



# QMS1008Gv2

English User's Manual

## Contents

<b>1. Basic Information</b> .....	3
1.1 Front / Back Panel.....	3
1.2 LEDs Definition .....	3
1.3 The Reset Button .....	3
1.4 Connect to switch Web Pages .....	4
<b>2 System Functions</b> .....	5
2.1 Information.....	5
2.2 IP Setting .....	5
2.3 User Account .....	6
2.4 Port Setting.....	6
<b>3. Configuration Functions</b> .....	7
3.1 Link Aggregation.....	7
3.2 VLAN.....	8
3.3 QoS .....	9
3.4 Loop Prevention/Detection .....	10
3.5 Port-based Mirroring.....	10
3.6 Port Isolation .....	11
3.7 Bandwidth Control .....	12
3.8 Jumbo Frame .....	12
3.9 MAC Constraint.....	13
3.10 EEE.....	13
3.11 IGMP .....	14
3.12 DHCP Snooping .....	14
<b>4. Security Functions</b> .....	15
4.1 MAC Address .....	15
4.2 Storm Control .....	16
<b>5. Monitoring</b> .....	17
5.1 Port Statistics.....	17
5.2 Cable Diagnostic.....	18
<b>6. Tools</b> .....	19
6.1 Firmware Upgrade .....	19
6.2 Reset.....	20
6.3 Save.....	20
6.4 Reboot.....	20

Default-IP

192.168.0.1

Username & Password:

admin

## 1. Basic Information

### 1.1 Front / Back Panel



### 1.2 LEDs Definition

This device provides extensive LEDs to show the activities on power, system and ports. See the following description for your reference:

LED	Status	Operation
POWER	Steady yellow	The switch is powered on.
	Off	The switch is powered off.
Link/ACT	Steady on	Valid port connection; Green=1000M/yellow=10/100M
	Blinking Green	Valid port connection and there is data transmitting/receiving
	Off	Port disconnected.

### 1.3 The Reset Button

Reset the switch to its factory default configuration via the RESET button. Press the RESET button for five seconds more and release. The switch automatically reboots and reloads its factory configuration file.

## 1.4 Connect to switch Web Pages

### (1) Connect PC and Switch



### (2) Set the PC's IP address on to the same subnet as the switches. 192.168.0.2/255.255.255.0

網際網路通訊協定第 4 版 (TCP/IPv4) - 內容

一般

如果您的網路支援這項功能，您可以取得自動指派的 IP 設定。否則，您必須詢問網路系統管理員正確的 IP 設定。

自動取得 IP 位址(O)

使用下列的 IP 位址(S):

IP 位址(I): 192 . 168 . 0 . 2

子網路遮罩(U): 255 . 255 . 255 . 0

預設閘道(D): . . .

自動取得 DNS 伺服器位址(B)

使用下列的 DNS 伺服器位址(E):

備用 DNS 伺服器(P): . . .

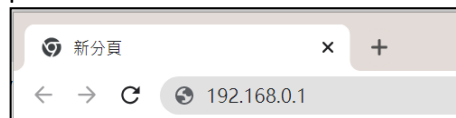
其他 DNS 伺服器(A): . . .

結束時確認設定(L)

進階(V)...

確定 取消

### (3) To connect to the web server, input the IP of switch in the URL field of the browser. http://192.168.0.1



### (4) The login screen appears. Enter the User Name and Password to login the configuration interface. They are both admin by default. admin/admin

登入

http://192.168.0.1

你與這個網站之間的連線不是私人連線

使用者名稱

密碼

登入 取消

### (5) After you login the web page successfully, you will see the information page. This page shows some information of this switch.

System

- Information
- IP Setting
- User Account
- Port Setting
- Inner IP Setting
- Configuration
- Security
- Monitoring
- Tools

System Information

Device Type	Gigabit SmartSwitch
MAC Address	1A:08:22:01:00:0F
IP Address	0.0.0.0
Netmask	0.0.0.0
Gateway	0.0.0.0
Firmware Version	EN_V3.11
Firmware Date	Sep 23 2022 17:00:42
Hardware Version	V3.11

## 2 System Functions

User can configure switch through web pages, such as VLAN entry, IP setting. In this section, configuration that user can access through web pages will be introduced.

### 2.1 Information

This page shows the device configuration such as Ethernet Address, IP address and firmware version.

Device Type	Gigabit SmartSwitch
MAC Address	1A:08:22:01:00:0F
IP Address	192.168.1.1
Netmask	255.255.255.0
Gateway	192.168.1.254
Firmware Version	EN_V3.11
Firmware Date	Sep 23 2022 17:00:42
Hardware Version	V3.11

### 2.2 IP Setting

This page shows IP configuration. User can set static IP address, or enable DHCP client function to get IP (Default is DHCP) . If user set Gateway to "0.0.0.0", switch will not send ARP request for Gateway.

