



**Smart Ethernet Switch**  
**GX1026i**

**User Manual**

E3816

First Edition  
May 2008

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## Package contents

Before installing the GX1026i switch, check your package for the following items.

- ASUS GX1026i switch x 1
- AC power cable x 1
- Installation CD x 1 (User Manual included)



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If any item is damaged or missing, contact your retailer immediately.

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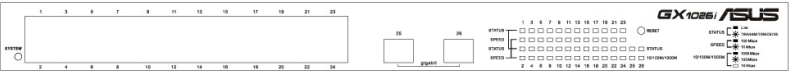
# Hardware overview

## Product features

- Supports 24 ports 10/100Mbps Half/Full duplex and 2 ports 1000Mbps Full duplex, flow control and auto-negotiation
- Supports IEEE 802.3x flow control for Full Duplex mode and back pressure for Half Duplex mode
- Supports automatic address learning and address aging
- Supports Store-and-Forward architecture
- Supports auto MDI/MDI-X function
- Supports up to 4K MAC Address Table
- Web management interface
- Supports System log, IP setting through Web management utility, firmware upgrade
- Supports Port-based VLAN, Tag-based VLAN, Trunk, Port Mirroring, QoS, and CoS
- Supports SNMP, IGMP Snooping.
- Supports Port-based Rate Limit control
- Supports Storm Control
- Support Port Counter (Transmit, Receive Drop, CRC error packets)
- Supports backup and restore current configuration

## Front panel

The front panel of GX1026i includes 24 10/100Mbps Fast Ethernet ports, 2 10/100/1000Mbps Gigabit Ethernet ports, and LED indicators that show the working conditions of the switch.



## LED indicators

LED	Color	Status	Description
SYSTEM	Green	ON	The power is ON
10/100M LINK / ACT	Green	ON	A link of 100Mbps is established.
		Blinking	A link of 10Mbps is established.
10/100/1000M LINK / ACT	Green	ON	A link of 1000Mbps is established
		Blinking	A link of 10/100 Mbps is established.
STATUS	Green	ON	System is linking.
		Blinking	Data is being transmitted or received.

## Rear panel

The rear panel of GX1026i contains the power connector.



# Connecting network devices

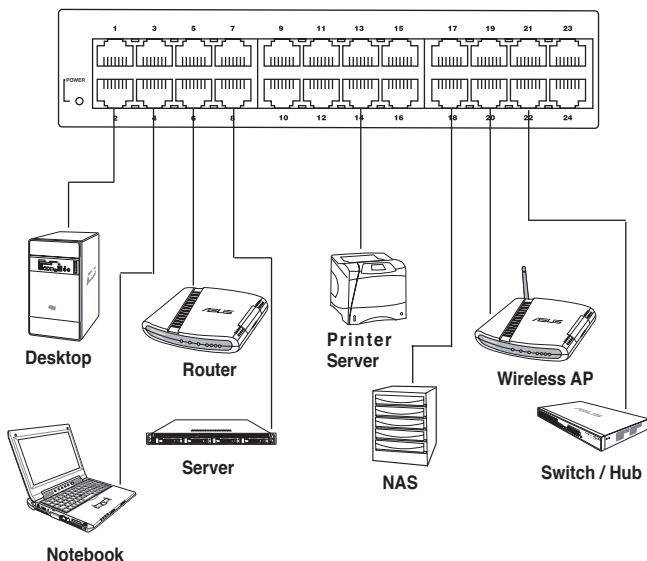
GX1026i has an auto-MDI/MDIX crossover detection function and provides plug-and-play capability. Just simply connect your computer and other network devices to enjoy the switch's features.

To connect network devices to the GX1026i switch:

1. Connect one end of the Ethernet cable to an Ethernet port on the switch front panel. Connect the other end to the Ethernet port of the network device. Repeat this step to connect additional network devices.



- We recommend the use of Category 5 Ethernet straight-through cables to ensure proper connections between the switch and other network devices.
- You can use either cross-over or straight-through cables to connect other network devices such as bridges, switches, hubs, and repeaters.



2. Plug one end of the power cable to the power connector on the switch rear panel, then plug the other end to a power outlet.
3. The Power LED and LAN LED indicators for active Ethernet ports light up when the switch is powered on and active nodes are connected to the LAN ports. Refer to the front panel illustration and LED table in page 6 for details.

