Hyperion

INTELLIGENT GIGABIT SWITCH

Contents

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

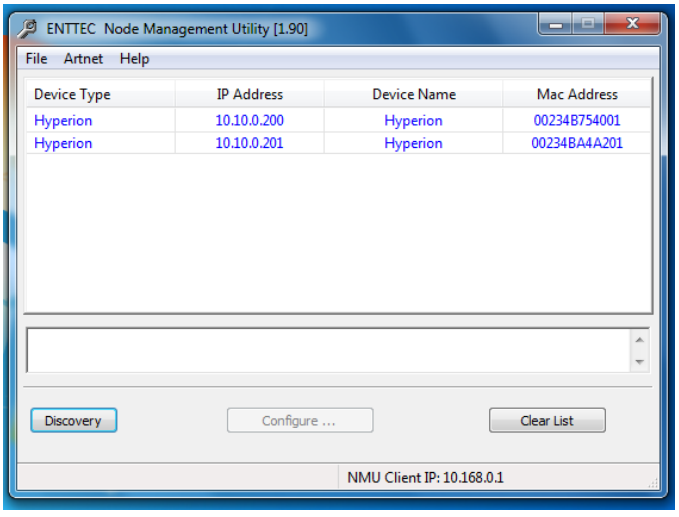
- Connect Hyperion directly to a computer using a cat5 cable

NOTE

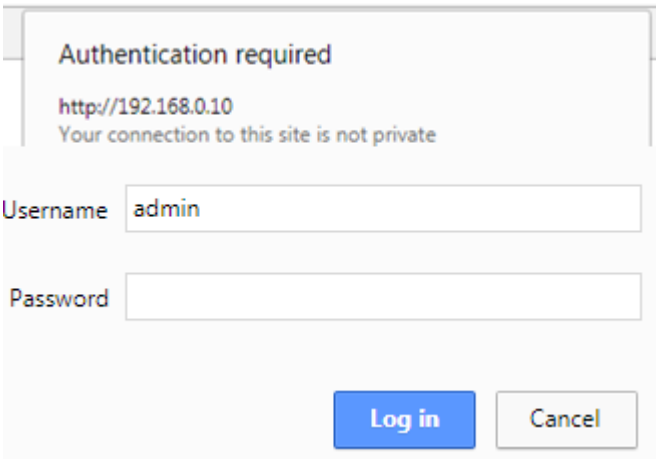
The computer should have the following network adapter settings:

  - 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

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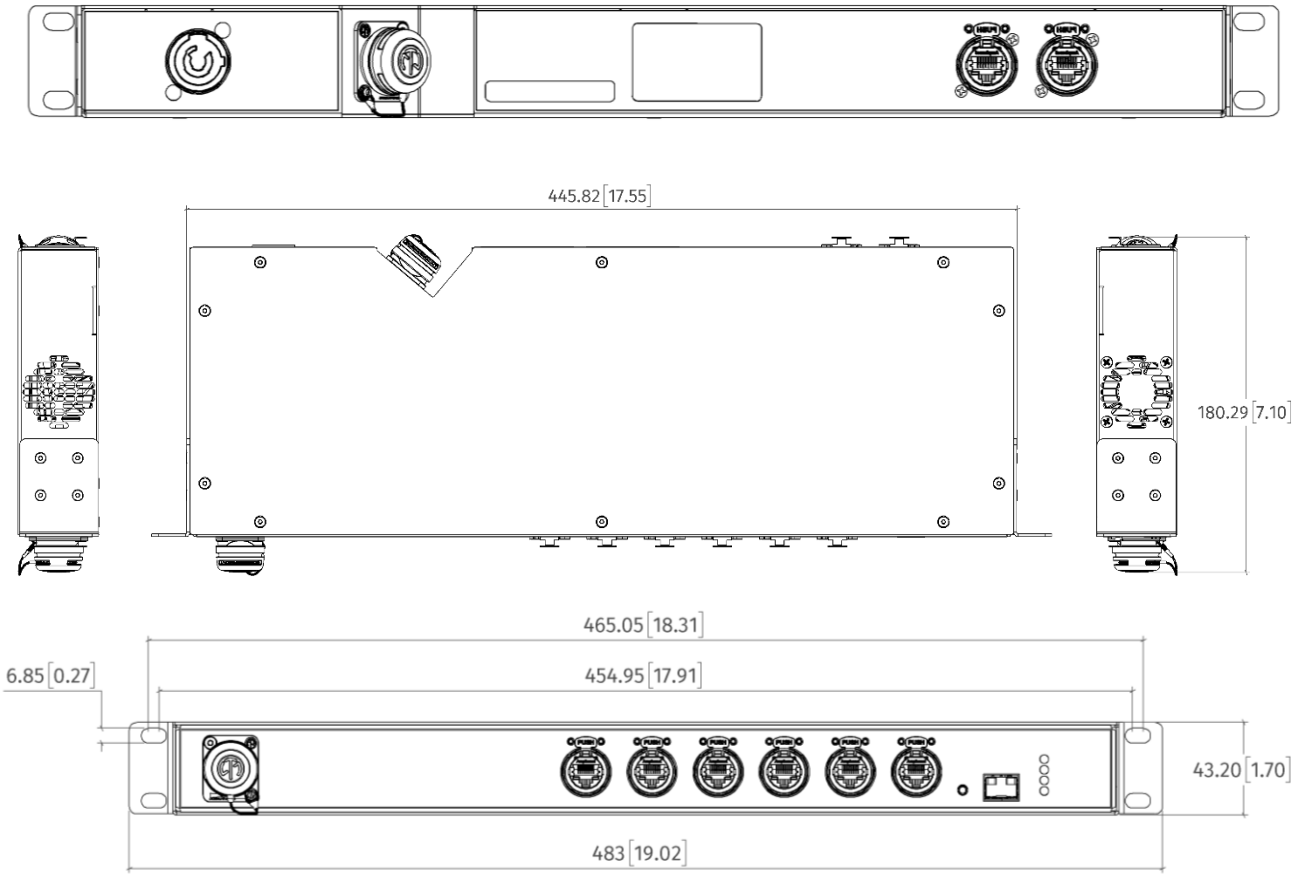
Physical Dimensions