DHCP Setting	Enable
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.254

Apply

### 2.3 User Account

This page shows username and password configuration. User can change username and password in this page.

User Account Setting

New Username	admin
New Password	
Retype Password	

Apply

### 2.4 Port Setting

This page shows link status, speed, duplex, and flow control ability of all ports. User can change port ability of switch in this page.

Port Setting

Port	Name	State	Speed/Duplex	Flow Control
Port 1				
Port 2				
Port 3		Enable	Auto	Off
Port 4				
Port 5				
Port 6				

Apply

---

Port	Name	State	Speed/Duplex		Flow Control	
			Config	Actual	Config	Actual
Port 1		Enabled	Auto	Link Down	On	Off
Port 2		Enabled	Auto	Link Down	On	Off
Port 3		Enabled	Auto	Link Down	On	Off
Port 4		Enabled	Auto	100Full	On	Off
Port 5		Enabled	Auto	Link Down	On	Off
Port 6		Enabled	Auto	Link Down	On	Off
Port 7		Enabled	Auto	Link Down	On	Off
Port 8		Enabled	Auto	Link Down	On	Off

### 3. Configuration Functions

#### 3.1 Link Aggregation

Trunk Group Setting – This page shows trunk status of switch. User can add/remove trunk or change group ports of trunk in this page. Note that trunk 1 can only includes port 1 to port 4, and trunk 2 can only includes port 5 to port 8. In the following situation, adding a trunk will be denied:

(1) Trunk includes only one port.

(2) Ingress/Egress rate control of any one port in trunk is enabled. (3) Link speed/duplex of ports in port are not identical.

Trunk Group Setting

Group ID	Ports
Trunk1	Port 1 Port 2 Port 3 Port 4 Port 5 Port 6

Add / Modify

---

Group ID	Ports	Select
----------	-------	--------

Delete    Select All

### 3.2 VLAN

Static VLAN – This page shows information of static VLAN entries. User can add/remove static VLAN entries in this page. Note that the Default VLAN with VID being 1 cannot be removed but can modify untagged/tagged set and member ports.

Static VLAN Table Setting

VLAN ID	<input type="text" value=""/>	(1-4094)	VLAN Name	<input type="text" value=""/>					
Port	Select All	1	2	3	4	5	6	7	8
Untagged	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tagged	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not Memeber	All	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

---

VLAN ID	VLAN Name	Member Ports	Tagged Ports	Untagged Ports	Delete
<a href="#">1</a>		1-8	-	1-8	<input type="checkbox"/>

VLAN Setting – This page shows VLAN port information. User can assign PVID, tag egress mode, accepted frame type of each port.

VLAN Port Setting

Port	PVID	Accepted Frame Type
Port 1		All
Port 2		All
Port 3		All
Port 4		All
Port 5		All
Port 6		All

---

Port	PVID	Accepted Frame Type
Port 1	1	All
Port 2	1	All
Port 3	1	All
Port 4	1	All
Port 5	1	All
Port 6	1	All
Port 7	1	All
Port 8	1	All



### 3.3 QoS

Port-based Priority – This page shows port-based priority of each port. User can configure port priority with 4 priority level of each port.

Priority selection Setting

Priority	Decision
Port	
1Q	
ACL	
DSCP	
CVLAN	
SVLAN	

Apply

---

Priority	Decision
Port	7
1Q	1
ACL	8
DSCP	1
CVLAN	1
SVLAN	1
DA	1
SA	1

Queue Weight – This page shows the priority to queue mapping. User can set the priority to queue mapping of each priority.

Queue Weight Setting

Priority Queue	Weight
1(lowest)	
2	
3	
4(highest)	

Apply

---

Priority Queue	Weight
1	Strict priority
2	Strict priority
3	Strict priority
4	Strict priority

Remember that don't set higher priority queue to weight 1~15 but lower priority queue to strict priority. The following setting is wrong:

Wrong

Priority Queue	Weight
1	Strict priority
2	Strict priority
3	Strict priority
4	5

### 3.4 Loop Prevention/Detection

This page shows current loop detection / loop prevention function state. User can configure to enable loop detection or loop prevention, or turn off both of them. User can set time interval and recover time in this page.

Loop Prevention Setting

Loop function	Off
Time Interval (1~32767)	0 sec
Recover Time (0 or 4~1000000)	0 sec

Apply

Please remember that to enable RLDP function also need HW pin DIS\_LPD to pull down.

Pin Name	Pin No.	Type	Description
	RTL8367M		
DIS_LPD	25	I/O <sub>PU</sub>	Realtek Loop Detection Configuration Pull Down: Enable Loop detection function. <i>Note: This pin should be pulled low via an external 4.7k ohm resistor upon power on or reset when Loop Detection function is used. 2KHz signal out when looping is detected.</i>

### 3.5 Port-based Mirroring

Port-based Mirroring – This page shows the mirroring function of switch. User can set mirroring port, monitor port, and mirror direction in this page.

