

StoneGate™



Interface Module Guide

Interface Module GE4B

Interface Module GE6

Interface Module GE8

Interface Module GESFP4

Interface Module GESX2B

Interface Module GESX4B

Interface Module 10GSFP2

Interface Module 10GSR2B

Interface Module 10GLR2B

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Secure Information Flow

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Welcome

Thank you for choosing Stonesoft™ appliances. This guide provides instructions for using Stonesoft interface modules with modular Stonesoft appliances. The initial hardware installation and the maintenance of the Stonesoft appliances is explained in the *Appliance Installation Guide* that is delivered with each appliance. See *Product Documentation* (page 4) for more information.

The use of the appliances and the interface modules is subject to the acceptance of the End User License Agreement, which can be found at the Stonesoft website.

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Caution – Read the *Safety Precautions* (page 4) before you conduct any installation or maintenance operations with the interface modules.

Product Documentation

This guide explains the use of Stonesoft interface modules with modular Stonesoft appliances. See the *Appliance Installation Guide* that was delivered with the appliance for installation and maintenance instructions for the appliance.

All Stonesoft guides are available as PDFs at the Stonesoft website at http://www.stonesoft.com/en/support/technical_support_and_documents/manuals/

Install the free Adobe Reader program to view the PDF documents (available at www.adobe.com/reader/).

Safety Precautions

Follow these safety precautions whenever working with Stonesoft interface modules. See the appliance-specific *Appliance Installation Guide* for safety precautions for working with your Stonesoft appliance.

Electrical Safety Precautions

- Do not open the interface module covers to avoid damaging the modules.
- Power down the appliance and disconnect all cables before installing or removing interface modules.
- Make sure that an interface module or a placeholder module is installed in each slot before turning on the appliance.

ESD Precautions

Electrostatic discharge (ESD) is generated by two objects with different electrical charges coming into contact with each other. An electrical discharge is created to neutralize this difference, which can damage electronic components and printed circuit boards. Use a grounded wrist strap designed to prevent static discharge.

Laser Precautions for Interface Modules

Class 1 Laser Product.



Caution – Invisible laser radiation is emitted from the end of fiber cable and from the aperture of the port when no fiber cable is connected. Do not stare into the beam and avoid direct exposure to the beam.

Operating and Storage Temperatures

The allowed operating temperature of the interface modules is +5...+35°C. The allowed storage temperature is -20...+65°C. Do not operate or store the modules in temperatures outside these limits. If the modules have been stored in temperatures below 0°C or above +40°C, allow for 2 hours to bring the modules to normal operating temperature before turning on the appliance. Otherwise, the appliance or the modules may be damaged.

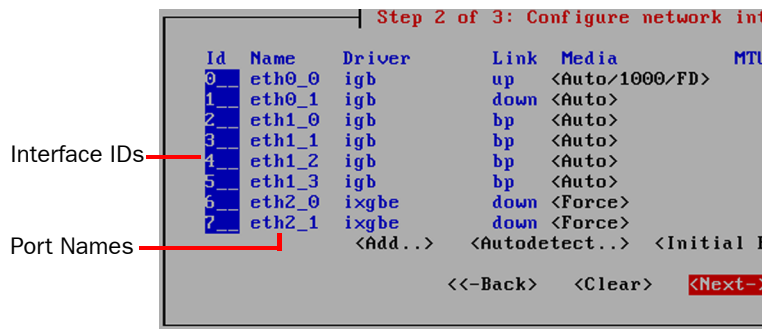
Ethernet Port Names

There are one or more slots for interface modules in each modular Stonesoft appliance. The slot numbers for the modules are shown on the appliance's front panel. The Ethernet port numbers are shown on the modules.

Each Ethernet port has a unique name that indicates the slot to which the port belongs and also the port number. The port names are shown in the engine configuration wizard. The first number in the port name indicates the number of the slot and the second number indicates the port number. For example, Ethernet port eth2_0 is port 0 in slot 2.

During the initial configuration of the appliance, the Ethernet ports are mapped to the Interface IDs that you have defined in the Management Client.

Illustration 1 Mapping Between Interface IDs and Ethernet Port Names



The fixed Ethernet ports in the appliance belong to slot 0. For example, if there are two fixed Ethernet ports, the port names are eth0_0 and eth0_1, and the default Interface IDs for the ports are ID 0 and ID 1.

The ports in the interface modules are named in the same manner. For example, if there are four ports in a module and the module is installed in slot 1, the ports are numbered eth1_0, eth1_1, eth1_2, and eth1_3. The default Interface IDs for the ports are 2, 3, 4, 5. The illustration above shows how the Interface IDs and port names are displayed in the engine configuration wizard.

