UniFi® | SWITCH 16 XG

10G 16-Port Managed Aggregation Switch

Model: US-16-XG

Non-Blocking Throughput Switching

Maximum Performance and Low Latency

10G Ethernet SFP+ and RJ45 Ports

UBIQUITI®
N E T W O R K S

10G Aggregation Switch for Enterprise Networks

Build and expand your network with Ubiquiti Networks® UniFi® Switch 16 XG, part of the UniFi Enterprise System. The US-16-XG is a fully managed, 16-port, 10G fiber switch that enhances network capacity by providing high-bandwidth aggregation connectivity to multiple switches in your network.

The US-16-XG offers an extensive suite of advanced Layer-2 switching features and protocols, and also provides Layer-3 routing capability.

Switching Performance

The US-16-XG offers the forwarding capacity to simultaneously process traffic on all ports at line rate without any packet loss.
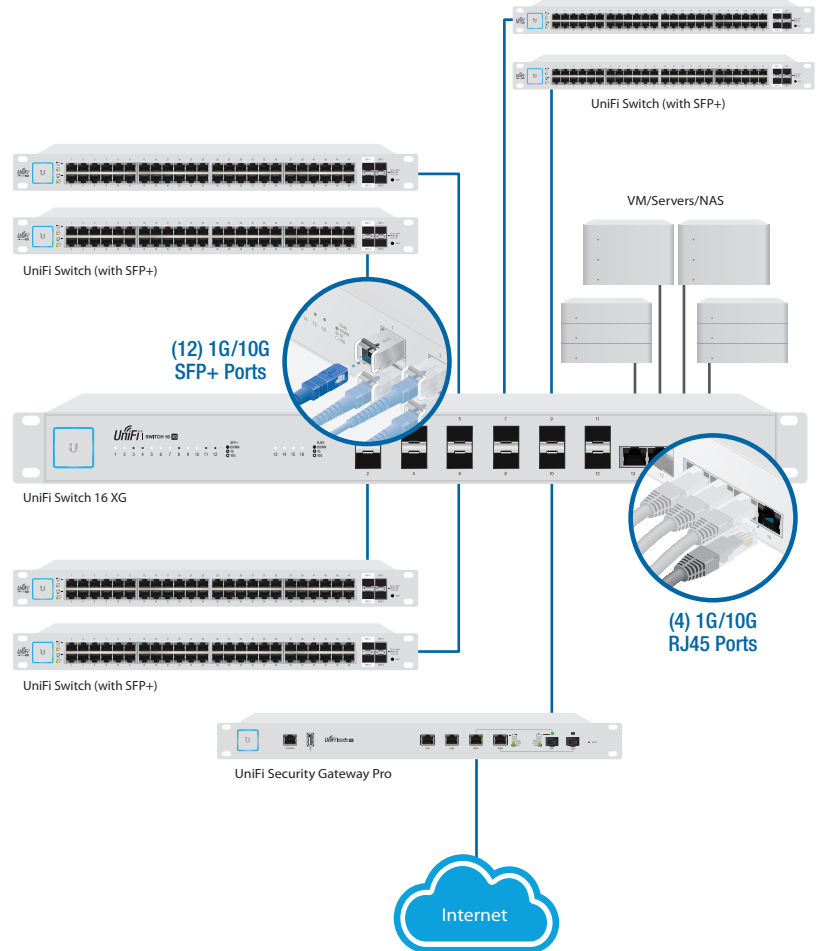
The total non-blocking throughput is up to 160 Gbps.

10G High-Capacity Links

The US-16-XG offers maximum performance and low latency as an aggregation switch.

For fiber connectivity, it features 12 SFP+ ports. For copper connectivity, the US-16-XG offers four RJ45 ports that support 10GBASE-T, the standard for 10 Gbps connections using Cat6 (or higher) cabling and RJ45 connectors.

Deployment Example

UniFi Switch (with SFP+)

UniFi Switch (with SFP+)

VM/Servers/NAS

(12) 1G/10G SFP+ Ports

UniFi Switch 16 XG

(4) 1G/10G RJ45 Ports

UniFi Switch (with SFP+)

UniFi Security Gateway Pro

Internet

The US-16-XG connects to the following:

- *Multiple UniFi Switches and a 1G/10G router via SFP+ ports*
- *VM, Server, NAS, or other network devices via 1G/10G RJ45 ports*

UniFi Controller

Designed for convenient management, the UniFi Controller software allows admins to configure and monitor the UniFi Switch and other UniFi devices using a graphical user interface. You can download it from **www.ubnt.com** at no cost.

Multi-Site Management

A single instance of the UniFi Controller running in the cloud can manage multiple UniFi sites within a centralized interface. Each site is logically separated and has its own network monitoring, configuration, maps, statistics, and admin accounts.