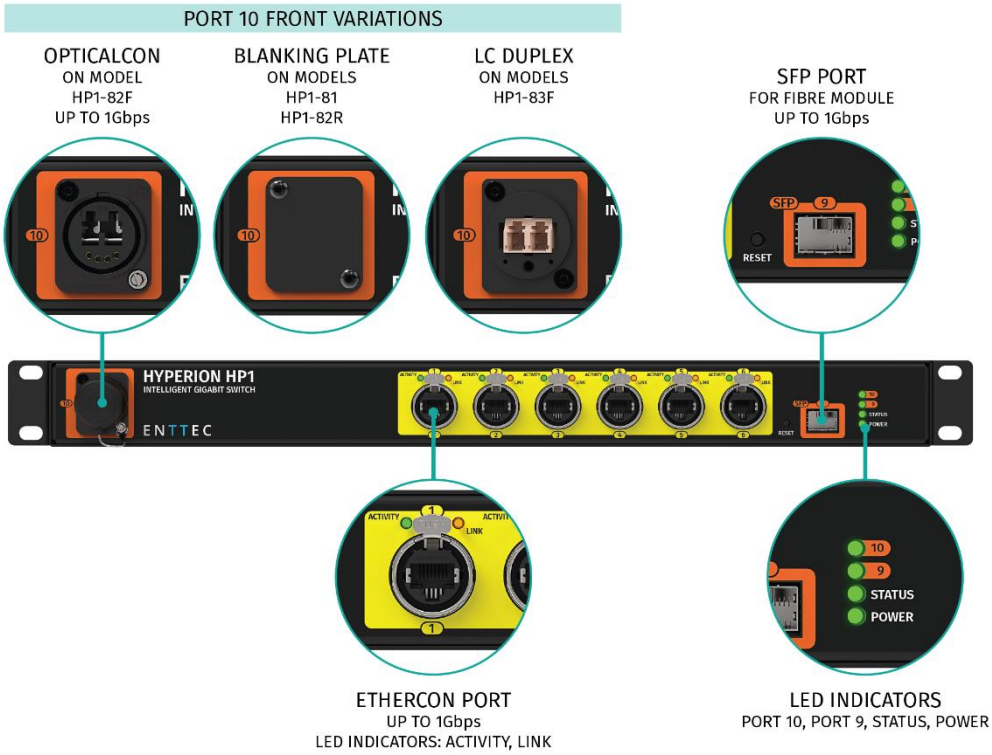


Specifications

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.

