

QNAP

# QSW-M408 Series

## 10GbE Ethernet Switch



QSW-M408-4C



QSW-M408S



QSW-M408-2C

### Key Features

- Transform your 1GbE network to 10GbE (5-speed) with affordable cost.
- Provides 4 x high-speed 10GbE ports to empower bandwidth-demanding applications.
- High-quality hardware and cooling for reliable performance.
- Improve the efficiency, safety and expandability significantly.
- Simple and easy to manage.

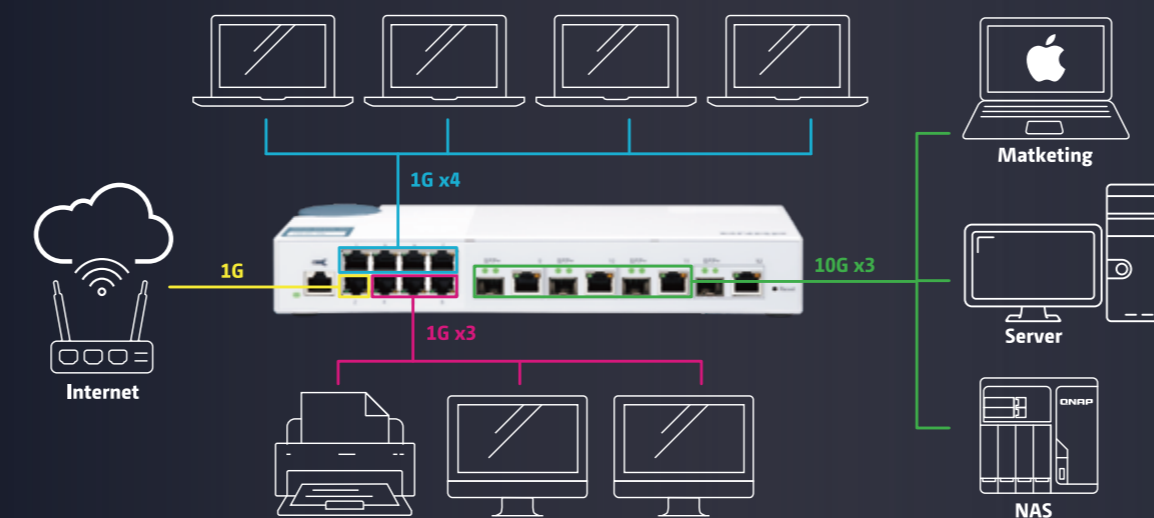
### Introduction

Small businesses need high speed and reliable networks to aid their growth, but often find themselves being budget-constrained. The QSW-M408 provides the ability to immediately upgrade 1GbE networks to 10GbE (5-speed) at an affordable cost to boost file transfer, sharing, system backup and everyday networking.

The QSW-M408 series provides 10GbE connections to the server and NAS for high-speed file transfer. Moreover, this web-managed series supports essential management functions that can help users with any skill level manage their network. These management functions can be configured with an easy-to-use interface which assists users in completing settings.

