SUPERMICR[®]

Switch Web GUI Quick Configuration Guide for

SSE-G48-TG4 SSE-G24-TG4 SSE-X24S SSE-X24SR SSE-X3348S SSE-X3348SR SSE-X3348TR SSE-X3348TR SSE-X3348TR SBM-GEM-X2C SBM-GEM-X2C+ SBM-GEM-X3S+

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1 Introduction

This document is designed to provide Supermicro switch users with the information required to configure the basic functionalities on the switch through its Web graphical user interface (GUI).

Supermicro Switch products can be configured through Web browsers like Internet Explorer or Mozilla Firefox. To manage a switch through a web browser, type in the management IP address in the web browser address bar. This will allow you to start accessing the switch. For example, if the management IP address of the switch is 192.168.100.102, the switch can be accessed through the Web browser by typing **http://192.168.100.102** in the address bar of the web browser.

Note:

Most of the contents of this manual apply to these switch products:

SSE-G48-TG4 SSE-G24-TG4 SSE-X24S SSE-X24SR SSE-X3348S SSE-X3348SR SSE-X3348T SSE-X3348T SSE-X3348TR SSE-X3348TR SBM-GEM-X2C SBM-GEM-X2C+ SBM-GEM-X3S+ SBM-XEM-X10SM

In a few sections the contents differ for these products. In those specific places, the applicable product is clearly identified. So if any particular product is not mentioned, you can assume that the contents are valid for all six switch products.

2 Basic Configurations

2.1 Login Page

When you type the switch IP address into the browser, the following Login page appears.

SUPERMICR										
	Authenticate with Login and Password! Usemame ADMIN Password error									

Fig 1: Login page

Enter the **User Name** and **Password** and click on the **Login** button. This **User Name** and **Password** are both used for accessing the switch through the web for switch configuration. The user name and password entered are validated by the switch. The default user name is ADMIN and the default password is ADMIN.

2.2 <u>Home</u> page

The **Home** page is displayed upon successful validation of the user name and password. This page presents links to configurations of all the features of the switch. It has the following main components.

- Page Top Links
- Page Top LED Display
- ✤ Left Side Tree

Middle Configuration Links Table

Except for the Page Top LED Display section, the **Home** page is same for all the switch products **SSE-G48-TG4**, **SSE-G24-TG4**, **SSE-X24S**, **SSE-X24SR**, **SSE-X3348S**, **SSE-X3348SR**, **SSE-X3348T**, **SSE-X3348TR**, **SBM-GEM-X2C**, **SBM-GEM-X2C+**, **SBM-GEM-X3S+** and **SBM-XEM-X10SM**.



2.2.1 Page Top Links

This section provides the following links:

 Refresh
 Help
 Logout

 Support
 About

The <u>Refresh</u> link refreshes the contents of the page. Unlike the browser provided refresh button, this link refreshes <u>only</u> the contents of the section in the middle of the page which has active data.

The <u>Support</u> link provides a link to the customer support group at Supermicro.

The <u>Help</u> link provides context specific help text. This link opens a new help text page relevant to the configuration page currently being displayed.

The <u>About</u> link provides information about the switch itself and the firmware versions supported.

The <u>Logout</u> link provides a means of signing out of the management web application. It returns to the login screen requesting a user name and password for login.

2.2.2 Page Top LED Display

This part of the screen displays the port status of the switch. It displays Speed and Link status for every port. Since the number of ports is different in each of the switches, this displays a different number of ports for each type of switch.

For SSE-G48-TG4, it displays 48 Gigabit Ethernet ports and four 10-Gigabit Extreme Ethernet ports.

For SSE-G24-TG4, it displays 24 Gigabit Ethernet ports and four 10-Gb Extreme Ethernet ports.

For SSE-X24S and SSE-X24SR, it displays 24 10-Gb Extreme Ethernet ports and one Gigabit Ethernet Port.

For SSE-X3348S and SSE-X3348SR it displays two 1-Gb ports, 48 10-Gb Extreme Ethernet ports and four 40-Gb (QX) Ethernet ports.

For SSE-X3348T and SSE-X3348TR it displays two 1-Gb ports, 48 10-Gb Extreme Ethernet ports and four 40-Gb (QX) Ethernet ports.