Port Mirroring Setting

Mirror Direction	Mirroring Port	Mirrored Port List
Disable	Port 1	Port 1 Port 2 Port 3 Port 4 Port 5 Port 6

Apply

---

Mirror Direction	Mirroring Port	Mirrored Port List
Disabled	-	-

Delete

### 3.6 Port Isolation

This page shows the port isolation configuration. User can set isolation port mask of each port.

Port Isolation Setting

Port	Port Isolation List
Port 1	Port 1
Port 2	Port 2
Port 3	Port 3
Port 4	Port 4
Port 5	Port 5
Port 6	Port 6

Apply

---

Port	Port Isolation List
Port 1	1-8
Port 2	1-8
Port 3	1-8
Port 4	1-8
Port 5	1-8
Port 6	1-8
Port 7	1-8
Port 8	1-8

### 3.7 Bandwidth Control

This page shows the ingress/egress bandwidth control rate of each port. User can change ingress/egress bandwidth rate of each port. Rate setting does not include IFG(Inter Frame Gap).

Bandwidth Control Setting

Port	Type	State	Rate(Kbit/sec)
Port 1			
Port 2			
Port 3			
Port 4	Ingress	Disable	Unlimited (0-1000000, multiple of 8)
Port 5			
Port 6			

Apply

---

Port	Ingress Rate (Kbit/sec)	Egress Rate (Kbit/sec)
Port 1	Unlimited	Unlimited
Port 2	Unlimited	Unlimited
Port 3	Unlimited	Unlimited
Port 4	Unlimited	Unlimited
Port 5	Unlimited	Unlimited
Port 6	Unlimited	Unlimited
Port 7	Unlimited	Unlimited
Port 8	Unlimited	Unlimited

### 3.8 Jumbo Frame

This page shows the maximum transmission unit (MTU) size of packet that the switch can receive/transmit. User can change the MTU configuration in this page. The maximum size user can set in this page is 16383 bytes. When user set to 16383 bytes, switch can forward packet size to 16 k bytes. But switch only guarantee that 16383 bytes packet wil not have any packet lost when traffic rate is wire-speed.

Jumbo Frame Setting

Jumbo Frame (Bytes) 16383

Apply

### 3.9 MAC Constraint

MAC Constraint –This page shows the configuration of per-port MAC constraint function. User can set number of MAC addresses that can be learned in this page. The maximum MAC entries switch can learn is 4160(including dynamic & static MAC). switch will allocate one MAC for LWS use. So, total MAC that can be learned is 4159. When user set port's Entry Limits to 4160 entries, it means unlimited. When the constraint limit set to "0" and Action is set to "drop", there is no MAC can be learnt and the whole packet will be dropped in this port except for the management packet. When packets inject is more than "Entry Limits", new inject packet's MAC will not be learned and packet will flood or drop is based on "Learn over Action" setting. Learn over Action is system-wide configuration. But when total MAC entries that switch learnt is up to 4160, new injected packet (new source MAC) will be flooding.

MAC Constraint Action Setting

Learn over Action:

---

MAC Constraint Setting

Port	State	Entry Limits
Port 1		
Port 2		
Port 3		
Port 4	<input type="text" value="Disable"/>	<input type="text" value="Unlimited (0-4160)"/>
Port 5		
Port 6		

---

Port	Entry Limits
Port 1	Unlimited
Port 2	Unlimited
Port 3	Unlimited
Port 4	Unlimited
Port 5	Unlimited
Port 6	Unlimited
Port 7	Unlimited
Port 8	Unlimited

### 3.10 EEE

This page shows the EEE (Energy Efficient Ethernet) configuration. User can enable/disable EEE function in this page.

EEE Setting

EEE function:



## 4. Security Functions

### 4.1 MAC Address

MAC Search – In this page, user can input MAC address and VID to search the corresponding entry in layer 2 table.

MAC Addresses Searching

MAC Address	VLAN ID
<input type="text" value="00:00:00:00:00:00"/>	<input type="text"/> (1~4094)

Static MAC – This page shows the static MAC entries. User can add/remove static MAC in this page. User can select “Source MAC Blocking” field to set this MAC as source MAC blocking(not include destination MAC blocking).

Static MAC Setting

MAC Address	VLAN ID	Port	Source MAC Blocking
<input type="text" value="00:00:00:00:00:00"/>	<input type="text"/> (1~4094)	<input type="text" value="Port 1"/> Port 2 Port 3 Port 4 Port 5 Port 6	<input type="checkbox"/>

---

No.	MAC Address	VLAN ID	Port	Source MAC Blocking	Select
-----	-------------	---------	------	---------------------	--------

## 4.2 Storm Control

This page shows the storm control information of broadcast packets, multicast packets, unknown multicast packets and unknown unicast packet. User can enable/disable storm control function of these 4 kinds of storm of each port separately. Rate setting does not include IFG(Inter Frame Gap).

