

# QUICK START GUIDE 8000 SERIES DEVICES

Thank you for choosing Sourcefire!

Before installing this device, download and follow the instructions in the Sourcefire Support Welcome Kit (<https://support.sourcefire.com>) to get started with Sourcefire Support, and to set up your Customer Center account.

## Included items:

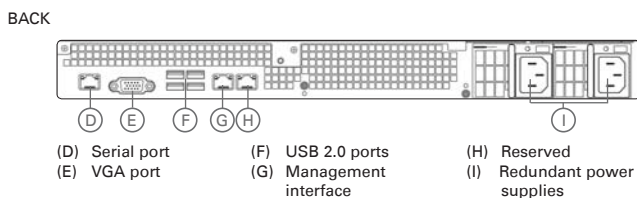
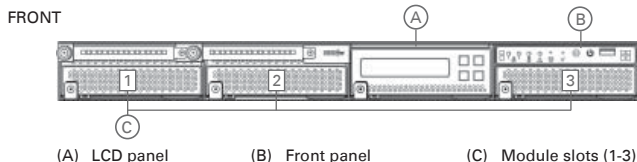
- one of the following Sourcefire devices:
  - 3D8120 (1U model)
  - 3D8130 (1U model)
  - 3D8140 (1U model)
- The 3D8120/8130/8140 have identical chassis. If you are not sure which model you have, see your packing list.
- 3D8250 (2U model)
- 3D8260 (4U stacked model), which includes a 3D8250 10G-capable primary device and one secondary (expansion) device
- 3D8270 (6U stacked model), which includes a 3D8250 40G-capable primary device and two secondary (expansion) devices
- 3D8290 ((8U stacked model), which includes a 3D8250 40G-capable primary device and three secondary (expansion) devices
- a combination of Network Modules (NetMods)
- stacking module: optional for 3D8140 or 3D8250; included for 3D8260/8270/8290
- two power cords per chassis
- two straight-through Cat 5e Ethernet cables per chassis
- rack-mounting kit per chassis

## Required items:

- flathead and Phillips screwdrivers for rack-mounting kit

## 3D8120/8130/8140

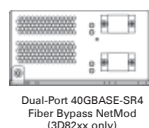
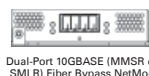
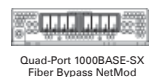
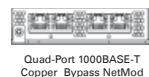
(Chassis: CHAS-1U-AC / CHAS-1U-DC / CHAS-1U-AC/DC)



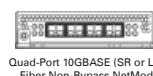
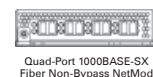
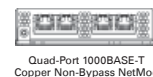
## 8000 Series Modules

See page 3 for more information.

### Configurable Bypass NetMods



### Non-Bypass NetMods

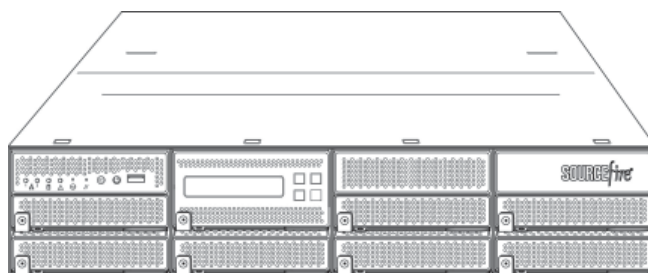


### Stacking Module

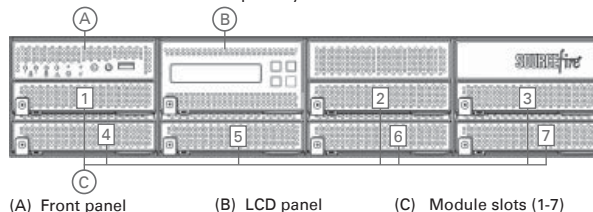


## 3D8250/8260/8270/8290

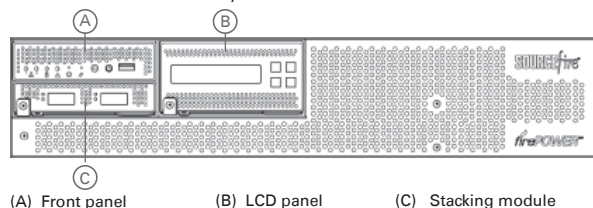
(Chassis: CHAS-2U-AC / CHAS-2U-DC / CHAS-2U-AC/DC)