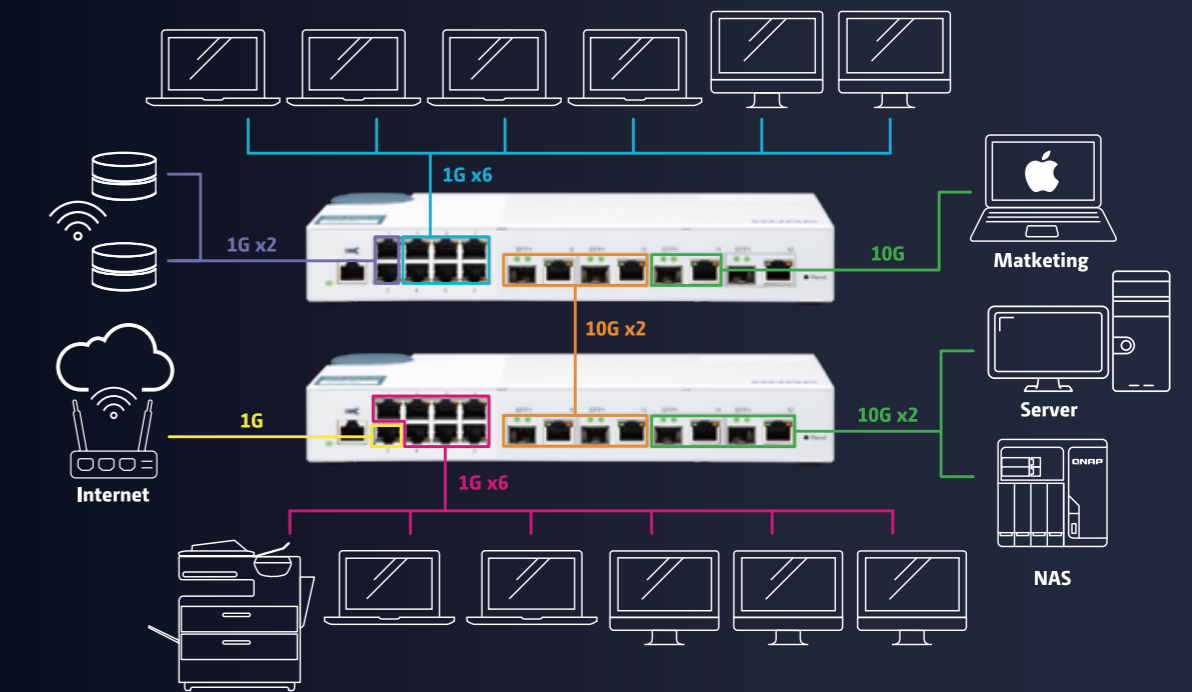
### Example Applications

The QSW-M408 is ideally used as in the following example:



1. The marketing department shares and retains materials (including content-rich presentations, high-resolution artwork and product photos, catalogues, and video tutorials) on their server for the sales department to access.
2. The admin department carries out routine ERP or server backup to NAS.

Based on the above scenario, the more QSW-M408 could be deployed as:



1. One 10G link to server (fiber or copper).
2. One 10G link to NAS (fiber or copper).
3. One 1G or 10G uplink to ISP gateway (copper).
4. One spare 10G link for the marketing department (fiber or copper).
5. Other 1G ports link to users or other office resources (such as Wi-Fi router or a printer) (copper).
6. Two 1G or 10G link of each QSW-M408 could be used to connect with another QSW-M408 for network expansion.

### Highlights\_Software

1. Easy-to-use interface for simplified management.
2. VLAN for setting up logical groups/departments and traffic segmentation.
3. LAG for flexible port bandwidth allocation and network expansion.
4. RSTP for loop-free network expansion yet with redundancy.
5. ACL for access control by MAC and IP address.
6. QoS for traffic prioritization and enhancing performance
7. IGMP snooping v2 and v3 for multicast optimization.
8. LLDP for the transparency of connected devices.
9. Flow Control (IEEE 802.3x) for preventing packet loss when network congestion occurs.
10. Energy Efficient Ethernet (IEEE 802.3az) for maximum power saving.
11. Online checking for the latest firmware update.

### Highlights\_Hardware

1. High-speed 10GbE connections
2. QSW-408-4C: 8 10/100/1000T + 4 10G SFP+/ NBASE-T Combo ports
3. QSW-408-2C: 8 10/100/1000T + 2 10G SFP+/ NBASE-T Combo + 2 10G SFP+ ports
4. QSW-408-S: 8 10/100/1000T 4 10GbE SFP+ ports
5. NBASE-T support for 5-speed auto negotiation (10G/5G/2.5G/1G/100M)
6. Balanced thermal and noise control: two ball-bearing PWM cooling fan with large conductive plus directive heatsink.
7. Elegant design: stylish and functional with a 90° rotatable power jack.



QSW-408-4C



QSW-408-2C



QSW-408S

## Features and Benefits

Software	
Easy-to-use web-based interface	<ul style="list-style-type: none"> <li>The simple and friendly user interface makes it easy for IT staff to maintain managed networks of any size.</li> <li>Features straightforward instructions for easy day-to-day use.</li> </ul>
VLAN	VLAN allows grouping different ports on one or more connected switches and VLAN tag allows different VLANs' traffic to be bonded on one port. With VLAN, the network could be planned as: isolating resources between network administrators and general users or between employees and public guest users.
RSTP	RSTP is the most universal protocol for a managed network to prevent loops and to establish a backup path. But it is usually not available for entry-level managed switches due to the complex settings required. On the QSW-M408, RSTP is at your disposal by simply enabling the RSTP function and creating parallel physical connection between multiple QSW-M408s.
ACL	ACL is the most powerful access control tool for filtering the ingress and egress packets by creating and applying the ACL rule. For example, users can deny access to specific sources or destination IP/MAC addresses and therefore improve network safety and efficiency.
LAG	LAG bonds two physical ports to provide a single logical port with double bandwidth. For example, if all the 10GbE ports of are occupied, you can bond two idle 1GbE ports to get a "widened path" for the large throughput.
QoS	QoS provides different priority to different applications, users, or data flows to guarantee a certain level of network performance.
IGMP snooping v2 and v3	IGMP snooping ensures multicast traffic reaches only designated receivers, reduces the amount of network traffic.
LLDP	LLDP collects and presents the profile information of devices connected to the switch to provide a clear overview of network connection status.
Flow Control	Flow Control (IEEE 802.3x) runs in background to keep the entire network aware of congestion and pause the jammed link. So, it benefits the traffic control and prevents packet loss.
Energy Efficient Ethernet	Energy Efficient Ethernet (IEEE 802.3az) automatically adjusts fan speeds and reduces power consumption based on the link status and cable length.
Online firmware update	Update the firmware with just one click.

