

XG3316-16T DATASHEET

THINKING OF LINKING !



16 Ports with 5 speeds : 10G , 5G , 2.5G , 1G , 100M

Upgrade your Network Potential with 10-Gigabit/Multi-Gigabit 5-Speed Networking Switches

Revolutionary 5-speed 10-Gigabit/Multi-Gigabit technology built in the CL Networks multi-speed switches allows your devices to speed past the Gigabit barrier. Compliant with IEEE 802.3 and IEEE802.3az standards.

- IEEE802.3an : 10GBASE-T
- IEEE802.3bz : 5 / 2.5GB-T , 5G / 2.5GBASE-T Broadcom MGBASE-T , NBASE-T
- IEEE802.3ab : 1000BASE-T
- IEEE802.3u : 100BASE-TX

Innovative Switching Technology

The XG3316-16T a fully managed, 10G copper switch that enhances network capacity and provides high-bandwidth services to growing networks for Small and Medium Businesses (SMB).

The XG3316-16T offers an extensive suite of innovative Layer-2 switching features and protocols, and also supports Layer-3 routing capability.


Switching Power

The XG3316-16T offers the forwarding capacity to simultaneously process traffic on all ports at line rate without any packet loss. For its total, non-blocking throughput, the XG3316-16T supports up to 160 Gbps.

10G High-Capacity Links

The XG3316-16T offers maximum performance and low latency as an aggregation switch, which has 16 RJ45 ports that support 10GBASE-T, the standard for 10 Gbps connections using Cat6 (or higher) cabling and RJ45 connectors.

HARDWARE SPECIFICATION

Dimension	437 mm x 260 mm x 44 mm (17.20 x 10.24 x 1.69")	
Weight	Rack-Mount Brackets Included	Rack-Mount Brackets Excluded
	3.41 kg (7.52lb)	3.30 kg (7.28lb)
Enclosure Characteristics	SGCC Steel	
Total Non-Blocking Throughput	160 Gbps	
Switching Capacity	320 Gbps	
Forwarding Rate	238.10 Mpps	
Max. DC Power Consumption	65W , PSU's PF > 0.95 with PFC	
Supported Voltage Range	100 ~ 240VAC / 50~60Hz	
LEDs	LINK / ACTIVITY per Ports	
	PWR , SYS , FAN For System Alarm	
Networks	16 x 100M/1G/2.5G/5G/10Gbps RJ45 Ethernet Ports	
Management Interface	1 Port RJ45 Serial Port (UART) , 1 Port GE/FE Out Band	
USB	1 Port USB2.0 For Upgrade Image (2.5A)	
Certifications	CE , FCC , KC	
Rack Mount	Yes , 1U High	
ESD / EMP Protection	Air : ±15kV , Contact : ± 8kV	
Operating Temperature	-5° C to 40° C (23° F to 104° F)	
Operating Humidity	5% to 95% None condensing	
EMC Certifications	KC : KN32/KN35 Class A	
	FCC : Parts 15b Class A	
	CE : EN55032 / EN55035 Class A	
Accessry	Power Cord , Usb Console cable (optional) , Rack mount Brackets	
		

