switching of Ethernet ring network.

The NSS4330 also supports Virtual Router Redundancy Protocol (VRRP), which implement backup of uplinks. One switch can connect to multiple aggregation switches through multiple links, significantly improving the reliability of access devices.

Perfect security policy

NSS4330 series switch provides various security policies such as user authority/identity authentication, port security, port rate limitation, port monitoring, ACL, loopback detection, and 802.1X authentication; provides various protect mechanisms for user access and network security. It has perfect security function design and supports MAC+IP+VLAN binding and 802.1X authentication security policies, and anti-network storm attack, anti DOS/DDOS attack, anti ARP attack, and anti-network protocol packet attack security technologies. In this way, the attacks and virus can be prevented and it is more suitable for large-scale, multi-service and complicated-traffic networks.

Advanced QoS

NSS4330 series switch supports eight queues per port and the queue scheduling policies such as SP, RR, WRR, and WDRR; rich priority mappings including 802.1p, COS, DSCP; Kbps-level port traffic rate restriction and carriers can limit the rate according to the time period; Tail Drop and RED packet loss algorithm.

Zero Touch Implementing

NSS4330 series support Zero Touch Provisioning (ZTP). It enables the switch to automatically obtain and load version files from file server through DHCP server or USB flash disk.

IPv4&IPv6 Dual-stack ability

NSS4330 series switch comes with IPv4/IPv6 dual-stack platform which provides hardware-based IPv4/IPv6 wire-speed/**non-blocking** forwarding and IPv4/IPv6 Layer3 routing protocols (RIPng, OSPFv3, BGP4+ and IS-IS for IPv6). With these IPv6 features, the NSS4330 can be deployed on a pure IPv4 network, a pure IPv6 network, or a shared IPv4/IPv6 network, helping achieve IPv4-to-IPv6 transition.

BD-LAN Controller Management

NSS4330 can be managed by Maipu BD-LAN controller, which is an integrated SDN platform for campus network. It simplifies campus network security, deployment, and management with the latest software-defined network technologies. It helps the network team complete most of the work on the BD-LAN controller platform. Compared with traditional methods, BD-LAN solution can make the network deployment faster, maintain the network easier, troubleshoot much more efficient, and save customer's overall cost.

Free Licensing Policy

Maipu always insists on "One-time investment" free license policy, the standard features and advanced features will be never divided to different version. For any new firmware version, Maipu will share to customers without extra charge. Compared with other manufacturers, Maipu free license policy can better protect users' short-term and long-term investment.

Technical Specifications

Product model	NSS4330-32TXF	NSS4330-32TXP	NSS4330-56TXF	NSS4330-56TXP
Hardware specification				
Hardware Version	V2	V2	V2	V2
Physical interfaces	24*10/100/1000M Base-T interfaces, 6*10G SFP+ interfaces	24*10/100/1000M Base-T interfaces, 6*10G SFP+ interfaces	48*10/100/1000M Base-T interfaces, 6*10G SFP+ interfaces	48*10/100/1000M Base-T interfaces, 6*10G SFP+ interfaces
SDRAM/ Flash	2GB/8GB	2GB/8GB	2GB/8GB	2GB/8GB
PoE & PoE+	N/A	380W/760W (802.3af/802.3at)	N/A	380W/760W/1440W (802.3af/802.3at)
Switching/Forwarding capacity	328Gbps/244Mpps	328Gbps/244Mpps	376Gbps/279Mpps	376Gbps/279Mpps
Extension slots	One	One	One	One
Mac Address	256K	256K	256K	256K
Arp Table	48K	48K	48K	48K
Jumbo Frame	12K	12K	12K	12K
Routing Entry	IPv4: 80K IPv6:28K	IPv4: 80K IPv6:28K	IPv4: 80K IPv6:28K	IPv4: 80K IPv6:28K
Layer 2 / Layer 3 Multicast Entry	5K/6K	5K/6K	5K/6K	5K/6K
VLAN Entry	4094	4094	4094	4094
Layer 3 Vlan Int	1K	1K	1K	1K
Power slots	Dual Modular/ Hot-Swap	Dual Modular/ Hot-Swap	Dual Modular/ Hot-Swap	Dual Modular/ Hot-Swap
Management interfaces	One RJ45 Console Port, One Management Ethernet Port (DC0 Port) , One USB2.0 interface			
Input voltage	AC:100V ~ 240V, 50Hz ~ 60Hz, DC:-40 ~ -72V			
Temperature	Work Temperature: -5°C to 55°C, Storage Temperature: -40°C to 70°C			
Humidity	Work Humidity:10% ~ 90%, non-condensing, Storage Humidity:5% ~ 95%, non-condensing			
Product model	NSS4330-36GXF	NSS4330-60GXF	NSS4330-36TXF	NSS4330-60TXF
Hardware Version	V2	V2	V3	V3
Physical interfaces	24*1G SFP interfaces, 4*10G SFP+ interfaces	48*1G SFP interfaces, 4*10G SFP+ interfaces	24*10/100/1000M Base-T interfaces, 4*10G SFP+ interfaces	48*10/100/1000M Base-T interfaces, 4*10G SFP+ interfaces
SDRAM/ Flash	2GB/8GB	2GB/8GB	2GB/8GB	2GB/8GB
Switching/Forwarding capacity	448Gbps/330Mpps	496Gbps/366Mpps	448Gbps/330Mpps	496Gbps/366Mpps
Extension slots	Dual (Hot-Swap)	Dual (Hot-Swap)	Dual (Hot-Swap)	Dual (Hot-Swap)
Mac Address	256K	256K	256K	256K
Arp Table	48K	48K	48K	48K
Jumbo Frame	12K	12K	12K	12K
Routing Entry	IPv4: 80K IPv6:28K	IPv4: 80K IPv6:28K	IPv4: 80K IPv6:28K	IPv4: 80K IPv6:28K

