



The ComNet CWGE28MS2 has twenty 100/1000Base-FX SFP ports, four Gigabit combo ports that allow for TX or FX transmission and four 1000Base-FX SFP ports. All SFP ports utilize ComNet SFP\* modules for fiber, connector type and distance. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols (ERPS G.8032 and MSTP/RSTP/STP) which protect your applications from network interruptions or temporary malfunctions by redirecting transmission within the network. The CWGE28MS implements complete Layer 2 to Layer 4 ACLs to restrict access to your sensitive network resources by filtering specific packets based on TCP/UDP ports, source and destination IP addresses or particular network devices. Furthermore, DHCP snooping, TACACS+, ARP, IEEE 802.1X and Port Security provide additional tools to manage access and levels of use of the network. These defence mechanisms of the CWGE28MS along with advanced DoS auto prevention deliver robust network security and enables network administrators to offer more stable services on a more secure network.

## FEATURES

- › 28 Gbps Ports: 20 × 100/1000Base-FX SFP Ports  
4 × Gigabit Combo Ports  
4 × 1000Base-FX SFP Ports
- › Supports IPV6 latest internet protocol version
- › Provided SSH protocol enhances network security
- › Supports Device Binding security function
- › Internal 100-240 VAC Power Supply
- › Supports SNMP v1/v2c/v3 & RMON & 802.1Q VLAN Network Management
- › Supports L2/L3/L4 ACL, TACACS+ & 802.1x User Authentication for security
- › Supports 10K Bytes Jumbo Frame
- › Multiple notifications warn of unexpected events
- › Web-based, Telnet, Console (CLI), and Windows-based utility (eConsole) monitoring
- › Layer 3 static routing
- › Supports IEEE 1588v2 Precision Timing Protocol
- › IEEE 802.3AZ Energy Efficient Ethernet-Compliant
- › Supports LLDP Protocol
- › 19 inch rack mountable design
- › ITU-T G.8032 Ethernet Ring Protection Switching (ERPS)
- › MSTP/RSTP/STP (IEEE 802.1s/w/D)

\* Small Form-Factor Pluggable Module. Sold separately.

## SPECIFICATIONS

## Connectors

Gigabit Combo Ports	4 × 10/100/1000Base-T(X) & 100/1000Base-X SFP <sup>1</sup>
100/1000Base-X Ports	20 × SFP <sup>1</sup>
1000Base-X Ports	4 × SFP <sup>1</sup>
Serial Console Port	RS-232 in DB9 connector with console cable. 38400bps, 8, N, 1

## Switch Properties

Switching latency	7 μs
Switching bandwidth	56 Gbps
L2 Forwarding	41.7 Mpps
Packet Buffer	12 Mbit
Max. Available VLANs	4k
IGMP multicast groups	256
Port rate limiting	User Defined
Processing	Store-and-Forward
Priority Queues	4
Network Redundancy	ERPS (G.8032) Dual Homing STP RSTP MSTP
MAC Table	16K MAC Addresses
Jumbo Frame	Up to 10K Bytes

## Enhanced Function

Hardware Monitor
Code Redundancy
Protocol-based VLAN
MAC-based VLAN
GARP/GVRP
IPoE (DHCP option 82)
IGMP Statistics/Group Filter
IGMP Message Filter
MVR (Multicast VLAN Registration)
DHCP Relay
PPPoE IA
VLAN Translation
DHCP Option 66/67
Auto Provisioning
MLDv2 (Multicast Listener Discovery)
PTP (IEEE-1588v2)
Static Route
SNTP
Port Alias
DHCPv6 Option 18/37
DHCPv6 Relay
UDLD

## Network Function

Loop detection with recover timer
Static/LACP Trunking
IGMP Snooping v1/v2/v3
VLAN Stacking (Q in Q)
DHCP Snooping
Flow Control

## Network Management

Local Console
CLI through Console and Telnet
Web-based GUI
SNMP v1/v2c/v3
Port-based Mirroring
System Log
SNMP Trap
RMON
Monitor alarm
DDMI support
Firmware upgrade
Configuration Backup/Restore
Management VLAN
LLDP
E-Mail Alerts

## User Security

Static MAC Forwarding
ARP Inspection
ACL (L2/L3/L4)
DHCP Snooping
DoS Attack Prevention SSH
802.1x Port Authentication
MAC Anti-Spoofing
TACACS+

## Traffic Management and QoS

Rate Limitation
Tag Based/Port-Based VLAN
4K Active VLAN Support
802.1p Priority Queues per port
Traffic Classification
Network Storm Control
QoS Scheduler SP/WRR

## SPECIFICATIONS

### Power

Input Power	100~240 VAC at AC Input with power cord
Power Consumption	45 Watts
Overload Current Protection	Present

### Mechanical

Indicating LEDs	Power, Post, Alarm, 1000Mb, Link/Act
Size	17.33 × 11.18 × 1.73 in (44 × 28.4 × 4.4 cm)
Installation	Desktop or 19-inch Rack Mount
Cooling	Fan Assisted Cooling, Noise Level 56dB(A)
Weight	8 lb / 3.6 kg

### Environmental

MTBF	>100,000 hours
Storage Temperature	-20° C to 70° C
Operating Temperature	-20° C to 60° C
Operating Humidity	10% to 90% non-condensing

### Ethernet Standards

IEEE 802.3 for 10Base-T
IEEE 802.3u for 100Base-TX and 100Base-FX
IEEE 802.3ab for 1000Base-T
IEEE 802.z for 1000Base-X
IEEE 802.3x for Flow control
IEEE 802.3ad for LACP (Link Aggregation Control Protocol)
IEEE 802.1p for COS (Class of Service)
IEEE 802.1Q for VLAN Tagging
IEEE 802.1D for STP (Spanning Tree Protocol)
IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol)
IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol)
IEEE 802.1x for Authentication
IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
IEEE 802.3az Energy Efficient Ethernet
IEEE 802.3ad VLAN Stacking
IEEE 1588-2008 Precision Time Protocol (PTP)
ITU-T G.8032v1/v2 Ethernet Ring Protection Switching (ERPS)

### Regulatory Compliance

EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1

AGENCY COMPLIANCE



## ORDERING INFORMATION

Part Number	Description	100/1000Base-X Ports <sup>1</sup>	Gbps Combo Ports <sup>1</sup>	1000Base-X Ports <sup>1</sup>
CWGE28MS	Commercial Grade 28 Port Gigabit Managed Ethernet Switch	20	4	4

[1] Multimode fiber needs to meet or exceed fiber standard ITU-T G.651. Single mode fiber needs to meet or exceed fiber standard ITU-T G.652  
Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J  
In a continuing effort to improve and advance technology, product specifications are subject to change without notice.