For SBM-GEM-X2C, it displays 16 Gigabit Ethernet ports and three 10-Gb Extreme Ethernet ports.

For SBM-GEM-X2C+, it displays 22 Gigabit Ethernet ports and three 10-Gb Extreme Ethernet ports.

For SBM-GEM-X3S+, it displays 24 Gigabit Ethernet ports and three 10-Gb Extreme Ethernet ports.

For SBM-XEM-X10SM, it displays 24 10-Gb Extreme Ethernet ports and one Gigabit Ethernet port.

Note:

Ex ports configured as stacking ports will not be displayed in this LED display. The link status of stacking ports is displayed on the stacking pages.

In stacking, a switch identifier will be displayed on top of this LED display. You can select the stack member switch of interest in order to view the LED display for that corresponding switch.

2.2.3 Left Side Tree

The Left Side Tree display on the left side of the page provides quick access to configuration pages. This tree is organized based on the features supported in the switch. The main features are categorized as follows:

- <u>System Management</u> System based configurations
- ✤ Layer 2 Management Layer 2 Protocols including VLAN, RSTP, MSTP ...
- ✤ Layer 3 Management Layer 3 Protocols including IP, RIP, OSPF
- Multicast Management Multicast Protocols including IGMP, PIM …
- ◆ <u>Statistics</u> Statistics and Counters for all the features.

This tree is displayed on the left panel on all configuration pages. This allows you to choose any configuration page directly without requiring a return to the home page.

2.2.4 Middle Configuration Link Table

This section of the page displays a table of links to all major configurations. This table provides links similar to those of the Left Side Tree. The configuration links are categorized based on features of switch.

2.3 Management IP Address

Note: The default management IP address for all Supermicro switch products is: **192.168.100.102**.

Switch	Management IP Interface
SSE-G24-TG4 SSE-G48-TG4	The management IP address is configured for VLAN 1. All front 1-Gb ports and back 10Gb ports are configured as untagged member ports of VLAN 1 by default.
	You can connect to any of the front panel 1Gb ports or back panel 10-Gb ports to manage the switch using the management IP address.
SSE-X24S SSE-X24SR SSE-X3348S SSE-X3348SR SSE-X3348T SSE-X3348TR	The management IP address is configured for a 1Gb management Ethernet port. You can connect to this management IP address through the 1-Gb Ethernet port. If you prefer to manage through the 10-Gb ports, then you can assign the desired management IP address to VLAN 1. Alternatively, you can create any layer 3 VLAN to manage the switch through its 10-Gb ports.
SBM-GEM-X2C SBM-GEM-X2C+ SBM-GEM-X3S+ SBM-XEM-X10SM	Blade switches can be managed with the default IP address through the CMM Ethernet connection. The internal management Ethernet ports of the blade switches are connected with the CMM Ethernet ports internally. If you prefer to manage through the front panel Ethernet ports, then you can assign the desired management IP address to VLAN 1. Alternatively, you can create any layer 3 VLAN and manage the switch through its front Ethernet ports.

2.3.1 Changing the Management IP Address & Gateway

The management IP address and default gateway can be configured in the **System Mgmt** \rightarrow **Management IP** page.

SUPERMIC SWITCH SBM-GEM-J SMIS	Refresh Support Help About Log Out
Home • System Mgmt System Settings Management IP File Management Security Syslog ACL • Sather • Sather • Sather • Sather • Sather • Sather • Sather • Sather • Layer3 Mgmt • Layer3 Mgmt • Layer3 Mgmt • Statistics	Imagement IP Settings IP Address Mode IP Address 192168.100.102 Subnet Mask 295.255.255.0 Default Mgmt Gateway IP 1910
	Fig 3: Management IP Page

- IP Address Mode For a static IP addresses use the Manual mode. To get an IP address through DHCP, use the Dynamic mode.
- IP Address Use this setting to configure the IP address for static manual mode.
- Subnet Mask Use this setting to configure the subnet mask for the static manual mode.
- Default Mgmt Gateway The default gateway can be configured only for the SBM-GEM-X2C, SBM-GEM-X2C+, SBM-GEM-X3S+, SBM-XEM-X10SM, SSE-X24S, SSE-X24SR, SSE-X3348S, SSE-X3348SR, SSE-X3348T and SSE-X3348TR switches.

