

TL-SL2109 8+1G Gigabit Ethernet Smart Switch



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SAFETY NOTICES

Caution:

Do not use this product near water, for example, in a wet basement or near a swimming pool.

Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

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Package Contents

The following contents should be found in your box:

- > One TL-SL2109 Switch
- > One power cord
- One serial cable
- > This User's Guide
- > One Resource CD
- > Rubber footpads for Desk-mount
- > Rack-mount kit for installing the switch in a 19-inch rack

Note: If any of the above contents is damaged or missing, please contact the retailer from whom you purchased the TL-SL2109 Switch for assistance.

Chapter 1: About the Guide

Thank you for purchase of TL-SL2109 8+1G Gigabit Ethernet Smart Switch. The TL-SL2109 supports TRUNK, VLAN and port configuration. With the features of high performance, easy to use and economical, the TL-SL2109 is one best choice for you.

1.1 Purpose

The right guide is about to help you use the model of TL-SL2109 Gigabit Smart Switch accurately.

1.2 Terms and usage

In simple word, this guide uses the terms "Switch" (first letter upper case) to refer to the model of TL-SL2109 8+1G Gigabit Smart Switch, and "switch" (first letter lower case) to refer to all Ethernet switch, including the model of TL-SL2109 naturally.

1.3 Overview of the Guide

Chapter 1: About the guide.

Chapter 2: Introduction. Describes the Switch and its features.

Chapter 3: Installation. Helps you get started with the basic installation of the Switch.

Chapter 4: Install and usage of GSSC. Describe how to configure the Switch by GSSC.

Appendix A: Technical Specifications. Lists the technical (general, environmental and physical) specifications of the Switch.

Appendix B: Twisted-Pair Cabling.

Chapter 2: Introduction of the Product

This part simply describes the features of the model of TL-SL2109 Gigabit Smart Switch, and some information in context about the technology of Switch.

2.1 Port-Trunking function

Basically, TRUNK permits to provide a wider bandwidth between the switches by two or more than two ports (less than four ports generally) working side by side. It means that the TRUNK solves many physical ports as one logical port. When there is no TRUNK, the maximal bandwidth is decided by Auto-negotiation. The good of the TRUNK is that you can use many lower speed devices as a higher speed device. Using the TRUNK, you can only add the adapters in the server machine connected to the switch to solve the traffic between the switch and the server. You also can use the Switch to solve the traffic between the switch and the server. You also can use the TRUNK between the switchs to solve the traffic.

TL-SL2109's TRUNK function supports one TRUNK, which is made up of the seventh and the eighth port, the TRUNK port's bandwidth can get to 400Mbps.

2.2 Virtual Local Area Network

The Virtual Local Area Network can be out of the constraints of the physical connections. You can move the workstations among the workgroup and the subnet without changing the physical connection. The work stations build up the logical workgroup or the virtual subnet to improve the performance of the system. Poise the flux in the network and utilize the source of the device reasonedly. In the same time, the VLAN decompresses the management and maintenance of the network.

- Virtual Group: The members of the groups' communication with each other will be greatly improved. And not required the router in the system.
- Safety: Because only the legal user can forward the information, the safety of the network will be improved.
- Economize cost: You can use VLAN in the network without adding the router or re-distributing the cable.

Port-based VLAN is the usual technology of the TL-SL2109. The TL-SL2109P supplies nine Port-based VLAN.

2.3 Priority

The TL-SL2109 supplies the port-based priority. The Switch had two levels, low and high. The switch forwards the frames based on the level of the priority. The frames with high level priority can be solved firstly.

2.4 Main features

- > Complies with IEEE 802.3、IEEE 802.3ab
- > 8 10/100Mbps Auto-Negotiation RJ45 ports supporting Auto-MDI/MDIX
- > 1 10/100/1000Mbps Auto-Negotiation RJ45 ports supporting Auto-MDI/MDIX
- Supports IEEE802.3x flow control for Full Duplex mode and backpressure for half-duplex mode
- > Supports port-based VLAN with 9 entries
- > Supports TRUNK
- > Supports Port Enable/Disable
- > Supports Static Port Priority with 2-level priority queuing
- > 1 console port supporting configured software setting
- > Desktop or rack-mountable steel case
- Internal power supply

Chapter 3: Installation

3.1 Installation

Firstly, please place the switch following the steps:

- > The surface must support at least 5kg;
- > The power source must be within 1.5m;
- > Check the power cable carefully to make sure the connection to AC power;
- > Leave enough space for the ventilation.

3.1.1 Installation on the desktop

- 1. Place the Switch on a desk which has enough space;
- 2. Take off the four pads' adhesive tape and adhere to the four circle grooves on the bottom of the switch respectively;
- 3. Turn off the switch again, place on the desktop.

3.1.2 Rack Installation

The TL-SL2109 can be mounting in an EIA Standard size 19 inches rack.

- 1. Attach the mounting brackets to each side of the TL-SL2109 with the screwes;
- 2. Slide the TL-SL2109 into the rack;
- 3. Use the screwes to secure the switch to the rack..



Figure 3-1 Rivet the "L" brackets onto the Switch



Figure 3-2 Fasten the Switch in the rack

3.1.3 Hang on the wall

The TL-SL2109 can be hung on the wall.

- 1. Drill two holes with a 6mm diameter on the wall, the distance between the holes is 160mm.
- 2. Press the plastic tube in the hole entirely, then put screws in the plastic tubes, screw them with a few body stuck out the wall;
- 3. Place the switch to the two screws by the holes in the switch.

3.1.4 Power on

The TL-SL2109 can be used with the power source in the range of 110 to 260 VAC, 50-60Hz. After the power is on, the power LED will be light.

Caution: As a precaution in the event of a power failure, unplug the switch, when the power resumed, plug the switch back in.

3.1.5 Initialization

Turn on the power, the switch will automatically initialize and the LEDs, will be light as follows:

- 1. As the time you turn on the power, the LEDs will turn on for a second, which indicates system resetting.
- 2. The power LED is always light.