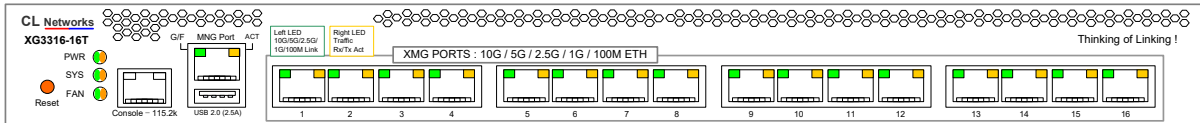
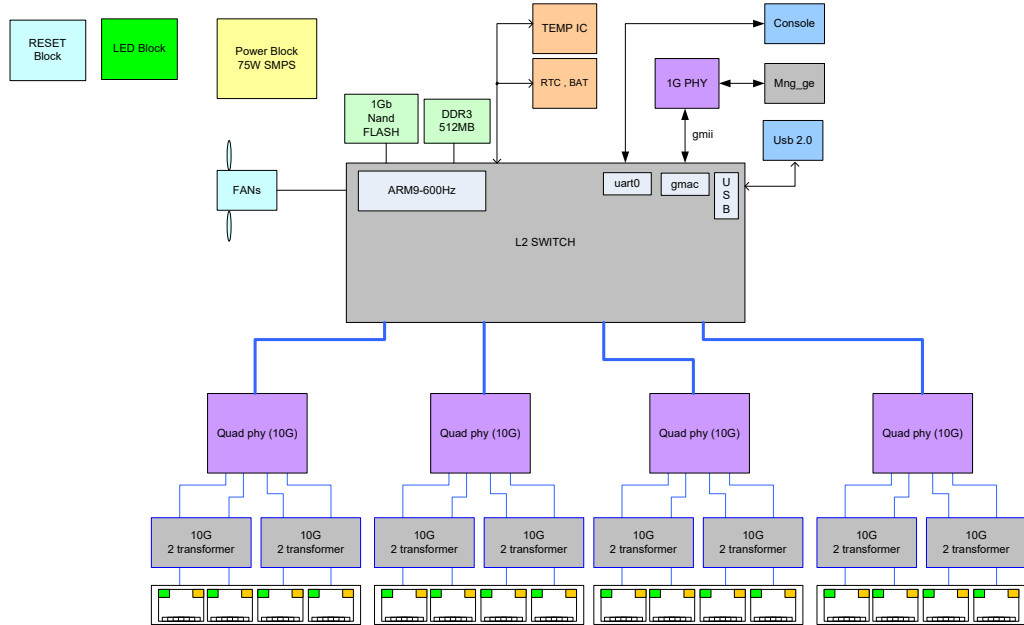
SOFTWARE SPECIFICATION

