
8 Port Switching Hub with feeding power function

HPS-108 (HPS-2109C)

Users Manual

November, 2004

| |
|---|
| Please often read, and keep the manual. |
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|--|
| <ul style="list-style-type: none">• Please often read the explanation on safety before using this product and understand enough.• Please keep this manual in a nearby place to refer at any time. |
|--|
-

Introduction

Thank you indeed for purchasing switching hub HPS-108 with eight Port feeding power function for this time.

Please read this book well before it uses it. Moreover, it might help you later, and keep it, please after it reads.

This book describes a necessary function explanation and operation method for correctly using this product.

About the electric wave trouble self-imposed restraint like the information processing equipment etc.

This device is class A information technological device based on the standard of electric wave trouble self-imposed restraint conference (VCCI) like the information processing equipment etc.

When this device is used by home environments, electromagnetic interference might be caused.

It is likely to be demanded in this case so that the user may lecture on appropriate measures.

Attention when exporting

Please take a necessary procedure for the Japanese national administration prefecture to apply the export permission when you take it out of Japan.

This product is a Japanese specification, and it doesn't conform to the standard etc. of the foreign country.

When this product is used out of Japan, our company cannot assume the responsibility at all.

Moreover, neither the maintenance service nor TECHNICAL SUPPORT, etc. in the concerning foreign countries go to this product in our company.

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1 To handle it safely

 Common notes concerning safety

Please often read the explanation on the safety described as follows, and understand enough.

- The operation must instruct in this book, and follow the procedure.
- Please defend notes displayed in this product and this book. When this is neglected, injury, the equipment on personal or the damage of the device might be caused.
- Please do neither operation nor operation other than being described in this book.
- Please buy and contact me previously when there are some problems about the content that has been described in this product and this book.
- It is still thought that the situation that exceeds the forecast happens though notes displayed in this product and this book are the one examined enough. Not only obey instructions but also even oneself always must be careful when it works.
- Notes concerning safety are shown by finding shown below. This is the one that the headword "Warn" and "Attention" was combined with the attention symbol.









 **Warn: This ..potential.. by might cause a death or important injury is used to show the existence of Kiken.**

 **Attention: This ..potential.. by might cause serious damage of a comparatively slight injury or device is used to show the existence of Kiken.**

This attention symbol is used to show that the matter that is used with the headword etc. , and described there is safely concerning, and to make it pay attention.






1-1 of me, especially would like you to note it. (absolute prohibited matter)

1-1-1 warning

- (1)  When warning abnormal, it doesn't use it.
Smoke has risen by any chance, it smells strange, and when abnormality such as hearing a strange sound is found, doesn't continue using. It causes a fire and the electric shock. Please pull out the power supply code from the outlet at once.
Please confirm smoke doesn't rise, buy, and contact me previously. It is dangerous, and stop the repair by the customer absolutely, please.
- (2)  The warning remodeling is not done.
Please do not remodel this product. It causes a fire, the electric shock, and the breakdown. There are no parts that takes off and and the customer change.
- (3) The warning power supply code is not damaged.
 Please do not damage, do not damage, process, and torture the power supply code. The heavy one is put, heated or is pulled, and moreover, the power supply code is damaged, and it causes a fire and the electric shock.
- (4) It doesn't wet it to the warning water.
 Please pull out the power plug from the outlet when water etc. enter by any chance in the equipment. It causes a fire and the electric shock when using it as it is.
- (5) The warning plug is firmly inserted.
Please insert the power plug up to the root firmly. Moreover, please do not use the shaking outlet so that it to be easy become a loose connection. It causes a fire and the electric shock.

- (6) The warning plug is cleaned.
Please confirm dust doesn't adhere, and insert the power plug in the outlet. When dust adheres, it causes a fire and the electric shock.
- (7)  Warning doesn't touch the plug by a wet hand.
Please do not touch the power plug by a wet hand. It causes the electric shock.
- (8)  It doesn't connect it with a power supply outside the warning specification.
 Please do not use it excluding displayed power supply and voltage. It causes a fire and the electric shock.






1-1-2 attention

- (1)  The attention foreign body is not put.
Please do not insert, and do not drop the foreign body like metals and the combustible one, etc. from the vent etc. of this product internally. There is fear of a fire and the electric shock. Please pull out from the outlet, buy the power supply code, and contact me previously when the foreign body enters this device by any chance.
- (2)  The attention ventilation is not disturbed.
The vent is used to prevent an internal rise in heat. Please do not close the vent by putting on the place where ventilation is bad, putting the thing, and leaning it. When an internal temperature rises, it causes a fire and the breakdown.
- (3)  It doesn't set it up in an unstable place to note.
Please do not put it on an unstable place like on the shaking stand and the inclining place, etc. It causes the injury by falling, and falling.
- (4)  The attention thing is not put.
Please do not put the container etc. where the vase, the flower pot, the glass, the medicine, and water entered on this product. It causes a fire, the electric shock, and the breakdown when it spills or it enters the inside. Moreover, it causes the injury by the balance's collapsing, and falling.
- (5)  Impossible power to note is not added.
Please do not add impossible power to the connector, and touch by the metal. Impossible power might be added, and serious damage be given.

2 Other notes

A proper environment and handling are necessary to patronize it long without ruining the function of this product.

- (1) The pulling out opening of the attention plug has the plug.
Please take the power plug when the power supply code is inserted in the outlet, and it pulls it out and. When the code part is pulled, it causes the disconnection.
- (2)  It doesn't put it on the place where the attention environment is bad.
Please neither keeping nor use it in moisture and a dusty place. Moreover, please do not put it on the place where lamp soot and corroded gas are generated and the place where the vibration is consecutive. It causes the breakdown.
- (3)  It doesn't put it on the place where the attention environment is bad.
Please avoid and set up the place where direct sunshine strikes and the place that becomes a high temperature near the heat apparatus like the stove etc. The longevity of the device is shortened, and it causes the breakdown.
- (4)  When attention is not used, the power supply is pulled out.
Please pull out the power supply code from the outlet for safety when you do not use it for a long term.



3 Feature of product

3-1 Outline of functions

- It equips it with the 10BASE-T/100BASE-TX. nine Ports
- It corresponds to all Ports Auto Negotiation.
- Port 1-8 corresponds to Auto-MDI/MDI-X. (The Uplink Port is fixed MDI.)
- The data-transfer velocity is 14880 per Port pps (wire speed corresponding of 100% of 10Mbps) and 148800 Pps. (wire speed corresponding of 100% of 100Mbps)
- It corresponds to the flow control by Back Pressure (half duplex) and IEEE802.3x (Full-duplex).
- Port 1-8 corresponds to feeding power by the IEEE802.3af method. (The feeding power pair wiring is a spare pair.)
- 15.4W or less per Port and feeding power abilities for each device of 74W
- Store & forward switching method
- 4K MAC address table)(with automatic learning function and the Aging function
- 256KB Packet Buffer
- The Port Base VLAN is supported.
- The Port trunking function is supported.
- The Port Mirroring function is supported.
- Setting and ..RS-232C DCE Port (console Port).. management of product
- Maintenance and management by command line
- Login management by password

4 Setup

Confirmation of 4-1 bundle content

Please confirm the contents opening the packing box and carefully. The following are included.

- Main body of HPS-108 : One
- AC power supply code : One
- Length putting stand : 4 pieces
- Length putting stand installation screw : Two
(bind M3X6)
- Manual(this manual) : One
- Written guarantee : One

Please use bundled a power supply code for the connection of this product and < attention > power supply. Moreover, please do not divert bundled a power supply code to other products except this product.

4-2 equipment installation procedure

About 4-2-1 installation place

There is not ruining the function of this product, and a proper environment and handling are necessary to patronize it long. In this connection, please shorten the longevity of the device and it causes the breakdown and avoid setting it up in the following places.

Place where direct sunshine strikes----- Window side

Place where change at each Onshime is extreme----- Near air conditioning equipment

Near equipment generating electrical noise----- Motor

Near equipment generating strong electric field----- Please do not bring the magnet etc. close.

Garbage and dusty place

Place where a lot of vibrations exist

The installation side should be able to support the load of 3.0kg even if the lowest.

Appropriate heat radiation from this product can be done, and enough ventilation must be performed.

Putting installation 4-2-2 flat

Please open enough space) to close neither the fan in this back of the product nor the vent of the side for ventilation when you set it up ..appropriate.. ..space (...