Switch Configuration

You can access any managed UniFi Switch through the UniFi Controller to configure a variety of features:

- Operation mode (switching, mirroring, or aggregate) per port
- Network/VLAN configuration
- Jumbo frame and flow control services
- Network settings
- Storm control setting per port
- Spanning tree configuration
- 802.1x control and RADIUS VLAN
- Debug terminal option for command-line interface

Switch Port Status

You can also view status information for each port:

- Connection speed and duplex mode
- TX/RX data rates
- Network/VLAN setting

Dashboard

The *Dashboard* tab provides a visual representation of your network's status. Basic information is provided for each network segment.

Device Configuration

The *Devices* screen displays the UniFi devices discovered by the UniFi Controller. You can access each managed device for device details and configuration.

Models

UniFi Switch 16 XG
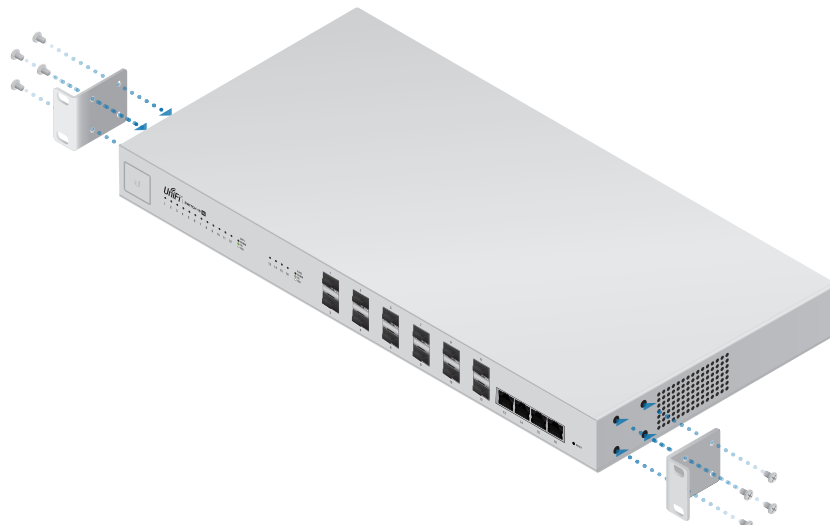
Model: US-16-XG

- (12) 1G/10G SFP+ Ports
- (4) 1G/10G RJ45 Ports
- (1) RJ45 Serial Console Port
- Non-Blocking Throughput: 160 Gbps
- Switching Capacity: 320 Gbps
- Forwarding Rate: 238.10 Mpps
- Rack Mountable with Mount Brackets (Included)
- DC Input Option (Redundant or Stand-Alone)

Front Panel

Back Panel

Place on a desktop or attach the mounting brackets to install in a rack.

UniFi® | SWITCH 16 XG

Hardware Specifications

US-16-XG		
Dimensions	443 x 221 x 43 mm (17.44 x 8.70 x 1.69")	
Weight	Without Mount Brackets	With Mount Brackets
	2.62 kg (5.78 lb)	2.71 kg (5.97 lb)
Enclosure Characteristics	SGCC Steel	
Total Non-Blocking Throughput	160 Gbps	
Switching Capacity	320 Gbps	
Forwarding Rate	238.10 Mpps	
Max. DC Power Consumption	36W (Excludes SFP/SFP+ Modules)	
Power Method	AC	DC
	100-240VAC/50-60 Hz, Universal Input	DC 56W, 25 to 16V, with 2.5 mm DC Power Inline Connector
Supported Voltage Range	100 to 240VAC	25 to 16VDC
Power Supply	AC/DC, Internal, 56W DC	
LEDs Per Data Port	Speed/Link/Activity	
Networking Interfaces	(12) 1/10 Gbps SFP+ Ethernet Ports (4) 1/10 Gbps RJ45 Ethernet Ports	
Management Interface	(1) RJ45 Serial Port Out-of-Band, Ethernet Ports In-Band	
Certifications	CE, FCC, IC	
Rack Mount	Yes, 1U High	
ESD/EMP Protection	Air: ± 24 kV, Contact: ± 24 kV	
Operating Temperature	-5 to 40° C (23 to 104° F)	
Operating Humidity	5 to 95% Noncondensing	
Shock and Vibration	ETSI300-019-1.4 Standard	