Layer 2 / Layer 3 Multicast Entry	5K/6K	5K/6K	5K/6K	5K/6K
VLAN Entry	4094	4094	4094	4094
Layer 3 Vlan Int	1K	1K	1K	1K
Power slots	Dual Modular/ Hot-Swap	Dual Modular/ Hot-Swap	Dual Modular/ Hot-Swap	Dual Modular/ Hot-Swap
FAN slots	N/A (fixed fan)	N/A (fixed fan)	Dual Modular/ Hot-Swap	Dual Modular/ Hot-Swap
Management interfaces	One RJ45 Console Port, One Management Ethernet Port (DC0 Port) , One USB2.0 interface			
Input voltage	AC:100V ~ 240V, 50Hz ~ 60Hz, DC:-40 ~ -72V			
Temperature	Work Temperature: -5°C to 55°C, Storage Temperature: -40°C to 70°C			
Humidity	Work Humidity:10% ~ 90%, non-condensing, Storage Humidity:5% ~ 95%, non-condensing			
Software Specification				
	Interface	Port Type UNI/NNI, Port Speed, MDI/MDX, Port MTU, Port Loopback, Loopback interface, Tunnel interface, Null interface, VXLAN interface, Storm Control (B/M/U)		
	Ethernet Swithing	LACP Link aggregation (32 port/128 group), LACP Port Priority, LACP Load Balance, LACP Rate Monitor, LACP Debug, Port isolation, QinQ, 802.1Q VLAN (1-4095), VLAN mapping(1:1, N:1), Super VLAN, PVLAN, Voice VLAN, STP, MSTP, G.8032, Loopback-detection, Error-disable, GVRP, MLAG, VLAN isolation, Jumbo Frame 12K bytes, 802.3x Flow Control, BPDU guard, Root guard.		
Standard L3 protocol	IP Protocol	ARP, DHCP, DHCPv6, DHCP Server, DHCPv6 Server, DHCPv6 Client, DHCP Relay, DHCPv6 Relay, DHCP Option82, DNS, GRE, IPIP, IPv6 over IPv4, ISATAP, IPv4 over IPv6, IPv6 over IPv6		
	Routing Protocol	Static route for IPv4&IPv6, RIPv1/v2, RIPng, OSPFv2, OSPFv3, IS-IS, IS-ISv6, BGP, BGPv6, Policy Route		
Multicast	L2 multicast	IGMPv1/v2/v3 Snooping, multicast VLAN		
	L3 multicast	IGMPv1/v2/v3, PIM-SM, IPv6 PIM-SM, IPv6 PIM-SSM, PIM-DM, MSDP, MLD-snooping		
QoS & ACL	QoS	802.1p, DSCP, ToS, Diffserv and other priority mapping, Layer 2 to Layer 4 packet filtering, SP, WRED, WDRR, Flow classification, Traffic monitoring, Traffic shaping, Congestion management, Congestion avoidance, Flow-based mirroring, Traffic classification based on source MAC, destination MAC, source IP, destination IP, TCP/UDP port, and VLAN, Rate limiting		
	ACL	Standard IP ACL, extended IP ACL (L2-L4 ACL), standard MAC ACL, extended MAC ACL, extended Hybrid ACL, Standard IPv6 ACL, extended IPv6 ACL		
Virtualization	Stacking	H-VST, M-VST, M-LAG (up to 8 unit, maximum 160Gbps stacking bandwidth)		
	MAD	MAD LACP, MAD BFD, MAD Fast-hello		
Zero Touch Provisioning	ZTP mode A	ZTP provisioning through DHCP server		
	ZTP mode B	ZTP provisioning trough USB flash disk		
MPLS VPN	L3 BGP MPLS	MPLS LDP, MPLS L3 VPN, MPLS Option-A & Option-B, MPLS Ping/traceroute		
	MCE	Multi-VRF		
Data Center	VxLAN	Static VxLAN, EVPN VxLAN		
	Security	ARP Check, AARF, AARF ARP-Guard, CPU Protection, Port Security, IP Source Guard(IPSG), IPv6 Source Guard, ND-Snooping, DHCP Snooping, DHCPv6		