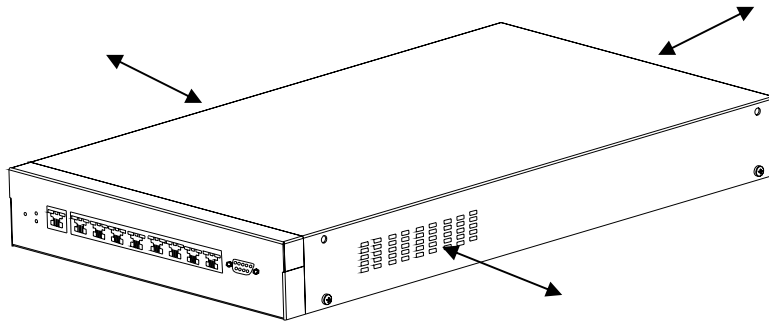
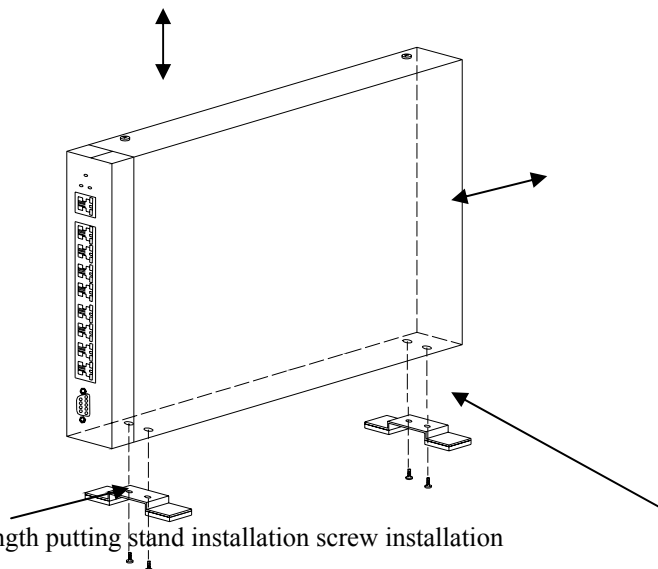


Figure 4-1

Putting installation of 4-2-3 length

Attached [length putting stand] is installed in a left side of this product by [length putting stand installation screw] when setting it up in on the desk and the shelf by putting length. (Please refer to the following illustrations for the installation method.)

An appropriate space for ventilation is made between this product and the surrounding environment at this installation.



Stand for putting length of length putting stand installation screw installation

Figure 4-2

Please install in the rack of a fixed shelf for the rack when it installs it in < attention > rack, and earthquake-proof set it up by a fixed band etc.

Please use the screw of the detaching appended goods of the installed screw (2)(2) for this product together with the use of < attention > length putting stand.

Installation of 4-2-4 power supply code

The power supply code of this product is done and is done to the outlet.

Please do ..steady.. to a prescribed outlet the plug of the power supply code.

The outlet must use the one with the earth.

4-2-5 power supply turning on and stop

Because this product doesn't have the power on/off switch, the power supply is supplied at once when is done to the Inlet, and POWER LED of the front panel lights the power plug.

Please pull out the power supply code once when POWER LED doesn't light, and confirm whether AC100V is supplied at the connection and the power supply outlet of the power supply code.

Please pull out the power supply code at once, and contact the shop or the sales origin of buying when lighting the LED is amusing though there is no problem in the connection.

After inserting the power supply code, this product enters an initial state and does the onboard software loading and the self-diagnosis. (15 ..brezing.. seconds)

When this product is stopped, the plug of the power supply code is removed from the power supply outlet.

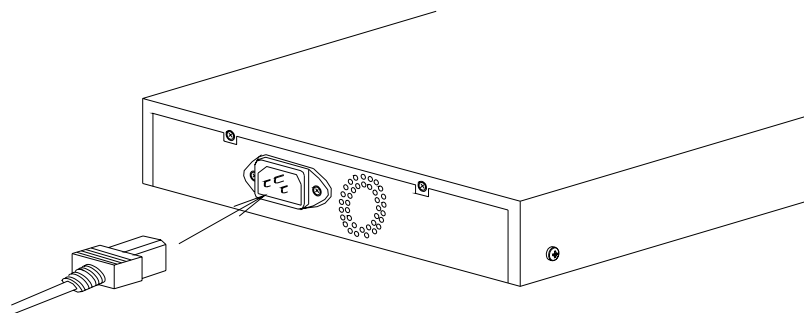


Figure 4-3

It is not abnormal in the product initial though lights or might blink temporary each Port LED (left).

5 Name of each part

In this section, it explains the front panel, the back panel, and the LED display of this product.

5-1 front side

Only it is for the communication Port (Port 1-8) with Power LED, Fan Alarm LED, PoE ERR LED, the console Port, and the PoE feeding power function and the Uplink Port and there is one Port (Port 9) without the PoE feeding power function in front of this product.

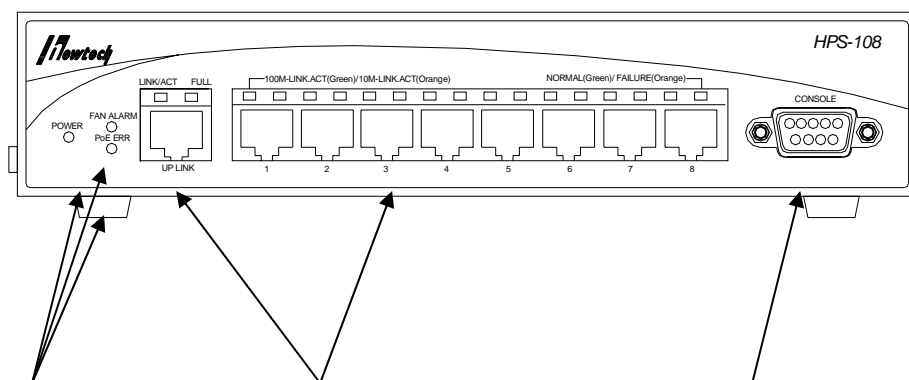


Figure 5-1

Each LED: The state of this product and the network is displayed (Please refer to the following [LED display]).

The communication Port: It is equipped with nine Ports of Port 1-8 and the Uplink Port, and each Port is 10/100. It is possible to connect it with the end station, the server, and the hub, etc. with Mbps. 1-8 Ports except the Uplink Port correspond to the Auto-MDI/X function and the PoE feeding power function corresponding to all Ports Auto Negotiation. (The Uplink Port is MDI fixation.)

The console Port: It is Port used when the setting and the management of this product are done from PC that uses VT-100 interchangeable terminal or usual Tarminalmirataprogram.

5-2 backs

The back of this product includes the connector and FAN, etc. for the AC power supply.

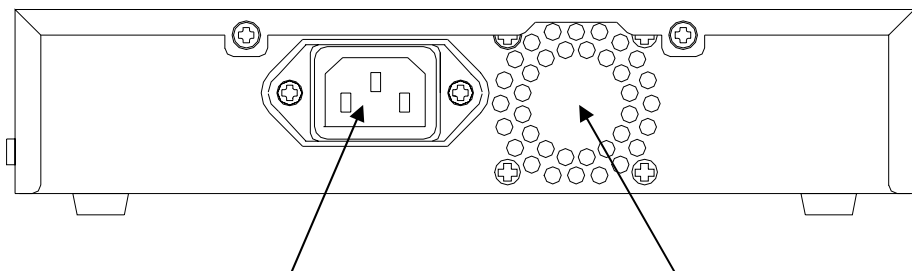


Figure 5-2

The AC Inlet: The surgical knife side plug of an attached power supply cord is connected with the AC Inlet, and the other side is inserted in the power supply outlet. The input voltage is 100/120/240 VAC and 50-60 Hz.

FAN: FAN is used for the heat radiation of this product. The vent is not prepared on both sides of this product, and do not interrupt those holes, please. Moreover, it is necessary to secure an enough space for this back of the product and the side side for an appropriate exhaust. Please note that the system might overheat and the system failure be caused when you cannot secure appropriate heat radiation and the air circulation.

5-3 LED display

It explains the LED display of this product.

