Commercial L3 Managed Switches 4* 1G/10G SFP+ 8* Combo Giga SFP/UTP + 16* Giga UTP

MODEL: 3C-S040816TGM Datasheet

Highlights

- Abundant Layer 3 routing protocols including RIP/OSPF/VRRP to support a scalable network

- True physical stacking technology supports up to 8 switches for scalability and efficient redundancy

-10 Gigabit Ethernet uplink ports ensure smooth data delivery for high-bandwidth applications

- 2 removable power units minimize downtime(default is 110-220VAC, 12V, or 36-72V are available)

- PIM-SM/PIM-DM/IGMP Snooping for reliably stable video quality

- RJ45 Console ports and an out-of-band management port provide a range of management options

Overview

3C-LINK 3C-S040816TGM supports 4*10G SFP/SFP optical ports + + 8 *1G SFP/UTP Combo ports.16* 10/100/1000Base-T adaptive RJ45 port

3C-S040816GM fully follows the design and materials of industrial products, the shell adopts 19-inch rack design, wide range of working environment temperature, DC37-75V/AC100-240V dual power supply redundancy and other technologies, providing durable Excellent industrial-grade quality such as high/low temperature and lightning protection; supports powerful management functions, including system management, comprehensive Layer 2 management functions, Layer 3 routing management, QOS queue management, comprehensive network security management and monitoring and maintenance management; industrial grade 3rd ESD protection is suitable for various occasions, such as deployment requirements in intelligent transportation, outdoor surveillance, industrial networks, safe cities and other harsh environments.

Advanced L3 Features

3C-LINK 3C-S040816TGM series switches support Layer 3 routing protocols that include Static Routing, RIP, OSPF and VRRP, helping to build scalable, reliable networks. Multicast routing protocols such as PIM-SM and PIM-DM guarantee efficient routing for multicast groups.

Physical Stacking Technology

The switches are equipped with 4 * 10G SFP+ ports which can be used for stacking. 3C-S040816TGM Series switches support up to 8 switches for network simplification. With different port forms including Gigabit Ethernet, SFP Slots, 10G SFP+ Slots, 3C-S040816TGM Series switches are capable of high switching capacity for the network. With all units identified by a simple IP address, the stack can be easily configured and monitored.

Rich Out-of-band management port

3C-S040816TGM series switches provide 2 kinds of out-of-band management ports: RJ45

console ports, RJ45 out-of-band management ports. Customer can use RJ45 console cable to manage switches through the CLI (command-line interface). The RJ45
out-of-band management port is used solely for web management, leaving the RJ45 ports free for data transmission.

Rich Features

Support WEB/HTTP/HTTPS/SSH/Telnet/SNMP/CLI/CONSOLE/ROM diversified management and maintenance methods

Support IPV4/IPV6 network management interface and network neighbor management

Support DHCP server, DHCPL2/L3 relay agent, DHCPV6 service

Support DNS host and client configuration management

Support SNMP V1/V2C/V3 and Trap message configuration management

Support LLDP and LLDP-MED configuration management, ISDP configuration management

Support switch timing plan management

Support port mode, port bandwidth speed limit, rate control, flow control and other management, port status panel information display

Support 8 groups of static and dynamic lacp aggregation

Support unicast/multicast/broadcast storm suppression

Support STP/RSTP/MSTP production tree protocol and loop protection protocol, support CST and MST configuration, eliminate the second layer loop, and realize link backup

Support port VLAN, IEEE 802.1Q VLAN, Voice VLAN, VLAN double tag QinQ configuration.

Support MAC address aging and static MAC address configuration

Supports IGMP and MVR multicast protocols, supports IGMP Snooping/ MLD Snooping, and meets the needs of multi-terminal high-definition video monitoring and video conference access.