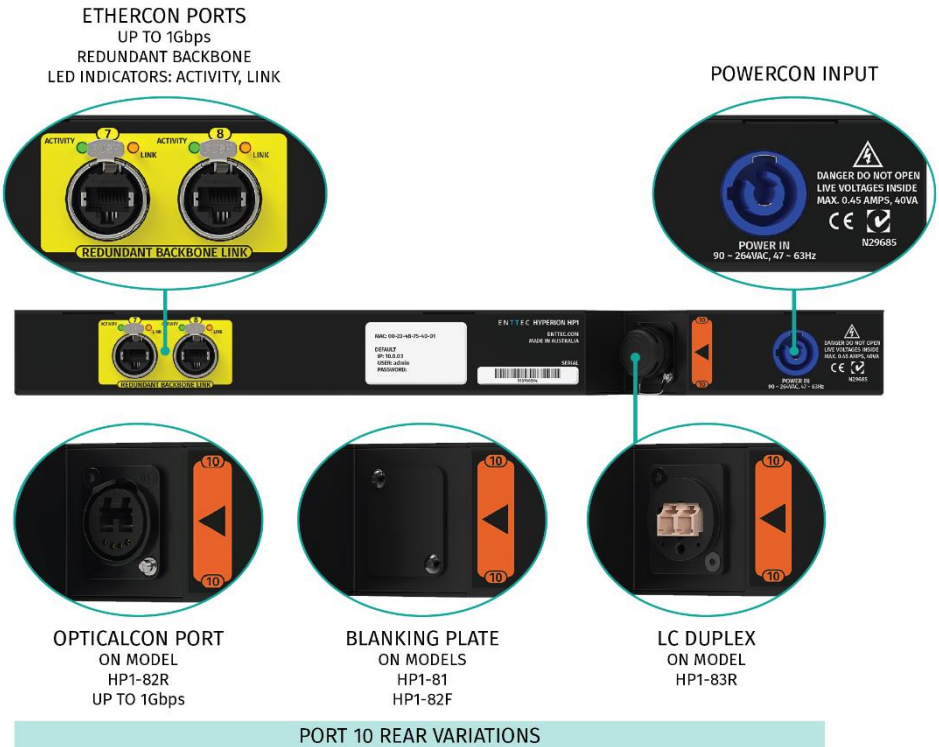
Hyperion Hardware Interface (Front)