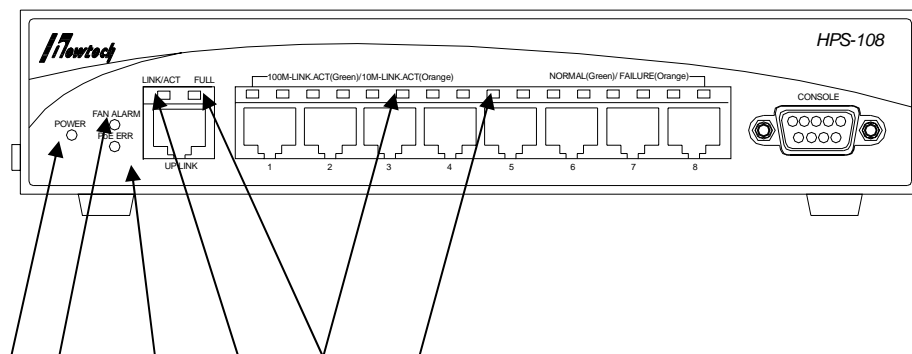


Figure 5-3

| Name | State | Specification |
|---|------------------------|---|
| POWER | Turning off | This product has stopped. (power supply OFF) |
| | Green blinking | This product is an initial inside. |
| | Green lighting | This product operates. (power supply ON) |
| Fan Alarm | Turning off | It is operating normally. |
| | Bitter orange lighting | The FAN operation is abnormal. |
| PoE ERR | Red turning off | The PoE operation is normal. |
| | Red lighting | It is a state of the PoE function power management. |
| LED for communication Port(left) (Port 1-8 and Uplink Port) | Green lighting | It is linking by 100M. |
| | Bitter orange lighting | It is linking by 10M. |
| | Turning off | It is link unestablishment. |
| | Green blinking | It is communicating by 100M. |
| | Bitter orange blinking | It is communicating by 10M. |
| LED for feeding power(right) (Port 1-8) | Green lighting | It is feeding power normally. |
| | Bitter orange lighting | It is Overcurrent or Undercurrent. |
| | Turning off | It is a feeding power halt condition. |
| LED for communication Port(right) (Uplink Port) | Green lighting | It is linking with Full Duplex. |
| | Turning off | It is linking with Half Duplex. |

6 Connection with equipment

This section explains the method of connecting this product.

Connection with 6-1 terminals

In the terminal, it is 10/100 PC, wireless LAN access point, the VoIP telephone, and the router, etc. equipped with the Mbps RJ-45 LAN connector are included.

The terminal and this product are connected by using UTP straight cable of category 3/4/5. Connected Port can be connected with the arbitrariness of Port 1-8 and the Uplink Port.

If the Port setting when the terminal is connected is done to [Auto] by using < attention > Port 1-8, the crossing cable can be used.

Please use the crossing cable when connecting it with other network equipment because < attention > Uplink Port is MDI fixation.

It is not possible to feed power the terminal for the PoE feeding power even if it connects it because < attention > Uplink Port doesn't provide the PoE feeding power function.

Connection with network equipment of 6-2 but not limited tos

In other network equipment, it is 10/100 Hub and 2/3 layer switches, etc. equipped with the Mbps RJ-45 LAN connector are included.

Other network equipment and this products are connected by using UTP straight cable of category 3/4/5. Connected Port can be connected with the arbitrariness of Port 1-8 and the Uplink Port.

If the Port setting when the network equipment is connected is done to [Auto] by using < attention > Port 1-8, the crossing cable can be used.

equipment

Cable of which 6-3 use

A straight cable or the crossing cable of the following pin assign is necessary for the UTP cable used for the connection with this product, the terminal or other network equipment.

| Pin assign of straight cable | Pin assign of crossing cable |
|------------------------------|------------------------------|
| 1pin-1pin | 1pin-3pin |
| 2pin-2pin | 2pin-6pin |
| 3pin-3pin | 3pin-1pin |
| 4pin-4pin | 4pin-4pin |
| 5pin-5pin | 5pin-5pin |
| 6pin-6pin | 6pin-2pin |
| 7pin-7pin | 7pin-7pin |
| 8pin-8pin | 8pin-8pin |

The cable use for the pin assign other than < attention > above-mentioned causes the switch breakdown and never do.

Please use the UTP cable of five or more by the category when < attention > communicating by the 100BASE-TX. We will recommend the category to use all UTP cables of five or more to avoid confusing when communicating by the 10BASE-T though the UTP cable of category 3/4/5 can be used.

7Function of this product

7-1 switch function

7-1-1 packet forwarding

This product writes the relation of the Port or the gateway router where destination MAC and the destination exist in the forwarding table. When the packet is forwarded, this information is used. This comes to reduce the Torahicc crowding on the network. The purpose of it is to send it only to the destination Port without forwarding the packet to all Ports.

When one turned packet is received to the connected terminal, the switch sends the packet to Port 2 Port 1 through Port only 2. At this time, nothing is sent to other Ports. This processing is called "Study" of the network topology.

MAC the Aging time influences the learning process of the switch. The input value of the MAC address table (It is composed of transmission former/destination MAC address and the relating Port number) is deleted from the table when it will not be accessed in this the Aging time.

The Aging time can be set for one million seconds from ten seconds (Default is 300 seconds). The possibility of causing a wrong packet filtering/forwarding rises by using "It is old" dynamic entry so that the renewal of the table may slow at extremely long the Aging time. Oppositely, the possibility of receiving the packet that a transmission former address doesn't exist in the address table rises because a dynamic entry is annulled at once when it is extremely short. In this case, the switch will forward the packet to all Ports, and a lot of advantages the switch original are lost.

[2×T] from the second Operation at the Aging time ..product.. actual varies until the second at time [T]. ([T] It is a value input by the [config aging_time] command.). The actual the Aging time operation will vary between the [30] second and the [60] second when inputting as an example as [30].

7-1-2 VLAN

VLAN(Virtual Local Area Network) is network topology based on the logical construction rather than physical arrangement. VLAN is used to unite sets of LAN segments with autonomous User Group who sees it like one LAN. To forward the packet only between Ports in VLAN, VLAN logically divides the network into a different broadcast domain. (Though the necessity doesn't necessarily exist.)A certain VLAN corresponds to a certain specific subnet usually.

VLAN brings strengthening security by bringing the improvement of the performance by saving bandwidth and limiting Torahicc to a specific area.

VLAN is sets of the end nodes made an a group by logic instead of a physical position. As for the end node to intercommunicate frequently, whether where exist physically on the network them is allocated to same LAN regardless of. A certain VLAN can see one the broadcast domain and 1 by logically saying. Because for broadcast packet to be forwarded only to member of VLAN from which the broadcast is begun

< notes >

The packet cannot exceed different VLAN if there is no network equipment (The example: router) with the routing function between VLAN.

- This product can compose eight Port VLAN a groups or less.
- This product supports asymmetric VLAN. The member Port of VLAN can overlap.
- In this product, the IEEE 802.1Q The VLAN packet penetrates in Port VLAN and is forwarded. At this time, the IEEE 802.1Q tag is not changed at all.

7-1-3 QoS control

This product has two queues of each Port of the high priority and the low priority, and identifies the communication packet to the high priority packet and the low priority packet based on IEEE802.1p priority information or Port priority information. The identified packet is forwarded according to the Weighted Fair Queuing mechanism. The following three kinds of weight values can be selected by the console setting in this product.

High priority valuing

The forwarding processing ..packet in the high priority queue.. is done by 15 packets or it moves to the low priority queue processing when the queue empties. It moves to the high priority queue processing when the forwarding processing ..packet in the low priority queue.. is done by one packet or the queue is empty. This is repeated.

Evenness

It moves to the low priority queue processing when the forwarding processing ..packet in the high priority queue.. is done by one packet or the queue is empty. It moves to the high priority queue processing when the forwarding processing ..packet in the low priority queue.. is done by one packet or the queue is empty. This is repeated.

Low priority Omo

It moves to the low priority queue processing when the forwarding processing ..packet in the high priority queue.. is done by one packet or the queue is empty. The forwarding processing ..packet in the low priority queue.. is done by 15 packets or it moves to the high priority queue processing when the queue empties. This is repeated.

7-1-4 Port Mirroring

This product can copy the Frames that a certain Port (source port) send/receives, and do the copy sent to another Port (target Port). Details concerning the packet that passes the Port can be seen by installing the monitor device such as LAN analyzers in the Port made a mirror. This is useful for the network monitoring and the troubleshooting. This product can set two or more source ports to one target Port at the same time.

The problem in throughput occurs if the Mirroring to a more low-speed Port is done from a Port < attention > high-speed. (For instance, when you try the Mirroring from the Port of 100Mbps to 10Mbps.)The source port is the same speed as the target Port or a more low-speed speed. shouldMoreover, it is necessary to note that the sum total of Torahic doesn't exceed the speed of the target Port when two or more Ports are set as a target Port.

7-1-5 Port trunking

Two or more Ports are made an a group and the Port trunking is used as a link of one. As for bandwidth Mo time single link how manyIt is time when be most widely used the Port trunking connects the backbones of the network equipment (for instance, server etc.) on which bandwidth concentrates and networks.