# SmartSwitch Web-Base Controller

The GX1026i contains the SmartSwitch Web-Base Controller, a web-based preinstalled software, which makes it easier for you to manage and monitor the switch and the network devices connected to it.

## Configuring your LAN

Before running SmartSwitch, you need to configure the Local Area Network (LAN) settings of your computer. By default, GX1026i IP address is **192.168.2.1**, and the Subnet Mask is **255.255.255.0**.

### Windows® 98/98 SE

1. From your Windows® desktop, click **Start > Settings > Control Panel**.
2. Double-click the **Network** icon, and select the **Configuration** tab.
3. Select **TCI/IP**, then key in the IP address for the switch. The IP address must be **192.168.2.X**. (X can be any number between 2 and 254 that is not used by another device.)
4. Set the **Subnet Mask** to **255.255.255.0**. Click **OK** when finished.

### Windows® 2000/XP platform

1. From your Windows® desktop, click **Start > Control Panel > Network and Internet Connection > Network Connections**.
2. Right-click the **Local Area Connection** icon, then select **Properties**.
3. Double-click the **Internet Protocol (TCP/IP)** item to display the **Internet Protocol (TCP/IP) Properties** window.
4. Select the **Use the following IP address** option, then key in the IP address for the switch. The IP address must be **192.168.2.X**. (X can be any number between 2 and 254 that is not used by another device.)
5. Set the **Subnet Mask** to **255.255.255.0**. Click **OK** when finished.

### Windows® Vista platform

1. From your Windows® desktop, click **Start > Control Panel > Network and Sharing Center > Manage Network Connections**.
2. Right-click the **Local Area Connection** icon, then select **Properties**.
3. Select **Internet Protocol version 4 (TCP/IPv4)**, then click **Properties**.
4. Select the **Use the following IP address** option, then key in the IP address for the switch. The IP address must be **192.168.2.X**. (X can be any number between 2 and 254 that is not used by another device.)
5. Set the **Subnet Mask** to **255.255.255.0**. Click **OK** when finished.

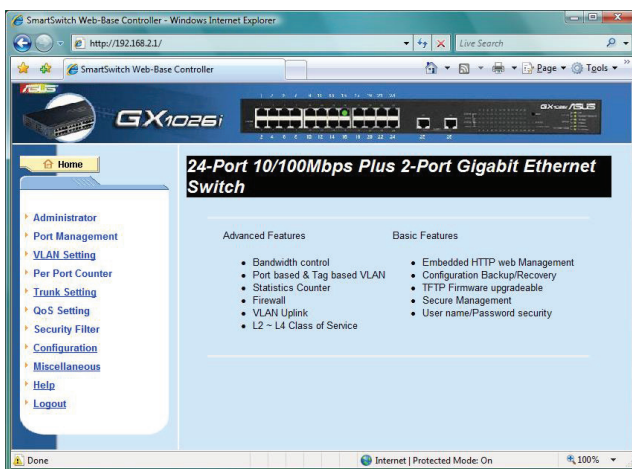
## Logging on to SmartSwitch

To log on to SmartSwitch:

1. In your web browser, enter this IP address: **http://192.168.2.1**.



2. Enter the default username: **admin** and password: **system**. The GX1026i home page appears. The home page displays quick links to help you easily configure the features in the switch.



You can change the username and password in **Administrator > Authentication Configuration** on SmartSwitch.

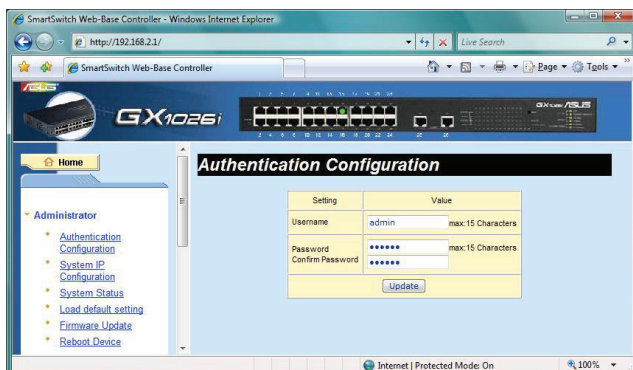
# SmartSwitch Configuration

Using the preinstalled SmartSwitch Web-Base Controller, you can easily access the quick links and make the necessary configurations. This will make it easy for you to manage and monitor the switch and the network devices connected to it.