Security & Network Reliability		Snooping, Dynamic ARP Inspection(DAI), Host Guard, PPPoE+, AAA, 802.1x, 802.1x with VLAN/ACL assignment, TACACS+, RADIUS, User/MAC/Portal based authentication, Anti-attack detect drop flood log, URPF, AARF
	Network Reliability	HA, ULFD, G.8032, ULPP, Monitor Link, VRRP, VRRPv3, VBRP, BFD, EEP
Management	Network Management	SNMP v1/v2/v3, MIB, RMON (RFC 2819) (RMON Groups 1, 2, 3, 9), SYSLOG, DNS, CLI, Telnet, SSH 2.0, SFTP, FTP/TFTP, FTPs Debug, NTP, Keepalive Gateway
	Network Monitoring	SPAN (1:1, N:1), 4 concurrent mirroring sessions, RSPAN, VLAN SPAN, ERSPAN, IPFIX, sFlow, LLDP, LLDP-MED, IP-SLA, CWMP, NDSP, Telemetry, OAM, Multiple image/config support, 802.3az Energy Efficient Ethernet (EEE).
IEEE Standard	<p>IEEE 802.3 (10BASE-T)</p> <p>IEEE 802.3u (100BASE-T)</p> <p>IEEE 802.3z (1000BASE-X)</p> <p>IEEE 802.3ab (1000BASE-T)</p> <p>IEEE 802.3ae (10G BASE-X)</p> <p>IEEE 802.3ah (Ethernet in the First Mile Operations, Administration, and Maintenance)</p> <p>IEEE 802.1x (Port-Based Network Access Control)</p> <p>IEEE 802.3ad (Link Aggregation)</p> <p>IEEE 802.3x (Flow Control)</p> <p>IEEE 802.1d (Spanning Tree Protocol)</p> <p>IEEE 802.1Q (Virtual LAN)</p> <p>IEEE 802.1w (Rapid Spanning Tree Protocol)</p> <p>IEEE 802.1s (Multiple Spanning Tree Protocol)</p> <p>IEEE 802.1p (Class of Service Priority)</p> <p>IEEE 802.1ag (Connectivity Fault Management)</p> <p>ITU-T G.8032 (Ethernet Ring Protection Switching)</p> <p>ITU-T Y.1731 (Ethernet OAM Performance Monitoring)</p>	