This product can generate four trunking groups or less by using an arbitrary Port. The Port made a trunk may be not consecutive (The Port number is in a word acceptable one by one). All Ports in the a group are necessary ..making it to the member of same VLAN... In addition, the Port made a trunk is necessary ..making it to the same speed and the entire Full-duplex...

7-2 PoE feeding power

The Port of this product can feed power from 1-8 to connected terminal such as VoIP multi-functioning telephones through the UTP cable.

Pair wiring for feeding power 7-2-1

The pair wiring of the cable used for the PoE feeding power is a method feeding power to the terminal by using the empty pair wiring (4, 5 pins, 7, and eight pins) not used to communicate among the pair wirings of four in the cable for the spare pair method.

7-2-2 PoE feeding power sequence

It is [attestation] this product is whether the terminal is terminal when the terminal is connected with the Port for feeding power. In that case, [PoE feeding power] is begun only for the terminal attested as a terminal that can feed power. HPS-108 corresponds to the PoE attestation by the IEEE802.3af method.

Please connect removing the AC adaptor on the terminal side before this product and the connection when the terminal from which it has already been fed power to the local with the AC adaptor etc. for the PoE feeding power is changed to the PoE feeding power by this product, and not feeding power to the terminal and connect the cable after it confirms it (Do not connect it ..UTP cable of the AC adaptor and the PoE feeding power.. at the same time).

Please set PoE State of a pertinent Port to Disable by using the command [config poe ports state] from the console screen the Port like < attention > PC and router, etc. connected with an equipment off the subject for the PoE feeding power.

7-2-4 classifications

The classification function is a function that the electric power level to which it is expected after the attestation of the PoE feeding power terminal succeeds based on signature from the terminal can be specified.

Therefore, when the class of this product and the PoE feeding power terminal doesn't agree, feeding power is not begun.

7-2-3 power management

This product controls beginning and the stop of feeding power PoE by the power management.

When the total of the supplied electricity to two or more PoE feeding power terminals exceeds a set value, newly it is connected and it doesn't feed power to the attested terminal. As for a new feeding power, a Port concerned is not begun

product

until it enters the state of the power management, and the total of the supplied electricity of the switch falls below a set value. Moreover, two or more PoE feeding power terminals stop and when power consumption increases by the operation etc. , and the total of the supplied electricity of the switch exceeds a set value, the switch stops feeding power from the terminal connected with the Port of the old turn compulsorily.

this product

8 Management and maintenance of this product

The local console interface is supported, and as a result this product is set up and, this product can be controlled by way of the terminal (Or, terminal emulator) usual.

It explains use in the console interface to access this product in this section.

Connection of 8-1 local console

The local console can be used by connecting this product by using the console cable for PC that executes a terminal emulator program (for instance, terminal program of the Windows operating system attachment) that is VT-100 interchangeable terminal or usual.

The RS-232C crossing cable is necessary for the connection with the terminal.

- Cable connector shape on this product side: D-sub9 pin(male)

The following settings are necessary for the parameter of the terminal.

- VT-100/ANSI compatible
- Speed : 9,600 baud
- Data length : 8 bits
- Parity :None
- Stop bit : 1bit
- Flow control :None

[User \$.following..] is displayed on the local console screen when the power supply of this product is turned on while correct the terminal and connected, and the local console can be logged in.

```

*****
HPS-108 PoE Switching Hub Ver 1.00.01
Copyright (c) 2004 Hirakawa Hewtech Corporation
All Right Reserved.
*****

Read EEPROM Config Information ..... OK
PoE Function Initialization .....OK
Switch Function Initialization .....OK

[User]$

```

Basic key operation of 8-2

It explains the key operation used with the local console of this product.

[Tab key]:The command under the input is supplemented and the command of complete shape is displayed. Whenever the Tab key is pushed when there are two or more commands that start by the input character string, the next candidate command is repeatedly displayed.

The blank (Space key) is input after the command to show the delimitation when the subcommand of the concluded command is displayed, and the Tab key is pushed.

[Esc key]:The command character string under the input is deleted, and it enters the state of the prompt display.

[↑ and ↓ key]:The command that has been executed before is called. It calls in new order (↑ key) or it calls it in old order (↓ key). This switch memorizes the command ten times.

The command history is cleared when the product is reactivated or it logs out once.

[← and → key]:The cursor is moved to the left (← key) or the right (→ key).

[Delete key]:The character at the cursor position is deleted, and the character string of the remainder is moved to the left.

It is likely not to operate according to the terminal emulator program < attention > use.

[Insert key]:The character is inserted in the cursor position, and the character string of the cursor and the remainder is moved to the right.

It is likely not to operate according to the terminal emulator program < attention > use.

[BackSpace key]:The character at the left of the cursor is deleted, and the character string of the cursor and the remainder is moved to the left.

The input character distinguishes the capital letter and the small letter with < attention > local console. For instance, please note that S and s are recognized another character.

this product

8-3 log in

[User \$.following..] is displayed on the local console screen when the power supply of this product is turned on while correct the terminal and connected, and the local console can be logged in.

```

*****
HPS-108 PoE Switching Hub Ver 1.00.01
Copyright (c) 2004 Hirakawa Hewtech Corporation
All Right Reserved.
*****

Read EEPROM Config Information ..... OK
PoE Function Initialization .....OK
Switch Function Initialization .....OK

[User]$

```

8-4 user account

Making of 8-4-1 accounts

The new user account is made by the [create account] command. An arbitrary character string (within 1-15 characters) is input as an account after the account level only ([admin]) is continuously input and 'Enter' is pushed.

(When account name [hps-108] is made, the following examples :.)

```

[User]$ create account admin hps-108
Command: create account admin hps-108
Executed.

```

The user accounts can be set up to four.

The made user account is displayed by the [show account] command.

(When account name [hps-108] is displayed, the following examples :.)

```

[User]$ show account
Command: show account
Admin account:
hps-108

```

Setting of 8-4-2 passwords

The password of the new user account is set by the [config account] command. The account name is input following the command and 'Enter' is pushed. Because the comment that presses the password input is displayed, an arbitrary character string (within 0-15 characters) is input, and 'Enter' is pushed. In addition, because the comment that presses the re-input of the password is displayed, the same character string is input, and 'Enter' is pushed.

(When the password is set to account name [hps-108], the following examples :.)

```
[User]$ config account hps-108
Command: config account hps-108
Password (0-15):*****
Enter again:*****
Executed.
```

```
[User]$
```

The account name is displayed in the command prompt when logging it in again in the made account.

(The following examples : when logging it in in account name [hps-108].)

```
*****
HPS-108 PoE Switching Hub Ver 1.00.01
Copyright (c) 2004 Hiramawa Hewtech Corporation
All Right Reserved.
*****
```

```
Read EEPROM Config Information ..... OK
PoE Function Initialization .....OK
Switch Function Initialization .....OK
```

```
login: hps-108
Password: *****
```

```
[hps-108]#
```

this product

Deletion of 8-4-3 accounts

The user account is deleted by the [delete account] command. The account name that wants to be deleted continuously is input and 'Enter' is pushed. The confirmation message my whether it may being to execute it is displayed, and when you may execute it, [y] is input and 'Enter' is pushed. (When account name [hps-108] is deleted, the following examples :.)

```
[hps-108]# delete account hps-108
Command: delete account hps-108
You want to delete this account.
Are you sure? (yes/no) yes
Executed.

[hps-108]#
```

8-5 logout

Logout by 8-5-1 commands

It logs out from the local console by the [logout] command when logging it in in the user account. (Please refer to clause 8-4 for making Yuzaacaun. The following are examples when logging it in in account name [hps-108].)

```
[hps-108]# logout
Command: logout

login:
```

Attention..command..besides..console..use..time..for a fixed time..exceeding..this..product..automatic..logout.(Please refer to 8-5-2.)

this product

8-5-2 automatic logout

It changes by the `[config serial_port]` command in the automatic logout time of the console interface. The logout time is input after the subcommand only (`[auto_logout]`) is continuously input and 'Enter' is pushed.

(The following examples : when changing to the logout time [ten minutes].)

```
[User]$ config serial_port auto_logout 10_minutes
Command: config serial_port auto_logout 10_minutes
Executed.
[User]$
```

The logout time that can be set is as follows.