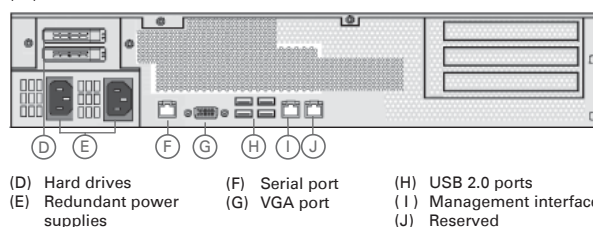
FRONT 3D8250 or 3D8260/8270/8290 primary device



FRONT 3D8260/8270/8290 secondary device



BACK (all)



## Deploying the Appliance

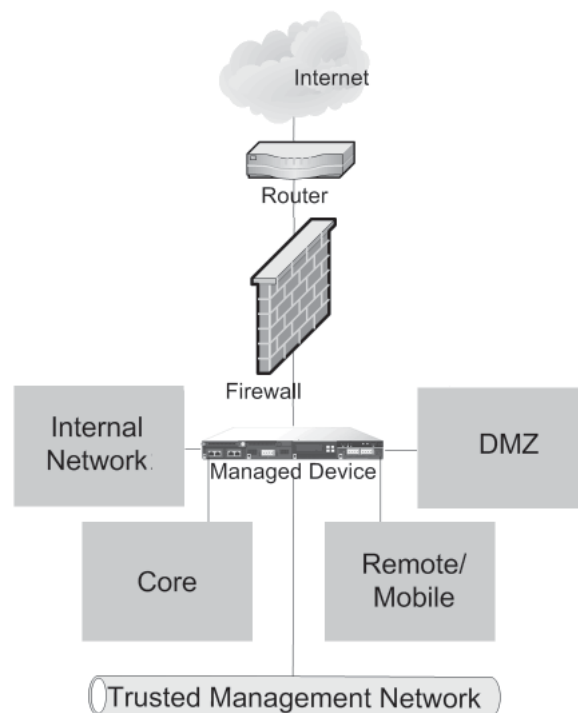
Your device is typically deployed inside a firewall, where it is connected to your trusted management network and the various network segments you want to monitor.

In a simple deployment scenario, you connect the management interface on your device to your trusted management network using an Ethernet cable, then connect the sensing interfaces to the network segments you want to monitor using the appropriate cables (copper or fiber) in either a passive or inline cabling configuration.

The trusted management network (a restricted network protected from unauthorized access) may have a single secure connection to the Internet for security updates and similar functions, but is separate from the rest of your network and is not accessible to hosts used in daily business operations.

You can connect sensing interfaces to different network segments dedicated to particular components of your business that have distinct security requirements to target policies based on the needs for specific segments. These segments can include the DMZ (outward-facing servers, such as mail, ftp, and web hosts), your internal network (hosts used in daily operation and similar applications), and the core (hosts reserved for critical business assets), and can also include segments dedicated to remote locations, mobile access, or other functions.

How you cable your sensing interfaces determines your configuration options. If you use passive cabling, you can configure passive sensing interfaces. If you use inline cabling, you can create passive, inline, inline with fail-open, virtual switch, virtual router, or hybrid sensing interfaces on your device. For more information on deployment options and interface configurations and how they affect product features, see the *Sourcefire 3D System User Guide* and the *Sourcefire 3D System Installation Guide*.



## Cabling the Device

You can cable your device to configure passive or inline interfaces, depending on your deployment needs.

Use passive cabling if you want to:

- monitor traffic
- collect information about hosts, operating systems, applications, users, files, networks, and vulnerabilities

Use inline cabling if you want to use the same features as a passive deployment, plus:

- configure a virtual switch, virtual router, or hybrid interface
- perform network address translation (NAT)
- use policies to block traffic based on access control features such as application control, user control, security intelligence, URL dispositions, file control, malware detection, or intrusion prevention

Use the appropriate cables (as indicated by your interface) and cabling diagram for the interface you want to configure, then use the web interface on the Defense Center to configure the interfaces. See *Connecting the Sensing Interfaces* on page 4.