Note:

For the blade switches SBM-GEM-X2C, SBM-GEM-X2C+, SBM-GEM-X3S+ and SBM-XEM-X10SM the management IP address and default gateway can also be configured from the CMM management interface.

The management IP address and gateway of the switch are saved automatically into switch NVRAM. Hence it is not required to *save configuration* in order to save the management IP and gateway address.

2.4 User Accounts

The default administrative user name for all Supermicro switches is ADMIN and the password for all these switches is also ADMIN. The password for this ADMIN user can be changed in the page **System Mgmt** \rightarrow **Management Security** \rightarrow **Local Users**.

New users can be created with different privilege levels. <u>Fifteen</u> is the highest privilege – it equals the ADMIN user. <u>One</u> is the lowest privilege – it only allows the user to view the configurations; the user may not modify them. The default privilege is at least <u>one</u>.



To change the password for the ADMIN user, choose ADMIN for the **User Name** and type the new password in the **Password** text box. Then make sure to set the **Privilege** as LEVEL_15 for an ADMIN user.

2.5 Interface MTU and Jumbo Frames

The interface MTU can be changed in *Layer2 Mgmt* \rightarrow *Port Manager* \rightarrow *Basic Settings* page. The default MTU is 1500 bytes. The maximum MTU supported is 9202.

The Supermicro switch MTU refers only to the layer 2 payload size. Hence the MTU of 9202 means a total "in-wire" MTU of 9220 (14 bytes Ethernet Header plus 4 bytes FCS are added).

To configure the MTU for any interface, the interface must be administratively brought down first by changing the Admin State to *Down*.

SUPERMIC	R				Speed Link Switch 0 Gi	123456	Refre	sh Sup 13 14 15 16 EXI EX	port H	elp	About	Log Out
SWITCH SBM-GEM-X	12C											
SMIS	Basic Settings	Port Monitoring	Traffic	Class	Port Con	rol R	ate Limiting					
Home System Mgmt System Settings Management IP File Management Eirmware Ungrade	Port Basic Settings Gi0/1-Ex0/3											^
Management Security Syslog ACL Web Settings		ALL Port	Link # Status	Admin Do State P	efault Switch User Port riority	Switch Port Mode	MTU	Link Up/Down Trap	Descrip	tion		
SNMP RMON		Gi0/1	7 U	p 🔽 0	Yes Y	Hybrid 💌	9000	Enabled 💌				
QoS Time Management		Gi0/2	🔻 U	p 🔽 O	Yes Y	Hybrid 💌	1500	Enabled 💌				
Stack CX4 Cable Length		🔲 Gi0/3	7 U	p 🔽 O	Yes 🛉	Hybrid 💙	1500	Enabled 💌				
 Layer2 Mgmt Layer2 Basic Settings 		🔲 Gi0/4	7 U	p 🔽 O	Yes Y	Hybrid 💌	1500	Enabled 💌				
Port Manager VLAN		🔲 Gi0/5	7 U	p 🔽 O	Yes Y	Hybrid 🚩	1500	Enabled 💌				
Dynamic VLAN RSTP		🗆 Gi0/6	7 U	p 🔽 0	Yes Yes	Hybrid 💌	1500	Enabled 💌				
MSTP LA		🔲 Gi0/7	7 U	p 🔽 🛛	Yes Yes	Hybrid 💙	1500	Enabled 💌				
Filters		🔲 Gi0/8	7 0	p 💙 0	Yes Yes	Hybrid 💌	1500	Enabled 💌				
Loop Protect		Gi0/9		p 💙 0	Yes Yes	Hybrid 💙	1500	Enabled 💌	2			
Multicast		G0/10		p 💙 🛛	Yes Y	Hybrid 💙	1500	Enabled Y	(A)			
Statistics		GOT		p v u	Yes Yes	Hybrid V	1500	Enabled V				
		Gi0/12			Yee Vee		1500	Enabled V	1			
				p v O	Vec V	Hybrid ¥	1500	Enabled V	1			
		Gi0/14	-			Hybrid ¥	1500	Enabled	9			
		Gi0/15		n v I	Yes Y	Hybrid ¥	1500	Enabled V	12			
		Ex0/1	- U	p 🗸 0	Yes Y	Hybrid V	16338	Enabled V				
		Ex0/2	- U	p 🗸 0	Yes Y	Hybrid V	16338	Enabled 💌	2			
		Ex0/3	7 U	p 🔽 0	Yes Y	Hybrid 👻	16338	Enabled 💌		1		~

Fig 5: Interface MTU Page

Configure jumbo frame support by setting the MTU as 9200 bytes (or any other preferred jumbo frame size up to 9202 bytes).