Support Auto-VoIP and UDLD port configuration

Support IP routing and L3 port routing management

Support ARP/RIP/OSPF/OSPFV3/BGP/Router Discovery/VRRP/ Route-Map/BFD three-layer routing

Support QOS 802.1P and IP DSCP priority, port queue management

Support Diffserv differentiated service quality management, including Class View/Policy

View/IPv6 Class View

Support Radius/TACACS+ server and 802.1x/Enable level/HTTP/HTTPs/Dot1x authentication

Support configuration management to prevent DOS attacks

Support port access security management configuration and status query

Support port IP security management based on IGMP Snooping/IPSG/dynamic ARP inspection

Support ACL management of IPV4/IPV6/MAC binding

Support system log/port statistics/port connection/port cable test/SFP optical module information/EAP packet monitoring management

Support switch restart/reset/fixed upgrade/configuration import/export/IMG dual firmware management/IP diagnosis/Chinese and English software interchange

Support switch hardware module/CPU temperature system occupancy view, support software function setting and SNTP time setting

Users can easily understand the working status of the equipment through the power indicator (PWR), system operation indicator (SYS), port status indicator (Link, L/A).

Specifications

Hardware Features & Performance

Product Picture			
Model		3C-S040816TGM	
General	Standard and Protocols	IEEE 802.3i 10BASE-T Ethernet IEEE 802.3u 100BASE-TX/FX IEEE 802.3ab 1000BASE-T IEEE 802.3z 1000BASE-X IEEE 802.3ae 10GBASE-SR/LR IEEE 802.3av GVRP IEEE 802.3x Flow control IEEE 802.3ad Link Aggregation IEEE 802.1v Protocol VLAN IEEE 802.1d Spanning Tree Protocol (STP) IEEE 802.1s Rapid Spanning Tree (RSTP) IEEE 802.1w Multiple Spanning Tree (MSTP) IEEE 802.1q VLANs / VLAN tagging IEEE 802.1x Network Login Security IEEE 802.1p QoS	
	Network Media	10BASE-T: UTP category 3, 4, 5 cable (maximum 100m) 100BASE-TX/1000Base-T: UTP category 5, 5e or above cable (maximum 100m) 1000BASE-X: MMF, SMF 10GBASE-LR 10GBASE-SR	
	Interfaces	16 10/100/1000Mbps RJ45 ports 8 Combo Gigabit SFP Slots/Giga UTP interface Up to 4 10G SFP+ Slots 1 RJ45 Console Port	
Performance	Switching Capacity	216Gbps	
	Packet Forwarding Rate	160.9Mpps	
	MAC Address Table	32K	
	Packet Buffer	32Mbit	
	Jumbo Frame	12KB	
Physical & Environment	Power Supply	100-240V AC, 50/60Hz	
	Max Power Consumption	58.82W (220V/50Hz)	
	Max Heat Dissipation	200.69 BTU/h	
	Dimensions (W x D x H)	17.3 x 11.1 x 1.7 in. (440 x 280 x 45 mm)	
	Operating Temperature	0°C~40°C (32°F~104°F)	
	Storage Temperature	-40°C~70°C (-40°F~158°F)	
	Operating Humidity	10% ~ 90%RH, non-condensing	
	Storage Humidity	5%~90%RH, non-condensing	
	Certification	CE, FCC	

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Physical Stacking

Installable SFP+ Transceivers and Direct Attach Copper (DAC) Cables	- 3C-SFP+-SR - 3C-SFP+-LR - 3C-SFP+-ER - 3C-SFP+-ZR - 3CW-SFP+23-LR/ 3CW-SFP+32-LR - 3CD-SFP+XX-ZR
Max Number of Stacking Ports Installable	- 4 SFP+
Stacking Speed (Per Port)	- 20Gbps (Full-Duplex)

Software Features

Stack	• Physical Stacking
	  - Up to 1408Gbps of Backplane when 8 units in the stack
	  - Up to 8 units per stack	

L3 Features	• L3 Routing
	  - 128 IPv4 Interface entries
	  - 256 IPv4 Static Routing entries
	  - 8K IPv4 Dynamic Routing entries
	• RIP v1, v2
	• OSPF v1, v2
	• IGMP v1, v2, v3
		• Multicast Routing
		  - Static Multicast Route
		  - PIM-DM/SM
		• ARP Proxy
		• DHCP Server/Relay
		• VRRP