The mapping between the Interface IDs and the Ethernet ports may change if you replace an interface module. If the number of ports in the old module and the new module are different, you may need to modify interface definitions in the Management Client. If you have replaced an interface module with an interface module that has a larger number of Ethernet ports, the Interface IDs for the new ports start from the next free Interface ID number. You can use the new Interface IDs to configure new interfaces in the Management Client. Once you have finished modifying the interface definitions in the Management Client, you must refresh the policy on the engine to transfer the changes (see *Modifying Interface Definitions* (page 9)).



Caution – Do not select the **Clear** action when you are modifying Interface IDs in the engine configuration wizard. Selecting **Clear** removes all the mapping information between Interface IDs and Ethernet ports, and restores the default values.

After you have refreshed the policy on the engine, the Ethernet port names in the engine configuration wizard change to reflect the changes in interface definitions.

Illustration 2 Changed Mapping Between Interface IDs and Ethernet Port Names

Id	Name	Driver	Link	Media	MT
0	eth0_0	igb	up	<Auto/1000/FD>	MT
1	eth0_1	igb	down	<Auto>	
2	eth1_0	igb	bp	<Auto>	
3	eth1_1	igb	bp	<Auto>	
6	eth2_0	ixgbe	down	<Force>	
7	eth2_1	ixgbe	down	<Force>	

<Add...> <Autodetect...> <Initial...>

<<-Back> <Clear> <Next-...>

For instance, if you change the four-port module installed in slot 1 in the previous example into a two-port module, the Interface IDs and Ethernet

port names for the two ports that no longer exist (eth1_2 with Interface ID 4 and eth1_3 with Interface ID 5) are removed from the list of network interfaces (see the illustration above).

Installing Interface Modules

This section provides information on installing Stonesoft interface modules into modular Stonesoft appliances. You must install an interface module or a placeholder module in each slot of a modular appliance before you can make the appliance operational. The process of installing a module is the same for all module types.

Read the *Safety Precautions* (page 4) before proceeding.

▼ To install a module

1. Make sure that the appliance is turned off.



Caution – Do not install or remove modules if the appliance is powered on to avoid damaging the modules and the modular appliances.

2. Unplug all power cords from the system and the wall outlets.
3. Disconnect all the cables from the appliance.
4. (*Recommended*) Fasten a grounding strap to your wrist so that it contacts your bare skin and attach the other end of the strap to the appliance.
5. Select the slot where you want to install the module.
6. Push the module into the slot according to appliance type until the front panel of the module is even with the front panel of the modular appliance.
 - 1U and 2U appliances: Make sure that the sticker on the module cover faces up.
 - 3U appliances: Make sure that the sticker on the module cover faces right.



Caution – Do not insert the module in the wrong orientation. Inserting the modules incorrectly may damage the appliance and the modules and will void the warranty.

7. Repeat steps 5-6 until you have installed an interface module or a placeholder module in each slot.
 - You must install a module in each slot before you can configure the appliance.

Replacing Interface Modules



Caution – Do not install or remove modules if the appliance is powered on to avoid damaging the modules and the modular appliances.

▼ To replace a module

1. Connect the serial cable supplied with the appliance to the serial port on the appliance and to a computer.
2. On the computer, open a terminal with settings 9600bps, 8 databits, 1 stopbit, no parity.
3. Shut down the engine:
 - If the appliance is powered on, press `Enter`, log in as the user `root` with the password you have set for the appliance, and issue the command `halt`.
4. Unplug all power cords from the system and the wall outlets.
5. Disconnect all the cables from the appliance.
6. (Recommended) Fasten a grounding strap to your wrist so that it contacts your bare skin and attach the other end of the strap to the appliance.
7. Locate the module's release lever on the left of the module's front panel on 1U and 2U appliances or at the top of the module's front panel on 3U appliances.
8. Release the module from its locking position by pressing the lever right on 1U and 2U appliances or down on 3U appliances, hold the lever down, and pull the module carefully out of the slot using the handle or the knob on the module's front panel.

Note – If the unlocked module does not move, keep the release lever down, press the module gently toward the back of the slot, and pull the module again by the handle or the knob.

9. Replace the module with a new one. See *Installing Interface Modules* (page 7).



Caution – To ensure proper cooling, do not power on the appliance if you have not installed an interface module or a placeholder module in each slot.

You can replace an interface module either with the same type of module or with a different type of module. If the number of ports in the old module and the new module are the same, the mapping between the Interface IDs and the port names does not change. No further action is needed after you have replaced the module. However, if the number of ports in the new module is not the same as in the old module, you may need to modify the interface definitions as described in *Modifying Interface Definitions*.