Note:

The check box on the first column needs to be checked for all of the interfaces that need to be configured. Multiple check boxes can be checked to configure more than one interface at a time. Use the **Apply** button at the end of the page to apply the changed configurations.

2.6 Interface Description

Interfaces can be given a description or name in text. This helps users to identify or remember the interface connections with other components on the network. The interface description can be configured in *Layer2 Mgmt* \rightarrow *Port Manager* \rightarrow *Basic Settings* page.

~					Speed.		Refre	ish Su	pport Help	About	Log Out
SUPERMIC	CRO				Link Switch 0 Gi 1	23456	7 8 9 10 11 12	13 14 15 16 EXI E	X2 EX3		
SWITCH SBM-GEM-	K2C										
SMIS	Basic Settings	Port Monitoring	Traffic Class		Port Contr	ol Ra	ate Limiting				
Home System Mgmt					Po	ort Basic	: Settings				^
System Settings Management IP File Management Firmware Upgrade		<u>Gi0/1-Ex0/3</u>									
Management Security Syslog ACL Web Settings		ALL Port	Link Admin Status State	Defaul User Priorit	t Switch Port	Switch Port Mode	MTU	Link Up/Down Trap	Description		
SNMP RMON		Gi0/1	🔻 Up 🕚	0 -	Yes 💌	Hybrid 💌	9000	Enabled 💌	BLD1_SW1_Connection		
QoS Time Management		🔲 Gi0/2	🔻 Up 💽	0 ~	Yes 💌	Hybrid 💌	1500	Enabled 💌	BLD2_Server3	1	
Stack CX4 Cable Length		🔲 Gi0/3	🔻 Up 💉	0 🗸	Yes 💌	Hybrid 💌	1500	Enabled 💌			
 Layer2 Mgmt Layer2 Basic Settings 		🔲 Gi0/4	🔻 Up 🕚	• 0 •	Yes 💌	Hybrid 💌	1500	Enabled 💌			
Port Manager VLAN		🔲 Gi0/5	🔻 Up 🕚	• 0 •	Yes 💌	Hybrid 💌	1500	Enabled 💌			
Dynamic VLAN RSTP		🔲 Gi0/6	🔻 Up 💧	0 ~	Yes 💌	Hybrid 💌	1500	Enabled 💌			
MSTP LA		🗌 Gi0/7	🔻 Up 💽	• 0 •	Yes 🚩	Hybrid 💌	1500	Enabled 💌			
802.1× Filters		🗌 Gi0/8	🔻 Up 💧	0 ~	Yes 💌	Hybrid 💌	1500	Enabled 🚩			
Loop Protect		Gi0/9	Vp N	• 0 •	Yes 🚩	Hybrid 💌	1500	Enabled 💌			
Multicast		Gi0/10	Vp N	0 ~	Yes 💌	Hybrid 💌	1500	Enabled 💌			
Statistics		Gi0/11	Up	< 0 ×	Yes 💌	Hybrid 💌	1500	Enabled 👻			
		Gi0/12	Up Vp		Yes 🚩	Hybrid V	1500	Enabled V			
		G0/13			Yes Y		1500	Enabled V			
		G0/14			Tes Vec		1500			-	
			Up		Yee V	Hybrid ¥	1500	Enabled V		1	
		E 50/1			Yes V	Hybrid ¥	16338	Enabled			
		Ex0/2	Up N	0 -	Yes V	Hybrid V	16338	Enabled V		1	
		Ex0/3	🔻 Up 🕚	0 ~	Yes 💌	Hybrid 💌	16338	Enabled 👻		1	~



2.7 Stacking

The SSE-G24-TG4 and SSE-G48-TG4 switches support stacking of up to 16 switches. SBM-GEM-X2C, SBM-GEM-X2C+ support stacking of up to 8 switches.