3.2 Explanation of switch appearance and the method of

connecting switch

The part gives you more details about front panel, rear panel, LEDs and extension port of the switch.

3.2.1 Front Panel

There are 8 10/100Mbps ports and LED indicators, 1 10/100/1000Mbps port and LED indicator, 1 serial port on the front panel of the TL-SL2109.



Fig 3.2 Front Panel of the TL-SL2109

3.2.2 Rear Panel

There is a power connector on the rear panel. The power supply is 100V-240V, 50-60Hz.





3.2.3 LED indicators

10/100Mbps ports' LED includes Link/Act and 100Mbps speed, gigabit port includes 10M speed, 100M speed, 1000M speed and Act. There also is a power LED. By these LEDs, you can monitor the working state of the switch easily. More details as follows:

- Power LED: The power LED will be always red when power on, or else check the power connection.
- Link/Act: The LED is green when there is a secure connection to a device at any of the 10/100M ports. It will be lit when transferring or receiving packages.
- > 10M LED: The LED is green when the gigabit port connects to a 10Mbps device, or else it will turn off.
- > 100M LED: The LED is green when the gigabit port connects to a 100Mbps device, or else it will turn off.
- > 1000M LED: The LED is green when the gigabit port connects to a 1000Mbps device, or else it will turn off.

Act LED: The LED is lit when the gigabit port are transferring or receiving the packages.

3.3 Connection

The TL-SL2109 supports MDI/MDIX, so you can use every port as a normal port or an uplink port. Each port is independent, which makes the connection very easy.

TP-LINK® TL-SL2109	8+1G Gi	gabit S	mart Sv	vitch						
Link • O O O O O O O O O O O O O O O O O O		2	3	4	5	6	7	8	GIGA	Console

Figure 3-1 TL-SL2109 Switch Front Panel sketch

Figure 3-2 TL-SL2109 Switch Rear Panel sketch

TP-LINK [®] TL-SL2109	
Link \bullet \bigcirc	
100Mbps O O O O O O O O O O O O O O O O O O O	

Figure 3-3 TL-SL2109 Switch LEDs sketch

Chapter 4: Installation and Usage of the Software

The TL-SL2109 is a smart switch. You can configure it with the management software provided by us. It makes you every convenient to manage the switch. The part helps you to use it.

4.1 The steps of the installation of GSSC (Gigabit Smart

Switch Configuration)

The software is running in windows (95/98/2000/NT). You can use it by a serial cable connected to the PC. So before your configuration, you should have a computer with the certain operating system and a serial port. The installation steps are as follows:

- 1. Connect the serial cable between the PC and the Switch;
- 2. Run the PC and the Switch;
- Run the setup.exe in the software package, and click Next to finish the installation, The default path is "C:\Program Files\TP-LINK\Giga Smart Switch Configuration 1.0". If you want to change the path, click the "Browse" button.

InstallShield Wiz	zard
Choose Destir Select folder	Choose Folder
	Please choose the installation folder.
Setup will ins	Path:
To install to t another folde	C:\Program Files\TP-LINK\GSSC Directories:
	SSREADER36 Symantec Giga Smart Switch Configurati Smart Switch Configurati Smart Switch Configurati
Destination	
C:V.,.VTP-L	Iowse
InstallShield	确定 取消
	< <u>B</u> ack <u>N</u> ext> Cancel

Fig 4.1 The installation path changing

4. Input your new path, such as "D:\Switch\TP-LINK\GSSC", then click "OK".

InstallShield Wiz	ard	x
Choose Destir	Choose Folder X	
Select folder	Please choose the installation folder.	
Setup will ins	Path:	
To install to t another folde	D:\Switch\TP-LINK\GSSC Directories:	select
– Destinatior	Mozilla Firefox Mozilla Firefox NetIQ Outlook Express Symantec Symantec_Client_Security TP-LINK Mozilla Firefox Smart Switch Configuration	
H:\\TP-L	Windows Media Player	rowse
InstallShield ——	OK Cancel	Cancel
-		

Fig 4.2 Inputting new path

5. After Click Next, the installation is finished.

InstallShield Wizard	×
Select Program Folizer Please select a program folder.	
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.	
Program Folders:	
TP-LINK\Smart Switch Configuration 3.6	1
Existing Folders: Advanced Archive Password Recovery 汉化版 Advantech LabTool Altera Ansoft Borland C++Builder 6 Cadence License Manager Cadence PSD 15.0 CAM350 Ver 8.0.6 EONE!	
InstallShield <u>Kack Next</u> Cancel	

Fig 4.3 Finish changing new path

4.2 The Usage of GSSC

The interface of the software is friendly and easy to use. There are four steps on configuration the switch generally:

- 1. Connect;
- 2. Open the existed configuration file or configure the switch directly;
- 3. Write in the result;
- 4. Exit.

Here are more details about how to use the GSSC software.

1. After finishing the installation, click Start – Programs – TP-LINK – Giga Smart Switch Configuration, the window interface will be displayed on the desktop.



Fig 4.4 Initialized software interface

2. Turn on the switch, and select the File—Link to switch menu or click the Link to Switch button.



Fig 4.5 Pick up from the menu

Gigabit Smart Switch Configuration 1.0	
Link to Switch	
Link to Swtich , and read the present configuration	数字

Fig 4.6 Pick up from the button

3. If the power supply is off or the serial cable is connected incorrectly, or something else, the program will display.



Fig 4.7 Connected at fault

4. After connecting successfully, the GSSC will read the configuration from the switch, and display the interface as Fig 4.8.

Caution: At this time the Off Line button is light. On the right of the button, there are eight buttons, Port Setting, TRUNK Setting, Port Close Setting, VLAN Setting, Priority Setting, Static MAC Address Setting, in turns.

