

EH-2400
Ethernet Hub User's Manual

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FCC WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

TRADEMARKS

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Revision

The information in this manual is subject to change without notice.

User's manual for PLANET Ethernet Hub :

EH-2400

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CHAPTER 1

INTRODUCTION

Product Introduction

EH-2400 is a standard Ethernet concentrator that retimes and re-transmits the signal to each network station on the LAN. It simplifies the implementation of twisted-pair Ethernet compatible networks following the IEEE 802.3 10Base-2/5/T CSMA/CD standard. Each Hub has twenty-four modular RJ-45 STP ports and one BNC port . one AUI port for attaching network devices (file server, bridge, and workstations) or additional concentrators.

Product Features

EH-2400 provides all the functions necessary to support the requirements of Ethernet networks. These function includes the following features:

- ❑ 24-port STP RJ-45 connector and one port BNC, one port AUI.
- ❑ Manchester decoder for clock and data recovery
- ❑ Automatic preamble regeneration to compensate for any bit loss
- ❑ Lockup and auto-partition for jabber to isolate network failures
- ❑ Built-in Micro processor detects the utilization of the hub
- ❑ 19-inch Rack-Mount for industrial standard
- ❑ Auto-Polarity correction
- ❑ Automatic address generation to disable transmission to the active port
- ❑ LEDs for Power, Link, TX/RX, partition, Collision, and Utilization

Unpacking the Hub

Carefully unpack the package and check its contents against the checklist given below.

Checklist of EH-2400 10Base-2/5/T Hub

- 24-port 10BASE-2/5/T Ethernet Hub
- Power Cord
- User's Manual

Please inform your dealer immediately for any wrong, missing, or damaged part if possible, retain the carton including the original packing materials, and use them against to repack the product in case there is a need to return it to us for repair.

CHAPTER 2

GENERAL DESCRIPTION

Front Panel of EH-2400

On the front panel of EH-2400, there are Power, Collision, Jabber, utilization LEDs. For each RJ-45 STP port, there are two LED indicators - TX/RX LED and Partition LEDs. These LEDs help in diagnosing line troubles and indicate the status of data transmission.

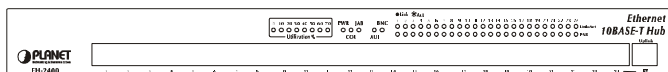


Figure 2-1 Front Panel of EH-2400

LED indicator

LEDs	Status	Description
Power	Steady Green	Indicates hub is power on
Collision	Blinking Orange	Blinks when network collision are detected
Jabber	Blinking Red	Blinks when network jabbers are detected
TX/RX	Steady Green Blinking Green	Indicates Link integrity pulses are being received Blinks when data is received or transmitting

LEDs	Status	Description
AUI	Blinking Green	Blinks when data is receiving / transmitting
BNC	Blinking Green	Blinks when data is receiving / transmitting
Utilization	Steady Green Yellow Amber Red	Utilization levels change from 5% to 70% as network level changes

Rear Panel of EH-2400

As shown in Figure 2-2

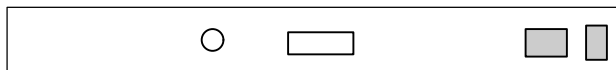


Figure 2-2 Rear Panel of EH-2400

One Power switch, power connector and one BNC, AUI connector for 10Base-2 and 10Base-5 network.

CHAPTER 3

INSTALLATION

Getting Ready to Install the EH-2400

Power Requirement

EH-2400 is designed with full range power supply. Make sure you power is in the range 90to 260VAC at 50 to 60 Hz. This device require 15 Watts for operation and 10 Watts for stand-by.

Prepare to Install EH-2400

EH-2400 support 24-port 10Base-T, one port BNC, and one port AUI connection. Extra UpLink port for hub cascade. Each port is printed with its port number on the location.

STP port and STP/UTP Cable

Connect port 1 to port 24 with non cross-over cable to any LAN cards. If connect to a hub through port 1 to port 24, a cross-over cable is required. Users can use a non cross-over cable to cascade to another hub through “UpLink port”. Users should use **ONLY ONE** of these two port at the same time. Plug two twisted-pair cable to these two ports will cause this hub malfunction.

The STP/UTP cable should be 22, 24, or 26 AWG with a minimum of one twist per foot. 24 AWG is recommended. The cable should have a nominal impedance of 100 ohms at 10 MHz, a maximum segment loss of 11.5 dB between 5 and 10 MHz, and a maximum end-to-end propagation delay of 1 microsecond. You can use a STP/UTP cable that complies with AT&T's Premises Distribution System (PDS) wiring standard.

