

The standalone fiber switch series of CTC Union contains Fast / Gigabit Ethernet, non-managed to managed switch family, which is suitable for market segments from SOHO, SMB and Enterprise customers. No matter if the company scale is very budget limited for the minimum office network maintenance or even plug-and-play requirement, the CTC Union's standalone fiber switch family fulfill the simple installation requirements of Ethernet LAN based network in cost effective manner.

Carrier Ethernet Switch



- MEF Compliant**
Ethernet Demarcation Device (EDD)
FRM220-MSW202
- 2x GbE RJ45 + 2 100/1000Base-X SFP
 - MEF9/14 Compliant
 - Fully Ethernet OAM Enabled
 - IEEE 1588v2 aware (Option)

NEW



- MEF Compliant**
Network Interface Device (NID)
FRM220-MSW404
- 4x SFP Slots in Dual Rate 100/1000Base-X + 4x GbE RJ45
 - MEF 9/14 Compliant
 - Fully Ethernet OAM Enabled
 - CE 2.0 Compliant
 - Sync. Ethernet & IEEE 1588v2

NEW



- MEF Compliant**
Network Interface Device (NID)
MSW-404SE & MSW-404SE1
- 4 GbE RJ-45 + 4x 100/1000Base-X SFP
 - CE 2.0 compliant
 - Sync. Ethernet & IEEE 1588 v2 (MSW-404SE only)
 - RFC 2544 throughput tester functionality



MEF Compliant

- L2+ Gigabit OAM Managed Fiber Access Switches**
MSW-4424A & MSW-4424S
- 24x 100/1000Base-X SFP + 4x 10GBase-X SFP+
 - Power redundancy, 9k bytes Jumbo frames
 - Web / CLI / SNMP management
 - IEEE802.3ah / IEEE802.1ag / ITU-T Y.1731 OAM management
 - Sync. Ethernet & IEEE 1588 v2 (MSW-4424S only)

NEW



MEF Compliant

- L2 Gigabit OAM Managed Fiber Access Switches**
MSW-4424C & MSW-4424CS
- 20x 100/1000Base-X SFP + 4x GbE Combo ports + 4x 10G Base-X SFP+
 - Power redundancy, 9k bytes Jumbo frames
 - Web / CLI / SNMP management
 - IEEE802.3ah / IEEE802.1ag / ITU-T Y.1731 OAM management
 - Sync. Ethernet & IEEE 1588 v2 (MSW-4424CS only)

Enterprise Ethernet Switch



- L2 Ethernet Managed Switches**
GSW-3208M1/3424M1
- 8/24x GbE RJ45 + 2/4 100/1000Base-X SFP
 - 8 priority queues are supported on each port for QoS application
 - Port-Based VLAN, 802.1Q VLAN, Voice VLAN and Q-in-Q
 - IEEE802.1D & 802.1w & 802.1s (spanning tree)
 - IEEE802.1x / RADIUS authentication function
 - DHCP Client / DHCP Option 82 Relay / DHCP Snooping function



POE

- Gigabit Web-Smart PoE Switch**
GSW-3208MP & GSW-3216MP
- 8 priority queues for port-based, IEEE802.1P QoS operation, with strict priority/WRP scheduling
 - IEEE802.3af and IEEE802.3at are supported on all TX ports.
 - IEEE802.1D STP/802.1w RSTP/802.1s MSTP
 - Port-based VLAN/Private VLAN/VLAN stacking (Q-in-Q)
 - IP Multicast with IGMP snooping/query/fast-leave/filtering/group-limited/MVR

FTTx Active Ethernet Switch

NEW

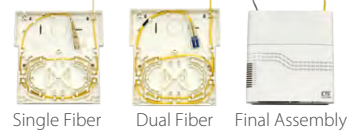


- L2 Managed Ethernet Switch**
GSW-3424FM
- 24 x 100/1000Base-X SFP slots + 4 x GbE combo ports (10/100/1000Base-T or 1000Base-X)
 - IEEE 802.1x security function, and VLAN assignment, Guest VLAN functions
 - IP Multicast with IGMP snooping/ query/ fast leave/filtering/ group limited/ MVR
 - ACL function for L2 ~ L4 packet control, Ingress/Egress rate control on port



- FTTx CPE Ethernet Switches**
GSW-2008MS & GSW-1005MS
- 5/8x GbE to 1/2x GbE SFP uplink
 - IEEE802.1Q tagged VLAN & IEEE802.1ad Q-in-Q
 - IEEE802.1p 8 priority queues per port
 - Per port based egress/ingress rate limit control
 - IGMP snooping v1/v2/v3

Built-in Cable Tray Optional



Fiber IAD

NEW

**Data / Voice / Video
Service 3 in 1**



- GbE Fiber IAD**
GW-732FW & GW-532FW
- Per port based NAT/bridge hybrid mode
 - IEEE 802.1Q tagged VLAN
 - IEEE 802.1p / DSCP QoS
 - IGMP snooping v1/v2
 - IEEE 802.11ac WiFi (GW-732FW)
 - IEEE 802.11n WiFi (GW-532FW)
 - TR-069/TR-104 (optional)

• The specification and pictures are subject to change without notice.