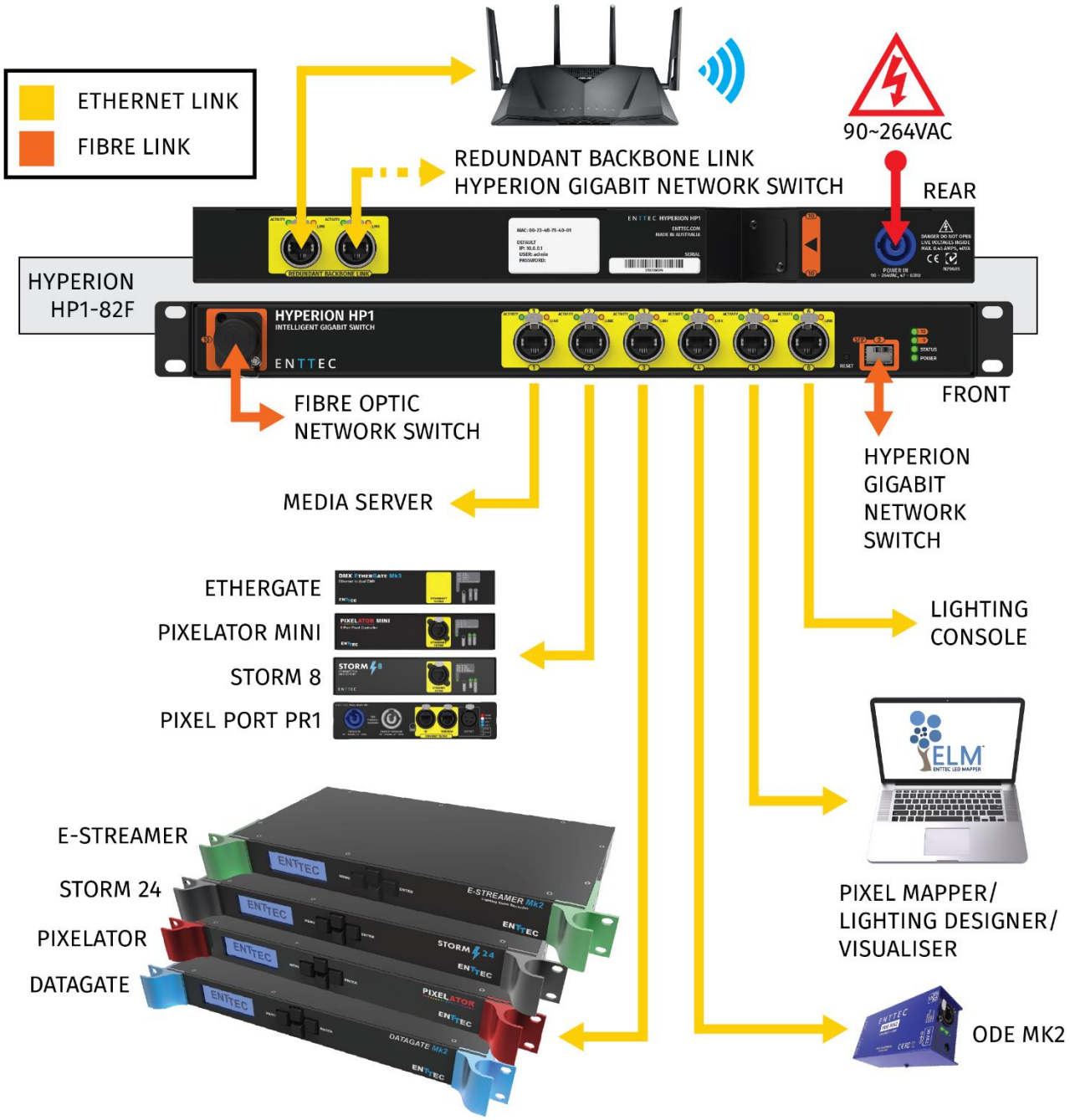
LED Status

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

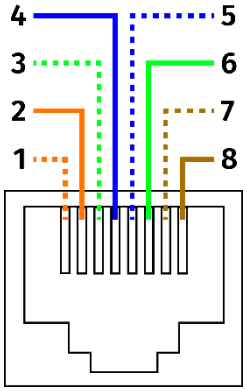
Hyperion Hardware Interface (Rear)