## Administrator

### Authentication Configuration

This page enables you to change the username and password.



### To change the username and password:

1. Click **Administrator > Authentication Configuration**.
2. Key in a maximum of 15 alphanumeric characters for both the new username and password. Key in the new password again to confirm.



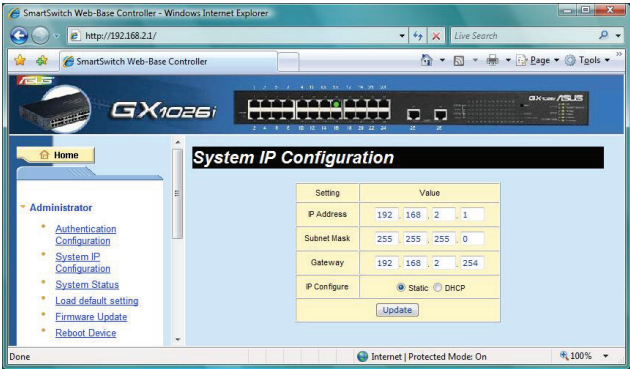
Both the username and password are case sensitive, so take note of the character case (lowercase or uppercase) that you entered for these items.

3. Click **Update** to save the changes.

## System IP Configuration

This page allows you to set the IP address and subnet mask for the switch. You can also optionally configure the Gateway IP address; and set the IP address as static or dynamic IP address.

To access this feature, click **Administrator > System IP Configuration**, make the necessary configurations, then click **Update** to save the changes.



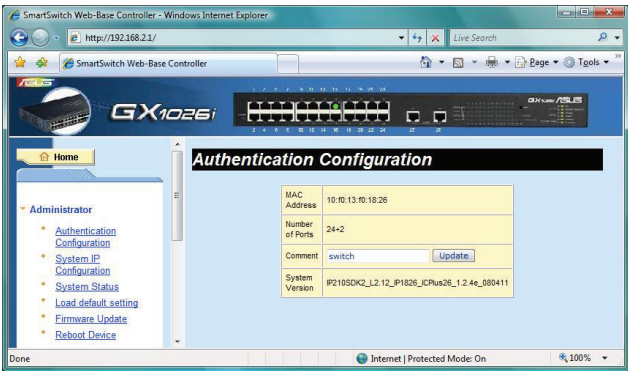
## System Status

To view the firmware version and the system settings, click **Administrator > System Status**. You can also view the system name from the Comment field.

To change the system name, simply key in the new system name, then click **Update** to save the changes.



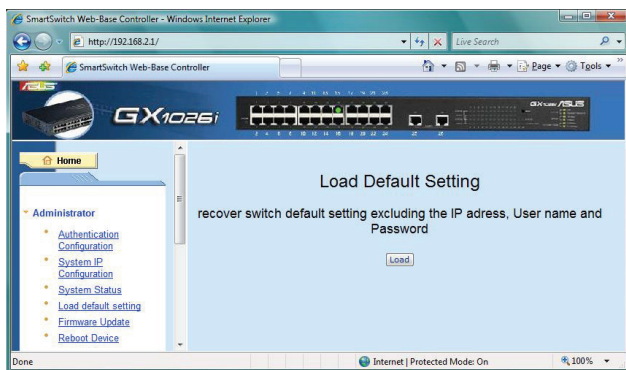
Changing the system name will not affect the behavior of the switch.



## Load Default Setting

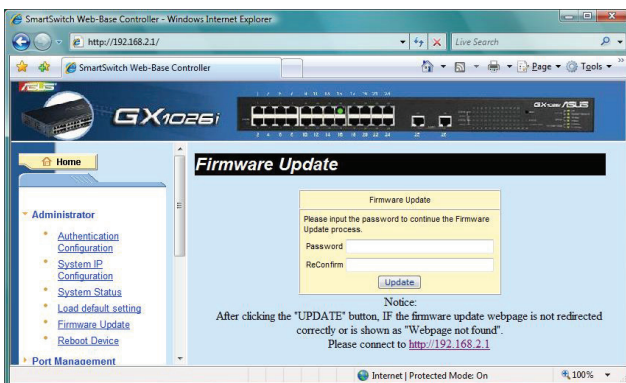
This page enables you to restore the switch's default settings, except the IP address, username and password.

To recover the system's default settings, click **Administrator > Load Default Setting**, then click **Load**.



