QSAN Official Document

# Host Cards

## Hardware Manual

May 2025

# ANNOUNCEMENT

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# PREFACE

## Technical Support

Do you have any questions or need help trouble-shooting a problem? Please contact QSAN Support, we will reply to you as soon as possible.

- Via the Web: https://www.qsan.com/technical_support
- Via Telephone: +886-2-77206355
- (Service hours: 09:30 - 18:00, Monday - Friday, UTC+8)
- Via Skype Chat, Teams / Skype ID: qsan.support
- (Service hours: 09:30 - 02:00, Monday - Friday, UTC+8, Summer time: 09:30 - 01:00)
- Via Email: support@qsan.com

## Information, Tip, and Caution

This manual uses the following symbols to draw attention to important safety and operational information.



### INFORMATION

INFORMATION provides useful knowledge, definition, or terminology for reference.



### TIP

TIP provides helpful suggestions for performing tasks more effectively.


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### CAUTION

CAUTION indicates that failure to take a specified action could result in damage to the system.

## Conventions

The following table describes the typographic conventions used in this manual.

| CONVENTIONS | DESCRIPTION |
|---|---|
| **Bold** | Indicates text on a window, other than the window title, including menus, menu options, buttons, fields, and labels.<br>Example: Click the **OK** button. |
| *<Italic>* | Indicates a variable, which is a placeholder for actual text provided by the user or system.<br>Example: copy *<source-file> <target-file>*. |
| [ ] square brackets | Indicates optional values.<br>Example: [ a \| b ] indicates that you can choose a, b, or nothing. |
| { } braces | Indicates required or expected values.<br>Example: { a \| b } indicates that you must choose either a or b. |
| \| vertical bar | Indicates that you have a choice between two or more options or arguments. |
| / Slash | Indicates all options or arguments. |
| underline | Indicates the default value.<br>Example: [ a \| b ] |


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# 1. OVERVIEW

Thank you for purchasing QSAN Technology, Inc. products. The system comes with some on-board connectivity ports on each controller. This chapter introduces host cards for expansion, which are optional accessories.

## 1.1. Available Host Cards

There are several types of host cards that are available for selection. The following tables provide detailed information about current host cards

*Table 1-1 Available Host Cards*

| HOST CARD | INTERFACE | DETAILS IN |
|---|---|---|
| 4-port 32 Gb Fibre Channel | SFP28 | Chapter 2.1 |
| 2-port 32 Gb Fibre Channel | SFP28 | Chapter 2.2 |
| 4-port 16 Gb Fibre Channel | SFP+ | Chapter 2.3 |
| 2-port 32 Gb Fibre Channel | SFP+ | Chapter 2.4 |
| 2-port 100 GbE | QSFP | Chapter 2.5 |
| 4-port 25 GbE | SFP28 | Chapter 2.6 |
| 2-port 25 GbE | SFP28 | Chapter 2.7 |
| 4-port 10 GbE | SFP+ | Chapter 2.8 |
| 2-port 10 GbE | RJ45 | Chapter 2.9 |


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# 1.2. Installing the Optional Host Card

**Host Card Installation Steps**

The following are detailed steps to install the host card into the system.

---

**CAUTION**

Before beginning the host card removal or installation procedure, the controller module must be removed from the system chassis. The host card cannot be hot-swapped from the controller module. Hot-swapping a host card may cause the system to hang.

---

1. Remove the controller from the system chassis.

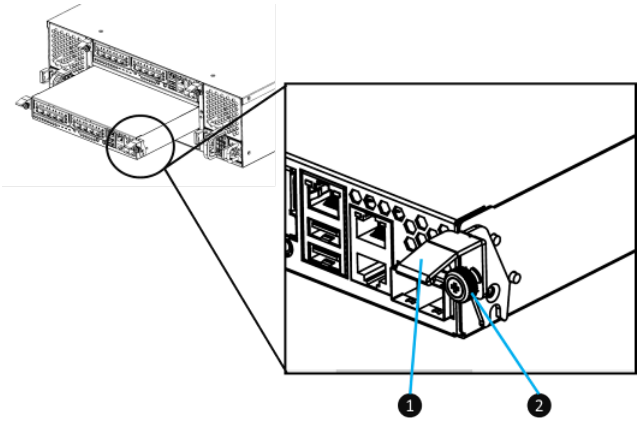



*Figure 1-1 Mechanical Components of the Controller Module*

2. Use a Phillips screwdriver to loosen the thumbscrews on each release lever.
3. Pull down both levers at the same time, then, holding both release levers, pull out the controller module about halfway.
4. Grasp one end of the controller module (the side with the release lever) with one hand and the bottom of the controller with the other hand; pull the controller module until it is free of the system chassis.
5. Remove the dummy host card cage by loosening its screws, and then lift the dummy cage out of the controller module.