Application Diagram

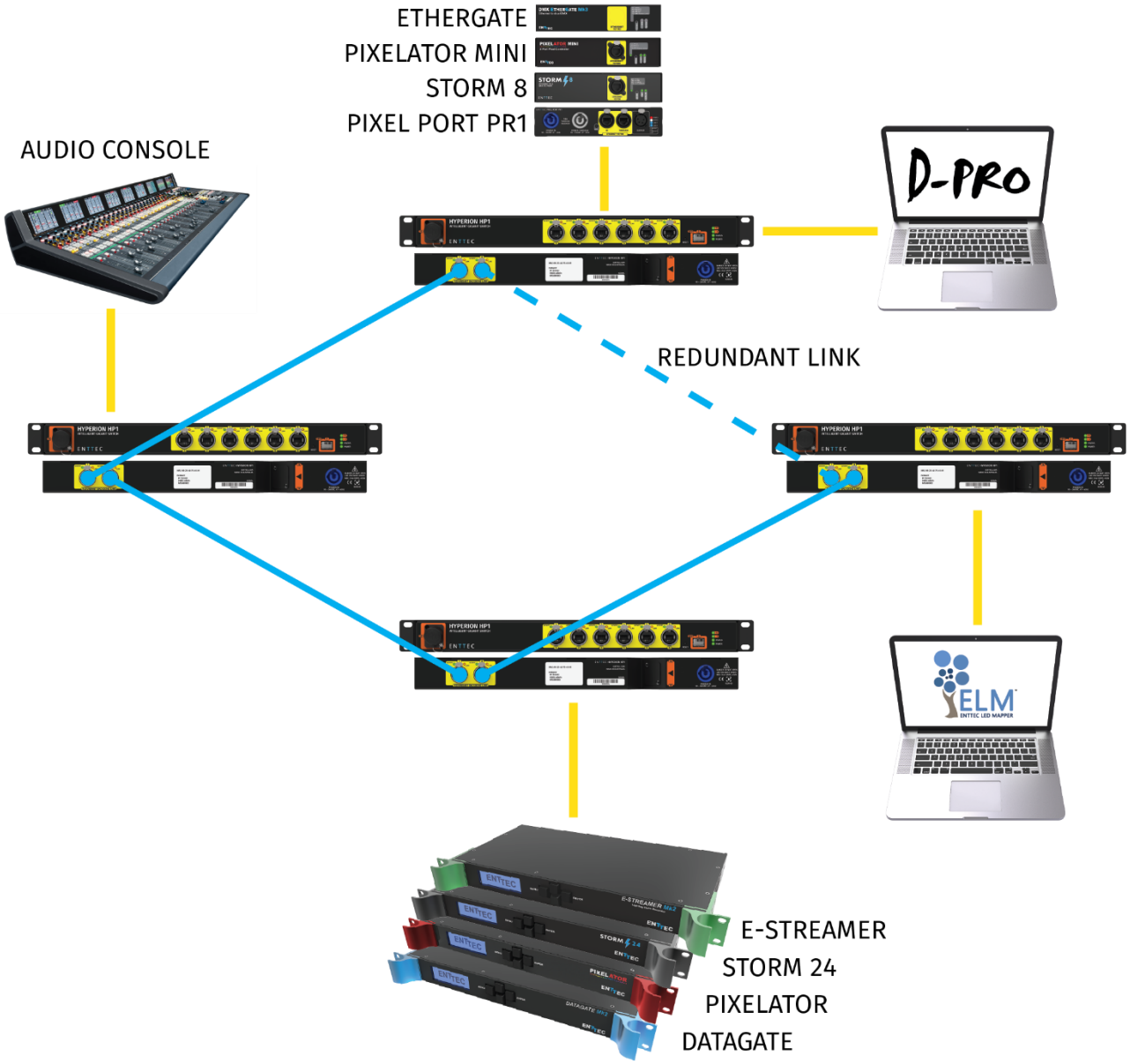


Ethernet Link Pin Out



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

Redundancy Link



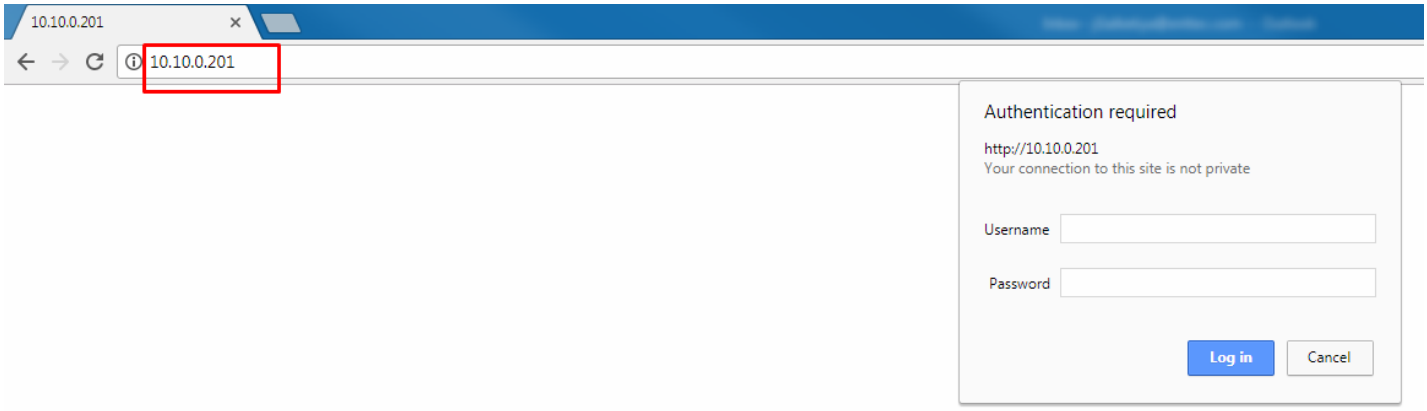
Redundancy link is the ability of two ports of Hyperion to be connected to the same