## Firmware Update

This page enables you to update the switch's firmware version.



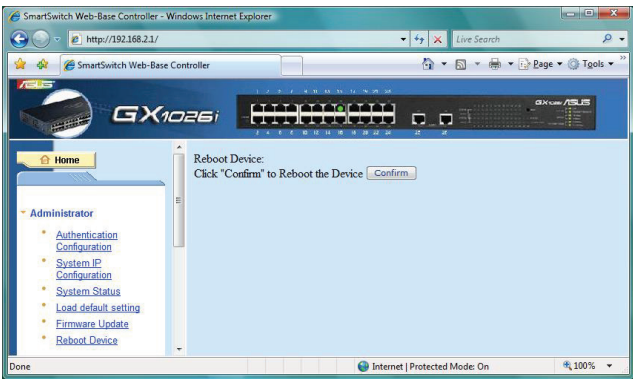
**To update the firmware:**

1. Click **Administrator > Firmware Update**.
2. Key in the password, then key in again to confirm.
3. Click **Update**, then select the firmware binary file. The uploading process will be completed in about 40 seconds.



## Reboot Device

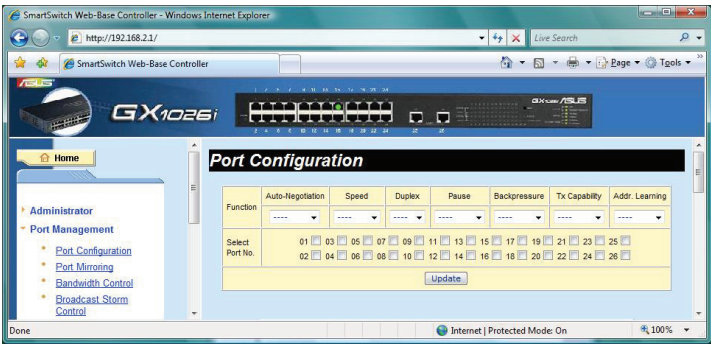
To reboot the switch, click **Administrator > Reboot Device**, then click **Confirm**.



## Port Management

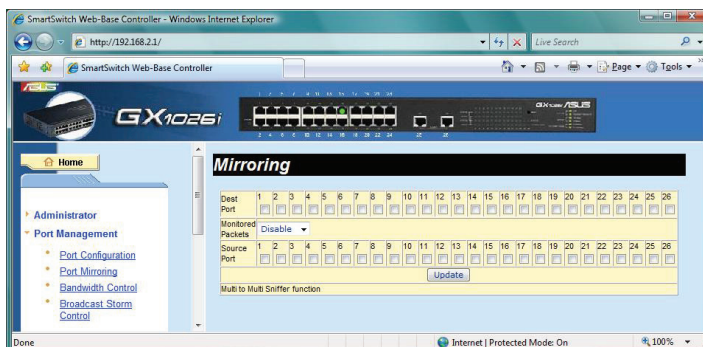
### Port Configuration

This page allows you to simultaneously set the operating mode for multiple ports. To do this, click **Port Management > Port Configuration**, then click **Update**. Each port's operating mode and settings are displayed in the list.



## Port Mirroring

This page enables you to monitor network traffic through setting the destination port and the source port. To set the destination/source ports, click **Port Management > Port Mirroring**.



The source port is the port where all the incoming/outcoming packets are copied from. The destination port is the port where all the packets will be sent from the source port.

There are four Port Mirroring methods:

- **Disable:** Disable port mirroring
- **Rx:** The incoming packet of the source port is copied to the destination port.
- **Tx:** The outgoing packet of the source port is copied to the destination port.
- **Tx & Rx:** Packets at both directions is copied to the destination port.