Storm Control Setting

Storm Type	Port	State	Rate (kbps)
Broadcast	Port 1 Port 2 Port 3 Port 4 Port 5 Port 6	Off	(8-1000000)

Apply

---

Port	Broadcast (kbps)	Multicast (kbps)	Unknown Unicast (kbps)	Unknown Multicast (kbps)
Port 1	Off	Off	Off	Off
Port 2	Off	Off	Off	Off
Port 3	Off	Off	Off	Off
Port 4	Off	Off	Off	Off
Port 5	Off	Off	Off	Off
Port 6	Off	Off	Off	Off
Port 7	Off	Off	Off	Off
Port 8	Off	Off	Off	Off



## 5. Monitoring

### 5.1 Port Statistics

This page shows the statistic of Good/Bad packets in receive/transmit direction. RxGoodPkt include received unicast, multicast and broadcast packets. RxBadPkt include oversize, undersize, FCS error, jabber and fragment packets. TxGoodPkts include transfer unicast, multicast and broadcast packets. TxBadPkt include excessive collision packets.

#### MIB COUNTER

Port	State	Link Status	TxGoodPkt	TxBadPkt	RxGoodPkt	RxBadPkt
Port 1	Enabled	Link Up	3560	0	4254	0
Port 2	Enabled	Link Down	0	0	0	0
Port 3	Enabled	Link Down	0	0	0	0
Port 4	Enabled	Link Down	0	0	0	0
Port 5	Enabled	Link Down	0	0	0	0
Port 6	Enabled	Link Down	0	0	0	0
Port 7	Enabled	Link Down	0	0	0	0
Port 8	Enabled	Link Down	0	0	0	0

Clear

## 5.2 Cable Diagnostic

In this page, user can trigger Cable Diagnostic function and get Cable Length/Status in this page. Cable diagnostic here uses RTCT to measure "Cable Fault Distance". When cable is broken, we can see "Test Result" field shows "Open", and can get cable broken distance by "Cable Fault Distance". Since RTCT is to measure Fault distance, when Cable is good without broken, "Test Result" field show "Normal" and length in "Cable Fault Distance" field is meaningless.

### Cable Diagnostic

Check	Port	Test Result	Cable Fault Distance
<input type="checkbox"/>	Port 1	-	-
<input type="checkbox"/>	Port 2	-	-
<input type="checkbox"/>	Port 3	-	-
<input type="checkbox"/>	Port 4	-	-
<input type="checkbox"/>	Port 5	-	-
<input type="checkbox"/>	Port 6	-	-
<input type="checkbox"/>	Port 7	-	-
<input type="checkbox"/>	Port 8	-	-

Apply

### MIB COUNTER

Port	State	Link Status	TxGoodPkt	TxBadPkt	RxGoodPkt	RxBadPkt
Port 1	Enabled	Link Down	0	0	0	0
Port 2	Enabled	Link Down	0	0	0	0
Port 3	Enabled	Link Down	0	0	0	0
Port 4	Enabled	Link Up	1355	0	4398	0
Port 5	Enabled	Link Down	0	0	0	0
Port 6	Enabled	Link Down	0	0	0	0
Port 7	Enabled	Link Down	0	0	0	0
Port 8	Enabled	Link Down	0	0	0	0

Clear

## 6. Tools

### 6.1 Firmware Upgrade

switch operates in two modes – runtime mode and loader mode. The above configuration setting is provided in runtime mode only. To upgrade firmware, user should switch the mode of switch from runtime mode to loader mode first. Enter the “Enter”

Loader Mode” button in this page, a dialog will be shown to confirm user. If user presses “Yes”, then switch will save the configuration and switch to loader mode after 3 or 4 seconds. User can upgrade firmware through HTTP, or reboot switch.

#### Firmware Upgrade

Enter loader mode to upgrade firmware. After entering loader mode, configuration will be saved.

Enter Loader Mode

---

#### Loader Mode

Firmware upgrade mode. Please upload your image by TFTP or HTTP

## 6.2 Reset

User can set configuration to factory default setting by clicking “Factory Default” button in this page.

Reset Configuration

Reset to default factory settings and restart the system.

## 6.3 Save

User can save the configuration they made by clicking this page. If user makes any change of configuration, current configuration will be saved to Flash automatically after any change of configuration in 2 minutes.

Save configurations

The configuration has been saved successfully.

## 6.4 Reboot

User can reboot the system by clicking the “Reboot” button.

Reboot

Reboot the switch.