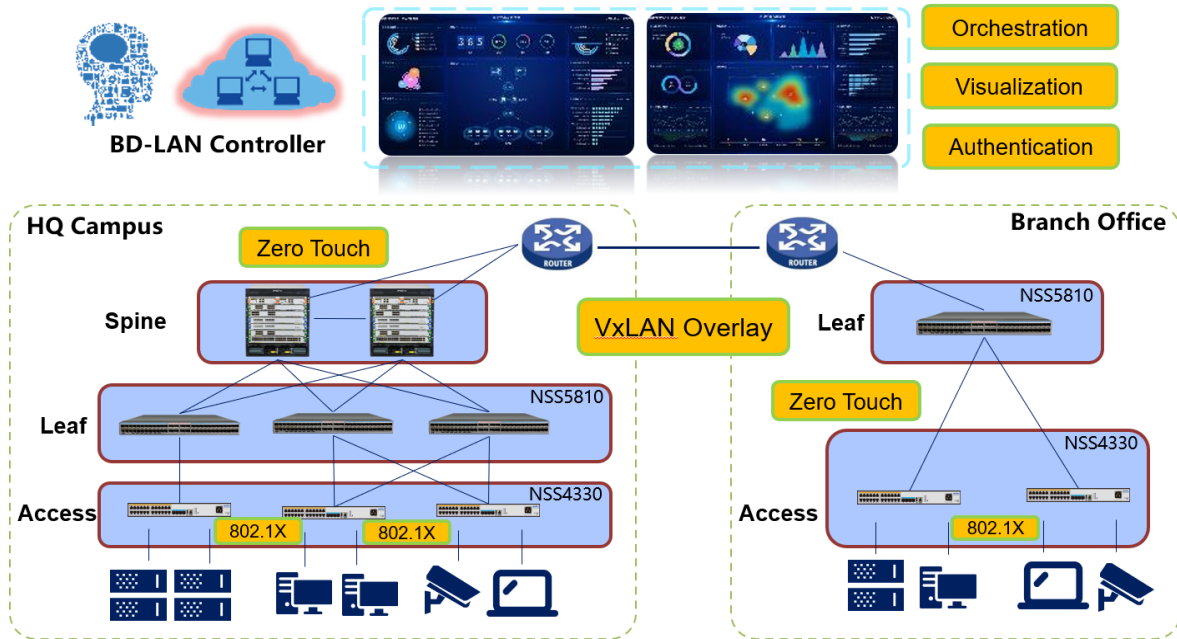
Order Information

Product model	Description
NSS4330 Series	
NSS4330-32TXF	V2 Version: 24*10/100/1000M Base-T autosensing interfaces, 6*10G/1G Base-X SFP+ interfaces, One Extension Slot, Dual Hot-Swap Power Slots.
NSS4330-56TXF	V2 Version: 48*10/100/1000M Base-T autosensing interfaces, 6*10G/1G Base-X SFP+ interfaces, One Extension Slot, Dual Hot-Swap Power Slots.
AD120-1S005E	120W AC Power Supply Module
NSS4330-32TXP	V2 Version: 24*10/100/1000M Base-T autosensing interfaces, 6*10G/1G Base-X SFP+ interfaces, PoE Enable (802.3af/802.3at), One Extension Slot, Dual Hot-Swap Power Slots.
NSS4330-56TXP	V2 Version: 48*10/100/1000M Base-T autosensing interfaces, 6*10G/1G Base-X SFP+ interfaces, PoE Enable (802.3af/802.3at), One Extension Slot, Dual Hot-Swap Power Slots.
AD500-1D005E	500W AC Power Supply Module
AD880-1D005E	880W AC Power Supply Module
NSS4330-36GXF	V2 Version: 24 10/100/1000M SFP interfaces, 4*10G/1G Base-X SFP+ interfaces, Dual Expansion Slots, Dual Hot-Swap Power Slots.
AD120M-HS0N	120W AC Power Supply Module
DD250M-5S0N	120W DC Power Supply Module
NSS4330-60GXF	V2 Version : 48*10/100/1000M SFP interfaces, 4*10G/1G Base-X SFP+ interfaces, Dual Extension Slots, Dual Hot-Swap Power Slots.
AD250-1S005E-B	250W AC Power Supply Module
DD500M-5S0B	500W DC Power Supply Module
NSS4330-36TXF	V3 Version : 24*10/10/100/1000M Base-T autosensing interfaces, 4*10G/1G Base-X SFP+ interfaces, Dual Extension Slots, Dual FAN Slots, Dual Hot-Swap Power Slots.
NSS4330-60TXF	V3 Version : 48*10/10/100/1000M Base-T autosensing interfaces, 4*10G/1G Base-X SFP+ interfaces, Dual Extension Slots, Dual FAN Slots, Dual Hot-Swap Power Slots.
AD120M-HS0N	120W AC Power Supply Module
Extension Module	
NM4A-2QXGEF	2-Port 40G QSFP+ Extension Module for NSS4330 Series
NM4A-4XGEF	4-Port 10G SFP+ Extension Module for NSS4330 Series
Transceivers	
MP-S85123-3CDLM	1.25G SFP 850nm 550m LC DDM Multi-mode SX
MP-S31121-3CDL20	1.25G SFP 1310nm 10-20Km LC DDM Single-mode LX