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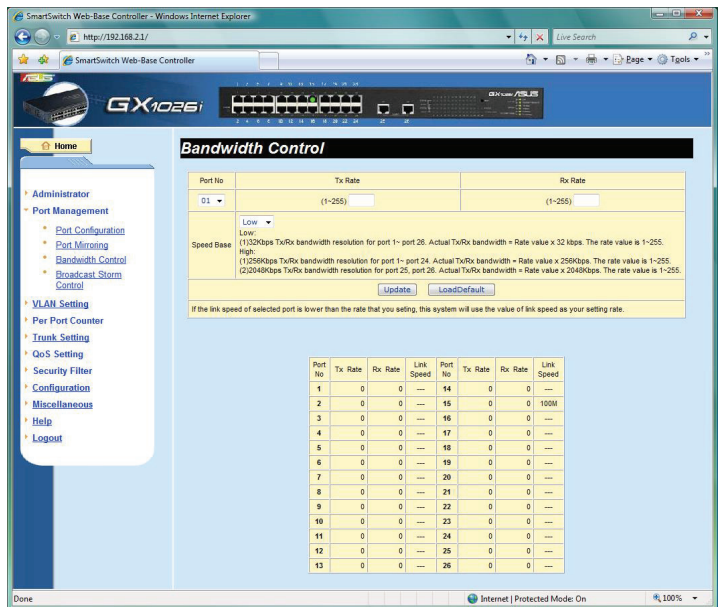
Port Mirroring is bandwidth consuming.

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To save the settings made on this page, click **Update**.

# Bandwidth Control

This page enables you to calculate the actual bandwidth usage for each port.



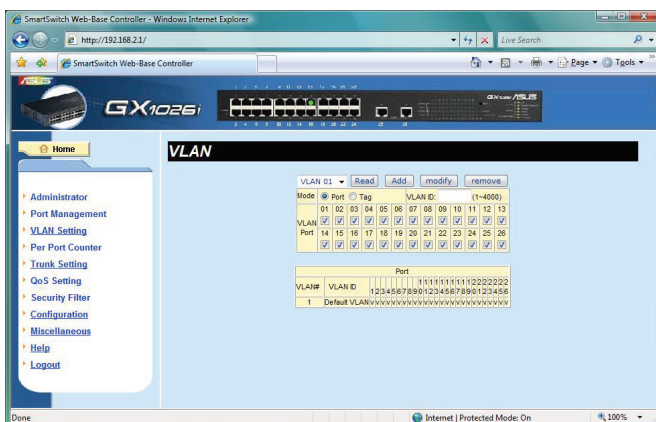
To calculate a port's bandwidth:

1. Click **Port Management > Bandwidth Control**.
2. Key in the numeric values for **Tx Rate** and **Rx Rate**.
3. From the dropdown list, select either **Low** or **High** for the speed rate.
4. Click **Update** to save the settings. To delete all settings and restore the switch to its factory default settings, click **Load Default**.

This page allows you to control your network's broadcast or multicast traffic. It allows you set the threshold for the number of broadcast packets allowed to enter in each port in one time unit. To save the settings in this page, click **Update**.



This page allows you to configure the settings for the Virtual Lan Network (VLAN). In this page, you can read (or load), add, modify, and remove a VLAN setting.



**To load a VLAN setting:**

1. Click **VLAN Setting**.
2. From the dropdown list, select the VLAN entry that you want to load.
3. Click **Read** to load the VLAN setting.

**To add a VLAN setting:**

1. Click **VLAN Setting**.
2. From the **Mode** field, select either **Port** or **Tag** to set the mode if it is a port-based or tag-based VLAN. If it is a tag-based VLAN, key in the VLAN ID.
3. From the **VLAN Port** field, select the VLAN members.
4. Click **Add** to add the VLAN setting.

**To modify a VLAN setting:**

1. Click **VLAN Setting**.
2. From the dropdown list, select the VLAN entry that you want to modify.
3. Make the necessary changes, then click **Modify** to overwrite the settings in the VLAN entry.

**To remove a VLAN setting:**

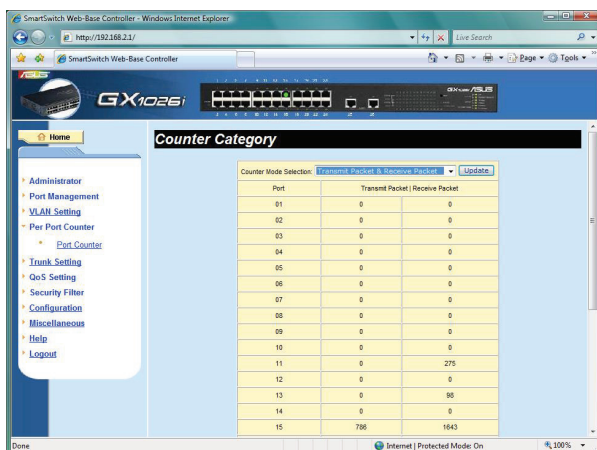
1. Click **VLAN Setting**.
2. From the dropdown list, select the VLAN entry that you want to delete.
3. Click **Remove** to delete the VLAN entry.