networking device. Redundancy link will automatically take over the signal within milliseconds, once link failure is detected.

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.

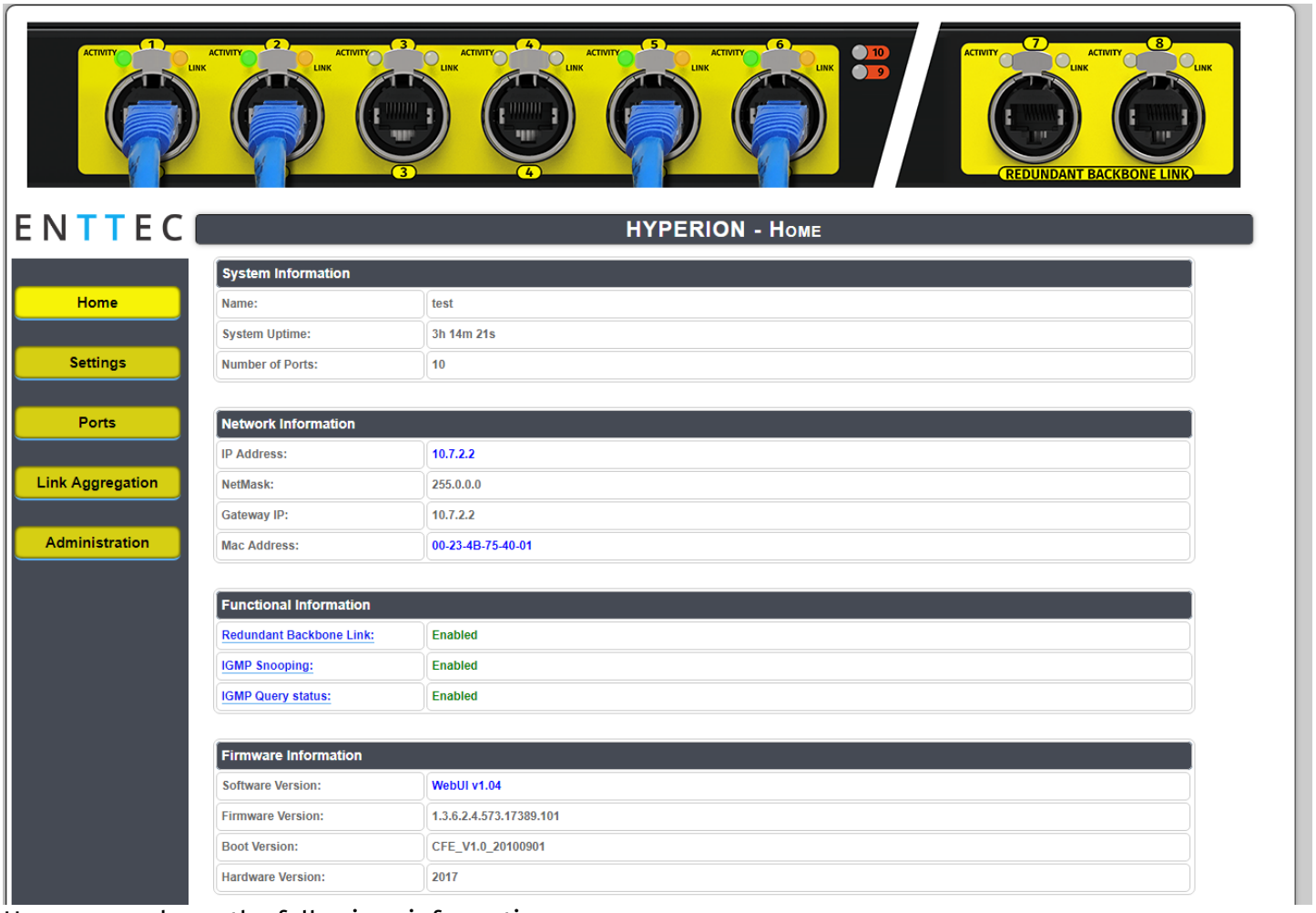
     By default, password is not required, so should be empty.