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6. Align the host card with the slot to be installed, and push it all the way into the controller cage until you hear a "click" sound, ensuring that the host card is well connected to the connector in the controller module.
7. If you need to install another host card, repeat the above steps.
8. Before connecting the cables from the storage system to the host side, you have to install the GBIC(s) for the Fibre Channel or Ethernet host cards.
9. If all host cards are ready, insert the controller module into the system chassis.

### Confirm Host Card Installation

If the host card is installed correctly, you can check the host card connection status in the **System** -> **Network**. If the host cards are installed properly, they will show up.


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# 2. HOST CARD LED DESCRIPTION

This chapter describes the definition of the host card LED behavior.

## 2.1.1. 4-port 32 Gb Fibre Channel Host Card LED

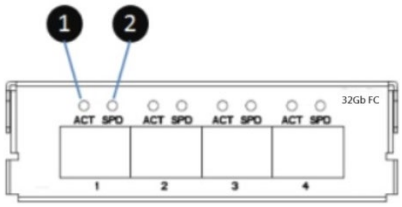



*Figure 2-1 4-port 32 Gb FC Host Card LEDs*

*Table 2-1 4-port 32 Gb FC Host Card LED Description*

| NUMBER | DESCRIPTION | DEFINITION |
|---|---|---|
| **1** | Activity LED | • Solid Green: Asserted when the link is established (Link OK without I/O).<br>• Blinking Green: Asserted when the link is established, and packets are being transmitted along with any receive activity (Access).<br>• Off: No link is detected, or link fails. |
| **2** | Speed LED | • Solid Blue: Asserted when a 32 Gb link is established and maintained.<br>• Solid Amber: Asserted when a 16 Gb link is established and maintained.<br>• Solid White: Asserted when an 8 Gb and below link is established and maintained.<br>• Off: No link is detected, or link fails. |


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## 2.1.2. 2-port 32 Gb Fibre Channel Host Card LED

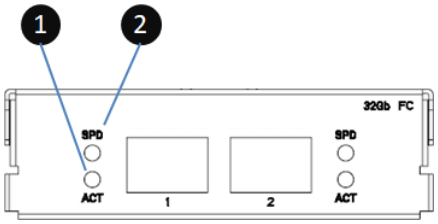



*Figure 2-2 2-port 32 Gb FC Host Card LEDs*

*Table 2-2 2-port 32 Gb FC Host Card LED Description*

| NUMBER | DESCRIPTION | DEFINITION |
|---|---|---|
| **1** | Activity LED | • Solid Green: Asserted when the link is established (Link OK without I/O).<br>• Blinking Green: Asserted when the link is established, and packets are being transmitted along with any receive activity (Access).<br>• Off: No link is detected, or link fails. |
| **2** | Speed LED | • Solid Blue: Asserted when a 32 Gb link is established and maintained.<br>• Solid Amber: Asserted when a 16 Gb link is established and maintained.<br>• Solid White: Asserted when an 8 Gb and below link is established and maintained.<br>• Off: No link is detected, or link fails. |


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## 2.1.3. 4-port 16 Gb Fibre Channel Host Card LED