## Per Port Counter

There are four kinds of counter for each port:

- Transmit Packet & Receive Packet
- Collision Count & Transmit Packet
- Drop packet & Receive Packet
- CRC error packet & Receive Packet

You can select one out four counters. After clicking the counter mode, the previous counter value for each port will be flushed. Click **Clear** to clear the counter to 0 (zero). Click **Refresh** to update the counter value.



SmartSwitch Web-Base Controller - Windows Internet Explorer

http://192.168.2.1/

SmartSwitch Web-Base Controller

GX1026i

Home

- Administrator
- Port Management
- VLAN Setting
- Per Port Counter
  - Port Counter
- Trunk Setting
- QoS Setting
- Security Filter
- Configuration
- Miscellaneous
- Help
- Logout

### Counter Category

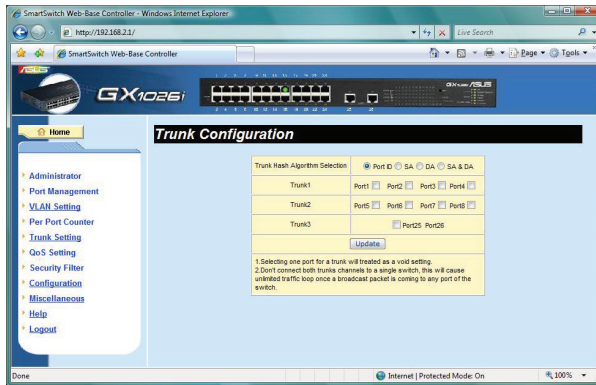
Counter Mode Selection: **Transmit Packet & Receive Packet** [Update](#)

Port	Transmit Packet	Receive Packet
01	0	0
02	0	0
03	0	0
04	0	0
05	0	0
06	0	0
07	0	0
08	0	0
09	0	0
10	0	0
11	0	275
12	0	0
13	0	95
14	0	0
15	796	1643

Done Internet | Protected Mode On 100%

## Trunk Setting

This page allows you to configure the trunk settings.



To configure the trunk settings:

1. Select one from these four hash algorithms for traffic distribution: **Port ID**, **SA**, **DA**, and **SA & DA**. Port ID is the default hash algorithm.
2. Select one or more ports for any of these three trunks: **Trunk1**, **Trunk2**, and **Trunk3**.
3. Click **Update** to save the settings.

# QoS Setting

## Priority Mode

This page allows you to set the priority for incoming and outgoing packets. You can set three priority modes for the packets:

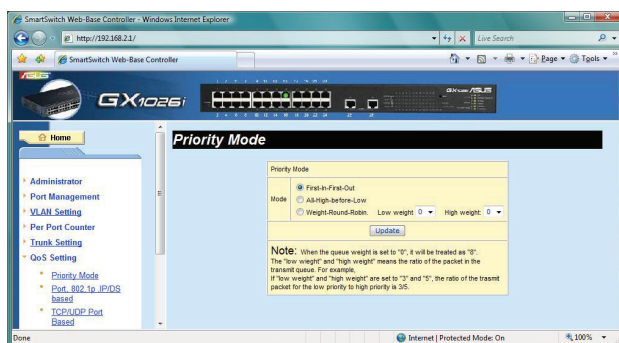
- **First-In-First-Out:** The switch gives equal priority to all packets, and forwards the packets as soon as they are received.
- **All-high-before-low:** The switch first forwards all the packets in high-priority queue, then forwards those packets in low-priority queue.
- **Weight-and-round-Robin:** The switch forward a specified number of high priority packets and then a specified number of low priority packets. The switch repeats this cycle continuously. The “Low weight” and “High weight” stands for the “number of packets in low priority queue” and “number of packets in high priority queue” respectively. The number is only meaningful for weight-and-round-robin mode.



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“0” is treated as “8” for both weight numbers.