Hyperion Web Interface

The Hyperion web interface has the following sections:

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

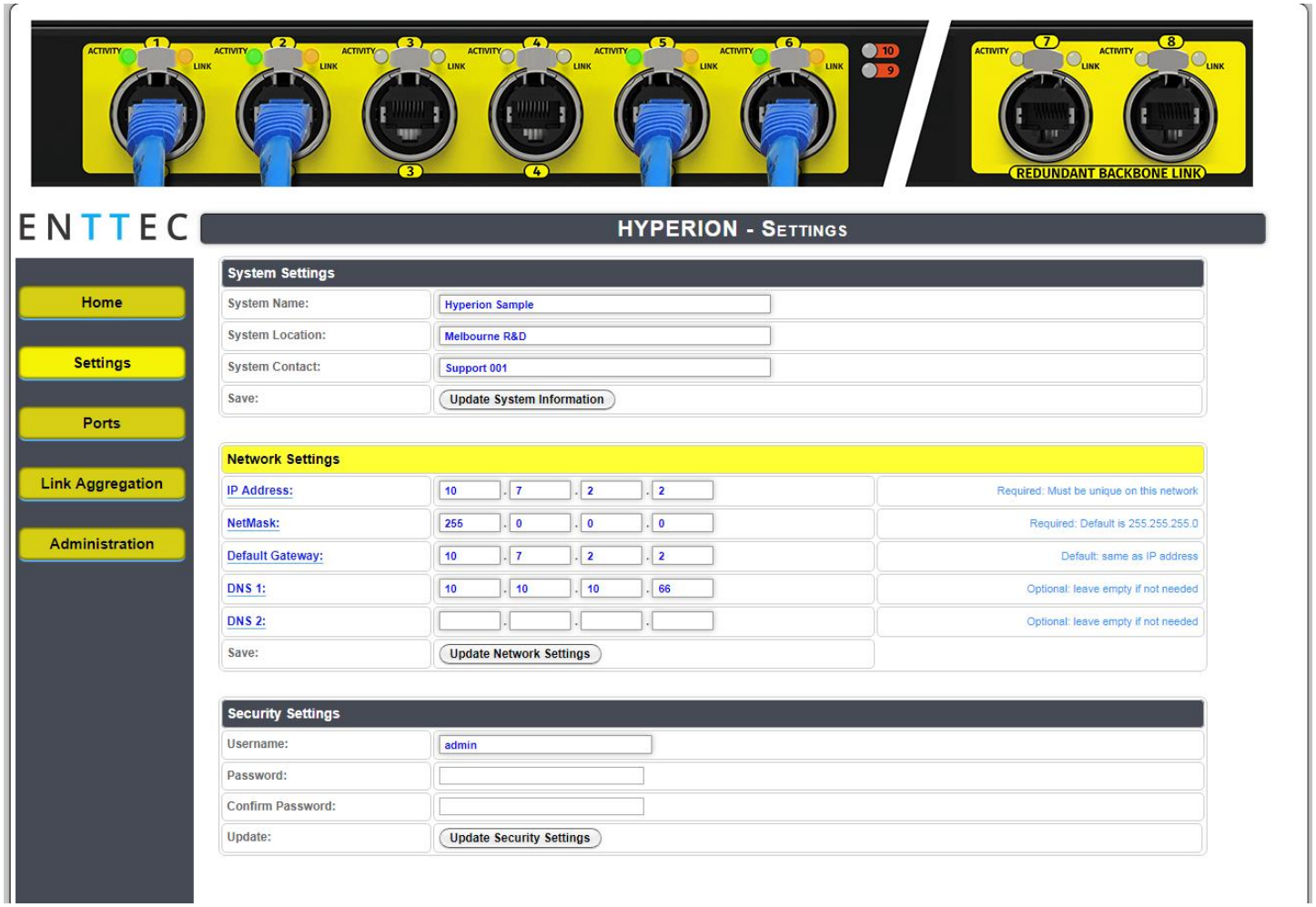
Home Page



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

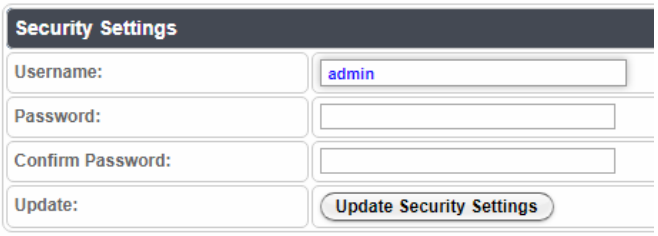


The setting pages permits the setting of:

- 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:



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

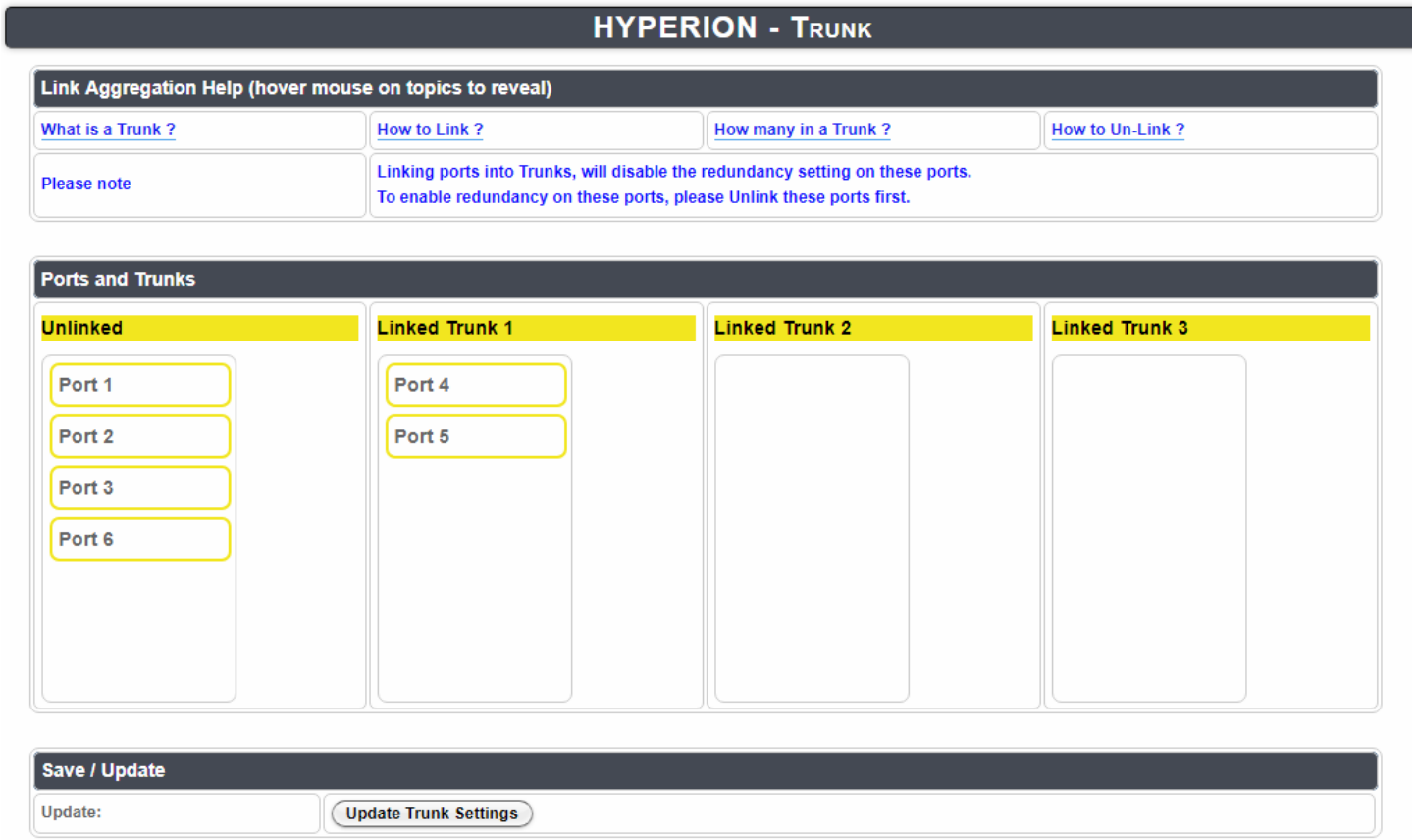
- Shows the status and speed of:
  - etherCON ports
  - opticalCON port (model dependent)
  - SFP port
  - LC Duplex ports
- Speed settings of ports can be specified
- Flow control – disabled by default. Supports flow control when enabled.
- MTU – specify the largest network layer protocol data unit
- 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	100 Mbps	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