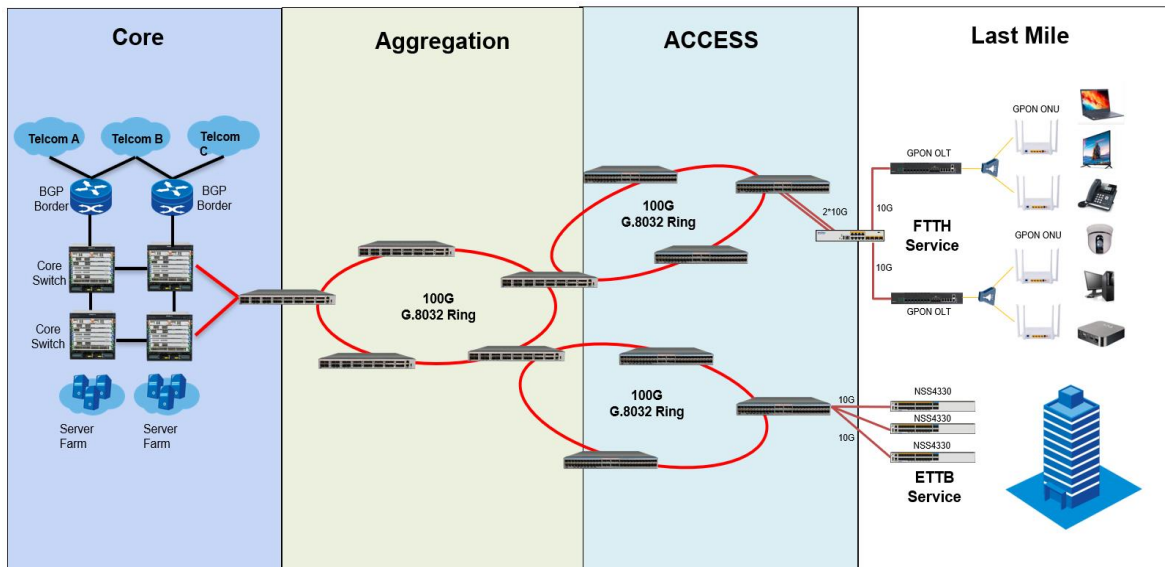
MP-S31121-3CDL40	1.25G SFP 1310nm 40Km LC DDM Single-mode LH
MP-S55122-3CDL80	1.25G SFP 1550nm 70-80Km LC DDM Single-mode ZX
MP-S851X3-NCLM	10G SFP+ 850nm 300m LC DDM Multi-mode SR
MP-S311X2-NCL10	10G SFP+ 1310nm 10Km LC DDM Single-mode LR
SFP-GETA	1000M Base-TX, RJ45 interface
SFP-STACK-15	SFP+ DAC stacking cable, SFP+ to SFP+,10Gbps, 1.5 meters length
SFP-STACK-30	SFP+ DAC stacking cable, SFP+ to SFP+,10Gbps, 3 meters length
SFP-STACK-50	SFP+ DAC stacking cable, SFP+ to SFP+,10Gbps, 5 meters length
QSFP-STACK-10	QSFP DAC stacking cable, QSFP to QSFP, 40Gbps, 1.0 meters length
QSFP-STACK-30	QSFP DAC stacking cable, QSFP to QSFP, 40Gbps, 3.0 meters length
QSFP-STACK-50	QSFP DAC stacking cable, QSFP to QSFP, 40Gbps, 5.0 meters length

Typical Application

Campus LAN Network



ISP FTTH Network



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