- never :It doesn't log out automatically.
- 2_minutes :Two minutes
- 5_minutes :Five minutes
- 10_minutes :Ten minutes(default value)
- 15_minutes :15 minutes

Console interface information including the automatic logout time is done by the `[show serial_port]` command.

```
[User]$ show serial_port
Command: show serial_port

Serial Port Setting Information
-----
Baud rate: 9600
Data bit: 8
Parity:                none
Stop bit: 1
Flow control: none
Logout status: 10 minutes
[User]$
```

Preservation of 8-6 settings

Configdata that is set and changed is preserved by the `[save]` command.

```
User]$ save
Command: save
Save configuration to eeprom ok.
[User]$
```

this product

Forwarding of 8-7 configuration files

8-7-1 up-loading

The up-loading of the configuration file (file transfer from this product to the terminal) is done by the [upload] command.

```
User]$ upload
Command: upload
```

The screen display changes if the command is input and 'Enter' is pushed. When the up-loading work is done, the Space key is continuously pushed. (Please push other keys when you revert up-loading to a usual console operation without working.) The message is displayed after the Space key is input and it is shown this product is waiting for the file transfer.

```
Upload Configuration data to One *.bin file
*****
--Press <SPACE> key,Start upload process.
--Press any other key,Return to Normal operation.
->

Please select Xmodem(checksum) Receive section with
terminal emulator program.

Ready for Upload->
```

After this display is confirmed, the X-Modem RECEIVE function of the terminal emulator program is used.

< attention > configuration file : as assumption as the binary form, and an extension. Please give bin.

Please select Checksum as an option of < attention > X-Modem communication.

When forwarding the file is completed, the message and the command prompt of the following completions are displayed.

```
Upload Configuration data to One *.bin file
*****
--Press <SPACE> key,Start upload process.
--Press any other key,Return to Normal operation.
->

Please select Xmodem(checksum) Receive section with
terminal emulator program.

Ready for Upload->

Upload Configuration data was finished!

Executed.
[User]$
```

this product

8-7-2 download

The download of the configuration file (file transfer from the terminal to this product) is done by the [download] command.

```
[User]$ download
Command: download
```

The screen display changes if the command is input and 'Enter' is pushed. When the download work is done, the Space key is continuously pushed. (Please push other keys when you revert download to a usual console operation without working.) The message is displayed after the Space key is input and it is shown this product is waiting for the file transfer.

```
Download Configuration data from One *.bin file
*****
--Press <SPACE> key,Start download process.
--Press any other key, Return to Normal operation.
->

Please select Xmodem(checksum) Send section with
terminal emulator program.

Ready for Download->
```

After this display is confirmed, the X-Modem transmission function of the terminal emulator program is used.

< attention > configuration file : as assumption as the binary form, and an extension. Please give bin.

Please select Checksum as an option of < attention > X-Modem communication.

When forwarding the file is completed, the message and the command prompt of the following completions are displayed.

```
Download Configuration data from One *.bin file
*****
--Press <SPACE> key,Start download process.
--Press any other key, Return to Normal operation.
->

Please select Xmodem(checksum) Send section with
terminal emulator program.

Ready for Download->

Save configuration to eeprom ok.
Download Configuration data was finished!

Executed.
[User]$
```

Download of 8-7-3 firmwares

The firmware is downloaded by the [firm download] command.

```
[Admin]# firm download
Command: firm download
You want to download firmware.
Are you sure? (yes/no) yes
```

The [Shift+3] key is pushed before the command is input, [y] is pushed, and the farm starts. When the screen display changes and the update work is done, [1] is continuously pushed. (Please push other keys when you revert download to a usual console operation without working.) [1] The message is displayed after it inputs it, the comment that presses the update of the firmware is displayed, and push [y], please.

```

                                Firmware Programming Window
                                Revision: 1.0
                                -----
                                Please select one of the following item:
                                -- Press < 1 > key, Programming Flash Firmware.
                                -- Press any other key, Return to Normal operation.
-> 1
Do you really want to update flash firmware?(y/n) yes

*****

The main firmware size must be less than 64k byte.
File format must be *.bin.
Programing process need about (1 ~ 2) minutes.

*****

Please select Xmodem(checksum) send section.
Ready for programing main firmware ->

Flash Firmware update successfully!
```

After this display is confirmed, the X-Modem transmission function of the terminal emulator program is used.

The message is displayed when forwarding the file is completed and it reverts to an initial screen.

< attention > configuration file : as assumption as the binary form, and an extension. Please give bin.

Please select Checksum as an option of < attention > X-Modem communication.

9 Local console

It explains the setting, the change, and the method of the display of this product etc. in this section.

9-1 communication Port

The setting and the change in each communication Port are done by the `【config port】` command. Either of subcommand as follows that inputs the Port (specification from among all Ports) to be set continuously is input.

The parameter is as follows of the input of `< attention > Port`.

`【all】` With the input :All Ports that become objects

`【1】` With the input(input example) :Specified single Port(The example is Port 1.)

`【1-4】` With the input(input example) :Two or more within specified the range Ports(The example is Port 1, 2, 3, and 4.)

Effective, invalidity, and default of 9-1-1 communication Port

When effective, invalidity, and the default of each Port of the telecommunication facilit of the communication Port are changed, it uses it. The setting inputs an effective, invalid parameter after subcommand `【state】` is input and pushes 'Enter'.

(The following examples set `【 effective 】` to all Ports)

```
[User]$ config ports all state enable
Command: config ports all state enable
Executed.

[User]$
```

The parameter that can be set is as follows.

- enable :Communication Port operation(default value)
- disable :Communication Port operation stop
- default :The communication Port operation is returned to the default value.

9-1-2 speeds/duplex setting and change

When speed/duplex of the communication Port is set and changed, it uses it.

The setting inputs the parameter of speed/duplex after subcommand [speed] is input and pushes 'Enter'. (When [100BASE-TX and half duplex] is set from Port 1 to four, the following examples :.)

```
[User]$ config ports 1-4 speed 100_half
Command: config ports 1-4 speed 100_half
Executed.
[User]$
```

The parameter that can be set is as follows.

- auto :Auto-Negotiation(default value)
- 10_half : 10BASE-T and half duplex fixation
- 10_full : 10BASE-T and Full-duplex fixation
- 100_half : 100BASE-TX and half duplex fixation
- 100_full : 100BASE-TX and Full-duplex fixation

When < attention > Port 1-8 sets parameters other than [Auto-Negotiation], the Auto-MDI/X function becomes invalid. Moreover, the Uplink Port becomes MDI fixation regardless of the parameter.

Effective and invalidity of 9-1-3 flow control

When the flow control function of the communication Port is changed, it uses it.

The setting inputs an effective, invalid parameter after subcommand [flow] is input and pushes 'Enter'. (When [invalidity] is set to all Ports, the following examples :.)

```
[User]$ config ports all flow disable
Command: config ports all flow disable
Configuration of Ports flow may affect QoS control state.
Are you sure? (yes/no) yes
Executed.
[User]$
```

The parameter that can be set is as follows.

- enable :The flow control function is effective. (default value)
- disable :The flow control function is invalid.

Set display of 9-1-4 communication Port

The communication Port setting is displayed by the [show ports] command. The Port (specification from among all Ports) to be displayed continuously is input and 'Enter' is pushed. (When the communication Port setting of all Ports is displayed, the following examples :.)

```
[User]$ show ports all
Command: show ports all

Port# Speed/Duplex State Flow Control Auto_mdix Link
-----
01 100 half disabled disabled disabled down
02 100 half disabled disabled disabled down
03 100 half enabled disabled disabled down
04 100 half enabled disabled disabled down
05 auto enabled disabled enabled down
06 auto enabled disabled enabled down
07 auto enabled enabled enabled down
08 auto enabled enabled enabled down
09 auto enabled enabled fixed down

[User]$ ]
```

The content of the display is as follows.

- Port# : 08(Port 8) and 09(Uplink Port) are shown from 01(Port 1).
- Speed/Duplex : Value (auto/10_half/10_full/100_half set by Config ports speed command /100_full) is displayed.
- State : Value (enable/disable) set by the Config ports state command is displayed.
- Flow Control : Value (enable/disable) set by the Config ports flow command is displayed.
- Auto mdix : The Auto-MDI/X function : at operation Disable at operation state (enable of the Auto-MDI/X function.

The Auto-MDI/X function displays stop). Fixed of the Uplink Port is MDI fixation.

- Link :Down of link at down o'clock and 10 link state (_ half/10_full/100_half of communication Port

Link improvement) is displayed by each speed/duplex at/100_full.

The setting of < attention > flow control is unconditionally reflected as shown in the following QoS and the Port trunking setting.

- The flow enable□qos state setting maintains the current state.
- As for the flow enable□trunking state setting, disable is done.
- As for the flow disable□qos state setting, enable is done.
- The flow disable□trunking state setting maintains the current state.

