User's Manual

HFS5T/HFS8T

5/8-Port 10/100M
Fast Ethernet Mini Switch

[NETWORKING IN THE FAST LANE!]

FCC Warning

This equipment has been tested and found to comply with the regulations for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

VCCI Mark Warning

注意
　この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準
に基づく第一種情報技術装置です。この装置を家庭環境で使用すると電波妨
害を引き起こすことがあります。この場合には使用者が適切な対策を講ずる
よう要求されることがあります。

LIMITED WARRANTY

Hawking Technology guarantees that every HFS5T/HFS8T Switch is free from physical defects in material and workmanship under normal use for two (2) years from the date of purchase. If the product proves defective during this two-year warranty period, call Hawking Customer Service in order to obtain a Return Authorization number. The warranty is for repair or replacement only. Hawking Technology does not issue any refunds. BE SURE TO HAVE YOUR PROOF OF PURCHASE. RETURN REQUESTS CANNOT BE PROCESSED WITHOUT PROOF OF PURCHASE. When returning a product, mark the Return Authorization number clearly on the outside of the package and include your original proof of purchase.

IN NO EVENT SHALL HAWKING TECHNOLOGY'S LIABILTY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, ITS ACCOMPANYING SOFTWARE OR ITS DOCUMENTATION. Hawking Technology makes no warranty or representation, expressed, implied or statutory, with respect to its products or the contents or use of this documentation and all accompanying software, and specifically disclaims its quality, performance, merchantability, or fitness for any particular purpose. Hawking Technology reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity. Please direct all inquiries to: techsupport@hawkingtech.com.

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HFS16T 16-Port 10/100M Rack Mount Switch

The Hawking HFS5T/HFS8T 5/8-Port 10/100M Fast Ethernet Mini Switch is designed for easy installation and high performance. The switch provides you with a flexible, reliable, and affordable solution for your Ethernet network, and includes five/eight independent 10Base-T/100Base-TX ports. Each port delivers up to 200Mbps throughput and can operate in either half or full-duplex modes.

The HFS5T/HFS8T features an N-way auto-negotiation (or auto-sense) function (refer to the chapter titled, "N-way Process"), which automatically adjusts the device for optimum operation, thus letting you easily migrate your 10Mbps Ethernet to 100Mbps Fast Ethernet. "Store-and-Forward" architecture filters eliminate error packets and improve efficiency. The switch also utilizes auto-MDI/MDIX technology, which enables you to use either standard Ethernet cables or crossover Ethernet cables to connect with other devices.

With its compact size, the HFS5T/HFS8T is ideal for small to middle-sized workgroups, and use with multiple, high-speed servers to share bandwidth within 10Mbps or 100Mbps Ethernet environments. With maximum throughput of 200Mbps, any port can be used to provide workstations with a congestion-free data pipe for simultaneous access to the server. In addition, the switch can be expanded by cascading two or more switches together. The switch can be cascaded from any port and to any number of switches.

The Plug and Play HFS5T/HFS8T is powerful and reliable, and can run your high-end video, graphic, real-time gaming, multimedia, database, and mission-critical applications with ease.

- **HFS5T**: (5) 10/100M auto-negotiation, auto-MDI/MDIX Ethernet ports;
  HFS8T: (8) 10/100M auto-negotiation, auto-MDI/MDIX Ethernet ports
- Complies with IEEE 802.3 10Base-T and IEEE 802.3u 100Base-TX standards
- Supports IEEE 802.3x flow control for full duplex operation
- Supports back pressure for half duplex operation
- Supports store-and-forward architecture and performs forwarding and filtering at non-blocking full wire-speed
- Supports "Link" and "Activity" LED modes with "Power" (on) auto diagnostic
- Supports 1K entry MAC address table
- Physical layer port polarity detection and correction function
- EMI certifications: FCC Class B, CE mark Class B, VCCI-B

Package Contents

HFS5T/HFS8T 5/8-Port 10/100M Fast Ethernet Mini Switch

The complete **HFS5T** package consists of:

- One HFS5T 5-Port 10/100M Fast Ethernet Mini Switch
- One external power adapter
- One user's manual

The complete **HFS8T** package consists of:

- One HFS8T 8-Port 10/100M Fast Ethernet Mini Switch
- One external power adapter
- One user's manual

Check to make sure that the unit was not damaged during shipping and that no items are missing. If you encounter a problem, please contact your dealer.

Please read this user's manual thoroughly, and follow the installation and operation procedures in the following pages.

Hardware Description
HFS5T/HFS8T 5/8-Port 10/100M Fast Ethernet Mini Switch

This chapter provides a description of the top panels, rear and side panels, and LED indicators of the HFS5T and HFS8T switches.

HFS5T

Top Panel

The top panel includes:

- Five "Link/Activity" LED indicators that correspond to the switch's five RJ-45 Ethernet ports.
- One additional "Power" (on) LED indicator.