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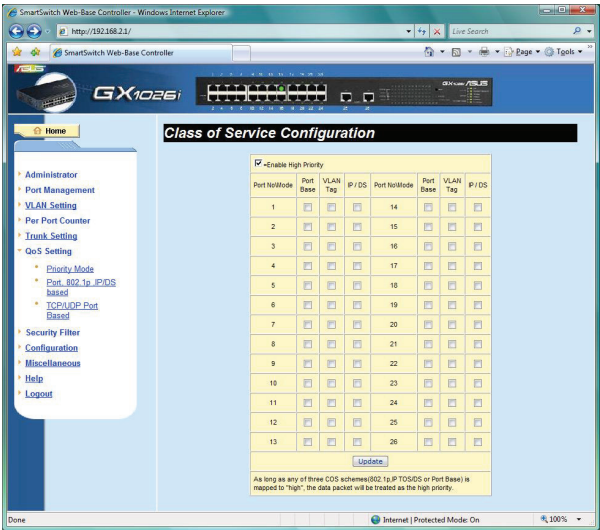




## Port, 802.1p, IP/DS based

This page provides three Class of Service (COS) types:

- **Port:** The packet at this port is unconditionally mapped as high priority.
- **802.1p:** 802.1Q tag will be checked. The packet with IP precedence 4~7 and 0~3 is mapped as high priority and low priority respectively.
- **IP/DS:** The switch checks the TOS or DS field to decide the priority of the packet. If a packet hit any of 3 rules, it is treated as a high priority.



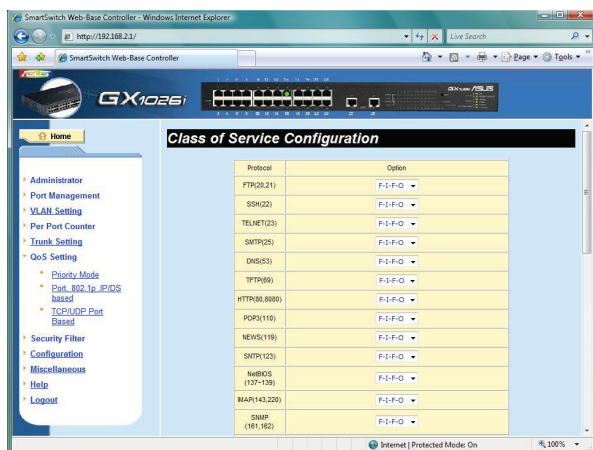
## TCP/UDP Port based

This page provides Class of Service based on TCP/DUP protocol. In addition to the well known protocols, this switch supports protocol range to cover a wide range of protocols. The mask number is used to define the protocol range. The result of the calculation is a range of acceptable protocol number.

Example:

The protocol should range from 1~65535 and the mask should be between 1~255. if you fill 7549 in the protocol field and fill 13 in the mask field, you will get the actual protocol numbers which can pass the switch. The calculation procedure is listed below:

- Transform the mask number into the binary form  $1+4+8=13$
- Subtract 0, 1, 4, 8, 13 from 7549, you will get result of 7549, 7548, 7545, 7541, 7536
- The protocol number listed above can pass the switch. Selecting “Override” makes this page configuration override the port based, 802.1p based and IP/DS based configuration. Click **Update** to save the settings.

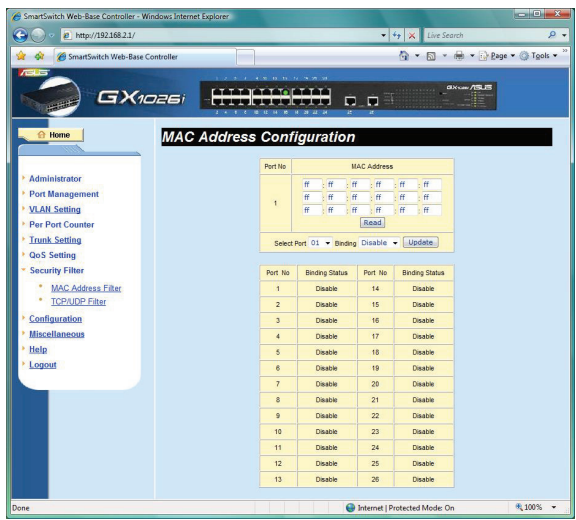


# Security

## MAC Address Filter

In this page, you can assign up to three static MAC addresses to a specified port. These static MAC addresses will not be aged out from the MAC address table. “ff ff ff ff ff ff” or “00 00 00 00 00 00” or blank will not be saved to the table. The configuration procedure is shown below:

