

Hyperion INTELLIGENT GIGABIT SWITCH



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Package Contents

- Hyperion (71025, 71026, 71027, 71028 or 71029)
- 2m cat5 cable (79102)
- This user manual

Safety Information

- This unit is intended for indoor use only
- Do not expose this device to rain or moisture, doing this will void the warranty
- Make all the connections before you plug in the mains power
- Do not remove the cover, there are no user serviceable components inside
- Never plug this unit into a dimmer pack
- Ensure proper earth connections
- Always be sure to mount this unit in an area that will allow proper ventilation. Allow about 6" (20 cm) between this device and a wall
- Power-supply cords should be routed so that they are not likely to be walked on or pinched

Initial Setup

Out of Box (Factory Settings)

All Hyperion devices come with the following default settings:

- IP: 192.168.0.10
- Subnet Mask: 255.255.255.0
- Gateway: 0.0.0.0

If multiple Hyperion units are connected to the same network, manually change the IP address to avoid any conflicts.

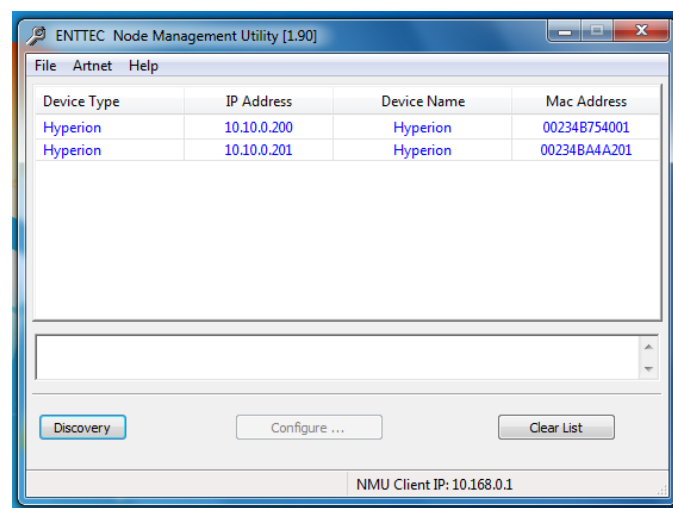
Finding IP Address Using NMU v1.9

- Connect Hyperion directly to a computer using a cat5 cable

NOTE

The computer should have the following network adapter settings:

- Static IP: 192.168.0.1
- Subnet Mask: 255.0.0.0
- Gateway: 0.0.0.0
- Open ENTTEC NMU. If prompted with multiple networks, select the correct one (identified by the IP address of your computer)
- Press Discovery button and wait until NMU finds all supported ENTTEC devices
- Once found, select Hyperion and use the IP address listed to access the web-interface via your web browser



- Type in the default IP shown on NMU into any browser
- Log into the device as shown in window below:

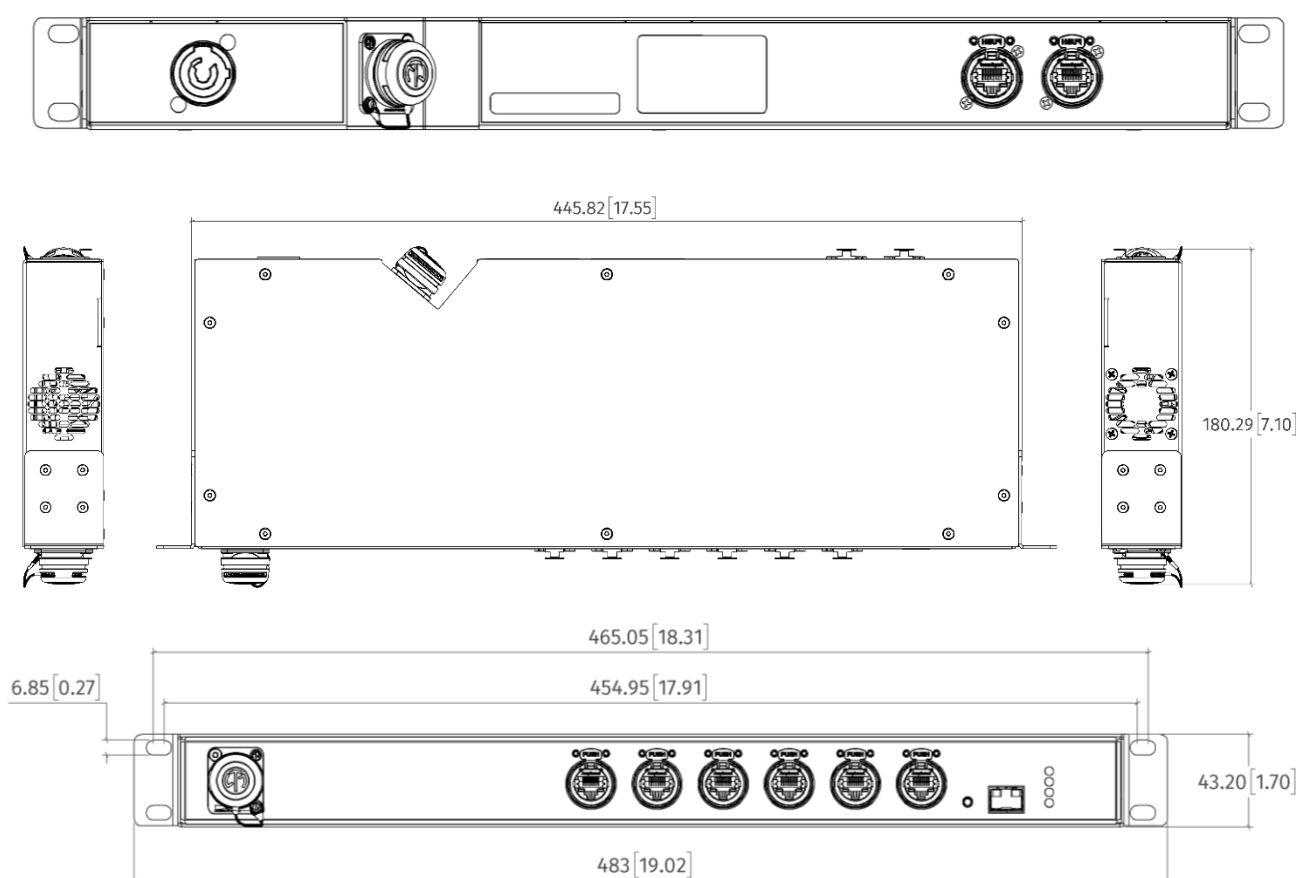
Default Login Details

The log in details for the device are as follows:

- Username: **admin**
- No password (leave empty)