Rear Panel and Side Panels

The rear panel includes (5) 10/100M auto-negotiation, auto-MDI/MDIX RJ-45 Ethernet ports. The left side panel includes the power port for connecting the AC power adapter. Please be sure to only use the power adapter that is included in the package.
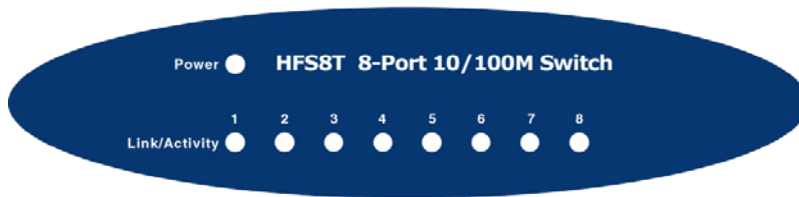
LED Indicators

The LED indicators will help you monitor the status of each port and connected segment. The functions of the LED indicators are described below.

LED Indicators	Description
Power	The indicator is lit green when the power is on. Otherwise, it remains unlit.
Link/Activity	These LEDs are lit when there is a connection (or link) to the desired port. The LEDs blink whenever reception or transmission (i.e., Activity) of data is taking place.

Hardware Description
HFS5T/HFS8T 5/8-Port 10/100M Fast Ethernet Mini Switch

HFS8T

Top Panel

The top panel includes:

- Eight "Link/Activity" LED indicators that correspond to the switch's eight RJ-45 Ethernet ports.
- One additional "Power" (on) LED indicator.

Rear Panel and Side Panels

The rear panel includes (8) 10/100M auto-negotiation, auto-MDI/MDIX RJ-45 Ethernet ports. The left side panel includes the power port for connecting the AC power adapter. Please be sure to only use the power adapter that is included in the package.

LED Indicators

The LED indicators will help you monitor the status of each port and connected segment. The functions of the LED indicators are described below.

LED Indicators	Description
Power	The indicator is lit green when the power is on. Otherwise, it remains unlit.
Link/Activity	These LEDs are lit when there is a connection (or link) to the desired port. The LEDs blink whenever reception or transmission (i.e., Activity) of data is taking place.

Hardware Installation
HFS5T/HFS8T 5/8-Port 10/100M Fast Ethernet Mini Switch

The HFS5T/HFS8T is a Plug and Play network device and does not require any special setup procedures. Connect the power cord and cables correctly, and the unit is ready for use.

Switch Installation

1. Place the switch in an appropriate location. When placing the switch, two items need to be considered:
   - Convenient location: The switch should be placed in a location that is central to your home or office space and allows all computers and networked devices to be connected to the switch.
   - Power: The switch must be placed in a location that is accessible to a nearby electrical outlet.
2. Power on the switch by connecting the power cord.
3. Make sure that the "Power" LED is lit. If the "Power" LED does not light up, check the power cord to ensure that it is properly connected to the power outlet. If the "Power" LED still remains unlit, please contact your dealer for support.

Ethernet Port Connections

Connect user machines, servers, additional switches, hubs, or other appropriate devices to the Ethernet ports on the switch with either standard or crossover Ethernet cables.

Make sure that the corresponding LEDs are working properly. (See previous chapter for description.)

Note: Make sure that there is proper heat dissipation from and adequate ventilation around the switch.

N-way Process
HFS5T/HFS8T 5/8-Port 10/100M Fast Ethernet Mini Switch

"Auto-negotiation" (N-way) mode automatically sets the best possible bandwidth (10Mbps, 100Mbps) when a connection is established with another network device.

Auto-negotiation (or auto-sense) functions are determined by these set data-transfer rate priorities:

1. 100Base-TX Full Duplex (200 Mbps)
2. 100Base-TX Half Duplex (100Mbps)
3. 10Base-T Full Duplex (20Mbps)
4. 10Base-T Half Duplex (10Mbps)

Each port with N-way capability supports half/full duplex functions.

Standards	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3x Flow Control		
Protocol	CSMA/CD		
Ports	**HFS5T**: (5) 10/100Mbps RJ-45 Ports (support auto-MDI/MDIX) **HFS8T**: (8) 10/100Mbps RJ-45 Ports (support auto-MDI/MDIX)		
Switching Scheme	Store-and-Forward		
Flow Control	Full Duplex: IEEE 802.3x Half Duplex: Back Pressure		
Cabling Type	Ethernet: UTP Category 3 or better, EIA/TIA-568 100-ohm screened twisted-pair (STP) Fast Ethernet: UTP Category 5, EIA/TIA-568 100-ohm screened twisted-pair (STP)		
MAC Address	1K		
LED Indicators	Power	Green	Power on
	Link / Activity	Green	Lit for successful connection, flashing for activity
Physical Dimension	125 x 69 x 30 (mm) (Width x Depth x Height) 4.92 x 2.72 x 1.18 (inches) (W x D x H)		
Power Adapter	7.5VDC/1A		
Power Consumption	HFS5T: 2.5W (max.) HFS8T: 2.8W (max.)		
Agency and Regulatory	FCC Class B, CE mark Class B, VCCI-B		
Operating Temperature	0° - 40°C		
Operating Humidity	10%-90% non-condensing		

P/N: 1907MSW105+5590