## NetMods

Network modules (NetMods) contain up to four copper or fiber, configurable bypass or non-bypass, sensing interfaces in either 1G, 10G, or 40G (3D8250 only) capacity.

Use a single interface to passively monitor a network segment, or use paired interfaces in an inline configuration to deploy the device inline or inline with configurable bypass, or to configure a virtual switch, virtual router, or hybrid interface on the monitored network segment.

As an example, a NetMod with four sensing interfaces (copper or fiber) can be used to monitor:

- up to four network segments in a passive configuration
- up to two network segments in an inline configuration
- one network segment in an inline configuration and up to two network segments in a passive configuration

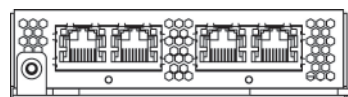
If you want to take advantage of the device's configurable bypass (fail-open) capability, you must connect either the two interfaces on the left or the two interfaces on the right of a configurable bypass NetMod to a network segment. This allows traffic to flow even if the device fails or loses power. Configure the interface set as inline with fail-open using the web interface on the Defense Center.

### Quad-Port 1000BASE-T Copper Configurable Bypass NetMod

Cable: standard copper

Passive configurations: 1, 2, 3, or 4

Inline configurations: 1 or 2 (left pair or right pair)

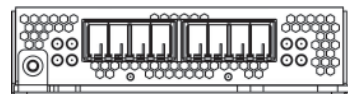


### Quad-Port 1000BASE-SX Fiber Configurable Bypass NetMod

Cable: Local Connector (LC) optical transceivers

Passive configurations: 1, 2, 3, or 4

Inline configurations: 1 or 2 (left pair or right pair)

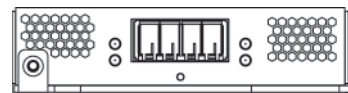


### Dual-Port 10GBASE Fiber Configurable Bypass NetMod

Cable: Local Connector (LC) optical transceivers, either MMSR or SMLR

Passive configurations: 1 or 2

Inline configurations: 1



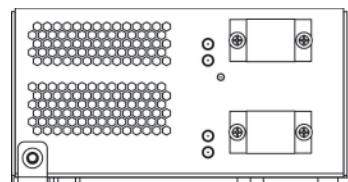
### Dual-Port 40GBASE-SR4 Fiber Configurable Bypass NetMod

3D8270/8290 or 40G-capable 3D8250/8260 only

Cable: Multiple-Fiber Push On (MPO) connector optical transceivers

Passive configurations: 1 or 2

Inline configurations: 1

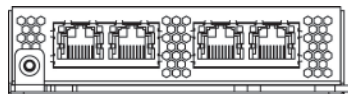


### Quad-Port 1000BASE-T Copper Non-Bypass NetMod

Cable: standard copper

Passive configurations: 1, 2, 3, or 4

Inline configurations: 1 or 2 (left pair or right pair)

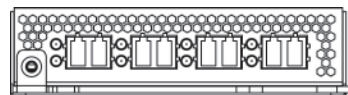


### Quad-Port 1000BASE-SX Fiber Non-Bypass NetMod

Cable: Local Connector (LC) optical transceivers

Passive configurations: 1, 2, 3, or 4

Inline configurations: 1 or 2 (left pair or right pair)

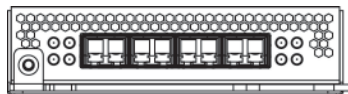


### Quad-Port 10GBASE-SR or LR Fiber Non-Bypass NetMod

Cable: Local Connector (LC) optical transceivers

Passive configurations: 1, 2, 3, or 4

Inline configurations: 1 or 2 (left pair or right pair)



## Stacking Module

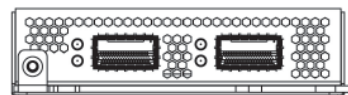
A stacking module connects two like devices to increase the power of the primary device. A 3D8140 can be connected to another 3D8140 (not available for 3D8120/8130). A 3D8250 can be connected to up to three 3D8250, for a total of four connected devices. For more information, see Stacking Configurations on page 6.