Stacking can be configured from the *System Mgmt* \rightarrow *Stack* \rightarrow *Stack Settings* page.

SUPERMIC SWITCH SBM-GEM-3 SMIS	2C Stack Settings	Stack Details	Spec Isol Switch Stack Link Status	d 0 Gi 1 2 3 4 5 6 7 8 9 Stack Counters	Refresh 10 11 12 13 14 15 1	Support 6 EXI EX2 EX3	Help	About	Log Out
Home System Mgmt System Settings Management IP File Management My Syrlog ACL Web Settings SNMP RMON CMA Cable Length Layer2 Mgmt Layer2 Mgmt Statistics		Not	Switch Priority Stackir	Stack Configu Id 1 Prefered Master v g Enable v Apply Res Stacking Is Dis mber of stacking	Porte xg2×g3 et sabled ports for al	A switches in	. stack.		

Fig 7: Stacking Page

In the **Ports** field, list the stacking ports as comma separated without space characters. Stacking ports are named as **xg1**, **xg2**, **xg3** and **xg4**. So if you choose ports xg1 and xg2 as stacking ports, configure the ports field as either "xg1,xg2" or as "xg1-2".

To connect switches in stacking mode follow the steps below:

- Configure the stacking Switch ID, Ports, and Priority. Then Enable for Stacking in all switches. Make sure to configure the priority as PM (preferred master) for the switch you intend to be master.
- Connect the stacking ports through CX4 cables (stacking cable lengths must not exceed 3 meters).
- Restart all switches
- Manage the stack through the master switch IP address.

Note:

1. Do not use the same switch ID for multiple switches on the stack.

- 2. All switches in the stack can only be configured through the master switch.
- 3. Make sure all stacked switches run the same version of firmware!

4. Only the same switch models can be stacked together. For example, the SSE-G24-TG4 switch can only be stacked with other SSE-G24-TG4 switches.

5. Use the same stacking ports configuration across all the switches in stack. For example, if xg1 and xg2 is used for stacking, all switches in the stack should have the same port numbers as stacking ports.

2.8 Tracking Uplink Failure

The Uplink Failure Tracking Feature (ULFT) is useful for blade switches (SBM-GEM-X2C, SBM-GEM-X2C+, SBM-GEM-X3S+ and SBM-XEM-X10SM). This helps blade servers to move to redundant Ethernet ports in case any blade switch uplink fails.

The user can configure one or more groups for ULFT. Each group can have one or more uplinks and one or more downstream ports.

Link tracking can be configured from the *Layer2 Mgmt* \rightarrow *Link Tracking* page.

SUPERMIC	R K2C	Sprod Link Switch 0 Gi 1 2 3 4 a	5 6 7 8 9 10 11 12 13 14 15 16	ENI EN2 EN3		
SMIS						
Home • System Mgmt • Layer2 Mgmt Layer2 Basic Settings optimized basic Settings optimized basic Settings optimized basic Settings UAN BASIC BASIC STATISTICS • Statistics • Statistics		Link Status Tracking Enable Apply ALL Group ID Upstream Interfa Upde	Configure Group Id Upstream Interfaces Downstream Interfaces Accs Downstre ate Delete	e New Grou	Status	



In the **Upstream Interfaces** field and **Downstream Interfaces** fields, list the ports as comma separated without space characters. For example to choose ports gi0/1 to gi0/5 and gi0/10 as downstream ports, configure the Downstream Interfaces field as "gi0/1-5,gi0/10".

For example if it is desired to bring down all fourteen ports from gi 0/1 to gi 0/14 when uplink interface gi 0/15 goes down, configure the following:

- Enable Link Status Tracking Choose Enable and click on the Apply button on the left panel.
- Configure the Group ID as 1
- Configure the **Upstream Interfaces** as gi0/15
- Configure the **Downstream Interfaces** as gi0/1-14
- Click on the Add Group button.

Note:

If more than one uplink port is configured, all downstream ports will be brought down only when all upstream ports are down.

2.9 Saving Configurations

Switch configurations can be saved on the **System Mgmt → File Management** page.

You can save a currently running switch configuration in one of three ways.