L2 Features	• Link Aggregation
	  - static link aggregation
	  - 802.3ad LACP
	  - Up to 64 aggregation groups, containing 8 ports per group
	• Spanning Tree Protocol
	  - 802.1D STP
	  - 802.1w RSTP
	  - 802.1s MSTP
	  - 32 MSTP Instance
	  - STP Security: Loop back detection, TC Protect, BPDU Filter/Protect, Root Protect
		• Loopback Detection
		• Flow Control
		  - 802.3x Flow Control
		• Port Mirroring
		  - One-to-One
		  - Many-to-One
		  - Flow-Based
		  - Tx/Rx/Both
		• LLDP, LLDP-MED

L2 Multicast	• 1024 IGMP groups
	• IGMP Snooping
	  - IGMP v1/v2/v3 Snooping
	  - IGMP Fast Leave
	  - MVR
	  - IGMP Snooping Querier
	  - Limited IP Multicast
	  - Static Multicast Forwarding
		• MLD Snooping
		  - MLD v1/v2 Snooping
		  - MLD Snooping Querier
		  - Fast Leave
		  - Limited IP Multicast
		  - Static Multicast Forwarding

VLAN	• VLAN Group - 4K VLAN Groups • 802.1Q tag VLAN • MAC VLAN • Protocol VLAN	• VLAN VPN (QinQ) • GVRP • Private VLAN

QoS	• Class of Service
	  - Port Priority
	  - 802.1p CoS/DSCP priority
	  - 8 Priority Queues
	  - Queue Schedule Mode
	• Bandwidth Control
	  - Port/Flow based Rating Limiting
	  - Storm Control
		- DiffServ
		  - DiffServ Class
		  - DiffServ Policy
		  - DiffServ Service
		• Auto-VoIP
		• Voice VLAN

Software Features

ACL	• Supports up to 3328 entries
	• MAC ACL
	  - Source MAC
	  - Destination MAC
	  - VLAN ID
	  - User Priority
	  - EtherType
	• Standard IP ACL
	  - Source IP
	  - Destination IP
	• Time based ACL
		• Extended IP ACL
		  - Source IP
		  - Destination IP
		  - Fragment
		  - IP Protocol
		  - TCP Flag
		  - TCP/UDP Port
		  - DSCP/IP TOS

Security	• AAA
	• DHCP Snooping
	• IP-MAC-Port Binding
	  - Up to 32768 entries
	• ARP Inspection
	  - Up to 32768 entries
	• IP Source Guard
	  - Up to 1020 entries
	• Static/Dynamic Port Security
	  - Up to 64 MAC addresses per port
	• Broadcast/Multicast/Unicast Storm Control
	  - kbps/ratio/pps control mode
	• IP/Port/MAC based access control
	• DoS Defend
		• 802.1X
		  - Port based authentication
		  - MAC(Host) based authentication
		  - Guest VLAN
		  - Support Radius authentication and accountability
		• Port Isolation
		• MAC Filtering
		• Secure web management through HTTPS with SSLv3/TLS1.0
		• Secure Command Line Interface(CLI) management with SSHv1/SSHv2

Management	• Web-based GUI • Command Line Interface(CLI) through console port, telnet • SNMPv1/v2c/v3 • SNMP Trap/Inform • RMON (1,2,3,9 groups) • DHCP Option82	• CPU Monitoring • Cable Diagnostics • Access Control • SNTP • System Log • Dual Image • IPv6 Management • PPPoE Circuit ID • HTTP/TFTP File Transfer
MIBs	• MIB II (RFC1213) • Interface MIB (RFC2233) • Ethernet Interface MIB (RFC1643) • Bridge MIB (RFC1493) • P/Q-Bridge MIB (RFC2674) • RMON MIB (RFC2819)	• RMON2 MIB (RFC2021) • Radius Accounting Client MIB (RFC2620) • Radius Authentication Client MIB (RFC2618) • Remote Ping, Traceroute MIB (RFC2925) • Support 3C-LINK private MIBs

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