Modifying Interface Definitions

If the number of Ethernet ports in a slot changes when you replace the interface module, you may need to modify the interface definitions in the Management Client and refresh the policy to transfer the changes to the appliance.

▼ To modify interface definitions

1. Change the interface definitions in the Management Client. See the *Administrator's Guide*.
 - If there are fewer ports in the new module than in the old one (for example, you replace a four-port module with a two-port module), remove the unnecessary interface definitions in the Management Client.
 - If there are more ports in the new module than in the old one (for example, you replace a two-port module with a four-port module), create interface definitions for the new ports in the Management Client.
2. Refresh the policy on the engine through the Management Client to transfer the interface changes.

When you create new interfaces in the Management Client, you must select Interface IDs that have not yet been selected for any other interface. For more information on the mapping between the Interface IDs and Ethernet ports, see *Ethernet Port Names* (page 5).

Interface Module Descriptions

This section describes the Stonesoft modules that you can use with modular Stonesoft appliances. It also explains the indicator lights on the modules.

The sticker attached to the cover of each interface module shows the module type. The following module types are available:

- *Copper Interface Modules* (page 11).
- *Fiber Interface Modules* (page 14).
- *SFP Interface Modules* (page 18).
- *Placeholder Module* (page 19).

Note – Do not remove the sticker on the cover of the module. The sticker contains important information.

Copper Interface Modules

MOD-EM1-GE-4-B: Quad Port Gigabit Ethernet Copper Bypass Interface Module

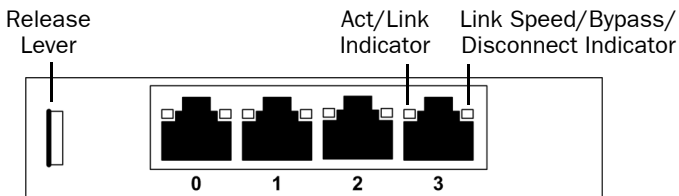


Table 1 Port Indicators

Indicator	Color	Description
Act/Link	Green	Link ok.
Link Speed/ Bypass/ Disconnect	Yellow	1G link. Blinks in disconnect mode.
	Green	100M link. Blinks in bypass mode.
	Unlit	10M link.

MOD-EM1-GE-6: Six Port Gigabit Ethernet Copper Interface Module

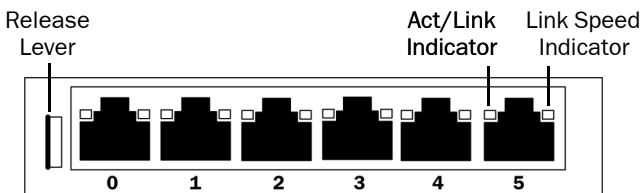


Table 2 Port Indicators

Indicator	Color	Description
Act/Link	Green	Link ok.
Link Speed	Green	1G, 100M, or 10M link.

MOD-EM1-GE-8: Eight Port Gigabit Ethernet Copper Interface Module

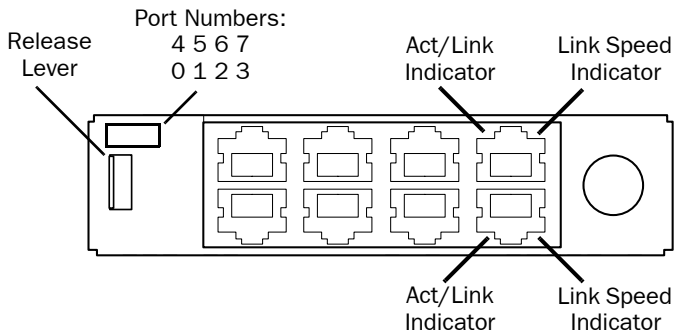


Table 3 Port Indicators

Indicator	Color	Description
Act/Link	Green	Link ok. Blinks on activity.
Link Speed	Yellow	1G link.
	Green	100M link.
	Unlit	10M link.

Fiber Interface Modules

MOD-EM1-GE-SX-2-B: Dual Port Gigabit Ethernet Fiber (SX) Bypass Interface Module

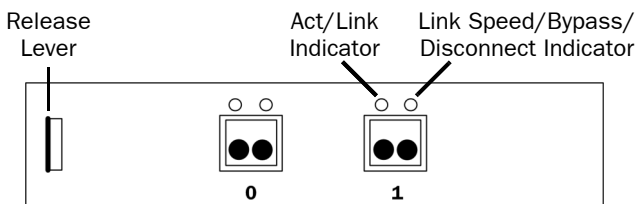


Table 4 Port Indicators

Indicator	Color	Description
Act/Link	Green	Link ok.
Link Speed/ Bypass/ Disconnect	Green	1G link. Blinks in bypass mode.
	Yellow	Blinks in disconnect mode.