### Stacking Module

Cable: 8000 Series stacking cable

3D8140: one per connection; up to two 2D8140 appliances

3D8250/8260/8270/8290: two per connection on up to four 3D8250 appliances



## Installing the Hardware

The device is delivered with mounting brackets for 19-inch racks.

To install the hardware into the rack:

1. Mount the device in your rack using the instructions included with the mounting kit.
2. Connect the power cords to the receptacles on the power supplies at the rear of the device.
3. Connect the other end of the power cords to an electrical outlet carrying suitable power. See power supply documentation in the *Sourcefire 3D System Installation Guide* for specifications.
4. Turn on the device using the power button on the front panel.

## Connecting the Sensing Interfaces

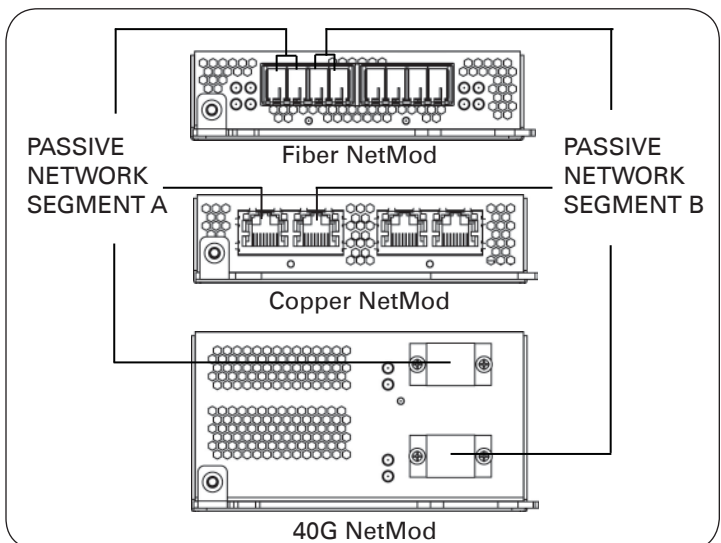
This section describes the physical connection of the sensing interfaces. After you cable the interfaces, use the web interface on the Defense Center that manages the device to configure the device's sensing interfaces as passive, inline, inline with fail-open, switched, routed, or hybrid. Use only the interfaces on the front of the device as sensing interfaces.

See the *Sourcefire 3D System Installation Guide* for detailed information on planning your deployment. After you have selected a deployment model, cable the sensing interfaces as needed for your configuration.

### Passive Interface Cabling

For each network segment you want to monitor passively, connect the appropriate cables (either fiber or copper) to one sensing interface.

Use this cabling when you want to configure passive interfaces.

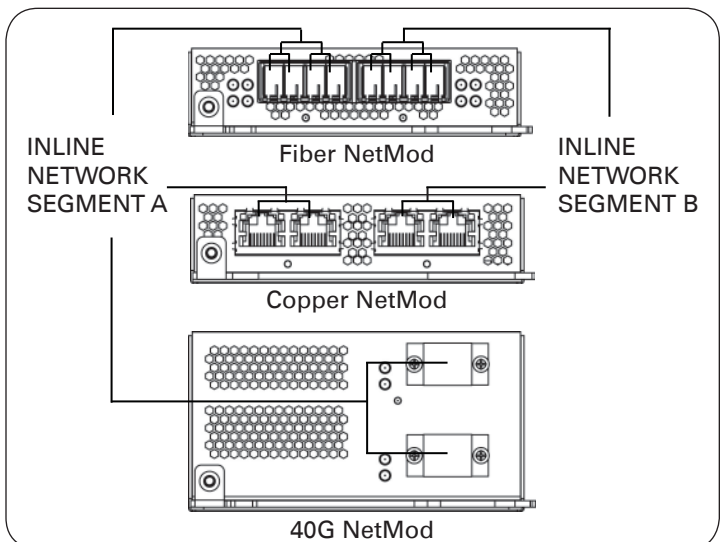


### Inline Interface Cabling

For each network segment you want to monitor inline, connect the appropriate cables (either fiber or copper) sequentially to pairs of sensing interfaces.

Use this cabling when you want to configure inline, inline with fail-open, switched, routed, or hybrid interfaces.

If you want to take advantage of the device's configurable fail-open capability, cable the interfaces, then use the web interface on the Defense Center that manages the device to configure the interface as inline with fail-open.