Disable ..< attention > Auto mdix.. ..Speed/Duplex.. ..fixed setting (.. is automatically done when making it to 10_half/10_full/100_half/100_full time.

9-2 the Aging time

Setting and change in 9-2-1 the Aging time

The setting and the change in MAC study table the Aging time are done by the `[config aging_time]` command.
(When the Aging time `[500 seconds]` is set, the following examples :.)

```
[User]$ config aging_time 500
Command: config aging_time 500
Executed.

[User]$
```

The parameter that can be set is as follows.

• `10 ?` It is a given value at one million seconds from 1000000:10 seconds. (The default value is 300 seconds.)

`[2×T]` from the second Operation at the Aging time ..product.. actual varies until the second at time `[T]`. (`[T]` It is a value input by the `[config aging_time]` command.). The actual the Aging time operation will vary between the `[30]` second and the `[60]` second when inputting as an example as `[30]`.

Set display at 9-2-2 the Aging time

MAC study table the Aging time setting is displayed by the `[show aging_time]` command.

```
[User]$ show aging_time
Command: show aging_time
The aging time is 300 sec.

[User]$
```

9-3 Port Base VLANs

9-3-1 Making of VLAN a group

VLAN is made by the `[create vlan]` command. An arbitrary character string (within 1-5 characters) is input as an a group name newly continuously made and 'Enter' is pushed.

(When VLAN a group name `[vlan1]` is made, the following examples :.)

```
[User]$ create vlan vlan1
Command: create vlan vlan1
Executed.
[User]$
```

VLAN a groups can be set up to eight at the same time.

9-3-2 Setting and change of VLAN

The setting and the change in the Port Base VLAN are done by the `[config vlan]` command.

The setting specifies the Port that wants to be included in VLAN following the VLAN a group name. Addition (add) and deletion (delete) are input, and after `[ports]`, the object Port (specification from among all Ports) is input.

(When `[Port 1, 2, 3, and 4]` is set to VLAN a group name `[vlan1]`, the following examples :.)

```
[User]$ config vlan vlan1 add ports 1-4
Command: config vlan vlan1 add ports 1-4
Executed.
[User]$
```

9-3-3 Deletion of VLAN a group

VLAN is deleted by the `[delete vlan]` command. The a group name that wants to be deleted continuously is input and 'Enter' is pushed. (When VLAN a group name `[vlan1]` is deleted, the following examples :.)

```
[User]$ delete vlan vlan1
Command: delete vlan vlan1
Executed.
[User]$
```

9-3-4 Set display of VLAN

The VLAN setting is displayed by the [show vlan] command. VLAN a group name to be displayed continuously or all VLAN a groups ([all]) are specified and 'Enter' is pushed.

(When the VLAN setting of VLAN a group name [all] is displayed, the following examples :.)

```
[User]$ show vlan all  
Command: show vlan all
```

```
VLAN Group P01 P02 P03 P04 P05 P06 P07 P08 P09
```

```
-----  
vlan1 Y Y Y Y - - - - -
```

```
[User]$
```

The content of the display is as follows.

- VLAN Group : The VLAN a group name made by the create vlan command is displayed.
- To which VLAN a group 08(Port 8) and 09(Uplink Port) belong from P01-P 09:01 (Port 1) is displayed.
 - Y : It is included in the vlan1 a group.
 - : It is not included in the vlan1 a group.

The Port cannot be set as < attention > VLAN Port and Port of the trunking come in succession.

9-4 QoS control

The setting and the change in the QoS control are done by the [config qos] command.

9-4-1 Effective, invalidity, and Defol of QoS control

When effective, invalidity, and Defol in the QoS control facilit are changed, it uses it.

The setting inputs an effective, invalid parameter after subcommand [state] is input and pushes 'Enter'.

(When [invalidity] in the QoS control facilit is set, the following examples :.)

```
[User]$ config qos state disable
Command: config qos state disable
Configuration of Port QOS may affect Ports flow and trunking state.
Are you sure? (yes/no) yes
Executed.
[User]$
```

The parameter that can be set is as follows.

- enable : QoS control function operation(default value)
- disable : QoS control function stop
- default : The QoS control function operation is returned to the default value.

The setting of < attention > QoS is unconditionally reflected as shown in the following the flow control and the setting of the Port trunking.

- The qos enable flow state setting maintains the current state.
- The qos enable trunking state setting maintains the current state.
- As for the qos disable flow state setting, enable is done.
- As for the qos disable trunking state setting, disable is done.

9-4-2 Setting and change of High priority threshold of IEEE802.1p Tag

It is high priority more than a set value, and less than set value is processed by the low priority. The setting inputs the parameter after subcommand `[tag_threshold]` is input and pushes 'Enter'.

(When `[5, 6, and User Priority value =7 of IEEE802.1p Tag process by the high priority, and process 0, 1, 2, 3, and User Priority value =4 by the low priority]` is set, the following examples :.)

```
[User]$ config qos tag_threshold 5
Command: config qos tag_threshold 5
Executed.
[User]$
```

The parameter that can be set is as follows.

- `0 ? 7` : It is a given value from 0 by seven. (The default value is 4.)

Setting and change in 9-4-3 Port priority

Whether the forwarding is done by either of high priority/low priority when QoS of the packet that doesn't contain IEEE802.1p Tag is controlled is set and changed in each Port. (All Ports are objects.)

The setting inputs the parameter of the high priority and the low priority after the Port to be set continuously after subcommand `[ports]` is input is input and pushes 'Enter'.

(When "Process it by the high priority" is set to Port 1 and 2, the following examples :.)

```
[User]$ config qos ports 1-2 high
Command: config qos ports 1-2 high
Executed.
[User]$
```

The parameter that can be set is as follows.

- `high` :It processes it by the high priority.
- `low` :It processes it by the low priority. (default value)

9-4-4 Setting and change of Weight value

When the ratio of the packet processed by the high priority and the low priority when QoS is controlled is set and changed, it uses it.

The setting inputs the parameter of high priority valuing/evenness/low priority valuing after subcommand [weight] is input and pushes 'Enter'.

(When [high priority valuing] is set, the following examples :.)

```
[User]$ config qos weight hq
Command: config qos weight hq
Executed.

[User]$
```

The parameter that can be set is as follows.

- hq :High priority valuing(default value)
- even :Evenness
- lq :Low priority valuing

9-4-5 Set display of QoS control

The QoS control setting is displayed by the `[show qos priority]` command.

```
User]$ show qos priority
Command: show qos priority
```

```
QoS State = enabled
hq:lq weight = hq
802.1p hq threshold = 5
```

```
Port Priority
-----
```

```
01 high
02 high
03 high
04 low
05 low
06 low
07 low
08 low
09 low
```

```
[User]$
```

The content of the display is as follows.

- QoS State : Operation and stop of QoS control set by `config qos priority state` command
The state is displayed.
- hq:lq weight : Weight value of QoS control set by `config qos priority weight` command
However, it is displayed.
- High of QoS control set by `802.1p hq threshold:config qos tag_threshold` command
The priority threshold is displayed.
- Port# : 08(Port 8) and 09(Uplink Port) are shown from 01(Port 1).
- Priority : Port of QoS control set by `config qos ports` command
The priority value is displayed.

9-5 Port Mirroring

The setting and the change in the Port Mirroring are done by the `[config mirror]` command.

Setting and change in 9-5-1 mirror Port and source port

The setting specifies one mirror Port that receives the packet copied after `[port]`. (specification from among all Ports) The source port that continuously copies the packet is specified. Addition (`add`) and deletion (`delete`) are input, and the object Port (specification from among all Ports other than the target Port) and the direction of sending and receiving are input after `[source ports]`. (When `[Port 1]` and the source port are set to `[RECEIVE of ..sending.. - of Port 7 and 8]`, the following examples : the mirror Port.)

```
[[User]$ config mirror port 1 add source_ports 7-8 both
Command: config mirror port 1 add source_ports 7-8 both
Executed.

[User]$.
```

When a new mirror Port is set with the Port Mirroring has already been set, the superscription will be changed to a new setting.

Effective and invalidity of 9-5-2 Mirrorings

The setting inputs an effective, invalid parameter after `[state]` is input and pushes 'Enter'.

(When `[effective]` of the Port Mirroring function is set, the following examples : .)

```
[User]$ config mirror state enable
Command: config mirror state enable
Executed.

[User]$
```

The parameter that can be set is as follows.