- Save Startup Config This option saves the current running configuration in local flash with the file name configured as "startup configuration" file. This configuration will be loaded automatically every time the switch reboots.
- Save Flash File This option saves the current running configuration in local flash with a user-specified file name.
- Save Remotely This option saves the current running configuration in a remote TFTP server. For this option you will need to provide the IP address and file name of the TFTP server.

SUPERMIC SWITCH SBM-GEM-J SMIS	R 20		Speed Innk Switch & Gi 1 2 3 4	Refresh	Support	Help	About	Log Out
Home System Mgmt System Settings Price Management IP Frie Management Firmware Ugrade Management Security Systog Web Settings SMMP RMON QoS Time Sasagement CA4 Cable Length Layer2 Mgmt Layer2 Mgmt Statistics		Save confi Save Startup Config Save Flash File Save Remotely Set Total Space Available Space	figuration ve 4096 KB 2508 KB	Source ⊙Local File Destination ⊙Local File	File Copy Rem Score Copy	note nf v		
		File Name iss.conf 1 Delete	File M Size Lo 1123 Sun Jun 13 114	lanagement st modified 25:25 2010	Startup O File No Restore Set Startup Con	Config fig		

Fig 9: File Management Page

2.10 Upgrading Firmware

Switch firmware can be upgraded in the **System Mgmt → Firmware Upgrade** page.

Flash Area – The default selection is *Normal* to upgrade firmware in normal flash area. To upgrade firmware in the fallback flash area, choose *Flash Area as the Fallback*.

File Name – Use the **Browse** button to select the switch firmware from local computer.

When switches are in the stacking mode, it is only necessary to upgrade the firmware of one switch – firmware will be upgraded in all other stack members automatically.

SUPERMIC SWITCH SBM-GEM-3 SMIS	Refresh Support Help About Log Out
 Home System Mgmt System Settings Management IP File Management Security Systog Web Settings SMMP RMON QoS Time Management Stack CX4 Cable Length Layer2 Mgmt Layer3 Mgmt Multicast Statistics 	Firmware Upload Firmware Vote: Firmware Upload will take a few minutes. Please be patient.

Fig 10: Firmware Upgrade Page

2.11 Resetting to Factory Defaults

Supermicro switches can be reset to factory defaults in the **System Mgmt** \rightarrow **System Settings** page.

This page has a button that you can press to allow a "Reset To Factory Defaults". This will clear all information about switch configurations and local user accounts. Make sure to have all necessary configurations backed up before doing "Reset To Factory Defaults" in external computers. This reset requires a reboot of the switch.

SUPERMIC SWITCH SBM-GEM-J SMIS	RO 22C System Settings	System Version	5.00	5pecd. Link: καλθ Gi 1 2 3 4 5 6 7 € 9 1	Refrest	Support	Help	About	Log Out
Home System Mamt Fire Management IP Fire Management Security Syslog AL Statings Summer Management Stack CM Cable Length Layer2 Mgmt Multicast Statistics			Device Name Switch Base MAC Adds SNMP EngineID Device Contact Device Location PIM Mode Snoop Forward Mode Configuration Restore St Device Up Time Hitp Server Status Hitp Port Number	system Setti SMIS cess 00:18:aabbcc:df 80:00:08:1c.04:46:53 http://www.supermicro. Supermicro Sparse V MAC Based V atus Successful 0 days 3 hrs 25 mins 1 Enable 80 Apply	ngs con 8 secs	Force Reload Switch Reset To Factory Defo Restart of switch rec f these values are cha	uits * juir ed., inged.		

Fig 11: System Settings Page

3 VLAN Configurations

The SSE-G24-TG4, SSE-G48-TG4, SBM-GEM-X2C, SBM-GEM-X2C+ and SBM-GEM-X3S+ switches support 1024 static VLANs. The SSE-X24S, SSE-X24SR, SSE-X3348S, SSE-X3348SR, SSE-X3348T, SSE-X3348TR and SBM-XEM-X10SM switches support 4K static VLANs.

VLANs can be configured in *Layer2 Mgmt* \rightarrow *VLAN* \rightarrow *Static VLANs* page.