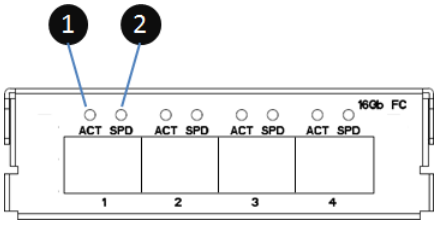



*Figure 2-3 4-port 16 Gb FC Host Card LEDs*

*Table 2-3 4-port 16 Gb FC Host Card LED Description*

| NUMBER | DESCRIPTION | DEFINITION |
|---|---|---|
| **1** | Activity LED | • Solid Green: Asserted when the link is established (Link OK without I/O).<br>• Blinking Green: Asserted when the link is established, and packets are being transmitted along with any receive activity (Access).<br>• Off: No link is detected, or link fails. |
| **2** | Speed LED | • Solid Blue: Asserted when a 16 Gb link is established and maintained.<br>• Solid Amber: Asserted when an 8 Gb link is established and maintained.<br>• Solid White: Asserted when a 4 Gb and below link is established and maintained.<br>• Off: No link is detected, or link fails. |


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## 2.1.4. 2-port 16 Gb Fibre Channel Host Card LED

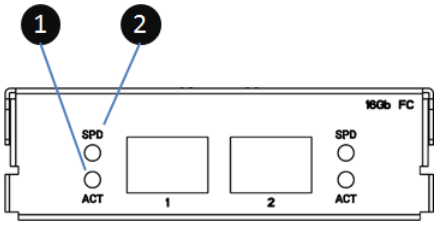



*Figure 2-4 2-port 16 Gb FC Host Card LEDs*

*Table 2-4 2-port 16 Gb FC Host Card LED Description*

| NUMBER | DESCRIPTION | DEFINITION |
|---|---|---|
| **1** | Activity LED | • Solid Green: Asserted when the link is established (Link OK without I/O).<br>• Blinking Green: Asserted when the link is established, and packets are being transmitted along with any receive activity (Access).<br>• Off: No link is detected, or link fails. |
| **2** | Speed LED | • Solid Blue: Asserted when a 16 Gb link is established and maintained.<br>• Solid Amber: Asserted when an 8 Gb link is established and maintained.<br>• Solid White: Asserted when a 4 Gb and below link is established and maintained.<br>• Off: No link is detected, or link fails. |


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## 2.1.5. 2-port 100 Gb Ethernet Host Card LED

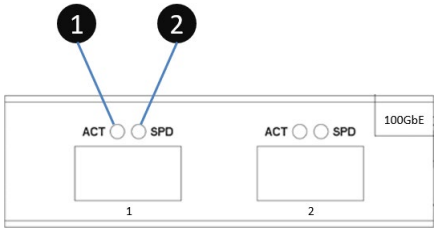



*Figure 2-5 2-port 100 GbE Host Card LEDs*

*Table 2-5 2-port 100 GbE Host Card LED Description*

| NUMBER | DESCRIPTION | DEFINITION |
|---|---|---|
| **1** | Activity LED | • Solid Green: Asserted when the link is established (Link OK without I/O).<br>• Blinking Green: Asserted when the link is established, and packets are being transmitted along with any receive activity (Access).<br>• Off: No link is detected, or link fails. |
| **2** | Speed LED | • Solid Blue: Asserted when a 100 Gb link is established and maintained.<br>• Solid Amber: Asserted when a 40 Gb link is established and maintained.<br>• Off: No link is detected, or link fails. |


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## 2.1.6. 4-port 25 Gb Ethernet Host Card LED

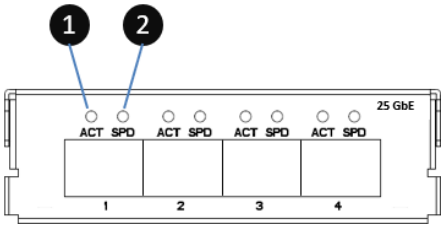



*Figure 2-6 4-port 25 GbE Host Card LEDs*

*Table 2-6 4-port 25 GbE Host Card LED Description*

| NUMBER | DESCRIPTION | DEFINITION |
|---|---|---|
| **1** | Activity LED | • Blinking Green: Asserted when the link is established, and packets are being transmitted along with any receive activity (Access).<br>• Off: No link is detected, or link fails. |
| **2** | Speed LED | • Solid Blue: Asserted when a 25 Gb link is established and maintained.<br>• Solid Amber: Asserted when not a 25 Gb link is established and maintained.<br>• Off: No link is detected, or link fails. |


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## 2.1.7. 2-port 25 Gb Ethernet Host Card LED