9 Eile ⊻iew s	Setting Write Configura					
보 미						_ 8
			*	8 F	₽ ?	
Model:	TL-SL2109	line Link Status:	ON			
Port Status:						
Port Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port
Port1	Auto	Port Number	Low	1104 Cu	No Trunk	No
Port2	Auto	Port Number	Low		No Trunk	No
Port3	Auto	Port Number	Low		No Trunk	No
Port4	Auto	Port Number	Low		No Trunk	No
Port5	Auto	Port Number	Low		No Trunk	No
Port6	Auto	Port Number	Low		No Trunk	No
Port7	Auto	Port Number	Low		No Trunk	No
Port8	Auto	Port Number	Low		No Trunk	No
Port9	Auto				No Trunk	No
	nato				no nam	
VLAN:		_				
VLAN 1	1,2,3,4,5,6,7,8,9,	_				
VLAN 2						
VLAN 3						
VLAN 4						
VLAN 5						
VLAN 6						
VLAN 7						
VLAN 8						
VLAN 9						
ff line						数字



5. Operate the configuration. When the PC connects to the switch successfully. You can configure the switch in terms of your requirement. You must click the write to switch button lastly, the switch will reset automatically after success in

configuration.

Click the setting menu, the software will display all functional buttons you can operate. The corresponding button will be light at the same time.

Gigabit Smart Switch Configuration 1.0							
	Port Status Setting			e f	8		
Model: Port Status	<u>I</u> RUNK <u>V</u> LAN Priority Setting	Link Status:	ON				
Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port	7
Port1	Auto	Port Number	Low		No Trunk	No	
Port2	Auto	Port Number	Low		No Trunk	No	
Port3	Auto	Port Number	Low		No Trunk	No	1
Port4	Auto	Port Number	Low		No Trunk	No	
Port5	Auto	Port Number	Low		No Trunk	No	1
Port6	Auto	Port Number	Low		No Trunk	No	1
Port7	Auto	Port Number	Low		No Trunk	No	1
Port8	Auto	Port Number	Low		No Trunk	No	1
Port9	Auto				No Trunk	No	1
VLAN:							-
VLAN 1	1,2,3,4,5,6,7,8,9,						
VLAN 2							
VLAN 3							
VLAN 4							
VLAN 5							
VLAN 6		7					
VLAN 7							
VLAN 8							
VLAN 9		7					
I		_					
.1							
•							<u> </u>
et port status						数字	

Fig 4.9 All the functional menu

4.3 Port Configuration

1. Select the **Port Status Setting** or click the **Port Setting** button.

	art Switch Configuration						
	🖻 🖬 🐺		🔚 🚹 🛒	2 F	₽?		
Model:	TL-SL2109	Port Setting US:	ON				
Port Status	:						
Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port	
Port1	Auto	Port Number	Low		No Trunk	No	
Port2	Auto	Port Number	Low		No Trunk	No	
Port3	Auto	Port Number	Low		No Trunk	No	
Port4	Auto	Port Number	Low		No Trunk	No	
Port5	Auto	Port Number	Low		No Trunk	No	
Port6	Auto	Port Number	Low		No Trunk	No	
Port7	Auto	Port Number	Low		No Trunk	No	
Port8	Auto	Port Number	Low		No Trunk	No	
Port9	Auto				No Trunk	No	
VLAN:							
VLAN 1	1,2,3,4,5,6,7,8,9,						
VLAN 2							
VLAN 3							
VLAN 4							
VLAN 5							
VLAN 6							
VLAN 7		7					
VLAN 8		7					
VLAN 9							
•							
Set port status						数5	
et port status						一 一 安火 于	

Fig 4.10 Configuring the Port Status

2. Every port of the Switch can be configured by the software, as fig 4.11, but you can not operate the dark button.

Gigabit Sma		iguration 1.0 Configuration <u>H</u> elp		_ 🗆 ×
	2		1 🖭 🖭 🗲 🗷 🤋	
Model:	TL-SL2109	Link Status: ON		
Port Status:	Port	Status Setting	x	
Port	Speed	Status Setting	sable Por	t
Port1	Auto		×	
Port2	Auto			
Port3	Auto	Speed/Duplex		
Port4	Auto	O 100Base-TX Full Duplex	E Broadcast Storm Control	
Port5	Auto	C 100D - TVU KD 1	MAC Address Bind	_
Port6	Auto	O 100Base-TX Half Duplex	4 P	
Port7	Auto	© 10Base-T Full Duplex	Flow control	
Port8	Auto		Priority	
Port9	Auto	O 10Base-T Half Duplex	Port-base Priority Low	
VLAN:		Autonegotiation		
VLAN 1	1,2,3,		O Port-base Priority	
VLAN 2		Port Disable		
VLAN 3		Port Disable	OK Cancel	
VLAN 4				
VLAN 5	P	ort8 Autonegotiation Port	Number Low	
VLAN 6				
VLAN 7				
VLAN 8 VLAN 9				
•				
NOTE: the defaul	t link is through C	iom 1!		数字 //

Fig 4.11 Configuring the Port Status

There are a few descriptions as follows:

Speed/Duplex: You can select Auto Negotiation or Force Mode, 100Mbps Full Duplex, 100Mbps Half Duplex, 10Mbps Full Duplex, 10Mbps Half Duplex. If you select the Half Duplex, the port can transfer or receive the packages. But the port can transfer and receive the packages at the same time of you select the Full Duplex.

If the Auto Negotiation is enabled, the port can select the favoured speed and duplex by terms of the port connected up far end.

Default Setting: Auto Negotiation

Priority: The priority, is an advanced feature of the switch, makes the important information transferred firstly come to true. The port-based priority is that you can configure the priority by terms of the port you selected. The tag-based priority is that the switch extracts the VLAN tag or the ToS tag from the packages, then make sure the packages' priority. The switch can only use the port-based priority. It divides two levels — Low and High.

Default Setting: Port Number (Low)

4.4 PortClose Setting

The **PortClose Setting** can close the port(s). It (They) can not transfer or receive the packages. The port (1-8) and the gigabit port configure in the different place in the software.

Default Setting: Open

1. There are two ways to configure the port (1-8)

Method one:

1) Select the PortClose Setting menu or click the PortClose Setting button.