SUPERMIC	R			Speed Link Switch 0 Gi 1 2	F 3 4 5 6 7 8 9 10	tefresh 11 12 13 14 15 16	Support EXI EX2 EX3	Help	About	Log Out
SWITCH SBM-GEM-X	02C									
SMIS	BasicSettings	PortSettings	StaticVLANs	ProtocolGroup	PortProtocol	MAC Via	n Unic	astMac	Wildcard	Switchportfiltering
Home System Mgmt System Settings Management IP File Management Security aClo Web Settings SMMP RMON Ors Management Security Web Settings CX4 Cable Length Layer2 Basic Settings Port Manager VLAN Dynmic VLAN Port Manager VLAN Dynmic VLAN STA Layer2 Mgmt Layer3 Mgmt Layer3 Mgmt Layer3 Mgmt Statistics			ALL VLAN ID	Static VLAN VLAN Member Untagge Forbidd	VLAN Config D Name Ports d Ports Ad Ports Ad Reset Member Ports Gi0/1-16.Ex0/1-3 Apply Delete	Juration	Ports Forbid	Iden Ports		

Fig 12: VLAN Page

In the **Member Ports**, **Untagged Ports**, and **Forbidden Ports** fields, list the ports as comma separated without space characters. While configuring continuous ports use "-" for port ranges. For example to configure ports gi 0/1 to gi0/10 and gi0/15 and gi0/20 as member ports, enter the Member Ports field as "gi0/1-10,gi0/15,gi0/20".

The following parameters can be configured in this page.

- VLAN ID This is a VLAN identifier number. It is mandatory to set this parameter in order to create a VLAN.
- VLAN Name Optional name or description to associate with this VLAN.

- Member Ports Provide all the member ports of this VLAN *including tagged and untagged* member ports.
- Untagged Ports These are the member ports that need to be configured as untagged ports. If all the ports of this VLAN are untagged, member ports and untagged ports will be same.
- Forbidden Ports This is a list of any ports that need to forbidden from this VLAN.

Note: PVID

Supermicro switches associate all received untagged packets as destined for VLAN 1. This happens irrespective of the VLANs which are associated with the received ports. Therefore if you need untagged packets to be associated with a particular VLAN, it is necessary to configure a **pvid** for those ports. The PVID can be configured in the *Layer2 Mgmt* \rightarrow *VLAN* \rightarrow *Port Settings* page.

4 Link Aggregation (LA)

Link Aggregation (LA) is a method of combining multiple parallel physical connections into a single logical connection(trunk), thus allowing increased bandwidth for a particular network path beyond what a single connection could sustain. By taking multiple LAN connections and treating them as a unified, aggregated link, practical benefits in many applications can be achieved. For example, link aggregation provides redundancy in case one of the links fails. Link Aggregation also provides load balancing so that processing and communication activity is distributed across several links in a trunk ensuring that no single link is overwhelmed.

Other terms often used to describe this Link Aggregation method include **port trunking, link bundling**, **bonding**, or **teaming**. These umbrella terms encompass industry standards such as **IEEE 802.1ax** Link Aggregation Control Protocol (LACP) for wired Ethernet, or the previous **IEEE 802.3ad**, as well as various proprietary solutions. In this manual we will also refer to a particular group of aggregated links as a **Port Channel**.

Supermicro switches support both static link aggregation and dynamic link aggregation using IEEE 802.3ad and LACP. Up to 24 Port Channels can be configured on an individual switch and each Port Channel can contain up to 8 members.

Configure port channel or link aggregation as follows:

- Enable LA Status
- Create a port channel
- Associate the port channel you have created with the required ports
- Configure any port-channel-specific parameters

4.1 Enabling LA Status

LA status can be enabled in *Layer2 Mgmt → LA → Basic Settings* page.

SUPERMIC SWITCH SBM-GEM-				Refrest Speed Tank Switch C G 1 2 3 4 6 6 7 8 9 10 11 12 13	h Support	Help	About	Log Out
SMIS System Mgmt Layer2 Mgmt Layer2 Mgmt Vynamic VLAN RSTP MSTP Layer3 Mgmt Layer3 Mgmt Statistics	BasiC settings	UNETIACESETTINGS	Portsettings	LA Basic Settings				



4.2 Creating a Port Channel

A port channel can be created in the *Layer2 Mgmt* → *LA* → *Interface Settings* page.



Fig 14: Port Channel Page

To create any port channel, enter the **Port Channel ID** in the page-top dialog box and click **Add**.