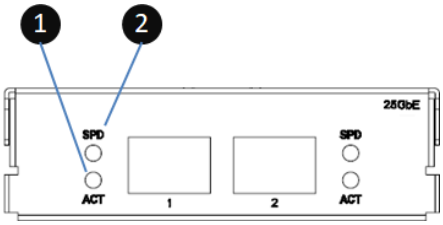



*Figure 2-7 2-port 25 GbE Host Card LEDs*

*Table 2-7 2-port 25 GbE Host Card LED Description*

| NUMBER | DESCRIPTION | DEFINITION |
|---|---|---|
| **1** | Activity LED | • Blinking Green: Asserted when the link is established, and packets are being transmitted along with any receive activity (Access).<br>• Off: No link is detected, or link fails. |
| **2** | Speed LED | • Solid Blue: Asserted when a 25 Gb link is established and maintained.<br>• Solid Amber: Asserted when not a 25 Gb link is established and maintained.<br>• Off: No link is detected, or link fails. |


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## 2.1.8. 4-port 10 Gb Ethernet Host Card LED

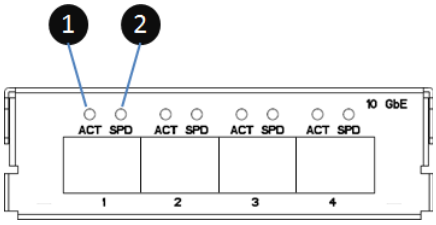



*Figure 2-8 4-port 10 GbE Host Card LEDs*

*Table 2-8 4-port 10 GbE Host Card LED Description*

| NUMBER | DESCRIPTION | DEFINITION |
|---|---|---|
| **1** | Activity LED | • Blinking Green: Asserted when the link is established, and packets are being transmitted along with any receive activity (Access).<br>• Off: No link is detected, or link fails. |
| **2** | Speed LED | • Solid Blue: Asserted when a 10 Gb link is established and maintained.<br>• Solid Amber: Asserted when a 1 Gb link is established and maintained.<br>• Off: No link is detected, or link fails. |


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## 2.1.9. 2-port 10 Gb Ethernet Host Card LED

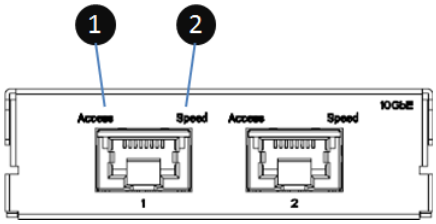



*Figure 2-9 2-port 10 GbE Host Card LEDs*

*Table 2-9 2-port 10 GbE Host Card LED Description*

| NUMBER | DESCRIPTION | DEFINITION |
|---|---|---|
| **1** | Activity LED | • Blinking Green: Asserted when the link is established, and packets are being transmitted along with any receive activity (Access).<br>• Off: No link is detected, or link fails. |
| **2** | Speed LED | • Solid Green: Asserted when a 10 Gb link is established and maintained.<br>• Solid Amber: Asserted when a 1 Gb link is established and maintained.<br>• Off: No link is detected, or link fails. |


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# 3. SUPPORT AND OTHER RESOURCES

## 3.1. Getting Technical Support

After installing your device, locate the serial number on the sticker located on the side of the chassis or from the **System** -> **Maintenance** > **System Information** and use it to register your product at https://www.qsan.com/business_partnership. We recommend registering your product in QSAN partner website for firmware updates, document download, and latest news in eDM. To contact QSAN Support, please use the following information.

- Via the Web: https://www.qsan.com/technical_support
- Via Telephone: +886-2-77206355
- (Service hours: 09:30 - 18:00, Monday - Friday, UTC+8)
- Via Skype Chat, Teams / Skype ID: qsan.support
- (Service hours: 09:30 - 02:00, Monday - Friday, UTC+8, Summer time: 09:30 - 01:00)
- Via Email: support@qsan.com

**Information to Collect**

- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages or capture screenshots
- Product-specific reports and logs
- Add-on products or components installed
- Third-party products or components installed

**Information for Technical Support**

If the technical support requests you to download the Service Package, please navigate in the **System** -> **Maintenance** > **System Information**, and then click the **Download Service Package**


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button to download. Then the system will automatically generate a zip file the default download location of your web browser.

## 3.2. Documentation Feedback

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