- `enable` :Port Mirroring function effective
- `disable` :Port Mirroring function invalidity(default value)

The problem in throughput occurs if the Mirroring to a more low-speed Port is done from a Port `< attention >` high-speed. The source port is the same speed as the mirror Port or a more low-speed speed. should Moreover, it is necessary to note that the sum total of Torahicc doesn't exceed the speed of the mirror Port when two or more Ports are set as a source port.

Set display of 9-5-3 Port Mirroring

The Port Mirroring setting is displayed by the [show mirror] command.

```
[User]$ show mirror
Command: show mirror

Mirror State = enabled
Mirror Port# = 01

Port# Rx Tx
-----
01 - -
02 Y Y
03 Y Y
04 - -
05 - -
06 - -
07 - -
08 - -
09 - -

[User]$
```

The content of the display is as follows.

- Mirror State : Port Mirroring function that sets it by config mirror state command
Effective and an invalid state are displayed.
- Mirror Port# : The target Port set by the config mirror command is displayed.
- Port# : 08(Port 8) and 09(Uplink Port) are pierced from 01(Port 1).
- Rx/Tx : The setting of the source port set by the config mirror command is displayed.
Y :It is included in the source port.
- :It is not included in the source port.

9-6 Port trunking

Making of 9-6-1 trunking groups

The trunking is made by the `[create trunking]` command. The trunking group number [either from 1 to 4] is input after subcommand `[group]` is continuously input and 'Enter' is pushed.

(When trunking group number [1] is made, the following examples :.)

```
[User]$ create trunking group 1
Command: create trunking group 1
Executed.
```

Trunking groups can be set up to four at the same time.

Setting and change in 9-6-2 Port trunking

The setting and the change in the Port trunking are done by the `[config trunking]` command.

The setting specifies the trunking group following subcommand `[group]`, and specifies the Port (specification from among all Ports) that wants to be included in the trunking. The addition and the deletion (add or delete) are input, and the object Port is input after `[ports]`. (When [Port 7 and 8] is set to trunking group number [1], the following examples :.)

```
[User]$ config trunking group 1 add ports 7-8
Command: config trunking group 1 add ports 7-8
Configuration of Trunking may affect Ports flow and QoS state.
Are you sure? (yes/no) yes
Executed.

[User]$
```

The setting of < attention > Port trunking is unconditionally reflected as shown in the following the flow control and the QoS setting.

- As for the trunking enable flow state setting, disable is done.
- As for the trunking enable qos state setting, enable is done.
- The trunking disable flow state setting maintains the current state.
- The trunking disable qos state setting maintains the current state.

Effective and invalidity of 9-6-3 Port trunking

Effective and the invalidity of the Port trunking function are set.

The setting inputs an effective, invalid parameter following subcommand [state] and pushes 'Enter'.

(When [effective] of the Port trunking function is set, the following examples :.)

```
[User]$ config trunking state enable
Command: config trunking state enable
Configuration of Trunking may affect Ports flow and QOS state.
Are you sure? (yes/no) yes
Executed.

[User]$
```

The parameter that can be set is as follows.

- enable :Port trunking function effective
- disable :Port trunking function invalidity(default value)

Deletion of 9-6-4 trunking groups

The trunking group is deleted by the [delete trunking] command. The group number that wants to be deleted after subcommand [group] is continuously input is input and 'Enter' is pushed.

(When trunking group number [1] is deleted, the following examples :.)

```
[User]$ delete trunking group 1
Command: delete trunking group 1
Executed.

[User]$
```

The Port cannot be set as the trunking Port and < attention > VLAN Port come in succession.

Set display of 9-6-5 Port trunking

The Port trunking setting is displayed by the [show trunking] command. The trunking group number to be displayed following subcommand [group] or all trunking groups ([all] the input) are specified and 'Enter' is pushed. (When the Port trunking setting of trunking group number [1] is displayed, the following examples :.)

```
[User]$ show trunking group 1
Command: show trunking group 1

Trunking State = enabled

Trunking Group P01 P02 P03 P04 P05 P06 P07 P08 P09
-----
Trunk 1 -   -   -   -   -   -   -   Y Y Y
[User]$
```

The content of the display is as follows.

- Group : The trunking group number made by the create trunking command
It is displayed.
- P01 ~ P09 : 08(Port 8) and 09(Uplink Port) : from 01(Port 1) to which trunking group.
It is part is displayed.
Y :It is included in the trunking group.
- :It is not included in the trunking group.

9-7 PoE feeding power

9-7-1 Effective, invalidity, and default of PoE feeding power

When effective, invalidity, and the default setting of each Port of the PoE feeding power function are changed, it uses it. As for the Port that operates the PoE feeding power function here, the Ether Port function operates at the same time, too. The setting inputs the parameter of effective, invalidity, and the default setting after the object Port (specification from among 8 from Port 1) is specified after the [config poe ports] command, and subcommand [state] is input and pushes 'Enter'.

(When [effective] is set from Port 1 to eight, the following examples :.)

```
[User]$ config poe ports all state enable
Command: config poe ports all state enable
Executed.

[User]$ ]
```

The parameter that can be set is as follows.

- enable : PoE feeding power operation(default value)
- disable : PoE feeding power operation stop
- default : The PoE feeding power setting is returned to the default value.

9-7-2 Setting and change in PoE feeding power classification

When classification of the PoE feeding power is changed, it uses it.

The setting inputs the parameter of 0, 1, 2, 3, and 4 after the object Port (8 from Port 1) is specified after the [config poe classification] command, and subcommand [class] is input and pushes 'Enter'.

(When [0] is set from Port 1 to eight, the following examples :.)

```
[User]$ config poe classification ports all class 0
Command: config poe classification ports all class 0
Executed.

[User]$ ]
```

The parameter that can be set is as follows.

- 0 ? 4 : It is a given value from 0 by four. (The default value is 0.)

9-7-3 Effective and invalidity of classification

When effective and the invalidity of classification of the PoE feeding power are set, it uses it.

The setting inputs the parameter of effective and an invalid setting after subcommand [state] is input after the [config poe classification] command and pushes 'Enter'.

(When classification of the PoE feeding power is set to [effective], the following examples :.)

```
[User]$ config poe classification state enable
Command: config poe classification state enable
Executed.
[User]$
```

The parameter that can be set is as follows.

- enable : Effective of classification of PoE feeding power
- disable : Invalidity of classification of PoE feeding power(default value)

9-7-4 Feeding power ability setting of PoE feeding power

1)When the feeding power ability of each Port is set, it uses it.

The setting specifies the object Port (specification from among 8 from Port 1) after the [config poe power] command, inputs an arbitrary parameter of [3000-16000], and pushes 'Enter'. (The Difolt value is 16000mW.)

(When [8000] mW is set from Port 1 to Port 8, the following examples :.)

```
[User]$ config poe power ports all 8000
Command: config poe power ports all 8000
Executed.
[User]$
```

2) When the feeding power ability of Total is set, it uses it.

The setting inputs an arbitrary parameter of [5.00-74.00] after subcommand [total] is input after the [config poe power] command and pushes 'Enter'. (The Difolt value is 64W.)

(When the Total feeding power is set to [50] W, the following examples :.)

```
[User]$ config poe power total 50
Command: config poe power total 50.00
Executed.
[User]$
```

9-7-5 Set display of PoE feeding power

The PoE feeding power setting is displayed by the [show poe] command. The Port (specification from among 8 from Port 1) to be displayed following subcommand [ports] is input and 'Enter' is pushed.

(When the PoE feeding power setting from Port 1 to 8 is displayed, the following examples :.)

```
User]$ show poe ports all
Command: show poe ports all

Classification State = enabled

Port# Class Status Power(mW) LimitPower(mW)
-----
01 0 enabled 0 8000
02 0 enabled 0 8000
03 0 enabled 0 8000
04 0 enabled 0 8000
05 0 enabled 0 8000
06 0 enabled 0 8000
07 0 enabled 0 8000
08 0 enabled 0 8000

Actual total power = 0.00 (W) [Max Limit 50.00 (W)]

[User]$
```

The content of the display is as follows.

- Classification State : Classification set by config poe classification command
Operation and the halt condition are displayed.
- Port# : 08(Port 8) is pierced from 01(Port 1).
- Class : Value set by config poe classification command(4 from 0)
- Status : Value set by config poe ports state command(enable/disable)

However, it is displayed.

- Power(mW) :PoE rough supplied electricity value in each Port when it is feeding power
It displays it.
- LimitPower(mW) :The supplied electricity setting value in each Port is displayed.
- Actual total power : The Total supplied electricity value of PoE under feeding power is indicated.
- Max Limit : The Total supplied electricity setting value of PoE under feeding power is indicated.