MOD-EM1-GE-SX-4-B: Quad Port Gigabit Ethernet Fiber (SX) Bypass Interface Module

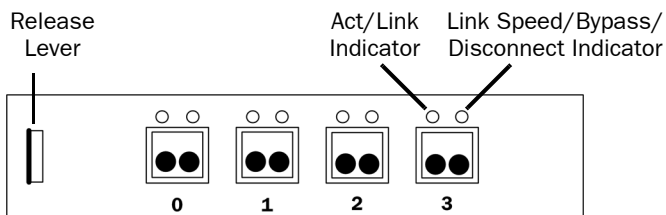


Table 5 Port Indicators

Indicator	Color	Description
Act/Link	Green	Link ok.
Link Speed/ Bypass/ Disconnect	Green	1G link. Blinks in bypass mode.
	Yellow	Blinks in disconnect mode.

MOD-EM1-10G-SR-2-B: Dual Port Fiber (SR) 10GB Bypass Interface Module

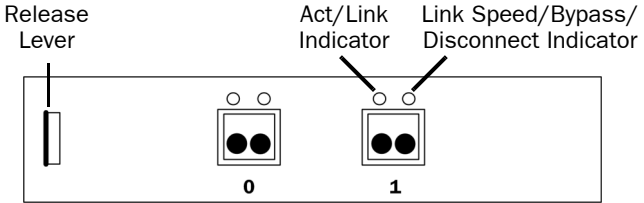


Table 6 Port Indicators

Indicator	Color	Description
Act/Link	Green	Link ok.
Link Speed/ Bypass/ Disconnect	Blue	10G link.
	Green	Blinks in bypass mode.

MOD-EM1-10G-LR-2-B: Dual Port Fiber (LR) 10GB Bypass Interface Module

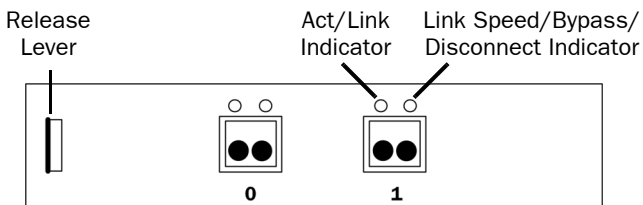


Table 7 Port Indicators

Indicator	Color	Description
Act/Link	Green	Link ok.
Link Speed/ Bypass/ Disconnect	Blue	10G link.
	Green	Blinks in bypass mode.

SFP Interface Modules

MOD-EM1-GE-SFP-4: Quad Port SFP Gigabit Ethernet Interface Module

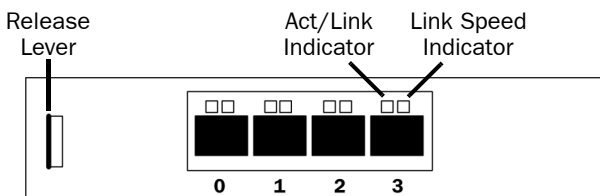


Table 8 Port Indicators

Indicator	Color	Description
Act/Link	Green	Link ok.
Link Speed	Yellow	1G link.

MOD-EM1-10G-SFP-2: Dual Port (SFP+) 10GB Interface Module

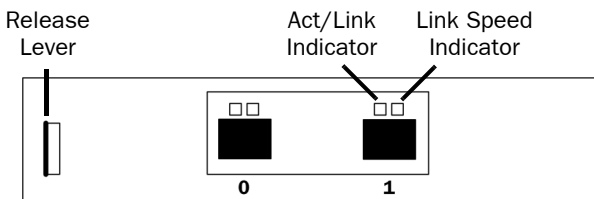


Table 9 Port Indicators

Indicator	Color	Description
Act/Link	Green	Link ok.
Link Speed	Blue	10G link.

Placeholder Module

A placeholder module (MOD-PH) is a module that does not contain a network interface card. If you do not have interface modules that contain a network interface card for all the slots in the modular appliance, you must insert placeholder modules in the remaining slots.



Disposal Instructions



Dispose of the appliance separately from household waste at an appropriate waste disposal facility at the end of its useful service life.

Stonesoft Interface Module Guide

This booklet covers the installation tasks specific to Stonesoft interface modules.

All documentation and our technical knowledge base is available at: www.stonesoft.com/support.

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**Stonesoft Corporation
International Headquarters**

Itälahdenkatu 22 A
FI-00210 Helsinki, Finland
tel. +358 9 4767 11
fax. +358 9 4767 1349
www.stonesoft.com

**Stonesoft Inc.
Americas Headquarters**

1050 Crown Pointe Parkway
Suite 900
Atlanta, GA 30338, USA
tel. +1 866 869 4075
fax. +1 770 668 1131