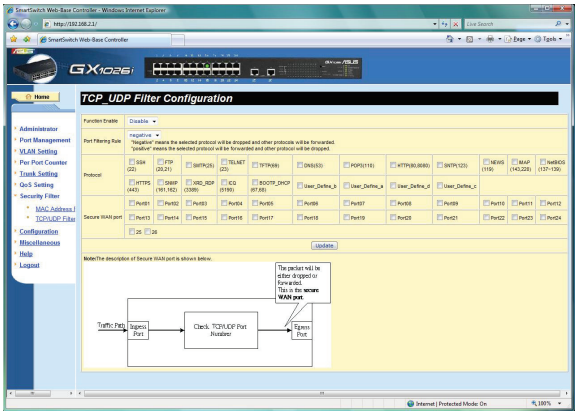
- To read the MAC address associated with a port, you should select the port number and then click **Read**.
- To specify the MAC address to a port, you should enter the MAC address to the field, select a port number and then click **Update** to save the settings.
- To flush the MAC address table, you should disable the port binding and then click **Disable**.



## TCP/UDP Filter

There are two types of protocol filter: **negative** and **positive**.

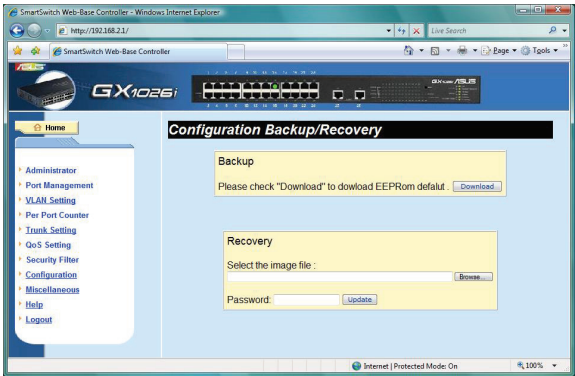
The negative list defines the protocol that will be dropped. The positive list defines the protocol that will be forwarded. To save the settings, click **Update**.



## Configuration

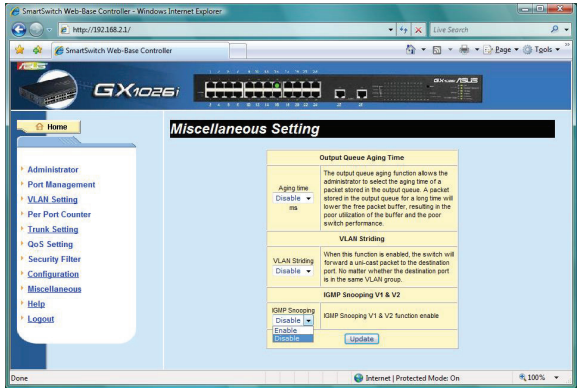
This page enables you to back up or recover the switch's settings. To recover the switch settings, select the file containing the switch's configurations, then click **Recover** to load the file to the switch.

To back up, click **Backup** to save the configuration file. The file will be saved in a readable text format.



# Miscellaneous

There are three options for Miscellaneous Setting: **Output Queue Aging Time**, **VLAN Striding**, and **IGMP Snooping V1 & V2**. Make the necessary configurations, and click **Update** to save the settings.



# ASUS Contact information

## ASUSTeK COMPUTER INC. (AsiaPacific)

Address	15 Li-Te Road, Peitou, Taipei, Taiwan 11259
Website	<a href="http://www.asus.com.tw">www.asus.com.tw</a>

### Technical Support

Telephone	+886228943447
Support Fax	+886228907698
Software download	<a href="http://support.asus.com">support.asus.com</a> *

## ASUS COMPUTER INTERNATIONAL (America)

Address	44370 Nobel Drive, Fremont, CA 94538, USA
Telephone	+15029550883
Fax	+15029338713
Website	<a href="http://usa.asus.com">usa.asus.com</a>
Software download	<a href="http://support.asus.com">support.asus.com</a> *

## ASUS COMPUTER GmbH (Germany and Austria)

Address	Harkort Str. 25, D40880 Ratingen, Germany
Telephone	+49210295990
Fax	+492102959911
Online contact	<a href="http://www.asus.com.de/sales">www.asus.com.de/sales</a>

### Technical Support

Telephone	+49210295990
Fax	+492102959911
Online support	<a href="http://www.asus.com.de/support">www.asus.com.de/support</a>
Website	<a href="http://www.asus.com.de/news">www.asus.com.de/news</a>

\* Available on this site is an online Technical Inquiry Form that you can fill out to contact technical support.