When the terminal connects it with an equipment off the subject for PC and feeding power PoE of the router etc. ,
disable automatically does the feeding power function < attention > PoE Port. (When you recognize the LINK
signal before it begins to feed power.)

Command ..9-8.. other

Display of list of 9-8-1 commands

The display of the list of the command that can be used by the local console interface is done by [?] or the [dir] command.

```
[User]$ ?  
Command: ?  
?  
clear counters ports  
config account  
:  
:  
show vlan  
upload  
[User]$
```

```
[User]$ dir  
Command: dir  
?  
clear counters ports  
config account  
:  
:  
show vlan  
upload  
[User]$
```

Setting of 9-8-2 screen scrolling

To stop more than one screen temporarily every one screen when the display continues, it does by the [config clipaging] command. An effective, invalid parameter is input after subcommand [state] is continuously input and 'Enter' is pushed.

(When [effective] of the temporary stop of the screen is set, the following examples :.)

```
[User]$ config clipaging state enable  
Command: config clipaging state enable  
Executed.  
[User]$
```

The parameter that can be set is as follows.

- enable :It is the temporary stop function effective on every one screen.
- disable :It is temporary stop function invalidity on every one screen. (default value)

Setting of 9-8-3 switch information

This product information is set by the `[config switch]` command. Because the comment that presses the switch name and the location input is displayed after 'Enter' is pushed, an arbitrary character string (within 0-32 characters) is input, and 'Enter' is pushed.

```
[User]$ config switch
Command: config switch
Switch name(0-32):*****
Location(0-32):*****
Executed.

[User]$
```

Set switch information is displayed by the `[show switch]` command.

```
User]$ show switch
Command: show switch

Display Switch Information
-----
HPS-108 Firmware Ver 1.00.00 by Hirakawa Hewtech Corporation.
Name:      *****
Location:  *****

[User]$
```

Moreover, the batch display of all information explains by the display command is done by inputting subcommand `[all]` following the `[show switch]` command.

Rebooting of 9-8-4 product

This product is rebooted by the [reboot] command. The confirmation message my whether it may being to execute it when 'Enter' is pushed after it inputs it is displayed. When you may execute it, [y] is input and 'Enter' is pushed.

```
[User]$ reboot
Command: reboot
You want to reboot the system.
Are you sure? (yes/no) yes
```

Initialization of 9-8-5 switches

To initialize it in the state when this product is shipped in the factory, it does by the [reset] command. The confirmation message my whether it may being to execute it when 'Enter' is pushed after subcommand [system] is continuously input is displayed. When you may execute it, [y] is input and 'Enter' is pushed.

```
[User]$ reset system
Command: reset system
You want to reset the system and
load factory default configuration.
Are you sure? (yes/no) yes
```

To initialize it in the state when the user account set to this product is left and the factory is shipped, subcommand [config] is input following the [reset] command. The confirmation message my whether it may being to execute it when 'Enter' is pushed after it inputs it is displayed. When you may execute it, [y] is input and 'Enter' is pushed.

```
[User]$ reset config
Command: reset config
You want to reset the system and
load factory default configuration except user account.
Are you sure? (yes/no) yes
```

Ten specifications

10-1 device specification

| Classification | Item | Specification |
|---|--|---|
| LAN Interface | Mounting Port | 10BASE-T/100BASE-TX: Nine Ports |
| | Speed/ Duplex | <ul style="list-style-type: none"> • For Auto-Negotiation(The half duplex fixation can Full-duplex/be set.) • For Auto-MDI/MDI-X(The Uplink Port is fixed MDI.) |
| | Conforming standard | IEEE 802.3 (CSMA/CD) |
| | | IEEE 802.3u (100BASE-X) |
| IEEE 802.3x (Flow Control) | | |
| Switching Method | Method | Store & forward |
| | Switch bus band | 1800Mbps |
| | The maximum throughput (per Port | 14,880 pps/port (10Mbps, 64 byte packet, and unicast) 148,810 pps/port (100Mbps, 64 byte packet, and unicast) (100% wire speed) |
| | Packet Buffer | 256kByte/device |
| | Address table | 4,096 addresses |
| | The Aging time | 300sec (300sec or more and one millionsec or less) |
| | VLAN | Port Base VLAN(The IEEE 802.1Q VLAN tag packet penetrates.) |
| | QoS | It identifies it by IEEE802.1p or the port basis. (two queues/Port) |
| PoE (Power Over Ether) Feeding power | Feeding power characteristic | +48VDC |
| | | 15.4W/port or less and 0.5W/port or more)(Port |
| | | 74W or less)(per device |
| | Port for feeding power | Eight from Port 1 |
| | Feeding power method | IEEE 802.3af method |
| | Feeding power pair wiring | Spare pair feeding power |
| | Distance in which it can feed power | 100m |
| Commonness | AC input voltage | 100V/120V/240V (±10%) |
| | AC power supply frequency | 50Hz/60Hz sharing(±1%) |
| | Power consumption | 120Watt (maximum) |
| | Operating temperature/humidity | 0 ~ 40 /20 ~ 90%(No do be dewy.) |

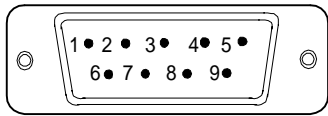
Specification

| | | |
|--|-----------------------------------|--|
| | Preservation temperature/humidity | -20 ~ 65 /10 ~ 95%(No do be dewy.) |
| | Size | 210mm (width)×297mm (depth)×43mm(height) |
| | Weight | About 2.5kg |
| | EMC | VCCI CLASS A |

10-2 interface specification

10-2-1 console Port connector

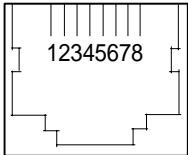
The console connector of this product is nine pin D-sub connector (male).



| D-sub Conectapin'asaiment | | | |
|---------------------------|-----------------------|------------|------------|
| Pin signal | DCE signal | Pin signal | DCE signal |
| 1 | Unused | 6 | Unused |
| 2 | RxD (RECEIVE) | 7 | Unused |
| 3 | TxD (transmission) | 8 | Unused |
| 4 | Unused | 9 | Unused |
| 5 | SG | — | |

10-2-2 communication Port connector

Port 1-8 of this product and the connector of the Uplink Port are eight pin modular connectors (RJ-45).



| RJ-45 Conectapin'asaiment | | | |
|---------------------------|---------------------|------------------------|--|
| Pin No. | 10/100BASE-TX | | PoE feeding power (Port only 1-8 :.) |
| | MDI-X | MDI | Spare pair |
| 1 | Rx + (RECEIVE) | Tx + (transmission) | Unused |
| 2 | Rx - (RECEIVE) | Tx - (transmission) | Unused |
| 3 | Tx + (transmission) | Rx + (RECEIVE) | Unused |
| 4 | Unused | Unused | DC+ |
| 5 | Unused | Unused | DC+ |
| 6 | Tx - (transmission) | Rx - (RECEIVE) | Unused |
| 7 | Unused | Unused | DC- |
| 8 | Unused | Unused | DC- |

> Uplink Port becomes MDI fixation < attention.

It communicates by either of MDI-X or MDI according to the interface condition of the opposing equipment
[Auto] ..< mind > Port 1-8.. ..the Port setting... It communicates with MDI-X, except when the Port setting is
[Auto].

10-3 default list

| Item | Set value |
|-----------------------|-------------------------------|
| User name | User |
| Password | None |
| Switch name | None |
| Switch location | None |
| Serial port baud rate | 9600 (fixed value) |
| Serial port Data bit | 8 (fixed value) |
| Serial port Parity | None (fixed value) |
| Serial port Stop bit | 1 (fixed value) |
| Serial port Flow | None (fixed value) |
| Auto log-out | 10 minutes |
| Clipaging | Disable |
| Port Speed/Duplex | Auto (Port 1-9) |
| Port Flow Control | Enable (Port 1-9) |
| Port Auto-MDI/X | Enable (Port 1-8) |
| Port state | Enable (Port 1-9) |
| Aging time | 300 secs |
| QoS Tag Priority | High Threshold = 4 (Port 1-9) |
| Port QoS Priority | Low (Port 1-9) |
| QoS Priority weight | Hq |
| QoS Priority state | Enable |
| Mirroring port | None |
| Mirroring state | Disable |
| Port based VLAN group | None |
| Port based VLAN port | None |
| Trunking group | None |
| Trunking port | None |
| Trunking state | Disable |
| PoE state | Enable(Port 1-8) |
| PoE class | Class0 |
| PoE class state | Disable |
| PoE Power Total | 64W |
| PoE Power port | 16000mW |