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› **10Gtek SFF-8643 to SFF-8643 12G Internal Mini SAS HD Cable Instruction Manual (Model BC32580)**

10Gtek BC32580

10Gtek SFF-8643 to SFF-8643 12G Internal Mini SAS HD Cable Instruction Manual

MODEL: BC32580

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your 10Gtek SFF-8643 to SFF-8643 12G Internal Mini SAS HD Cable. Please read this manual thoroughly before use to ensure optimal performance and longevity of the product.

2. Product Overview

The 10Gtek SFF-8643 to SFF-8643 Internal Mini SAS HD Cable is designed for high-speed data transfer in server environments, storage systems, workstations, and data centers. It ensures reliable connectivity between SAS controllers and devices.

Key Features:

- **High-Speed Data Transfer:** Supports data rates up to 12 Gbps per lane, compliant with SAS 3.0 standards. Backward compatible with SAS 2.0 and SAS 1.0.
- **SFF-8643 Connectors:** Features 4-lane high-density SFF-8643 connectors on both ends, suitable for SAS and SATA data transfer.
- **Sideband Signals:** Includes sideband signals for advanced features such as hot-plugging and error reporting.
- **EMI Shielding:** Fully shielded construction minimizes electromagnetic interference for reliable data transfer.
- **Durable Construction:** Manufactured with high-quality materials for long-lasting performance.

Figure 1: 10Gtek SFF-8643 to SFF-8643 Mini SAS HD Cables.

3. Specifications

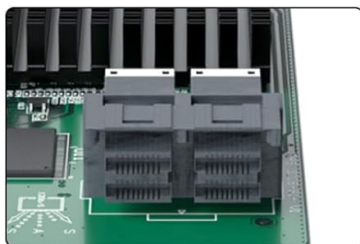| Feature	Description
Brand	10Gtek
Model Number	BC32580
Connector Type	SFF-8643 to SFF-8643
Cable Type	Internal Mini SAS HD Cable
Data Rate	Up to 12 Gbps per lane (SAS 3.0 compliant)
Impedance	100-Ohm
Cable Length	0.5 meters (1.6 feet)
Compatible Devices	Servers, Storage, NVMe Backplanes, RAID Cards
Special Feature	Sideband Signals, EMI Shielding

4. Installation Guide

Follow these general steps to install your Mini SAS HD cable:

1. **Identify Ports:** Locate the SFF-8643 ports on your RAID controller/motherboard and the NVMe backplane/storage device.
2. **Connect Cable:** Carefully align one end of the SFF-8643 cable with the port on your controller/motherboard and push firmly until it clicks into place.
3. **Secure Connection:** Ensure the latch mechanism on the connector is engaged to prevent accidental disconnection.
4. **Connect to Device:** Connect the other end of the SFF-8643 cable to the corresponding port on your NVMe backplane or storage device, ensuring a secure connection.
5. **Cable Management:** Route the cable neatly within your system chassis to avoid obstructing airflow or interfering with other components.

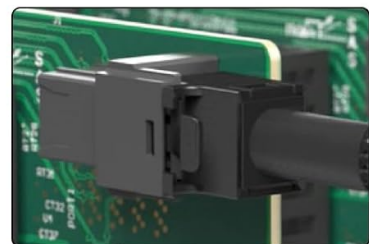SFF-8643 Slot   SFF-8643 Connector
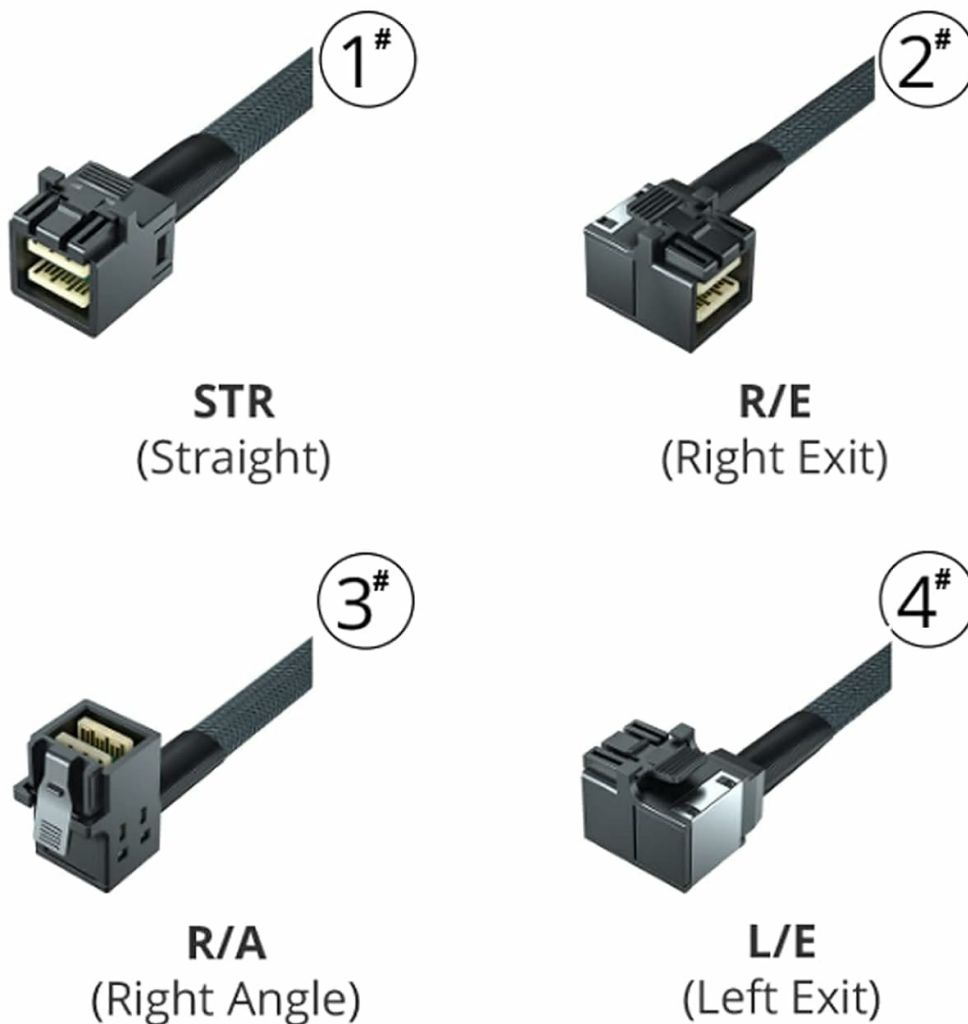
Figure 2: SFF-8643 Connector and Slot.