BNC port and Coaxial Thin Cable

EH-2400's thin coaxial port can be connected to either a computer or another hub. In order to user the thin coaxial port, you will need one thin coaxial cable, two 50-ohm terminators and T-connectors.

Thin coaxial cable is a 50-ohm coaxial cable with a copper or tinned center conductor, solid inner dielectric (insulating material), and braided wire (not foil) shielding. It can be an RG-58, RG-58/A, RG-58/U, or RG-58A/U cable.

AUI port

The AUI port of EH-2400, beside the feature of BNC port, can be connected to external transceivers, like AUI to BNC, AUI to TP, or AUI to fiber-optic transceiver, and then connected to a computer, a hub or another repeater.

EH-2400 Installation

Follow the instructions below to set up EH-2400.

- Step 1.** Select a suitable place to put the hub or to install. Make sure there is an AC outlet nearby.
- Step 2.** Power off all of the computers, hubs, or other devices that will be connected to the hub.
- Step 3.** Connect the power cord to the hub and AC outlet on the wall.
- Step 4.** Power on the Power switch on the rear panel. The power LED should light up.
- Step 5.** Connect all the cables and connectors.

Connecting the Hub to AC Power

After making network connections as described in the preceding sections, you are ready to plug the hub in and turn it on.

The input voltage is from 90 to 240 volts AC and any frequency from 50 to 60 hertz. Adjustment to the power source is automatic; there is no switch to set.

Before plugging the hub in, make sure the power cord

- (1) is long enough to reach an AC wall outlet of an approved type,
- (2) has plugs that match both the hub's power inlet and the type of wall outlet you will use, and
- (3) Conforms to safety regulations in your area.

In most parts of the world you must use a three-conductor power cord with an integral three-prong grounding plug.

If the supplied power cord does not meet all three requirements given above, contact your computer equipment dealer and obtain one that does. Do not use an extension cord or multi-socket adapter; do not attempt to use a cord designed for any other kind of power inlet or wall outlet; do not use a cord that fails to meet safety standards in your part of the world.

Power Failure

To prevent costly equipment damage and downtime, please consider installing a surge suppression device or a UPS (un-interrupted power supply).

CHAPTER 4

TROUBLESHOOTING

SYMPTOM: The power LED is not lit.

SOLUTION:

If the power LED is not lit after the power cord is plugged into the concentrator and the power outlet, there may be a power fault.

1. First verify if there is power at the power outlet by plugging in a device which is known to operate.
2. If a volt meter is available, measure the voltage on the power outlet.
3. If a volt meter is not available and the second power adapter does not fix the problem, contact the authorized dealer from whom you purchased your concentrator for assistance.

SYMPTOM: The Link LED is not lit.

SOLUTION:

The Link LED is not on after a workstation is connected to the STP port of the concentrator.

1. Verify if the workstation and the concentrator are powered up.
2. Verify if the network cable has been attached to the workstation.
3. Verify if the network cable from the Hub to workstation is straight-through and is not cross-over.
4. Verify if the wires to the phone jack pins are connected correctly and the connections are not faulty.

SYMPTOM: When port auto-partitioned out.

SOLUTION:

1. Use another Ethernet adapter to verify if the original Ethernet adapter malfunctions.
2. Connect the twisted-pair cable to another concentrator to verify if the twisted-pair cable can work well.

CHAPTER 5

PRODUCT SPECIFICATION

Standard	: Ethernet 10Base-2/5/T
Compliance	
Media Supported	: Category-3/4/5 STP/UTP cable Thick Cable RG-58 coaxial cable
Interface	: 24-port 10Base-T STP port 1-port 10Base-T UpLink port 1-port AUI port 1-port BNC port
LEDs	: 1-Power, collision, Jabber LED 8-Utilization LEDs 24-TX/RX LEDs 24-Partition LEDs
Power System	: 90~260 VAC, 50~60Hz
Power Consumption	: 15W maximum, 10W typical
Dimension	: 430 x 133 x 44.5 mm
Weight	: 1.5 Kg
Temperature	: 0~55 degree C (Operation) -10~70 degree C (Storage)
Humidity	: 10%~85% (Operation) 5 %~ 90% (Storage)

EM-2400V2