Once logged in, set the device with the appropriate network configurations

Physical Dimensions

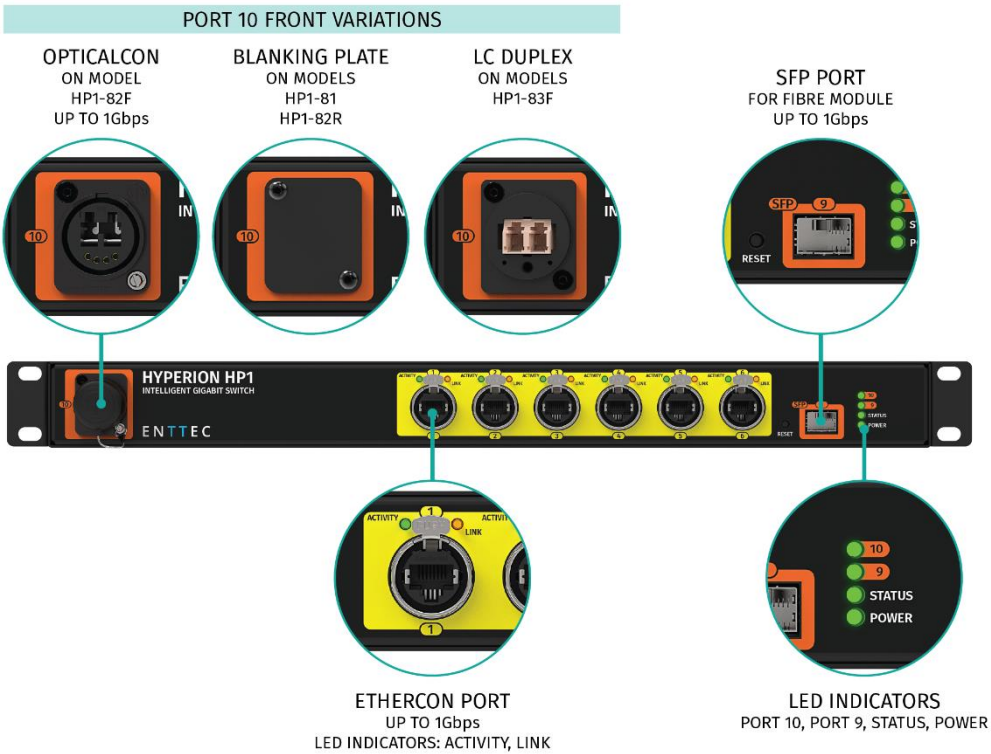


Specifications

| Item | Model SKU | | | | |
|--|--|---------------------------|----------------------------|--------------------------------------|-------------------------------------|
| | 71025 | 71026 | 71027 | 71028 | 71029 |
| Input Voltage | 90-264 V AC | | | | |
| Input Frequency | 47-63 Hz | | | | |
| Temp. | Storage | -20°C to 70 °C | | | |
| | Working | 0°C to 40 °C | | | |
| Humidity | Storage | 5% to 90% non-condensing | | | |
| | Working | 10% to 90% non-condensing | | | |
| Connectors | 1X powerCON IN 6X Front etherCON connectors 2X Rear etherCON connectors 1X 1000M SFP port | | | | |
| | 1X OpticalCON (Front) | N/A | 1X OpticalCON (Rear) | 1X LC Duplex connector (Front) | 1X LC Duplex connector (Rear) |
| IP Rating | IP20 | | | | |
| Cooling Method | Fan (always on) | | | | |
| Maximum Power | 60 W | | | | |
| Power Supply Protection | Over-current | | | Auto recovery | |
| | Over-temperature | | | Latch | |
| | Short | | | Auto recovery | |
| | Over-voltage | | | Auto recovery | |
| MAC Address table limit | 8192 | | | | |
| Maximum frame length | 9216 B | | | | |
| Cache | 32 Mb | | | | |
| Switching Capacity | 52 Gbps | | | | |
| IGMP support | Yes (V1/V2) | | | | |
| IGMP snooping (multicast) | Yes, enabled by default | | | | |
| Net Weight | 2.5 kg / 5.52 lb | | | | |
| Gross Weight | 2.8 kg / 6.18 lb | | | | |
| Dimensions (without ears) L x W x H | 445.82 mm x 180.29 mm x 43.20 mm 17.55 in x 7.10 in x 1.70 in | | | | |
| Dimensions (with ears) L x W x H | 483 mm x 180.29 mm x 43.20 mm 19.02 in x 7.10 in x 1.70 in | | | | |
| Packaging Dimensions | 533 mm x 247 mm x 111 mm 21.78 in x 9.72 in x 4.37 in | | | | |
| Ethernet Compliance | IEEE 802.3, IEEE 802.3u, IEEE 802.3x Flow Control, IEEE 802.3ab Gigabit Ethernet | | | | |

Due to continuous improvements and innovations of all ENTTEC products, specifications and features are subject to change without notice.

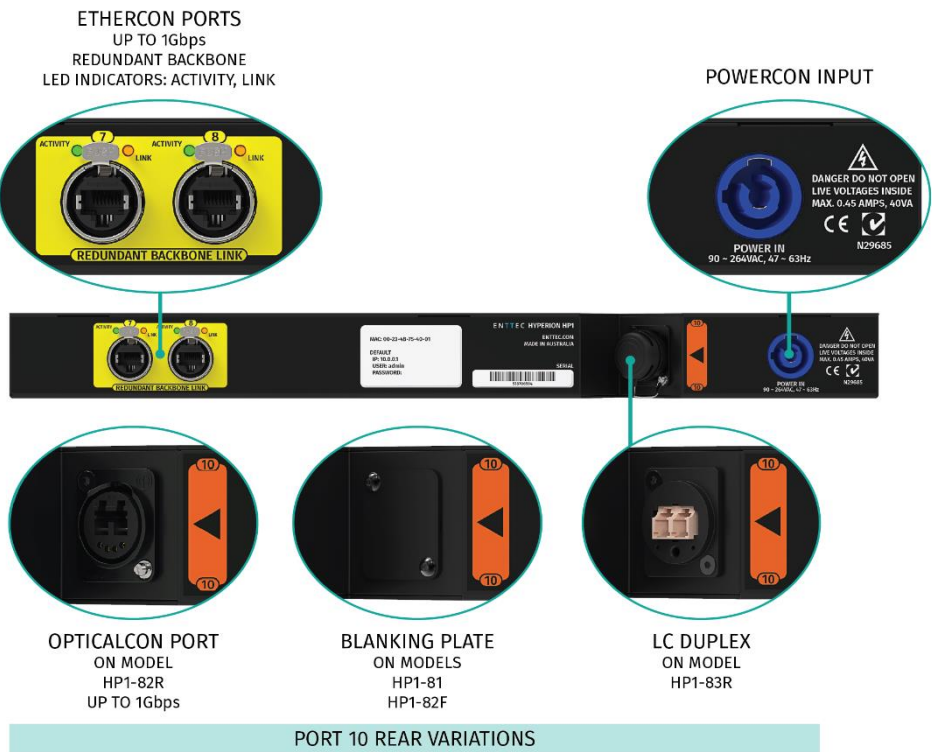
Hyperion Hardware Interface (Front)