	🖻 日 🖼		🔜 🚹 🖭	M 7	₽ ?	
odel:	TL-SL2109	Link Status	ortClose Setting			
ort Status	:					
Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port
Port1	Auto	Port Number	Low		No Trunk	No
Port2	Auto	Port Number	Low		No Trunk	No
Port3	Auto	Port Number	Low		No Trunk	No
Port4	Auto	Port Number	Low		No Trunk	No
Port5	Auto	Port Number	Low		No Trunk	No
Port6	Auto	Port Number	Low		No Trunk	No
Port7	Auto	Port Number	Low		No Trunk	No
Port8	Auto	Port Number	Low		No Trunk	No
Port9	Auto				No Trunk	No
AN:						
VLAN 1	1,2,3,4,5,6,7,8,9,					
VLAN 2	112101 110101110101	-				
VLAN 3		-				
VLAN 4		-				
VLAN 5						
VLAN 6						
VLAN 7		-				
VLAN 8		-				
VLAN 9		-				

Fig 4.12 Select Port (1-8) Close Setting

2) Click the port(s) you want to change.

	🖻 🖪 🖼		11		T	7	1		
Model:	TL-SL2109	Link Status:	ON						
Port Status:									
Port	Speed/Duplex	Priority Base	Priority		Flow ctl	TRUNK	Disa	ble Port	1
Port1	Auto	Port Number	Low			No Trun	(No		1
Port2	Auto	Port Number	Low			No Trun			1
Port3	Auto	D	l as a				c No		1
Port4	Auto	Disabe Port Setting				n	c No		1
Port5	Auto	Port1-8				nl	< No		1
Port6	Auto					n	(No		1
Port7	Auto	Port1	Port2	□ Port3	Port4		(No		1
Port8	Auto	Purti	Puriz	E Purta			C No		1
Port9	Auto	Port5	Port6	Port7	Port8	n	(No		1
VLAN:		NOTE: When se	leted the						-
VLAN 1	1,2,3,4,5,6,7,8,9	port is di		OK	Can	cel			
VLAN 2									
VLAN 3									
VLAN 4									
VLAN 5									
VLAN 6									
VLAN 7									
VLAN 8									
VLAN 9									
·		_							
•									
	link is through Com 1!							数字	

Fig 4.13 Port (1-8) Close Setting

Method two:

Select the corresponding port in the Port Setting, and click the Port Disable.

🚰 Gigabit Sm 📆 Eile View		
Model:	TL-SL2109 Link Status: ON	
Port Status	Port Status Setting	
Port	Speed sable Port	
Port1	Auto	
Port2	Auto	
Port3	Auto Speed/Duplex	
Port4	Auto C 100Base-TX Full Duplex 🗖 Broadcast Storm Control	
Port5	Auto	
Port6	Auto	
Port7	Auto C 10Base-T Full Duplex	
Port8	Auto Priority	
Port9	Auto C 10Base-T Half Duplex C Port-base Priority Low	
VLAN:	© Autonegotiation	
VLAN 1	1.2.3. C Port-base Priority	
VLAN 2		
VLAN 3	V Port Disable OK Cancel	
VLAN 4		
VLAN 5	Port8 Autonegotiation Port Number Low	
VLAN 6		
VLAN 7		
VLAN 8		
VLAN 9		
4		
NOTE: the defau	ink is through Com 1! 数字	

Fig 4.14 Port(s) (1-8) Close Setting 2

- 2. If you want to close the gigabit port, operate as follows:
- 1) Click the Giga Port Setting button.

1	🖻 日 🖼		🄜 🊹 🖭	EF	₽ ?		
Model:	TL-SL2109	Link Status:	ON	Giga	Port Setting		
Port Status	:						
Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port	1
Port1	Auto	Port Number	Low		No Trunk	No	1
Port2	Auto	Port Number	Low		No Trunk	No	1
Port3	Auto	Port Number	Low		No Trunk	No	1
Port4	Auto	Port Number	Low		No Trunk	No	1
Port5	Auto	Port Number	Low		No Trunk	No	1
Port6	Auto	Port Number	Low		No Trunk	No	1
Port7	Auto	Port Number	Low		No Trunk	No	1
Port8	Auto	Port Number	Low		No Trunk	No	1
Port9	Auto				No Trunk	No	1
VLAN:							
VLAN 1	1,2,3,4,5,6,7,8,9,						
VLAN 2							
VLAN 3							
VLAN 4		7					
VLAN 5							
VLAN 6							
VLAN 7							
VLAN 8		1					
VLAN 9							

Fig 4.15 Select Giga Port Setting

2) Then click the Disable Giga Port 9.

							×	
	2) 🖄	🔜 🚹 🖭	M 7	₽?		
Model:	TL-SL2109	Link	Status:	ON				
Port Status	:							
Port	Speed/Duplex	Priority	Base	Priority	Flow ctl	TRUNK	Disable Port	7
Port1	Auto	Port Nu	mber	Low		No Trunk	No	
Port2	Auto	Port Nu	mber	Low		No Trunk	No	
Port3	Auto	Port Nu	mher	low		No Trunk	No	
Port4	Auto	Port I			×	No Trunk	No	
Port5	Auto	Port I	- Disah	le Giga Port		No Trunk	No	
Port6	Auto	Port I	DISUD	ic algui olt		No Trunk	No	
Port7	Auto	Port I	🗹 Di	sable Giga Port 9		No Trunk	No	
Port8	Auto	Port I	EDS	sable Giga Port 10		No Trunk	No	
Port9	Auto	-		sable eiga Putt tu		No Trunk	No	
VLAN:								-
VLAN 1	1,2,3,4,5,6,7,8,9,			ОК	Cancel			
VLAN 2				W				
VLAN 3								
VLAN 4								
VLAN 5								
VLAN 6								
VLAN 7								
VLAN 8								
VLAN 9								
		_						
<u> </u>	It link is through Com 1!						数1	
NOTE: the derau	ic link is a rough com 1!						(叙)日	= //,

Fig 4.16 Giga Port configuration

4.5 TRUNK Setting

TRUNK can combine some ports to a logical port, and transmit data through it. It is very

useful to resolve the network traffic. The Switch looks a TRUNK as a big port regardless of its composition.