## Configuring the Management Interface

This section describes the process of using a monitor and keyboard to connect your management interface to a secure internal network, and to set up the IP address and network settings for the management interface for the device. You can also use a host on the management interface, the LCD Panel, or the command line to enter the network configuration and register the device to a Defense Center. See the *Sourcefire 3D System Installation Guide* for more information.

The procedure prompts you for the following information about the management interface and your network environment:

- the IP address you want to give to the management interface
- the netmask for the management interface's IP address
- the default gateway for the management interface

To use a monitor and keyboard to configure the management interface:

1. Using the supplied Ethernet cable, connect the management interface on the rear of the device to a protected management network. You can use the ID button on the front of the device to light an LED in the rear to help locate the chassis in the rack.
2. Connect a keyboard (and, if desired, a mouse) to the USB ports on the device, and the monitor to the VGA port.
3. Log in as `admin`.  
The system requests a password.
4. Enter `Sourcefire` as the password.  
Note that the password is case sensitive.
5. Type `expert` and press Enter.
6. Type `sudo su -` and press Enter. If needed, reenter `Sourcefire` as the admin account password to approve the command and display the `root` prompt.
7. Run the following script:  

```
/usr/local/sf/bin/configure-network
```

  
The following prompt appears (appended with the current value):  

```
Do you wish to configure IPv4? (y or n)
```
8. Type `y` and press Enter to configure the appliance with an IPv4 address.  
The following prompt (appended with the current value) appears:  

```
Management IP address?
```
9. Enter the IP address you want to assign to the management interface or press Enter to accept the current value. For example:  

```
10.2.2.20
```

  
The following prompt (appended with the current value) appears:  

```
Management netmask?
```
10. Enter the netmask for the interface's IP address or press Enter to accept the current value. For example:  

```
255.255.0.0
```

  
The following prompt appears:  

```
Management default gateway?
```
11. Enter the IP address of the gateway for this IP address. For example:  

```
10.2.1.1
```

  
The following prompt appears:  

```
Are these settings correct: (y or n)?
```
12. You have two options:
  - If the settings are correct, type `y` and press Enter to continue.
  - If the settings are incorrect, type `n` and press Enter. You are prompted to enter the information again.
13. After you enter the correct network settings for the management interface, type `exit` and press Enter to log out of `root`.
14. Type `logout` and press Enter to log out of the appliance, then disconnect the monitor and keyboard.  
Continue with Performing the Initial Setup.

## Performing the Initial Setup

Complete the initial setup through the web interface. To access the web interface through the management interface, browse to the IP address you configured in the previous procedure. See the *Sourcefire 3D System Installation Guide* for information on setting up the devices.



## Stacking Devices

You can stack devices in the following configurations:

- two 3D8140s (not available for 3D8120/8130)
- up to four 3D8250s
  - a 3D8260 (a 10G-capable primary device and a secondary device)
  - a 3D8270 (a 40G-capable primary device and two secondary devices)
  - a 3D8290 (a 40G-capable primary device and three secondary devices)

For the 3D8260 and 3D8270, you can stack additional devices for a total of four devices in the stack.

One device is designated as the primary device and is connected to the network segments. All other devices are designated secondary devices, and are used to provide additional resources to the primary device.

Connect the primary device to the network segments you want to analyze in the same way that you would connect a single 3D8140 or 3D8250. Connect the secondary devices to the primary device as indicated in the stack cabling diagram. If a secondary device contains sensing interfaces, those interfaces are not used.

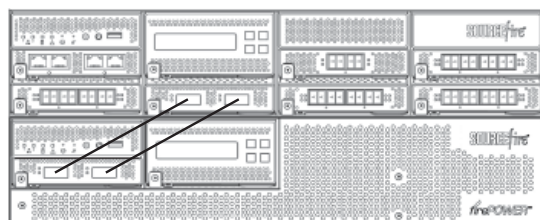
After the devices are physically connected to the network segments and to each other, use a Defense Center to establish and manage the stack. See the installation guide for more information.