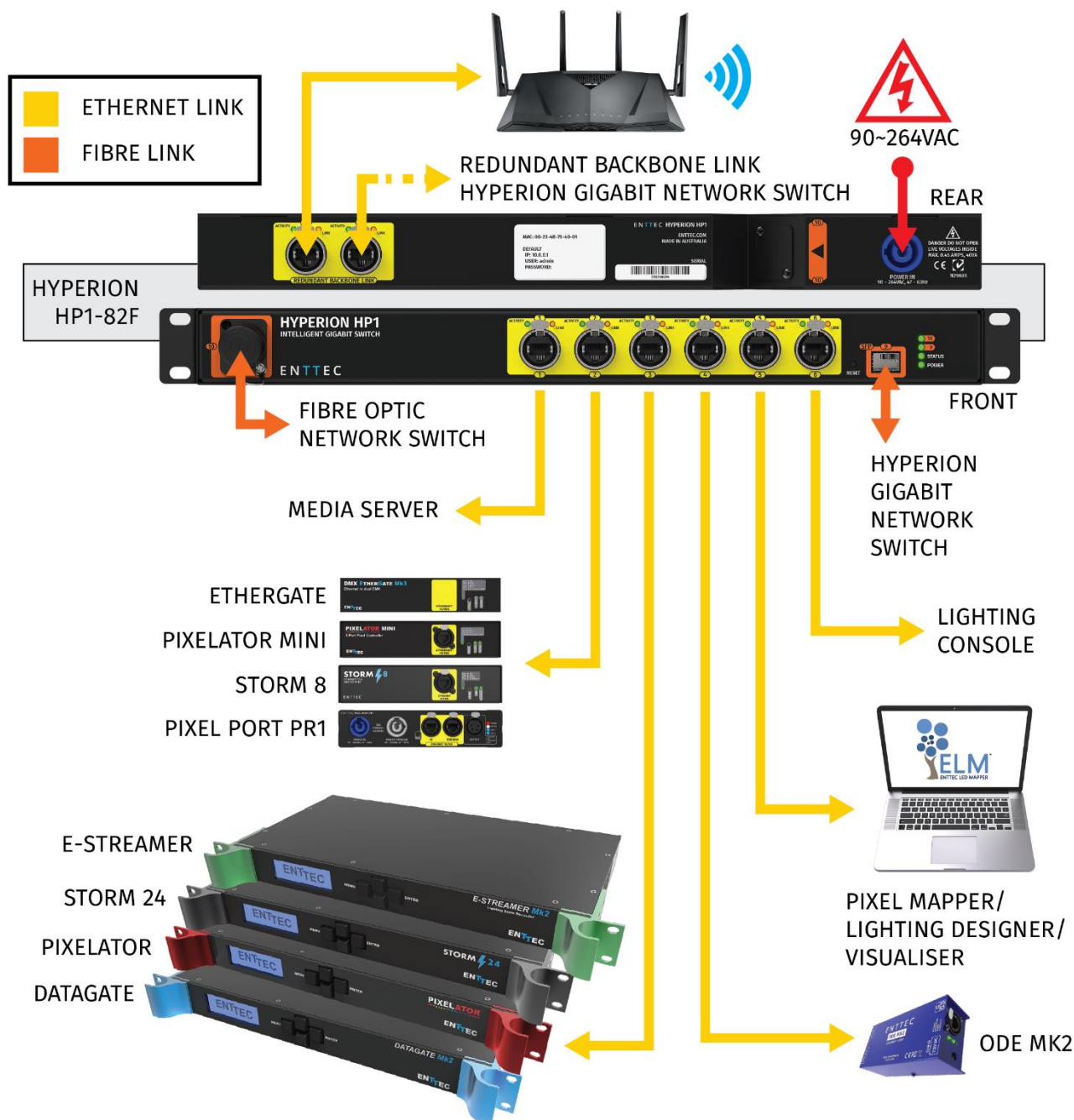
LED Status

| Power LED | Status LED | Operation |
|----------------|------------------|-------------------------|
| Green (static) | Amber | Device loading firmware |
| Green (Static) | Green (Blinking) | Normal operation |
| Green (Static) | No lit | Rebooting |

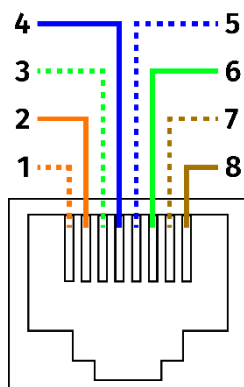
Hyperion Hardware Interface (Rear)



Application Diagram

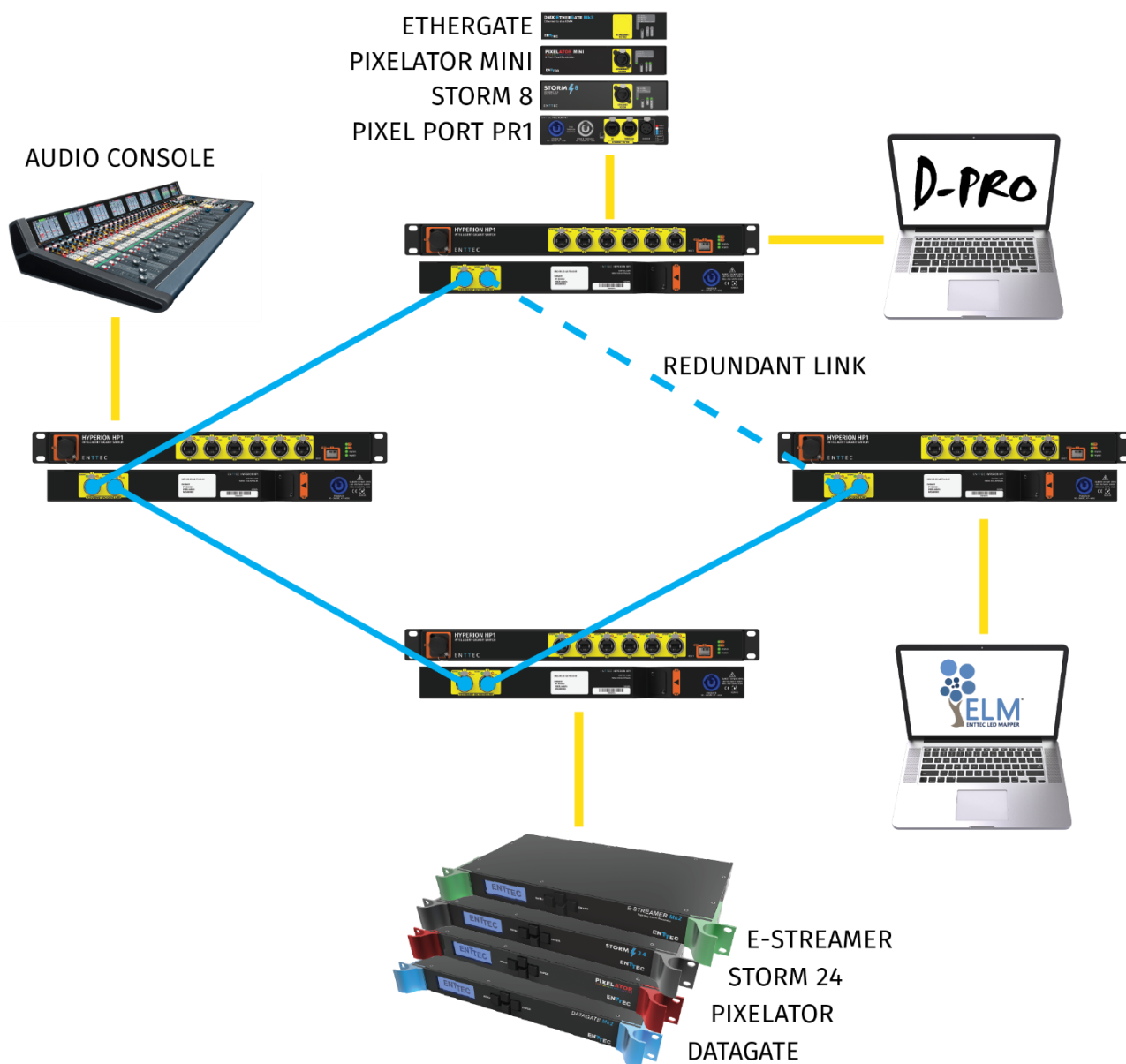


Ethernet Link Pin Out



| Pin | Colour |
|-----|--------------|
| 1 | White/Orange |
| 2 | Orange |
| 3 | White/Green |
| 4 | Blue |
| 5 | White/Blue |
| 6 | Green |
| 7 | White/Brown |
| 8 | Brown |

Redundancy Link



Redundancy link is the ability of two ports of Hyperion to be connected to the same networking device. Redundancy link will automatically take over the signal within milliseconds, once link failure is detected.

Notes:

- Redundancy link must be enabled (check from Home page for Ports 7 and 8)
- If Hyperion is restored to factory defaults, redundancy link will be disabled for all ports
- To enable redundancy link for Ports 7 and 8, simply load the Home page once
- To enable redundancy link for other Ports, use Ports page
- Can only be enabled/disabled when Port is not in use (not connected)
- Link Aggregation takes priority over Redundancy (Ports 1 to 6 only)

How to Access Web Interface?