Default Setting: NO

1. Select the TRUNK menu or click the **TRUNK Setting** button.

Image: Second		r t Switch Configuratio Setting Write Configura						_ 0 >
Port Status: Port Speed/Duplex Priority Base Priority Flow ctl TRUNK Disable Port Port1 Auto Port Number Low No Trunk No Port2 Auto Port Number Low No Trunk No Port3 Auto Port Number Low No Trunk No Port4 Auto Port Number Low No Trunk No Port5 Auto Port Number Low No Trunk No Port6 Auto Port Number Low No Trunk No Port6 Auto Port Number Low No Trunk No Port7 Auto Port Number Low No Trunk No Port7 Auto Port Number Low No Trunk No Port8 Auto Port Number Low No Trunk No VLAN : VLAN 1 1.2.3.4.5.6.7.8.9, VLAN 5	2 D	🖻 🖬 📓		m m	e f	₽ ?		
PortSpeed/DuplexPriority BasePriorityFlow ctlTRUNKDisable PortPort1AutoPort NumberLowNo TrunkNoPort2AutoPort NumberLowNo TrunkNoPort3AutoPort NumberLowNo TrunkNoPort4AutoPort NumberLowNo TrunkNoPort5AutoPort NumberLowNo TrunkNoPort6AutoPort NumberLowNo TrunkNoPort7AutoPort NumberLowNo TrunkNoPort6AutoPort NumberLowNo TrunkNoPort7AutoPort NumberLowNo TrunkNoPort8AutoPort NumberLowNo TrunkNoPort9AutoNo TrunkNoPort9AutoNo TrunkNoVLAN 11.2.3.4.5.6.7.8.9.VLAN 2No TrunkNoVLAN 3No TrunkNoVLAN 4No TrunkNoVLAN 5No TrunkNoVLAN 6No TrunkVLAN 9No Trunk	Model:	TL-SL2109	Link (TRUNK Se	tting				
Port1 Auto Port Number Low No Trunk No Port2 Auto Port Number Low No Trunk No Port3 Auto Port Number Low No Trunk No Port3 Auto Port Number Low No Trunk No Port4 Auto Port Number Low No Trunk No Port5 Auto Port Number Low No Trunk No Port6 Auto Port Number Low No Trunk No Port6 Auto Port Number Low No Trunk No Port6 Auto Port Number Low No Trunk No Port8 Auto Port Number Low No Trunk No Port9 Auto No Trunk No VLAN 1 1.2,3,4,5,6,7,8,9, VLAN 2 VLAN 3 VLAN 4 No Trunk VLAN 5 No Trunk No VLAN 8 No T	Port Status:							
Port2AutoPort NumberLowNo TrunkNoPort3AutoPort NumberLowNo TrunkNoPort4AutoPort NumberLowNo TrunkNoPort5AutoPort NumberLowNo TrunkNoPort6AutoPort NumberLowNo TrunkNoPort7AutoPort NumberLowNo TrunkNoPort7AutoPort NumberLowNo TrunkNoPort8AutoPort NumberLowNo TrunkNoPort9AutoIowNo TrunkNoPort9AutoNo TrunkNoPort9AutoNo TrunkNoVLAN 11,2,3,4,5,6,7,8,9,VLAN 2No TrunkNoVLAN 3No TrunkNoVLAN 4No TrunkNoVLAN 5No TrunkNoVLAN 6No TrunkNoVLAN 9No TrunkNo	Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port	
Port3AutoPort NumberLowNo TrunkNoPort4AutoPort NumberLowNo TrunkNoPort5AutoPort NumberLowNo TrunkNoPort6AutoPort NumberLowNo TrunkNoPort7AutoPort NumberLowNo TrunkNoPort7AutoPort NumberLowNo TrunkNoPort8AutoPort NumberLowNo TrunkNoPort9AutoNo TrunkNoPort9AutoNo TrunkNoVLANNo TrunkNoVLAN 11,2,3,4,5,6,7,8,9,VLAN 2No TrunkNoVLAN 3No TrunkNoVLAN 4No TrunkNoVLAN 5No TrunkNoVLAN 7No TrunkVLAN 8No TrunkVLAN 9No Trunk	Port1	Auto	Port Number	Low		No Trunk	No	
Port4AutoPort NumberLowNo TrunkNoPort5AutoPort NumberLowNo TrunkNoPort6AutoPort NumberLowNo TrunkNoPort7AutoPort NumberLowNo TrunkNoPort8AutoPort NumberLowNo TrunkNoPort9AutoPort NumberLowNo TrunkNoPort9AutoPort NumberLowNo TrunkNo/LANNo TrunkNoNoVLAN 11,2,3,4,5,6,7,8,9,VLAN 3No TrunkNoVLAN 4No TrunkNoVLAN 5No TrunkNoVLAN 6No TrunkNoVLAN 8No TrunkNoVLAN 9No TrunkNo	Port2	Auto	Port Number	Low		No Trunk	No	
Port5AutoPort NumberLowNo TrunkNoPort6AutoPort NumberLowNo TrunkNoPort7AutoPort NumberLowNo TrunkNoPort8AutoPort NumberLowNo TrunkNoPort9AutoNo TrunkNoVLAN1,2,3,4,5,6,7,8,9,VLAN 11,2,3,4,5,6,7,8,9,VLAN 2VLAN 3VLAN 4VLAN 5VLAN 5VLAN 7VLAN 8VLAN 9	Port3	Auto	Port Number	Low		No Trunk	No	
Port6 Auto Port Number Low No Trunk No Port7 Auto Port Number Low No Trunk No Port8 Auto Port Number Low No Trunk No Port8 Auto Port Number Low No Trunk No Port9 Auto No Trunk No Port9 Auto No Trunk No VLAN 1 1.2.3.4.5.6.7.8.9, No Trunk No VLAN 2 No Trunk No VLAN 3 No Trunk No VLAN 4 No Trunk No VLAN 5 No Trunk No VLAN 6	Port4	Auto	Port Number	Low		No Trunk	No	
Port7 Auto Port Number Low No Trunk No Port8 Auto Port Number Low No Trunk No Port9 Auto Low No Trunk No Port9 Auto No Trunk No VLAN : No Trunk No VLAN 1 1,2,3,4,5,6,7,8,9, No Trunk No VLAN 2 No Trunk No No Trunk No VLAN 2 No Trunk No VLAN 3 No Trunk No VLAN 5 No No VLAN 6 No VLAN 9	Port5	Auto	Port Number	Low		No Trunk	No	
Port8 Auto Port Number Low No Trunk No Port9 Auto No Trunk No VLAN : No Trunk No VLAN 1 1,2,3,4,5,6,7,8,9, No Trunk No VLAN 2 No Trunk No VLAN 3 No Trunk No VLAN 4 No Trunk No VLAN 5 No Trunk No VLAN 6 No Trunk No VLAN 8 No Trunk No	Port6	Auto	Port Number	Low		No Trunk	No	
Port9 Auto No Trunk No VLAN :	Port7	Auto	Port Number	Low		No Trunk	No	
VLAN: VLAN 1 1,2,3,4,5,6,7,8,9, VLAN 2 VLAN 3 VLAN 4 VLAN 5 VLAN 5 VLAN 6 VLAN 7 VLAN 8 VLAN 9	Port8	Auto	Port Number	Low		No Trunk	No	
VLAN 1 1,2,3,4,5,6,7,8,9, VLAN 2	Port9	Auto				No Trunk	No	
VLAN 2 VLAN 3 VLAN 4 VLAN 5 VLAN 6 VLAN 7 VLAN 8 VLAN 9	VLAN:							-
VLAN 3 VLAN 4 VLAN 5 VLAN 6 VLAN 7 VLAN 8 VLAN 9	VLAN 1	1,2,3,4,5,6,7,8,9,						
VLAN 4 VLAN 5 VLAN 6 VLAN 7 VLAN 8 VLAN 9	VLAN 2							
VLAN 5 VLAN 6 VLAN 7 VLAN 8 VLAN 9	VLAN 3							
VLAN 6 VLAN 7 VLAN 8 VLAN 9	VLAN 4							
VLAN 7 VLAN 8 VLAN 9	VLAN 5							
VLAN 8 VLAN 9 VLAN 9	VLAN 6		7					
VLAN 9	VLAN 7		7					
	VLAN 8		7					
	VLAN 9		1					
			_					
TRUNK 数字								