Software Specifications

Software Information	
Core Switching Features	• ANSI/TIA-1057: LLDP-Media Endpoint Discovery (MED) • IEEE 802.1AB: Link Layer Discovery Protocol (LLDP) • IEEE 802.1D: Spanning Tree Compatibility • IEEE 802.1S: Multiple Spanning Tree Compatibility • IEEE 802.1W: Rapid Spanning Tree Compatibility • IEEE 802.1Q: Virtual LANs with Port-Based VLANs • IEEE 802.1p: Ethernet Priority with User Provisioning and Mapping • IEEE 802.1X: Port-Based Authentication with Guest VLAN Support • IEEE 802.3: 10BASE-T • IEEE 802.3u: 100BASE-T • IEEE 802.3ab: 1000BASE-T • IEEE 802.3an-2006: 10GBASE-T • IEEE 802.1ak: Virtual Bridged Local Area Networks - Amendment 07: Multiple Registration Protocol • IEEE 802.3ac: VLAN Tagging • IEEE 802.3ad: Link Aggregation • IEEE 802.3x: Flow Control • IEEE 802.1D-2004: Generic Attribute Registration Protocol: Clause 12 (GARP) • IEEE 802.1D-2004: Dynamic L2 multicast registration: Clause 10 (GMRP) • IEEE 802.1Q-2003: Dynamic VLAN registration: Clause 11.2 (GVRP) • RFC 4541: Considerations for Internet Group Management Protocol (IGMP) Snooping Switches • RFC 5171: Unidirectional Link Detection (UDLD) Protocol
Advanced Layer 2 Features	• Broadcast Storm Recovery • Broadcast/Multicast/Unknown Unicast Storm Recovery • DHCP Snooping • IGMP Snooping Querier • Independent VLAN Learning (IVL) Support • Jumbo Ethernet Frame Support • Port MAC Locking • Port Mirroring • Protected Ports • Static MAC Filtering • TACACS+ • Voice VLANs • Unauthenticated VLAN • Internal 802.1X Authentication Server

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Software Information	

Platform Specifications	• DHCP Server
	  • Maximum Number of Pools: 128
	  • Maximum Number of Leases (Total): 2048
	• Routing
	  • Number of Routes: 16
	  • Number of Routing Interfaces: 15
	• VLANs: 255
	• MAC Addresses: 8k
	• MSTP Instances: 4
	• LAGs: 6
	• ACLs: 100 with 10 Rules per Port
	• Traffic Classes (Queues): 8

System Facilities	• Event and Error Logging Facility • Run-Time and Configuration Download Capability • PING Utility • FTP/TFTP Transfers via IPv4/IPv6 • Malicious Code Detection • BootP and DHCP • RFC 2021: Remote Network Monitoring Management Information Base Version 2 • RFC 2030: Simple Network Time Protocol (SNTP) • RFC 2819: Remote Network Monitoring Management Information Base • RFC 2865: RADIUS Client • RFC 2866: RADIUS Accounting • RFC 2868: RADIUS Attributes for Tunnel Protocol Support • RFC 2869: RADIUS Extensions • RFC 3579: RADIUS Support for EAP • RFC 3580: IEEE 802.1X RADIUS Usage Guidelines • RFC 3164: BSD Syslog Protocol
Management	• Web UI • Industry-Standard CLI • IPv6 Management • Password Management • Autoinstall Support for Firmware Images and Configuration Files • SNMP v1, v2, and v3 • SSH 1.5 and 2.0 • SSL 3.0 and TLS 1.0 • Secure Copy (SCP) • Telnet (Multi-Session Support)
Layer 3 Routing	• Static Routing • Policy Based Routing

Software Information	

QoS	• Access Control Lists (ACLs), Permit/Deny Actions for Inbound IP and Layer 2 Traffic Classification Based on:
	    • Time-Based ACL
	    • Source/Destination IP Address
	    • TCP/UDP Source/Destination Port
	    • IP Protocol Type
	    • Type of Service (ToS) or Differentiated Services (DSCP) Field
	    • Source/Destination MAC Address
	    • EtherType
	    • IEEE 802.1p User Priority
	    • VLAN ID
	    • RFC 1858: Security Considerations for IP Fragment Filtering
	 • Optional ACL Rule Attributes
	    • Assign Flow to a Specific Class of Service (CoS) Queue
	    • Redirect Matching Traffic Flows
	 • Differentiated Services (DiffServ)
	    • Classify Traffic Based on Same Criteria as ACLs
	    • Mark the IP DSCP or Precedence Header Fields, Optional
	    • Police the Flow to a Specific Rate with Two-Color Aware Support
	    • RFC 2474: Definition of the Differentiated Services Field (DS field) in the IPv4 and IPv6 Headers
	    • RFC 2475: An Architecture for Differentiated Services
	    • RFC 2597: Assured Forwarding Per-Hop Behavior (PHB) Group
	    • RFC 3246: An Expedited Forwarding PHB
	    • RFC 3260: New Terminology and Clarifications for DiffServ
	 • Class of Service (CoS) Queue Mapping Configuration
	    • AutoVoIP: Automatic CoS Settings for VoIP
	    • IP DSCP-to-Queue Mapping
	    • Configurable Interface Trust Mode (IEEE 802.1p, DSCP, or Untrusted)
	    • Interface Egress Shaping Rate
	    • Strict Priority versus Weighted Scheduling per Queue

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