1. Open any modern web browser, such as Chrome, Firefox, Safari or Edge
2. To access the web interface type in the assigned IP address of Hyperion e.g: 10.10.0.201



3. You will be prompted to login using the following details:

- User name: admin
- Password:

Please use the password, if any set by you.

By default, password is not required, so should be empty.

Hyperion Web Interface

The Hyperion web interface has the following sections:

1. Home
2. Settings
3. Ports
4. Administration

Home Page

ENTTEC HYPERION - HOME

System Information

| | |
|------------------|------------|
| Name: | test |
| System Uptime: | 3h 14m 21s |
| Number of Ports: | 10 |

Network Information

| | |
|--------------|-------------------|
| IP Address: | 10.7.2.2 |
| NetMask: | 255.0.0.0 |
| Gateway IP: | 10.7.2.2 |
| Mac Address: | 00-23-4B-75-40-01 |

Functional Information

| | |
|--------------------------|---------|
| Redundant Backbone Link: | Enabled |
| IGMP Snooping: | Enabled |
| IGMP Query status: | Enabled |

Firmware Information

| | |
|-------------------|-------------------------|
| Software Version: | WebUI v1.04 |
| Firmware Version: | 1.3.6.2.4.573.17389.101 |
| Boot Version: | CFE_V1.0_20100901 |
| Hardware Version: | 2017 |

Home page shows the followings information:

- Device Name – Identify this Hyperion in the network
- System uptime - The time since Hyperion was switched on
- Number of ports
- IP address
- Sub netmask
- Gateway IP
- Mac address (unique)
- Redundancy Backbone link – Ports 7 and 8 only
- Multicast IGMP Snooping and Query Status – should always be enabled
- Software/Hardware/Firmware versions

Settings Page

ENTTEC **HYPERION - SETTINGS**

System Settings

System Name:

System Location:

System Contact:

Save:

Network Settings

IP Address: Required: Must be unique on this network

NetMask: Required: Default is 255.255.255.0

Default Gateway: Default: same as IP address

DNS 1: Optional: leave empty if not needed

DNS 2: Optional: leave empty if not needed

Save:

Security Settings

Username:

Password:

Confirm Password:

Update:

The setting pages permits the setting of:

- System name - Assign a device name
- System location - Location of switch
- System contact - Note network contact
- IP address - IP of this Hyperion
- NetMask - Sub-net mask
- Default Gateway
- DNS 1/ DNS 2 - Configure IP of DNS server to be used
- Security settings - change user/password

Change Password

The change password feature is under the Settings page as shown in screen below:

Security Settings

Username:

Password:

Confirm Password:











Update:

To change the password:

1. Enter the new password (cannot be blank)
2. Click Update Security Settings

Ports Page

HYPERION - PORTS

| Port No. | Current Status/Speed | Speed Settings | Legend | Redundancy | MTU | Flow Control |
|-----------------|--|----------------------|--------|------------|------|--------------|
| 1 |  1 Gbps | Auto | | Enabled | 1518 | Disabled |
| 2 |  | Auto | | Enabled | 1518 | Disabled |
| 3 |  | Auto | | Enabled | 1518 | Disabled |
| 4 |  | Auto | | Disabled | 1518 | Disabled |
| 5 |  | Auto | | Enabled | 1518 | Disabled |
| 6 |  1 Gbps | Auto | | Enabled | 1518 | Disabled |
| 7 |  | Auto | | Enabled | 1518 | Disabled |
| 8 |  | Auto | | Enabled | 1518 | Disabled |
| 9 (SFP) |  | Auto | | Disabled | 1518 | Disabled |
| 10 (OpticalCon) |  | Auto | | Disabled | 1518 | Disabled |

Save / Update

Update:

[Update Ports Settings](#)

Please note:

Redundancy can only be enabled, if the Port is not linked to a Trunk

- Shows the status and speed of:
 - etherCON ports
 - opticalCON port (model dependent)
 - SFP port
 - LC Duplex ports
- Speed settings of ports can be specified
- Flow control – disabled by default. Supports flow control when enabled.
- MTU – specify the largest network layer protocol data unit
- Redundancy – disabled by default. Can only be set, when the port is not in use.

| Port | Current Status/Speed | Speed Settings | Legend | Flow Control | MTU |
|-----------------------------|--------------------------------|----------------|------------------------------|--------------|----------|
| 1 | <div><div></div>100 Mbps</div> | Auto | | Enabled | 1518 |
| Port 1 Statistics (Receive) | | | Port 1 Statistics (Transmit) | | |
| Total Data: | | 63.96 MB | TX Total Data: | | 13.11 MB |
| Errors: | | 0 | Errors: | | 0 |
| Unicast packets: | | 204159 | Unicast packets: | | 27673 |
| Discarded packets: | | 0 | Discarded packets: | | 0 |
| Multicast packets: | | 0 | Multicast packets: | | 8644 |
| Broadcast packets: | | 1831 | Broadcast packets: | | 21710 |
| Unknown packets: | | 0 | | | |

The network statistics for each port can be observed by clicking on the speed link indicated above

Link Aggregation

HYPERION - TRUNK

Link Aggregation Help (hover mouse on topics to reveal)

| | | | |
|-----------------------------------|-------------------------------|---|----------------------------------|
| What is a Trunk ? | How to Link ? | How many in a Trunk ? | How to Un-Link ? |
| Please note | | Linking ports into Trunks, will disable the redundancy setting on these ports. To enable redundancy on these ports, please Unlink these ports first. | |

Ports and Trunks

| Unlinked | Linked Trunk 1 | Linked Trunk 2 | Linked Trunk 3 |
|---|---|--|--|
| <div style="border: 1px solid #FFD700; padding: 2px; margin-bottom: 5px;">Port 1</div> <div style="border: 1px solid #FFD700; padding: 2px; margin-bottom: 5px;">Port 2</div> <div style="border: 1px solid #FFD700; padding: 2px; margin-bottom: 5px;">Port 3</div> <div style="border: 1px solid #FFD700; padding: 2px;">Port 6</div> | <div style="border: 1px solid #FFD700; padding: 2px; margin-bottom: 5px;">Port 4</div> <div style="border: 1px solid #FFD700; padding: 2px;">Port 5</div> | <div style="border: 1px solid #FFD700; height: 100px; width: 100%;"></div> | <div style="border: 1px solid #FFD700; height: 100px; width: 100%;"></div> |