## Cabling Diagrams

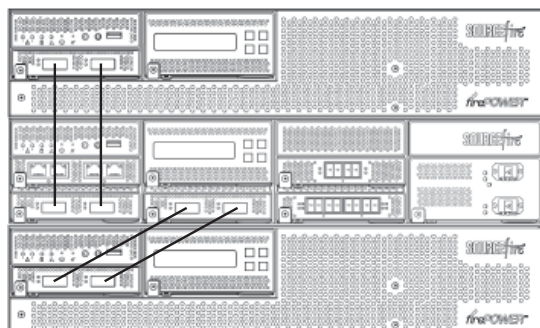
3D8140 with additional 3D8140



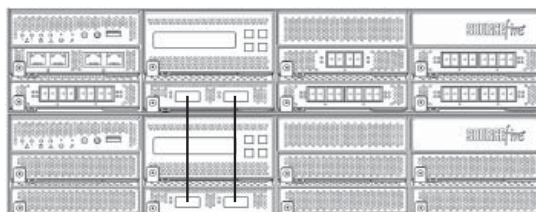
3D8260



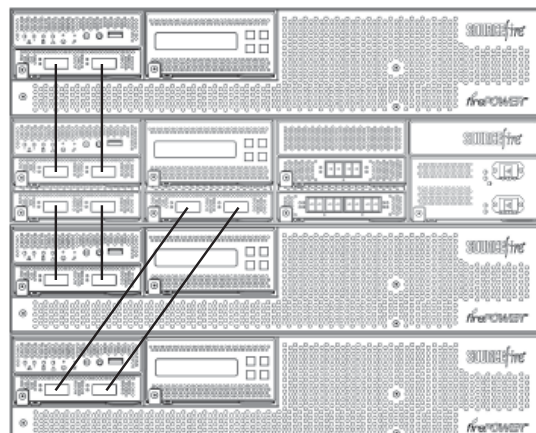
3D8270



3D8250 with additional 3D8250



3D8290

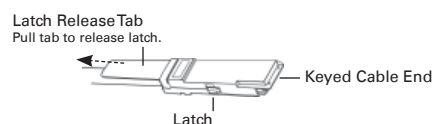


## Using the 8000 Series Stacking Cable

Install the devices within reach of the three-foot (one-meter) 8000 Series stacking cable to create the physical connection between the primary and secondary devices. Stacking two 3D8140s requires one cable. Stacking the 3D8250/8260/8270/8290 requires two cables per connection. Devices do not need to be powered down to insert or remove the stacking cable.

To use the 8000 Series stacking cable:

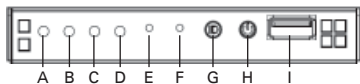
- To insert the cable, hold the cable end with release tab facing up, then insert the keyed end into the port on the stacking module until you hear the latch click into place.
- To remove the cable, pull on the release tab to release the latch, then remove the cable end.



## LEDS

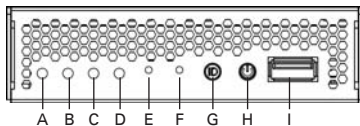
## Front Panel LEDs

3D8120/8130/8140



- A Management activity status LED
- B Reserved
- C Hard disk drive status LED
- D System status LED
- E Non-maskable interrupt button
- F Reset button
- G ID button
- H Power button
- I USB 2.0 port

3D8250/8260/8270/8290



LED	Description
Management Activity	A green light indicates there is management network activity. No light indicates there is no management network activity.
Hard Disk Drive Status	A green light indicates the fixed disk drive is active. An amber light indicates a fixed disk drive fault. No light indicates there is no drive activity, or the system is powered off.
System Status	A green light indicates the system is operating normally. A blinking green light indicates the system is operating in a degraded condition. A blinking amber light indicates the system is in a non-critical condition. An amber light indicates the system is in a critical or non-recoverable condition. No light indicates the system is starting up. <b>IMPORTANT!</b> The amber status light takes precedence over the green status light. When the amber LED is on or blinking, the green LED is off.
Power	A green light indicates the system has power. No light indicates the system does not have power.
System ID	A blue light is visible at the rear of the chassis when the ID button is pressed.

## Management Interface LEDs

Left (Link)	If the LED is on, the link is up; if the LED is off, there is no link.
Right (Activity)	A blinking LED indicates activity; if the LED is off, there is no activity.