Ethernet Switch Comparison Table



Market Segment		Telco / Carrier / MSO / ISP								
Model Name		MSW-4424S	MSW-4424A	MSW-4424CS	MSW-4424C	MSW-404SE	MSW-404SE1	FRM220-MSW202	FRM220-MSW404	
Service port	10/100/1000Base-T RJ45					4	4	2	4	
	100/1000Base-X SFP slot	24	24	20	20					
Uplink port	Gigabit combo port			4	4					
	100/1000Base-X SFP slot					4	4	2	4	
	1G/10Gbase-X SFP+ slot	4	4	4	4					
IEEE 802.3af/at PoE port										
Power Supply	External power adaptor									
	AC power module	100V~240VAC	100V~240VAC	100V~240VAC	100V~240VAC	100V~240VAC	100V~240VAC	100V~240VAC	100V~240VAC	
	DC power module	"-36V~-60V (-48VDC power) -9~-32V (-24VDC power)"	"-36V~-60V (-48VDC power) -9~-32V (-24VDC power)"	"-36V~-60V (-48VDC power) -9~-32V (-24VDC power)"	"-36V~-60V (-48VDC power) -9~-32V (-24VDC power)"	"-36V~-60V (-48VDC power) -9~-32V (-24VDC power)"	-36V~-60V (-48VDC power)	-36V~-60V (-48VDC power)	18 ~ 72VDC	-18 ~ -72VDC
	Dual power options	✓	✓	✓	✓	✓	✓	✓	✓	
Network Management	SNMP (v1/v2c/v3)	✓	✓	✓	✓	✓	✓	✓	✓	
	OAM (IEEE 802.3ah/802.1ag/ITU-T Y.1731)	✓	✓	✓	✓	✓	✓	✓	✓	
Ring Protection	STP/RSTP/MSTP	✓	✓	✓	✓	✓	✓	✓	✓	
	ITU-T G.8032	✓	✓	✓	✓	✓	✓	✓	✓	
MEF Certification		CE 2.0(plan)	CE 2.0(plan)	CE 2.0(plan)	CE 2.0(plan)	CE 2.0(plan)	CE 2.0(plan)	CE 1.0 compliant	CE 2.0 compliant	
SLA conformance testing	RFC2544					✓	✓		✓	
	ITU-T Y.1564					2015 (plan)	2015 (plan)		2015 (plan)	
Timing Synchronization	ITU-T G.8262	✓		✓		✓			✓	
	Sync. Ethernet IEEE 1588v2	✓		✓		✓			✓	
IPv6 support		✓	✓	✓	✓	✓	✓	✓	✓	
Cable Tray option										

Ethernet Switch Comparison Table



Market Segment		Large or SMB Enterprise / Campus / Government							
Model Name		GSW-3424FM	GSW-3420FM	GSW-3424M1	GSW-3208M1	GSW-3216MP	GSW-3208MP	GSW-2008MS	GSW-1005MS
Service port	10/100/1000Base-T RJ45			20	8	16	8	8	5
	100/1000Base-X SFP slot	24	20						
	Gigabit combo port								
Uplink port	Gigabit combo port	4	4	4					
	100/1000Base-X SFP slot				2	2	2	2	1
	1G/10Gbase-X SFP+ slot								
IEEE 802.3af/at PoE port						16	8		
Power Supply	External power adaptor							✓	✓
	AC power module	100V~240VAC	100V~240V	100V~240V	100V~240V	100V~240VAC	100V~240VAC		
	DC power module	-36V~-60V (-48VDC power)	-36V~-72V (-48VDC power)	-36V~-72V (-48VDC power)	-36V~-72V (-48VDC power)				
	Dual power options	✓	✓						
Network Management	SNMP (v1/v2c/v3)	✓	✓	✓	✓	✓	✓	✓	✓
	OAM (IEEE 802.3ah/802.1ag/ITU-T Y.1731)								
Ring Protection	STP/RSTP/MSTP	✓	✓	✓	✓	✓	✓	✓	
	ITU-T G.8032								
MEF Certification									
SLA conformance testing	RFC2544								
	ITU-T Y.1564								
Timing Synchronization	ITU-T G.8262 Sync. Ethernet								
	IEEE 1588v2								
IPv6 support		✓	✓	✓	✓	✓	✓	✓	✓
Cable Tray option								✓	✓