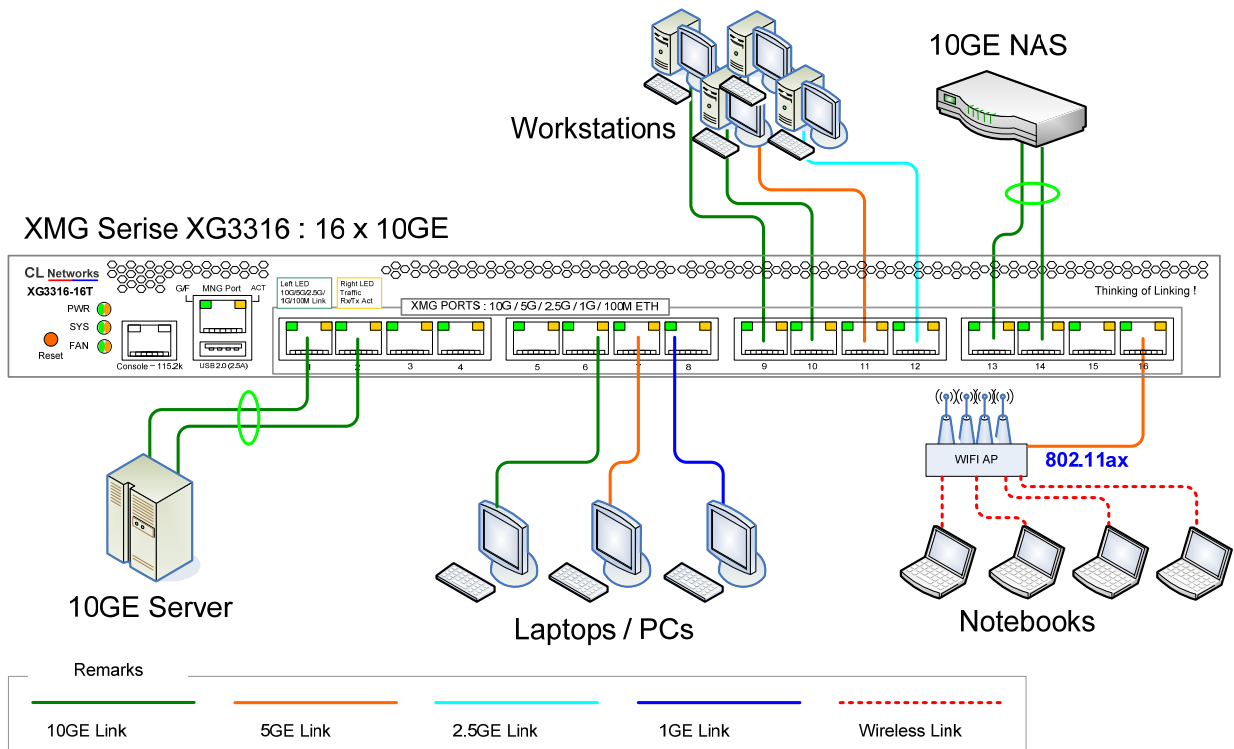
Core Switching Features	<ul style="list-style-type: none"> • IEEE 802.1D: Spanning Tree Compatibility • IEEE 802.1S: Multiple Spanning Tree Compatibility • IEEE 802.1W: Rapid Spanning Tree Compatibility • IEEE 802.1Q: Virtual LANs with Port-Based VLANs • IEEE 802.1p: Ethernet Priority with User Provisioning and Mapping • IEEE 802.1X: Port-Based Authentication with Guest VLAN Support • IEEE 802.3ab: 1000BASE-T • IEEE 802.3an-2006: 10GBASE-T • IEEE 802.3ac: VLAN Tagging • IEEE 802.3ad: Link Aggregation • IEEE 802.3x: Flow Control
Advanced Features	<ul style="list-style-type: none"> • Storm control • DHCP Snooping • IGMP Snooping • Jumbo Ethernet Frame Support • Port Mirroring • MAC Filtering • TACACS+
Platform Specifications	<ul style="list-style-type: none"> • VLANs: 4K • MAC Addresses: 16k • STP Instances: 128 • Traffic Classes (Queues): 8
System Facilities	<ul style="list-style-type: none"> • Run-Time and Configuration Download Capability • PING • FTP/TFTP • DHCP • RFC 1305: Network Time Protocol (NTP) • RFC 2865: RADIUS Client • RFC 2866: RADIUS Accounting • RFC 2868: RADIUS Attributes for Tunnel Protocol Support • RFC 2869: RADIUS Extensions • RFC 3580: IEEE 802.1X RADIUS Usage Guidelines • RFC 3164: BSD Syslog Protocol
Management	<ul style="list-style-type: none"> • Industry-Standard CLI • Password Management • Auto install Support for Firmware Images and Configuration Files • Telnet: 8 Session Support) <ul style="list-style-type: none"> • <i>Web UI*</i> • <i>SNMP v1, v2, and v3*</i> • <i>IPv6 Management*</i>
Layer 3 Routing	<ul style="list-style-type: none"> • Static Routing • <i>RIP, OSPF*</i>

QoS	<ul style="list-style-type: none">• Access Control Lists (ACLs), Permit/Deny Actions for Inbound IP Based on:<ul style="list-style-type: none">– Source/Destination IP Address• Differentiated Services (DiffServ)• Class of Service (CoS) Queue Mapping Configuration<ul style="list-style-type: none">– 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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* will be supported in the future

BLOCK DIAGRAM





1. Applied field

- Effective switching equipment for small and medium-sized (SMB) networks.
- Effect of resolving network bottlenecks with NAS devices with Link Aggregation.
- Uncompressed UHD image transmission with 10G Ethernet.
- Wireless LAN 802.11ax (Wi-Fi 6) AP capable of supporting 4.8 Gbps speed.

2. Economic and Industrial Impact

- 10G base-T (UTP cable) equipment will lead the diffusion of 10G Ethernet equipment.
- Currently, 10G Ethernet switch market is occupied by foreign equipment. Produce and supply more affordable equipment through localization
- It is possible to develop products that reflect the requirements of domestic users.
- Cost reduction by replacing optical module cable in 10G switch network construction.

3. Technological Impact

- 10 Gigabyte contributes to the spread of the Internet by meeting the increase of network capacity due to the spread of the Internet.
- UHD video, commercialization of 5G mobile communication technology, diffusion of IoT (Internet of things), responding to the surge of data traffic, helps to develop such related functions.

4. Supported distance of 10GB-T per UTP Cable Category

- CAT5E : ~ 30 meters
- CAT6 : ~ 55 meters
- CAT6A, CAT7 : ~ 100 meters



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