## Regulatory Conformance

This Sourcefire appliance conforms to multiple national and international standards. For a full list of regulatory compliance, see the *Sourcefire 3D System Installation Guides*.

## Security Considerations

Before you install your appliance, Sourcefire recommends that you consider the following:

- Locate your appliance in a lockable rack within a secure location that prevents access by unauthorized personnel.
- Allow only trained and qualified personnel to install, replace, administer, or service the appliance.
- Always connect the management interface to a secure internal management network that is protected from unauthorized access.

## NETMOD WARNINGS!

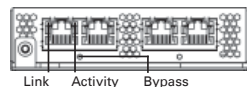
- NetMods are not hot-swappable. See the *Sourcefire Module Assembly Guide* for more information on installing NetMods.
- The small form-factor pluggable (SFP) transceivers on the quad-port 10GBASE fiber non-bypass NetMod are not removable. Any attempt to remove the SFPs can damage the NetMod.

## Module LEDs

## COPPER NETMODS

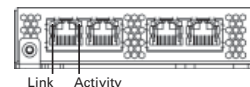
## CONFIGURABLE BYPASS

QUAD-PORT 1000BASE-T COPPER



## NON-BYPASS

QUAD-PORT 1000 BASE-T COPPER

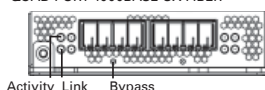


Copper Link/Activity LEDs	Description
Link (left) amber	The speed of the traffic on the interface is 10Mb or 100Mb.
Link (left) green	The speed of the traffic on the interface is 1Gb.
Activity (right) blinking green	The interface has link and is passing traffic.

## FIBER NETMODS

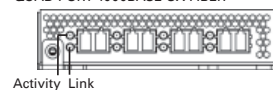
## CONFIGURABLE BYPASS

QUAD-PORT 1000BASE-SX FIBER

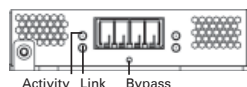


## NON-BYPASS

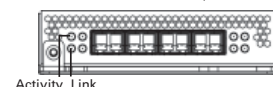
QUAD-PORT 1000BASE-SX FIBER



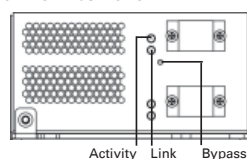
DUAL-PORT 10GBASE FIBER (MMSR or SMLR)



QUAD-PORT 10GBASE FIBER (MMSR or SMLR)

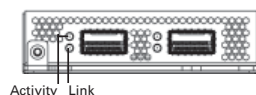


DUAL-PORT 40GBASE-SR4 FIBER



Fiber Activity/Link LEDs	Description
Activity (top)	Inline or passive: the light is on when the interface has activity. If dark, there is no activity.
Link (bottom)	Inline: the light is on when the interface has link. If dark, there is no link. Passive: the light is always on.
Bypass LED (all)	Description
Off	The interface is not in bypass mode or has no power.
Steady green	The interface is ready to enter bypass mode.
Steady amber	The interface has been placed in bypass mode and is not inspecting traffic.
Blinking amber	The interface has failed open and is in bypass mode.

## STACKING MODULE



Stacking Link/Activity LEDs	Description
Top (activity)	If the LED is blinking, there is activity. If the LED is off, there is no activity.
Bottom (link)	If the LED is on, the link is up. If the LED is off, there is no link or the port is in a "down" state.