Save / Update

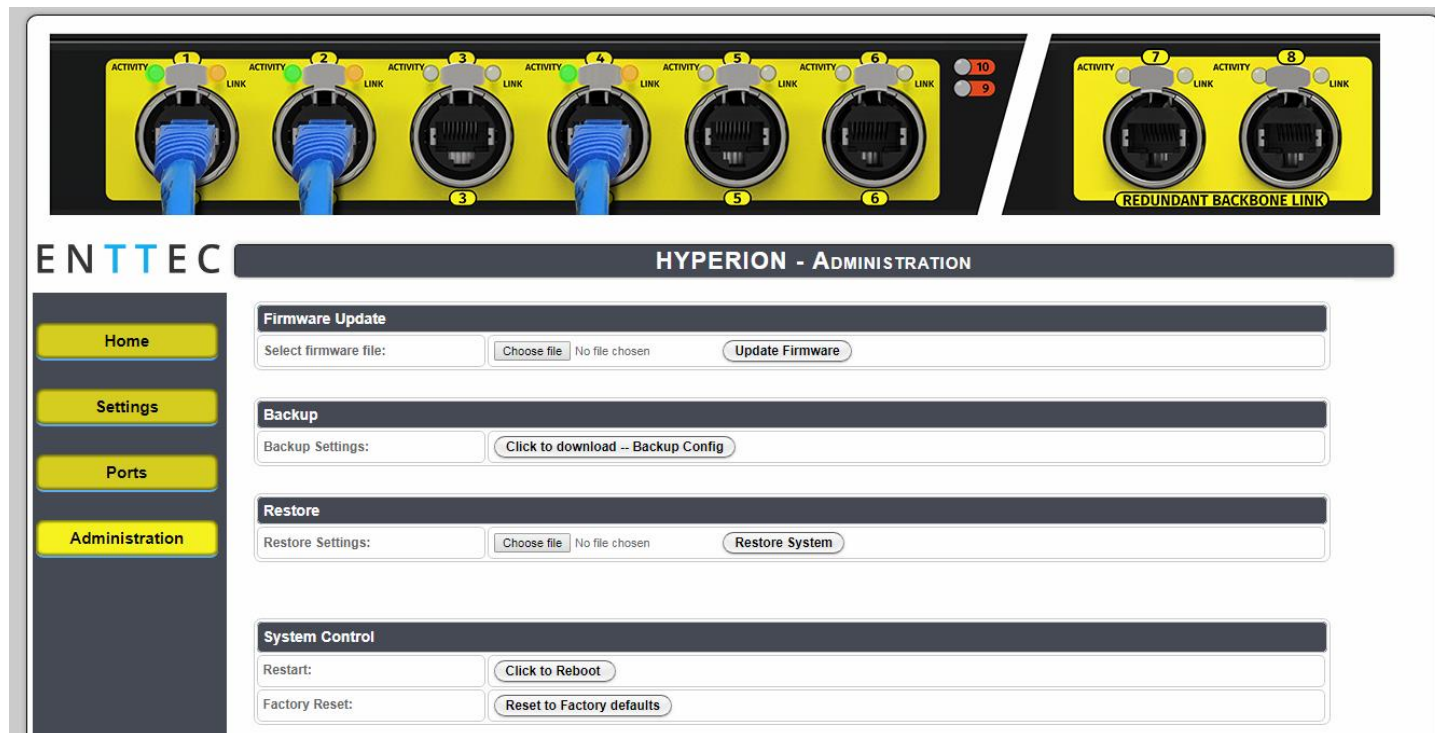
Update:
Update Trunk Settings

- Allows two ports to be linked into a Trunk. A total of 3 trunks are allowed
- Simply drag the ports from Unlinked column to a Trunk
- Devices connected to Trunked ports, **must support 802.3af** to work with Link aggregation

Notes:

- Each trunk can have a maximum port 2 ports
- First link the Ports in a Trunk, and, make the actual network connections afterwards.
- Link aggregation assumes, that the connections are made on the same network device (**must support 802.3af**)
- Redundancy link will get disabled as soon as two ports are link aggregated

Administration



The Administration page enables:

- Firmware update of the switch
- Backup of the switch configurations
- Restore the switch
- Reboot the device
- Reset to factory defaults

Restore to factory defaults (web interface)

- Resets password to default (blank)
- Resets username to **admin**
- Resets device IP to default of **192.168.0.10**
- Resets netmask to **255.255.255.0**
- Resets gateway to **0.0.0.0**
- Redundancy link on port 7 and 8 remains enabled (after refresh of Home page)

Restore to factory defaults (reset button)

To restore using the reset button (front of the unit)

- Press and hold the reset button, till the status led turns off
- Release the rest button, and wait for Hyperion to restore (takes 60 seconds)
- After successful restore, the following factory default configuration is loaded:
 - ✓ Resets password to default (blank)
 - ✓ Resets username to **admin**
 - ✓ Resets device IP to default of **192.168.0.10**
 - ✓ Resets netmask to **255.255.255.0**
 - ✓ Resets gateway to **0.0.0.0**
 - ✓ Redundancy link on port 7 and 8 are disabled (Refresh web Home page once to enable)

Reboot

Rebooting the device will restart your unit. No settings will be affected

Backup

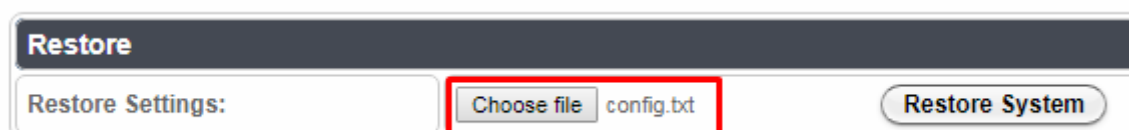
All user defined settings will be downloaded to a file (config)

Note:

Renaming or changing the backup file will result in failure of system restore

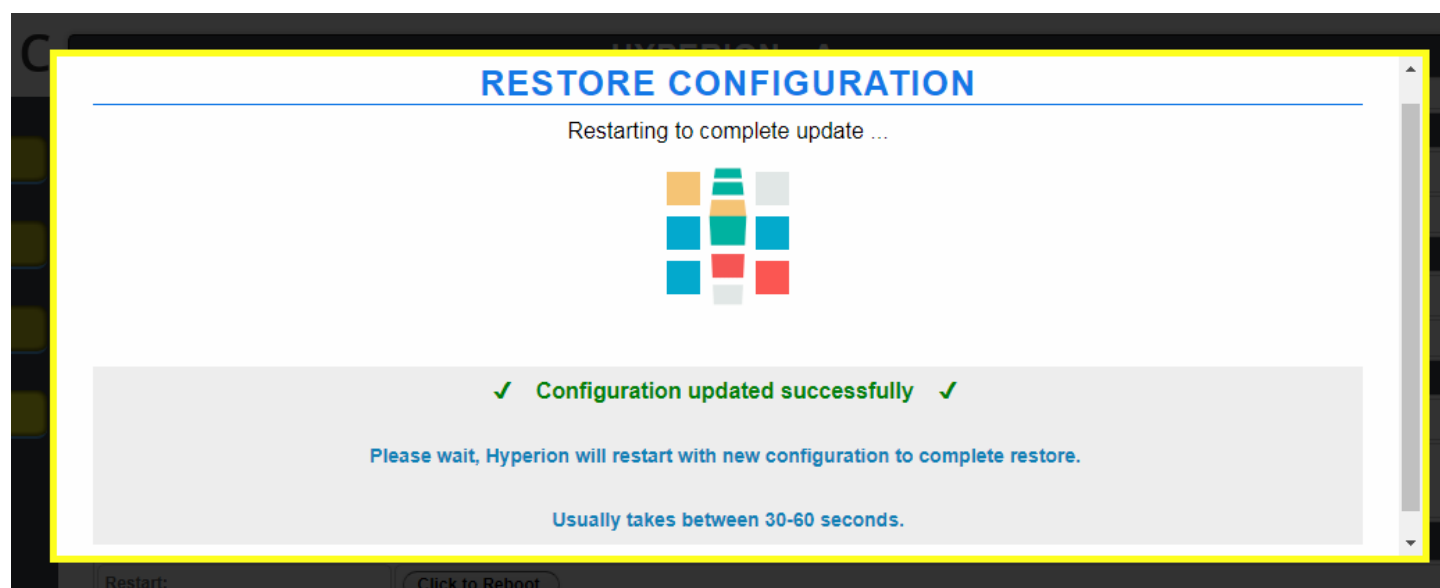
Restore

This can be used to restore a switch with set user defined settings except for (password and username).
Select the config file with the settings as shown below:



The screenshot shows a web interface for restoring settings. At the top is a dark bar with the word 'Restore' in white. Below this, on the left, is the text 'Restore Settings:'. To its right is a button labeled 'Choose file' followed by the text 'config.txt'. This button and text are enclosed in a red rectangular box. To the right of this is another button labeled 'Restore System'.