Figure 3: Typical Application of SFF-8643 Cable.

5. Operating Instructions

Once installed, the 10Gtek SFF-8643 cable operates automatically to facilitate data transfer between connected devices. Ensure that all connected devices (RAID card, NVMe backplane, SATA drives) are powered on and configured correctly according to their respective manuals.

- **Data Transfer:** The cable supports high-speed data transfer up to 12 Gbps. Actual speeds may vary based on the capabilities of your connected hardware.
- **Hot-Swap Compatibility:** The sideband signals enable hot-swapping capabilities for compatible devices, allowing drives to be added or removed without powering down the system.
- **System Recognition:** After installation, your operating system or RAID controller utility should detect the connected drives. Refer to your system's documentation for drive configuration and management.

6. Maintenance

To ensure the longevity and optimal performance of your 10Gtek Mini SAS HD cable, follow these maintenance guidelines:

- **Handle with Care:** Avoid bending or twisting the cable excessively, especially near the connectors, as

this can damage internal wiring.

- **Keep Clean:** Ensure connectors are free from dust and debris. Use compressed air or a soft, dry cloth if cleaning is necessary.
- **Secure Connections:** Periodically check that all cable connections are secure and latched properly.
- **Environmental Conditions:** Operate the cable within recommended environmental conditions (e.g., temperature, humidity) as specified by your system's manufacturer.

7. Troubleshooting

If you encounter issues with your 10Gtek Mini SAS HD cable, consider the following troubleshooting steps:

- **No Drive Detection:**

  - Verify that the cable is securely connected at both ends.
  - Ensure the RAID controller/HBA is properly installed and its drivers are up to date.
  - Check the power connections to your storage devices.
  - Test with a different cable if available to rule out cable failure.

- **Slow Data Transfer:**

  - Confirm that all components (controller, drives) support the desired data transfer speed (e.g., 12 Gbps).
  - Check for any system bottlenecks or background processes consuming resources.
  - Ensure the cable is not excessively long for your setup, which can sometimes impact signal integrity.

- **Intermittent Connectivity:**

  - Inspect connectors for any physical damage or bent pins.
  - Ensure proper grounding of your system components.
  - Minimize sources of electromagnetic interference in the vicinity of the cable.

8. Product Videos

The following videos provide additional information and visual guidance related to 10Gtek Mini SAS products:

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Video 1: Overview of Mini SAS 8643 cables by 10Gtek.

Your browser does not support the video tag.

Video 2: General overview of 10Gtek products and solutions.

9. Warranty Information

This product typically comes with a manufacturer's warranty. For specific details regarding the warranty period, coverage, and claims process, please refer to the official 10Gtek product page or contact 10Gtek customer support directly. Keep your proof of purchase for warranty purposes.
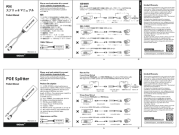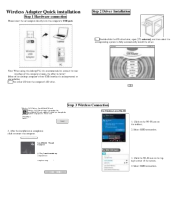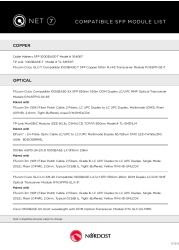
10. Support

For further assistance, technical support, or inquiries about the 10Gtek SFF-8643 to SFF-8643 12G Internal

Mini SAS HD Cable, please visit the official 10Gtek website or contact their customer service department. You can often find FAQs, driver downloads, and additional resources on their support pages.

Thank you for choosing 10Gtek.

Related Documents - BC32580

	[10Gtek PoE Splitter Product Manual](#) A product manual for the 10Gtek PoE Splitter (PB21-02(v1.0)), detailing its specifications, correct and incorrect usage methods, and limited warranty information. It explains how the device splits PoE signals into 12VDC power and Ethernet data for non-PoE devices.
	[10Gtek WD-4503AC Wireless USB Adapter Quick Installation Guide](#) Comprehensive quick installation guide for the 10Gtek WD-4503AC Wireless USB Adapter. Covers hardware connection, driver installation, wireless connection setup for Windows and macOS, and FCC compliance information.
	[10Gtek HDMI over Optical Fiber Extender CON-HDMI-TV/DV Datasheet](#) Detailed specifications, features, applications, and pin descriptions for the 10Gtek CON-HDMI-TV and CON-HDMI-DV HDMI over Optical Fiber Extenders, supporting up to 4Kx2K resolution and long-distance transmission.
	[NET 7 Compatible SFP Module List](#) A comprehensive list of compatible SFP modules, including copper and optical transceivers, from various manufacturers like Cisco, TP-Link, FS.com, and more, along with compatible fiber optic cables.