Fig 4.17 Select the Port TRUNK

2. Then click the port(s) that can be selected.

Caution: When TRUNK is enabled, the switch will change all the ports in the TRUNK to 100M Full Duplex.

	art Switch Configuration 1.0	
ER File View	Setting Write Configuration Help	<u>-8×</u>
Model:	TL-SL2109 Link Status: ON	
Port Status		
Port	Spee TRUNK Setting]
Port1	Auto Trunk1 Trunk2 Trunk3 Trunk4	
Port2	Auto Port 1-4 Port 7-8 Port 9-12 Port 13-16	
Port3	Auto real real real real real real real real	
Port4		
Port5		4
Port6	Auto	-
Port7 Port8	Auto Auto Fort78 will be set to 100M Full Duplex mode automatically.	-
Porto Port9	Trunk5 8	-
	Auto F Port 1 (确定) rt 29-32	J
VLAN:		
VLAN 1		
VLAN 2		
VLAN 3		
VLAN 4 VLAN 5	OK Cancel	
VLAN 5 VLAN 6		
VLAN 7		
VLAN 8		
VLAN 9		
NOTE: the defaul	It link is through Com 11 数字	

Fig 4.18 Port TRUNK Setting

4.6 VLAN

VLAN (Virtual Local Area Network) is a group domain composed of many terms. It can build a logical group without changing the physical connection. It is very easy and useful.

Default Setting: All ports in VLAN 1.

1. Select the VLAN Setting menu or click the VLAN Setting button.

👯 Gigabit Sma	art Switch Configuratio	on 1.0					_ 🗆 ×
🔛 Eile View	Setting Write Configura	ation <u>H</u> elp					_ 8 ×
<u>2</u> D	2			2 F	₽ ?		
Model:	TL-SL2109	Link Status:	ON VLAN Setting				
Port Status	:						
Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port	
Port1	Auto	Port Number	Low		No Trunk	No	
Port2	Auto	Port Number	Low		No Trunk	No	
Port3	Auto	Port Number	Low		No Trunk	No	
Port4	Auto	Port Number	Low		No Trunk	No	
Port5	Auto	Port Number	Low		No Trunk	No	
Port6	Auto	Port Number	Low		No Trunk	No	
Port7	Auto	Port Number	Low		No Trunk	No	
Port8	Auto	Port Number	Low		No Trunk	No	
Port9	Auto				No Trunk	No	
VLAN:							
VLAN 1	1,2,3,4,5,6,7,8,9,						
VLAN 2							
VLAN 3							
VLAN 4							
VLAN 5							
VLAN 6							
VLAN 7							
VLAN 8							
VLAN 9							
•							
Set VLAN						数	

Fig 4.19 Select VLAN Setting

2. Then move the cursor to a VLAN group, click the port(s) you want to put in, such as P2, P3, P4, P5.

Gigabit Smart Switch Config Ele View Setting Write Config			_ D × _ B ×
	a 🗅 🖆 🖄 🔚 🕩		
Model: VLAN Setting			×
Port Status VLAN			
Port VLAN1	1,2,3,4,5,6,7,8,9,	VLAN9	prt
Port1 VLAN2		VLANTO	
Port2 VLAN2 Port3 VLAN3		VLANTT	
Port4]]		
Port5 VLAN4]	VLAN12	
Port6 VLAN5		VLAN13	
Port7 VLAN6		VLAN14	
Port8 VLAN7		VLAN15	
		VLAN16	
VLAN:		VLISHIU	-
VLAN 1		Þ	
VLAN 2 VLAN 3 8+1G			
VI.1114	P2 P3 P4 P5 P6	P7 P8 P9(G) OK	
VLAN 4 P1	P2 P3 P4 P5 P6	P7 P8 P9(G) OK	
VLAN 6 Port1-9	n [Cancel	1
VLAN 7	3		
VLAN 8			
VLAN 9			
•)
NOTE: the default link is through Cor	n 1!		数字 //.