Hardware	
10GbE transmission	<ul style="list-style-type: none"> <li>10GbE interfaces (either SFP+ or SFP+/ NBASE-T Combo ports) provide the ability to build a high-speed local network infrastructure to aid large-file sharing and system backup.</li> <li>NBASE-T support for 5-speed auto negotiation (10G/5G/2.5G/1G/100M) backwards compatible, trouble-free network upgrade.</li> </ul>
PWM two ball-bearing fan	Features PWM automatic fan control for balancing cooling, power consumption and noise.
Refined design	The stone blue and white color combination plus 90° rotatable power jack provides both elegance and functionality.

## Technical Specifications

Model	QSW-408-4C	QSW-408-2C	QSW-408S
Interface			
Total Port	12		
Gigabit RJ45 ports	8		
10GbE SFP+ ports	N/A	2	4
10GbE Combo ports (SFP+/RJ45)	4	2	N/A
Console Port	1		
Button	Reset button		
Standards	IEEE 802.3 Ethernet IEEE 802.3u 100BASE-T IEEE 802.3ab 1000BASE-T IEEE 802.3bz 2.5G/5GBASE-T (Except QSW-M408S) IEEE 802.3an 10G BASE-T IEEE 802.3z 1000BASE-SX/LX IEEE 802.3ae 10G Fiber	IEEE 802.3x Full-Duplex Flow Control IEEE 802.1Q VLAN Tagging IEEE 802.1w RSTP IEEE 802.3ad LACP IEEE 802.1AB LLDP IEEE 802.3az Energy Efficient Ethernet IEEE 802.1p Class of Service	

Software Specifications	
L2 Service	
VLAN	Port Based VLAN IEEE 802.1Q Tag VLAN
RSTP	IEEE802.1w Rapid Spanning Tree
ACL	MAC-based ACLs IP-based ACLs (IPv4)
LAG	IEEE 802.3ad - LAGs (LACP) Manual Static LAG
QoS	Port-based QoS IEEE 802.1p CoS IPv4 DSCP-based QoS IPv4 ToS-based QoS
IGMP	IGMP snooping v2 and v3
LLDP	IEEE 802.1AB LLDP
Management Functions	
Web-based user interface	√
IEEE 802.3az Energy Efficient Ethernet	√
System status (Switch Name, IP Address, MAC Address, FW version, Port, VLAN, LACP Status)	√
Web authentication	√
DHCP client	√
DNS	√
SNTP	√
Online firmware update	√
Import/Export configuration file	√

Model	QSW-408-4C	QSW-408-2C	QSW-408S
Hardware Specifications			
Performance			
Switching capacity	96 Gbps		
Packet buffer	1.5MB		
MAC address table	16K		
Jumbo frame size	9K		
Power			
Input	100~240 VAC		
Max. power consumption	31.46W	22.04W	12.17W
Physical Specifications			
Dimensions (H x W x D)	42.5 x 290 x 127 mm		
Net weight	1150g	1150g	1145g
Included accessories	Power cord · DC jack adapter · QIG		
Environmental Specifications			
Operating temperature	0°C to 45° C (32° F to 113° F)		
Operating humidity	5% to 95% (non-condensing)		
Certifications			
Certifications	FCC: 47 CFR FCC Part 15, Subpart B, Class A ICES-003: 2016 Issue 6, Class A CE: EN 55032: 2015 + AC; 2016, Class A EN 55024: 2010 + A1: 2015 VCCI: Class A / Classification code W2 BSMI: CNS 13438/ CNS 15663/ CNS 14336-1 LVD: IEC/ EN 60950-1		
Electromagnetic Compliance	Class A		

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