4.3 Associating a Port Channel with Ports

Once a port channel is created in the port channel page, it can be associated with the required physical ports. This can be done in the *Layer2 Mgmt* \rightarrow *LA* \rightarrow *Port Settings* page.

Configure **Port Channel** and **Mode** for the required physical ports.

Use the mode "ON" for static port channels. Use the mode as "ACTIVE" or "PASSIVE" for LACP port channels.

SUPERMIC SWITCH SBM-GEM-W	R				Speed Link Switch 0 Gi 1	2 3 4 5	67891	Refresh 0 11 12 13	Support	Help	About	Log Out
SMIS	Basic Setting	js lr	nterfaceSettings	Port Setting								^
Home System Mgmt Layer2 Mgmt Layer2 Basic Settings Port Manager VLAN Dynamic VLAN RSTP	LA Port Settings <u>Gi0/1-Ex0/3</u>											
		Port	Port Channel	Mode	Admin Key	Port Priority	Timeout	Wait Time (s	Port State	Agg	regation State	
LA 202 1v		Gi0/1	po1 💌	On 💌	Not Configured 💌	128	Long 💌	2	Down, Not in Bundle	Agg, Default		
Filters		Gi0/2	po1 💌	On 💌	Not Configured 💌	128	Long 💌	2	Down, Not in Bundle	Agg, Default		
Loop Protect		Gi0/3	Not Configured 💌	~	Not Configured 💌	128	Long 💌	2	Down, Not in Bundle			
Multicast Statistics		Gi0/4	Not Configured 💌	~	Not Configured 💌	128	Long 💌	2	Down, Not in Bundle			
		Gi0/5	Not Configured 💌	~	Not Configured 💌	128	Long 🚩	2	Down, Not in Bundle			
		Gi0/6	Not Configured 💌	~	Not Configured 💌	128	Long 💌	2	Down, Not in Bundle			
		Gi0/7	Not Configured 💌	~	Not Configured 💌	128	Long 💙	2	Down, Not in Bundle			
		Gi0/8	Not Configured 💌	~	Not Configured 💌	128	Long 💌	2	Down, Not in Bundle	ļ		
		Gi0/9	Not Configured 💌	~	Not Configured 💌	128	Long 💙	2	Down, Not in Bundle			
		Gi0/10	Not Configured 💌	~	Not Configured 💌	128	Long 🚩	2	Down, Not in Bundle			
		Gi0/11	Not Configured 💌	~	Not Configured 💌	128	Long 💙	2	Down, Not in Bundle			
		Gi0/12	Not Configured 💌	~	Not Configured 💌	128	Long 💙	2	Down, Not in Bundle	ļ		
		Gi0/13	Not Configured	×	Not Configured	128	Long 💙	2	Down, Not in Bundle	ļ		_
		Gi0/14	Not Configured	~	Not Configured	128	Long 🗸	2	Down, Not in Bundle			_
		GI0/15	Not Configured	Y	Not Configured	128	Long V	2	Down, Not in Bunale	ļ		_
		GIU/16	Not Configured	× ×	Not Configured	120		2	Down Natin Rundlo			_
		Ex0/1	Not Configured	~	Not Configured	120	Long V	2	Down, Notin Bundle			_
		Ex0/2	Not Configured	×	Not Configured	128		2	Down, Not in Bundle			_
		10/07	Two comigured		risocoomigureu M	100	Long V	- J	Downersoen Danais	П.		~

Fig 15: Port Channel Ports Page

For example to configure the ports gi 0/15 and gi 0/16 with static port channel 10, do the following steps.

- Check the check box for the port gi 0/15 and gi 0/16.
- Choose the port channel as po10 for both port gi 0/15 and gi 0/16.
- Choose the mode as "On" for both ports gi 0/15 and gi 0/16.
- Click on **Apply** button.

4.4 Configuring Port Channel Parameters

Once a port channel is created and associated with the required ports, you can configure the port channel parameters.

If necessary configure the MTU of the port channel in the Port Channel page (Fig 14). The default value is 1500.

If necessary configure the name or description of the port channel in the Port Channel page (Fig 14).

Make the port channel Admin Status as "UP" in the Port Channel page (Fig 14).

Add the port channel to any required vlans in the VLAN page (Fig 12).

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