Once the Restore System button is clicked, a progress window will appear as shown below:



If an incorrect file is used for system restore, an error message will be displayed

Firmware Update

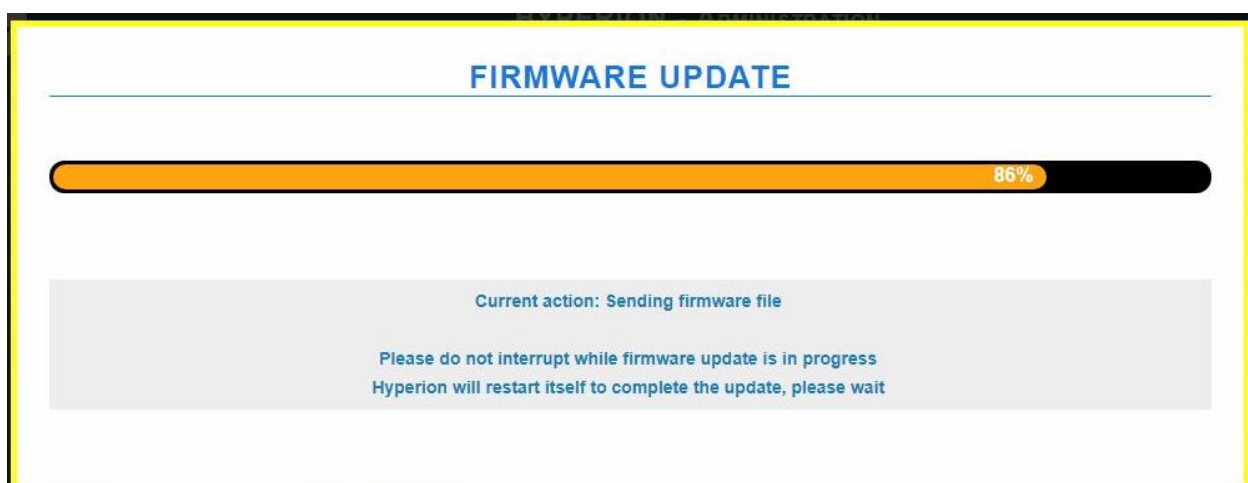
It is recommended to always update your Hyperion units to the latest firmware. Firmware files are released and available on www.enttec.com/hyperion.

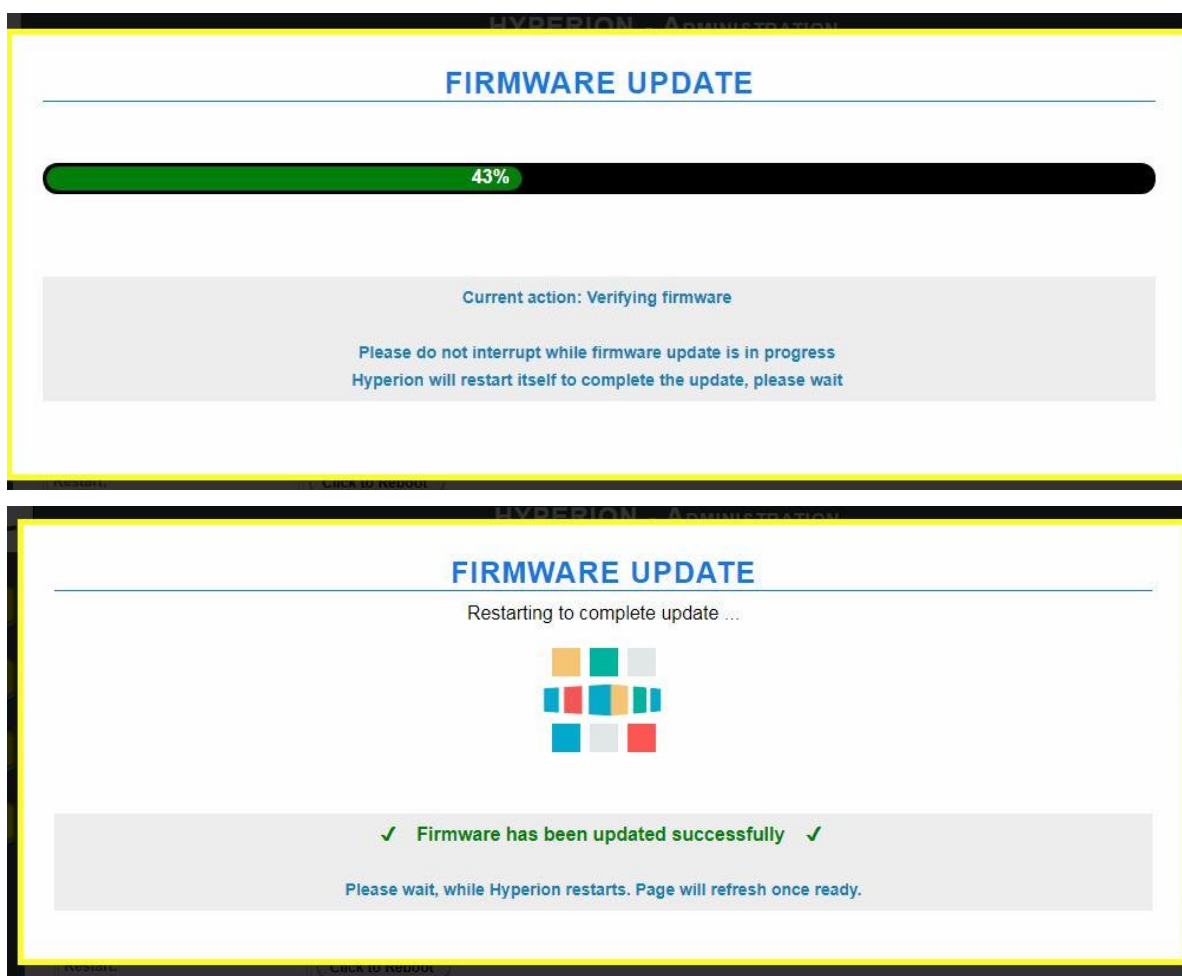
Firmware update option is under the Administration Menu. The steps for updating firmware are listed below:

1. Select the firmware to be loaded to the device (must be the correct firmware file for Hyperion only)
2. Click on Update Firmware button

WARNING: Please do not interrupt or power off your Hyperion unit, during a firmware update, as this can crash your Hyperion unit. Please be careful during firmware update.

The web interface will go through three screens during a successful firmware update as shown below:



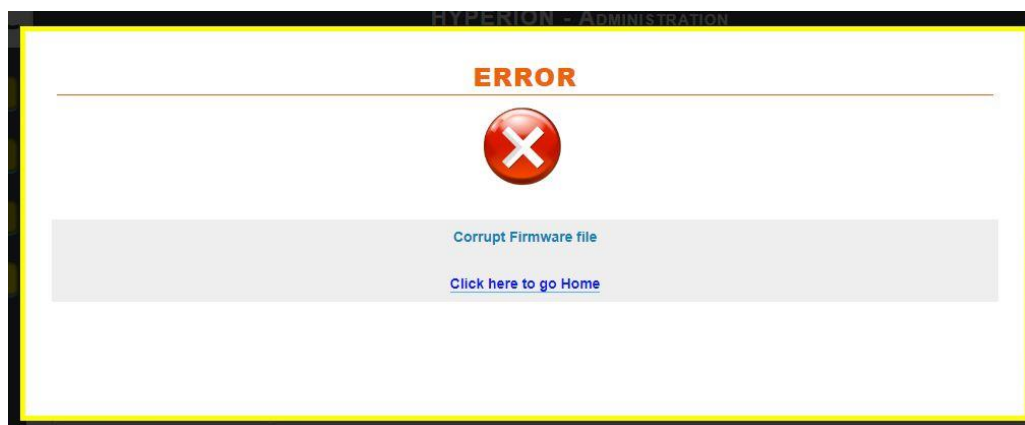


During step one and two: status LED will continue to blink. At step three, status LED will switch off for 30 seconds, then turn amber for roughly 10 seconds.