Fig 20 VLAN groups

Caution: VLANs can have the same port(s), and a VLAN can have only one port, the port can not transmit data with the others.

3. The Port(s) you selected is(are) in the same VLAN, you can delete or add the port(s) from the VLAN, just click the port(s) once again.

Caution: When a workstation moves from a VLAN to another VLAN the administrator should reassign the member of the VLAN. When the TRUNK is enabled, the switch requires all the ports, for the TRUNK are in the same VLAN.

and the second s	art Switch Configuration 1.0 Setting Write Configuration Help		- 🗆 ×
		T 🗹 F 🗷 🔋	
Model:	VLAN Setting	×	
Port Status	VLAN		
Port	VLAN1 1,2,3,4,5,6,7,8,9,	VLAN9 pr	t
Port1	VLAN2 4,5,6,	VLANTO	_
Port2 Port3		VLANII	_
Porta	VLAN3		-
Port5	VLAN4	VLAN12	-
Port6	VLAN5	VLAN13	
Port7	VLAN6	VLAN14	
Port8	VLAN7	VLAN15	
Port9			
VLAN:	VLAN8	VLAN16	
VLAN 1		F	
VLAN 2	8+1G		
VLAN 3 VLAN 4			
VLAN 4 VLAN 5	P1 P2 P3 P4 P5 P6	P7 P8 P9(G) OK	
VLAN 6		Canad	
VLAN 7	Port1–9	Cancel	
VLAN 8			
VLAN 9			
•			F
NOTE: the defau	It link is through Com 1!	jan	游字 //

Fig 4.21 VLAN group's member changing

4.7 Priority over ToS and VLAN Tag

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lodel:	TL-SL2109	Link Status:	ON Priority ov	ver ToS and Vlan Tag		
ort Status	:					
Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port
Port1	Auto	Port Number	Low		No Trunk	No
Port2	Auto	Port Number	Low		No Trunk	No
Port3	Auto	Port Number	Low		No Trunk	No
Port4	Auto	Port Number	Low		No Trunk	No
Port5	Auto	Port Number	Low		No Trunk	No
Port6	Auto	Port Number	Low		No Trunk	No
Port7	Auto	Port Number	Low		No Trunk	No
Port8	Auto	Port Number	Low		No Trunk	No
Port9	Auto				No Trunk	No
LAN:						
VLAN 1	1,2,3,4,5,6,7,8,9,					
VLAN 2						
VLAN 3						
VLAN 4						
VLAN 5						
VLAN 6						
VLAN 7		7				
VLAN 8		7				
VLAN 9		7				

1. Select the Priority Setting or click the Priority over ToS and VLAN.



2. The Priority is divided to three categories: Port-based priority, VLAN Tag based priority and ToS tag based priority. The switch support port based priority only. It divided into two levels: Low and High. The power of the transmitting between the low and the high has four scales, 1:1, 1:2, 1:3 and 1:4.

👾 Gigabit Smart Switch 💬 Eile View Setting 1	n Configuration 1.0 Write ⊆onfiguration Help	_ D × _ & ×
🛃 🗋 🖻 I	9 🗣 🗅 🖄 🖾 🔝 🕩 🝸 🖾 🗲 😢 ?	
Model: TL-SL	2109 Link Status: ON	
Port Status:		
Port Sp. Pri	ority Setting	e Port
Port1 Aut	Priority based on VLAN tag Priority based on ToS	
Port2 Aut	Priority of VLAN tag 0 Low Priority of Tos 0 Low	
Port3 Aut		
Port4 Aut	Priority of VLAN tag 1 Low Priority of Tos 1	
Port5 Aut	Priority of VLAN tag 2 Low Priority of Tos 2 Low	
Port6 Aut		
Port7 Aut	Priority of VLAN tag 3 Low Priority of Tos 3 Low	
Port8 Aut	Priority of VLAN tag 4 High Y Priority of Tos 4 High Y	
Port9 Aut		
VLAN:	Priority of VLAN tag 5 High Y Priority of Tos 5 High Y	
VLAN 1 1,2	Priority of VLAN tag 6 High Priority of Tos 6 High	
VLAN 2	Priority of VLAN tag 7 High T Priority of Tos 7 High	
VLAN 3	Priority of VLAN tag 7 High Y Priority of Tos 7 High	
VLAN 4		
VLAN 5	Priority Weight 1:1 _ OK Cance	:1
VLAN 6		
VLAN 7	1:3	
VLAN 8	1:4	
VLAN 9		
4		
NOTE: the default link is thr	ough Com 1!	

Fig 4.23 Priority Setting

4.8 The effect of the configuration

1. Carry out the current configuration. When finishing the all configuration you want to change. Click the **Write to Switch** button. The switch will reset to run the by terms of the result.

			四 千	H	
TL-SL2109	Link Status:	ON		Write to Switch	
Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port
Auto	Port Number	Low		No Trunk	No
Auto	Port Number	Low		No Trunk	No
Auto	Port Number	Low		No Trunk	No
Auto	Port Number	Low		No Trunk	No
Auto	Port Number	Low		No Trunk	No
Auto	Port Number	Low		No Trunk	No
Auto	Port Number	Low		No Trunk	No
Auto	Port Number	Low		No Trunk	No
Auto				No Trunk	No
1,2,3,4,5,6,7,8,9,					
	7				
	7				
	7				
	Auto Auto Auto Auto Auto Auto Auto Auto	Auto Port Number Auto Port Number	Auto Port Number Low Auto Port Number Low	Auto Port Number Low Auto Port Number Low	Auto Port Number Low No Trunk Auto Port Number Low No Trunk

Fig 4.24 Write to Switch

2. Restore the factory default configuration. Select the Manufactory's configuration

menu, the default configuration will be stored to the switch, and the switch will reset.