## Hardware Specifications

Physical and Environmental Parameters		
Parameter	3D8120/8130/8140	3D8250/8260/8270/8290
Form Factor	1U	2U/4U/6U/8U
Dimensions (D x W x H)	28.7" x 17.2" x 1.73" (72.8 cm x 43.3 cm x 4.4 cm)	29.0" x 17.2" x 3.48" (73.5 cm x 43.3 cm x 8.82 cm) each 2U appliance
Weight (max installed)	43.5 lbs (19.8 kg)	58 lbs (25.3 kg) each 2U appliance
Power Supply	650W dual redundant (1+1) power supplies for AC or DC AC Voltage: 100VAC to 240VAC nominal (85VAC to 264VAC maximum) AC Current: 10A maximum over the full range, per supply 5A max. for 187VAC to 264VAC, per supply AC Frequency range: 47Hz to 63Hz DC Voltage: -48VDC nominal referenced to RTN -40VDC to -72VDC maximum DC Current: 20A maximum, per supply	Dual 750W redundant power supplies designed for AC or DC AC Voltage: 100VAC to 240VAC nominal (85VAC to 264VAC maximum) AC Current: 10A maximum over the full range, per supply 5A maximum for 187VAC to 264VAC, per supply AC Frequency range: 47Hz to 63Hz DC Voltage: -48VDC nominal referenced to RTN -40VDC to -72VDC maximum DC Current: 20A maximum, per supply
Operating Temperature	10°C to 35°C (50°F to 95°F)	
Non-Operating Temperature	-20°C to 70°C (-4°F to 158°F)	
Operating Humidity	5% to 85%, non-condensing	
Altitude	0 (sea level) to 6000 ft (0 to 1800 m)	
Cooling Requirements	1725 BTU/hr	2225 BTU/hr
Acoustic Noise	Max normal operating noise is 87.6 dB LWAd (high temp). Typical normal operating noise is 80 dB LWAd.	Max normal operating noise is 72.9 dba at full processor load, normal fan operation at 27°C. Meets GR-63-CORE 4.6 Acoustic Noise
Operating Shock	No errors with half a sine wave shock of 2G (with 11 milliseconds duration)	
Airflow	Front to back, 160 ft³ (4.5 m³) per minute	Front to back, 210 ft³ (6 m³) per minute
RoHS	Complies with RoHS Directive 2002/95/EC	

Optical NetMod Parameters				
Parameter	1000BASE-SX	10GBASE-SR	10GBASE-LR	40GBASE-SR4
Optical connectors	All optical connectors are LC duplex	All optical connectors are LC duplex	All optical connectors are LC duplex	All optical connectors are OTP/MTP single row twelve fiber positions. Only the outer eight fibers are used.
Bit rate	1000Mbps	10.000Gbps	10.000Gbps	40.000Gbps
Baud rate/encoding/tolerance	1250Mbps / 8b/10b encoding	10.3125Gbps / 64/66b encoding / +/- 100 ppm	10.3125Gbps / 64/66b encoding / +/- 100 ppm	10.3125Gbps / 64/66b encoding / +/- 100 ppm
Optical interface	Multimode	Multimode	Single mode only	Multimode
Operating distance	200 m (656 ft) for 62.5 µm/125 µm fiber 500 m (1640 ft) for 50 µm/125 µm fiber	26 m (85 ft) to 33 m (108 ft) for 62.5 µm/125 µm fiber (modal BW 160 to 200 respectively) 66 m (216 ft) to 82 m (269 ft) for 50 µm/125 µm fiber (modal BW 400 to 500 respectively) Distances to 300 m (980 ft) are available with higher quality (OM3) fiber. Minimum distances (all): 2 m (6 ft)	2 m to 10 km for 9 µm/125 µm fiber	100m (320 ft) for 50 µm/125 µm fiber (OM3) Minimum distance: 0.5 m (2 ft) 40G optics are carried on eight fiber cables utilizing MPO connectors.
Transmitter wavelength	770-860 nm (850 nm typical)	840-860 nm (850 nm typical)	1270-1355 nm (1310 nm typical)	840-860 nm (850 nm typical)
Maximum average launch power	0 dBm	-1 dBm	-0.5 dBm	2.4 dBm
Minimum average launch power	-9.5 dBm	-7.3 dBm	-8.2 dBm	-7.6 dBm
Maximum average power at receiver	0 dBm	-1 dBm	-0.5 dBm	2.4 dBm
Receiver sensitivity	-17 dBm	-9.9 dBm	-14.4 dBm	-9.5 dBm

**WARNING!**

This Sourcefire appliance should be installed and maintained by qualified personnel only. Keep in mind the following safety information to avoid system damage or personal injury:

- Remove all factory packaging before using the appliance.
- Provide adequate ventilation to prevent overheating. Do not cover or block vents, or otherwise enclose the appliance.
- The appliance must be properly grounded when connecting power to the power outlet.
- At all times, keep the chassis area free from dust.
- Lifting the chassis for rack installation may require two people, as the unit is heavy.
- To avoid electrical shock, do not open or remove the chassis covers or metal parts without proper instruction.

# SOURCEfire®

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