It could take between 30-60 seconds for firmware update to complete. It is important, that you do not interrupt the firmware update procedure at any time.

Once restart is complete, status LED should start blinking – this shows it's ready.

In case a bad firmware update was attempted, the following error screen will be shown:



If the page does not refresh, please click the link at the bottom of the message, to load the Home page.

Tips and Tricks

Hyperion not found by NMU

- If you just reset Hyperion (factory restore), it might not be discovered by NMU.
- However, after a reset, it will always be set to IP: **192.168.0.10**
- Simply follow the [settings for your PC](#) guide, to ensure your computer is on the correct network settings, so it can talk to Hyperion.
- Once you change IP address of Hyperion, it will be visible in NMU.

Unsuccessful Firmware update, causes white page

- If you tried a bad or corrupt firmware file, and then followed it with a good firmware, it's possible that Hyperion will simply show a white page as shown in the image below

WARN!!! Write Flash...3%

Firmware is upgrading. Don't power down. Pls. retry when complete this upgrade!

- Please wait for 60 seconds, and refresh the page
- If it says Firmware update in progress, please wait another 60 seconds, and refresh
- If the page shows that Firmware update is complete as shown in the image below, then please re-power Hyperion. **Note: Ensure Status indicator blinks green**

WARN!!!

Firmware upgrade completed. Please do not change any configuration settings or reconfigure the system via main page while the settings are being saved.!!

- After re-powering the unit, web page should load normally

Settings do not Save

- Please make sure your unit is updated to the latest firmware available on www.enttec.com/hyperion
- If you still face the same problem, please restore using the reset button.

Redundancy Link Doesn't work

- Make sure redundancy link is enabled in the ports used
- Make sure the same network device is connected to both ports
- If both links are on and active, and redundancy link still doesn't work – re-power Hyperion
- For Ports 7 and 8: ensure Redundancy link is active (as shown on the home page)

Connection Lost

- Is Hyperion still powered on and connected to the network?
- Make sure the connections are good, and re-power Hyperion – if you can't talk to it

Device connected to Hyperion, not found

To troubleshoot do the following:

- Disconnect all other network connections
- Connect your computer directly to the switch
- Set the networking settings of your computer as specified in [settings for your computer](#)
- Enter default IP of device (192.168.0.10) into an address bar of a browser of your choice
- If device web page is inaccessible, reset device to factory settings by holding down reset button for ten seconds
- Wait one minute until status light of device is blinking green
- Re-enter default IP of device (192.168.0.10) into an address bar of a browser of your choice

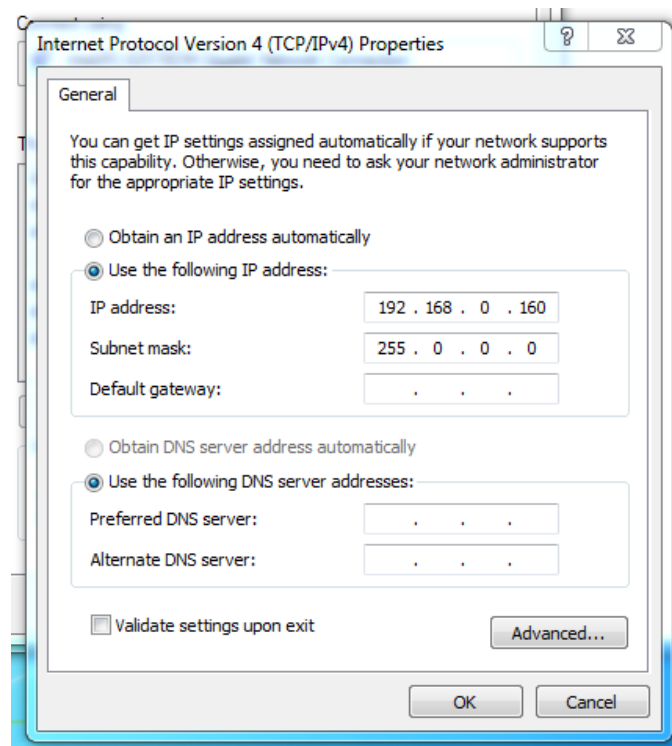
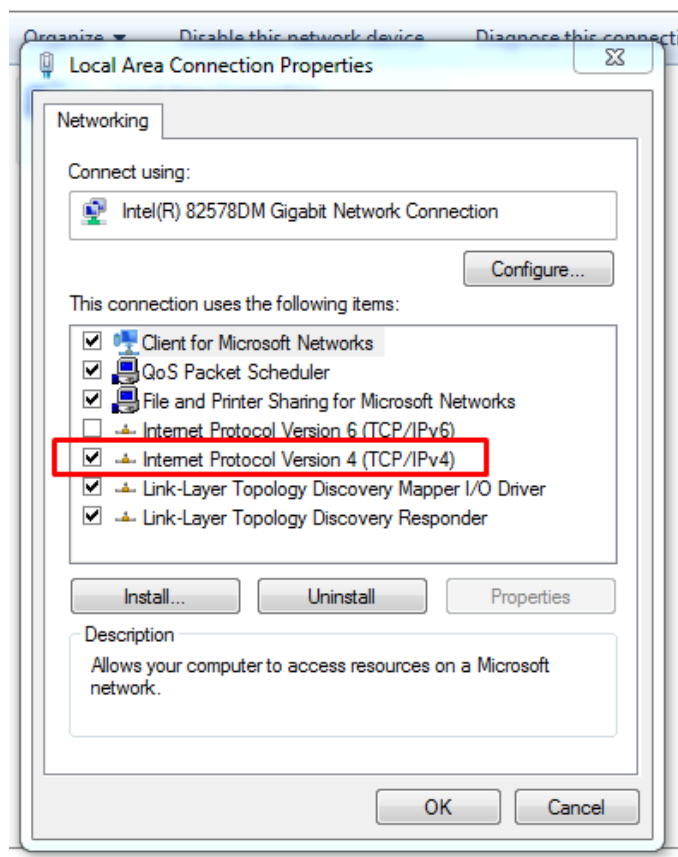
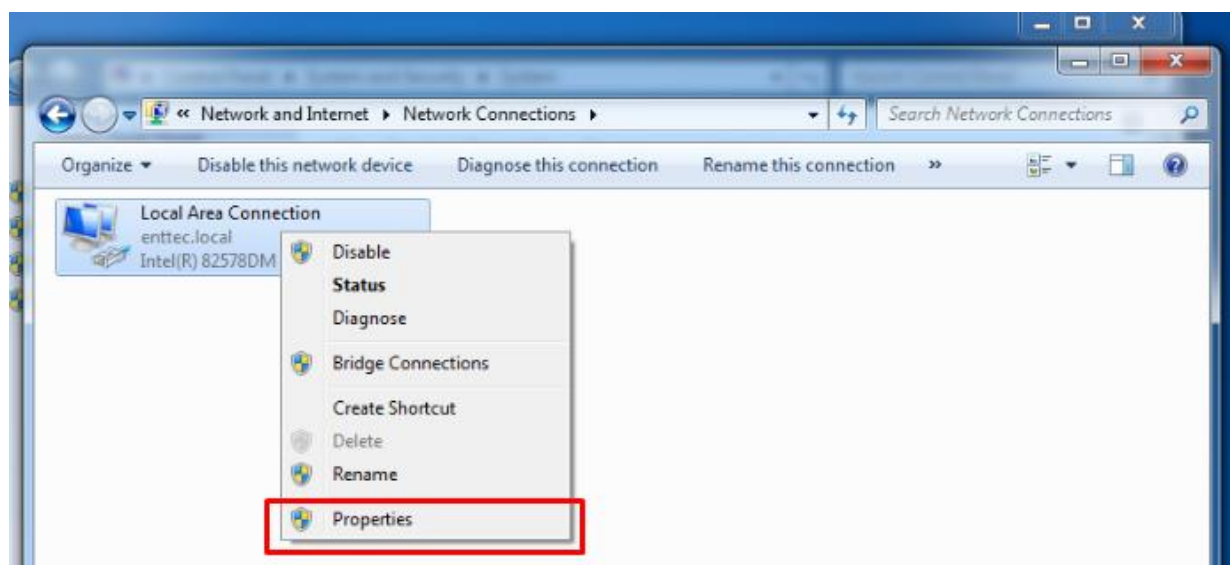
Device not discovered on reconnection