	Present Con Manufactory	riguration	🔚 🏦 🛒	図 千			
Model:	TL-SL2109	Link Status:	ON				
Port Status	:						
Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port	
Port1	Auto	Port Number	Low		No Trunk	No	
Port2	Auto	Port Number	Low		No Trunk	No	
Port3	Auto	Port Number	Low		No Trunk	No	
Port4	Auto	Port Number	Low		No Trunk	No	
Port5	Auto	Port Number	Low		No Trunk	No	
Port6	Auto	Port Number	Low		No Trunk	No	
Port7	Auto	Port Number	Low		No Trunk	No	
Port8	Auto	Port Number	Low		No Trunk	No	
Port9	Auto				No Trunk	No	
/LAN:							
VLAN 1	1,2,3,4,5,6,7,8,9,						
VLAN 2							
VLAN 3							
VLAN 4							
VLAN 5							
VLAN 6							
VLAN 7							
VLAN 8							
VLAN 9							

Fig 4.25 Restore default configuration

4.9 Save and Open the configuration

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Model:	TL-SL21	Link Status:	ON				
		1					
Port Status							
Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port	
Port1	Auto	Port Number	Low		No Trunk	No	
Port2	Auto	Port Number	Low		No Trunk	No	
Port3	Auto	Port Number	Low		No Trunk	No	
Port4	Auto	Port Number	Low		No Trunk	No	
Port5	Auto	Port Number	Low		No Trunk	No	
Port6	Auto	Port Number	Low		No Trunk	No	
Port7	Auto	Port Number	Low		No Trunk	No	
Port8	Auto	Port Number	Low		No Trunk	No	
Port9	Auto				No Trunk	No	
/LAN:							
VLAN 1	1,2,3,4,5,6,7,8,9,						
VLAN 2							
VLAN 3		_					
VLAN 4		-					
VLAN 5		-					
VLAN 6		-					
VLAN 7		-					
VLAN 8		-					
VLAN 9		-1					
_							

1. Save the file means that the software saves your current configuration to a file.

Fig 4.26 Save the configuration file

2. Open the file means that the software opens the configuration file which you built

up in the previous step.

9 <u>F</u> ile ⊻iew	Setting Write Configura	ation <u>H</u> elp					- 8
			🔚 🏦 🚆	E F			
Model:	TLOpen a file	Link Status:	ON				
Port Status	:						
Port	Speed/Duplex	Priority Base	Priority	Flow ctl	TRUNK	Disable Port	7
Port1	Auto	Port Number	Low		No Trunk	No	1
Port2	Auto	Port Number	Low		No Trunk	No	1
Port3	Auto	Port Number	Low		No Trunk	No	1
Port4	Auto	Port Number	Low		No Trunk	No	1
Port5	Auto	Port Number	Low		No Trunk	No	1
Port6	Auto	Port Number	Low		No Trunk	No	1
Port7	Auto	Port Number	Low		No Trunk	No	1
Port8	Auto	Port Number	Low		No Trunk	No	1
Port9	Auto				No Trunk	No	1
VLAN:							
VLAN 1	1,2,3,4,5,6,7,8,9,						
VLAN 2							
VLAN 3							
VLAN 4							
VLAN 5		1					
VLAN 6		1					
VLAN 7		1					
VLAN 8		-					
VLAN 9		-					
		_					

Fig 4.27 Open the configuration file

Appendix A: Technical Specifications

General	
Standards	IEEE802.3 10BASE-T
	IEEE802.3u 100BASE-TX
	IEEE802.3ab 1000BASE-T
	IEEE 802.3x Flow Control
Topology	Star
Protocol	CSMA/CD
Data Transfer Rate	Ethernet: 10Mbps (Half Duplex), 20Mbps (Full Duplex);
	Fast Ethernet: 100Mbps (Half Duplex), 200Mbps (Full Duplex)
	Gigabit Ethernet: 1000Mbps (Half Duplex), 2000Mbps (Full
	Duplex)
Network Media (Cable)	10BASE-T: UTP category 3, 4, 5 cable (maximum 100m)
	EIA/TIA-568 100Ω STP (maximum 100m)
	100BASE-TX: UTP category 5, 5e cable (maximum 100m)
	EIA/TIA-568 100Ω STP (maximum 100m)
	1000BASE-TX: UTP category 5, 5e cable (maximum 100m)
	EIA/TIA-568 100Ω STP (maximum 100m)
Number of Ports	8 10/100Mbps Auto-Negotiation ports,
	1 10/100/1000Mbps Auto-Negotiation port
LED indicators	Power, Link/Act, 100Mbps, 1000Mbps
Transfer Method	Store-and-Forward
MAC Address Learning	Automatically learning, automatically Update
Frame Filter Rate	10BASE-T: 14880pps/Port;
	100BASE-TX: 148800pps/Port
Frame Forward Rate	10BASE-T: 14880pps/Port;
	100BASE-TX: 148800pps/Port

Environmental and Physical			
Dimensions(W \times D \times H)	11.6 \times 6.2 \times 1.7in. (294 \times 158 \times 44mm)		
Operating Temperature	0℃~40℃ (32°F~104°F)		
Storage Temperature	-40~70℃ (-40°F~158°F)		
Operating Humidity	10%~90% non-condensing		
Storage humidity	5%~95% non-condensing		

Appendix B: Contact Information

For help with the installation or operation of the TP-LINK TL-SL2109 Smart Switch, please contact us.

E-mail: <u>support@tp-link.com</u> Website: <u>http://www.tp-link.com</u>