- Please wait 60 seconds and rediscover device using your software.
- If not discovered after 60 seconds, power cycle the device connected to Hyperion and rediscover

Settings for your Computer

Steps for Windows 7

1. Click **Start>Control Panel>Network and Internet>Network and Sharing Center>Change adapter settings**
2. Select **Internet Protocol Version 4 (TCP/IPv4)**, then click **Properties**

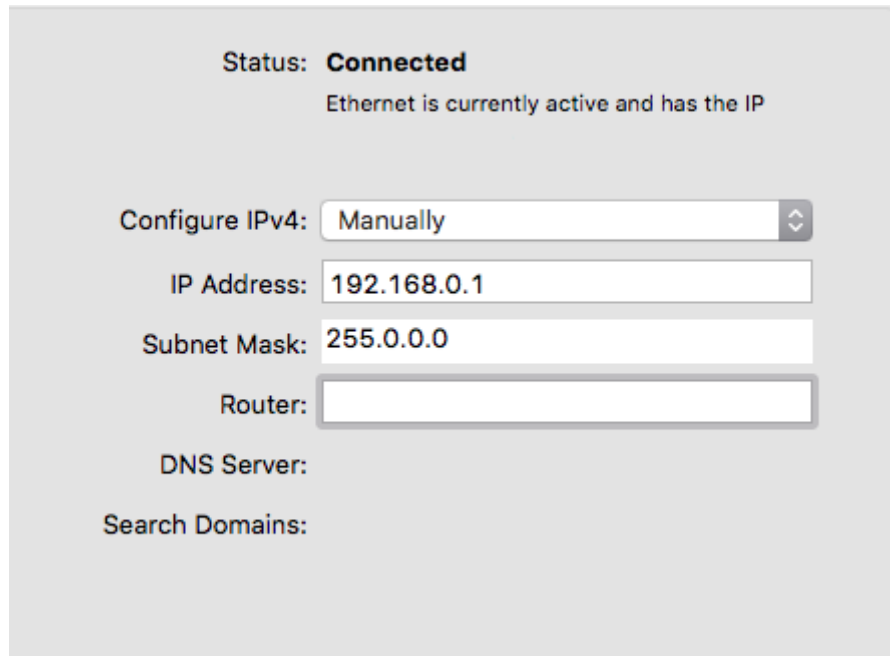


Select Internet Protocol Version 4 (TCP/IPv4)

Internet Protocol Version 4 Setting to be used

Steps for MacOS

1. Click System Preferences -> Network -> Ethernet
2. Select **Configure IPv4: Manually**, and enter values as shown below

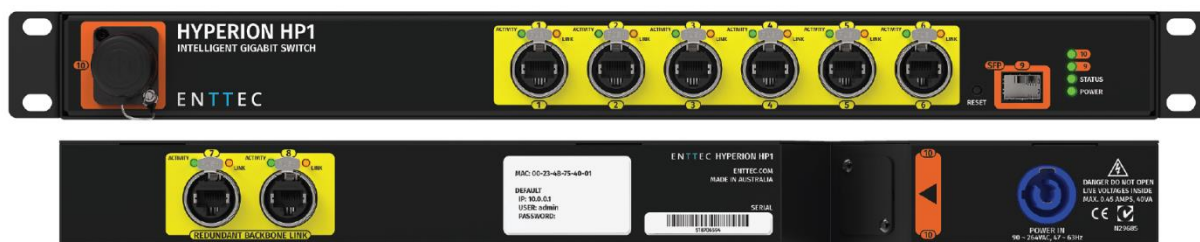


The screenshot shows the MacOS Network settings window for the Ethernet interface. The status is 'Connected' and a message states 'Ethernet is currently active and has the IP'. The 'Configure IPv4' dropdown is set to 'Manually'. The IP Address is 192.168.0.1, the Subnet Mask is 255.0.0.0, and the Router field is empty. The DNS Server and Search Domains fields are also empty.

| | |
|---|------------------|
| Status: | Connected |
| Ethernet is currently active and has the IP | |
| Configure IPv4: | Manually |
| IP Address: | 192.168.0.1 |
| Subnet Mask: | 255.0.0.0 |
| Router: | |
| DNS Server: | |
| Search Domains: | |

Available Models

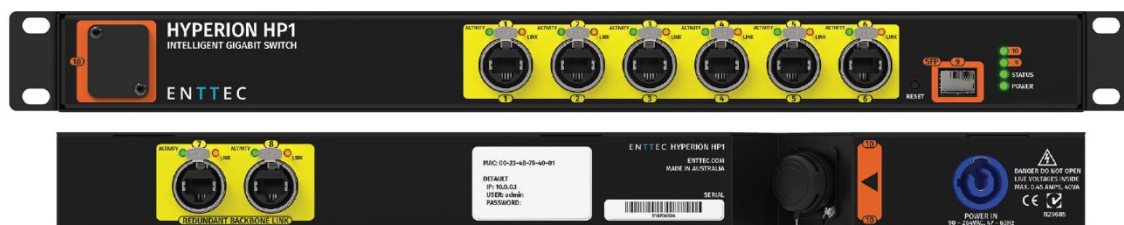
**71025
HP1-82F**



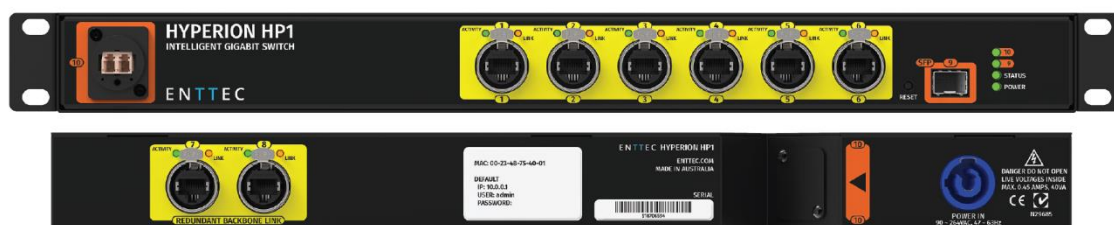
**71026
HP1-81**



**71027
HP1-82R**



**71028
HP1-83F**



**71029
HP1-83R**



Ordering Information

| SKU | Model Handle | Description |
|--------------|--------------|---|
| 71025 | HP1-82F | Hyperion Gigabit Switch with OpticalCON (Front) |
| 71026 | HP1-81 | Hyperion Gigabit Switch NO OpticalCON |
| 71027 | HP1-82R | Hyperion Gigabit Switch with OpticalCON (Rear) |
| 71028 | HP1-83F | Hyperion Gigabit Switch with LC Duplex (Front) |
| 71029 | HP1-83R | Hyperion Gigabit Switch with LC Duplex (Rear) |

Accessories and Recommended Products

| SKU | Model Handle | Description |
|--------------|--------------|--|
| 51155 | | Gigabit LC Fibre Optic Hyperion SFP Module (SFP-1GE-LX-1310nm) |
| 73910 | | US Mains plug powerCON cable |
| 73911 | | UK Mains plug powerCON cable |
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