- 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

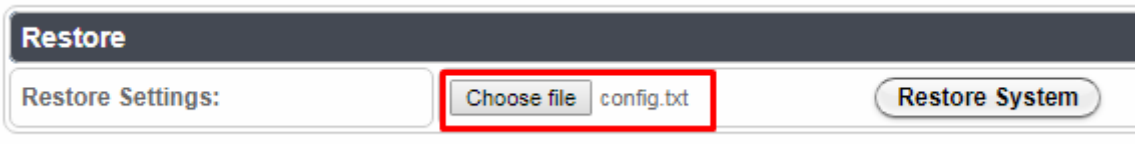
All user defined settings will be downloaded to a file (config)

Note:

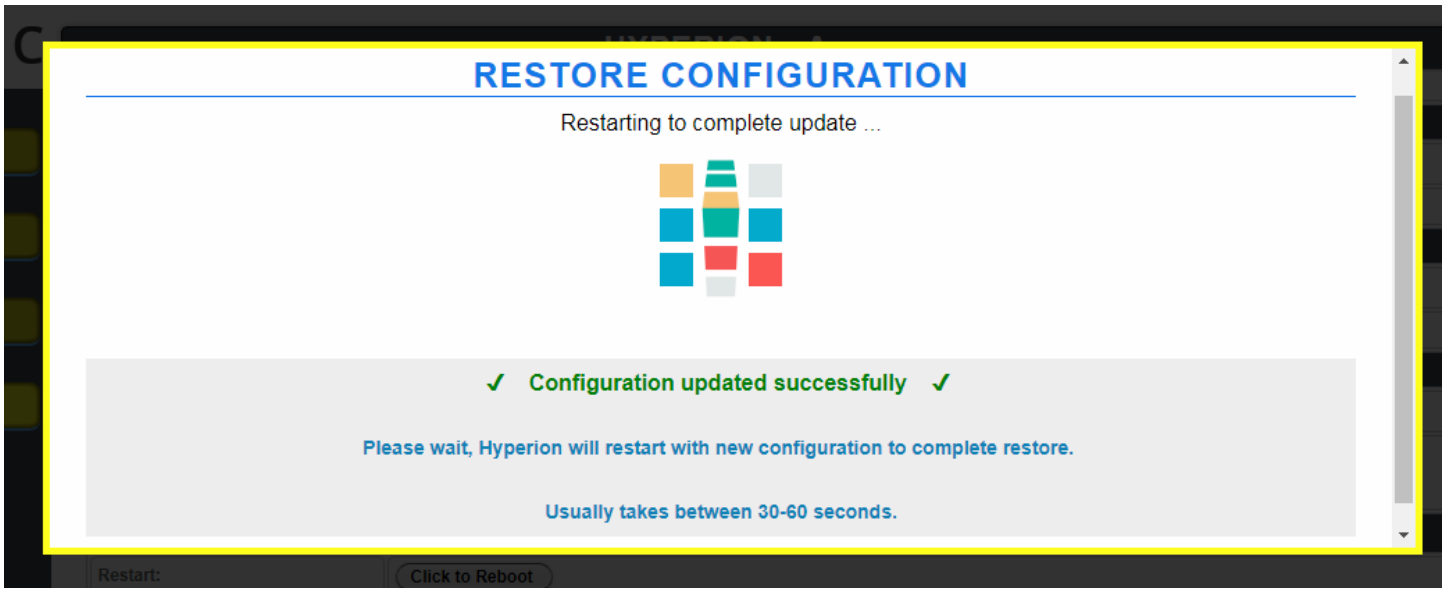
Renaming or changing the backup file will result in failure of system restore

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:



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

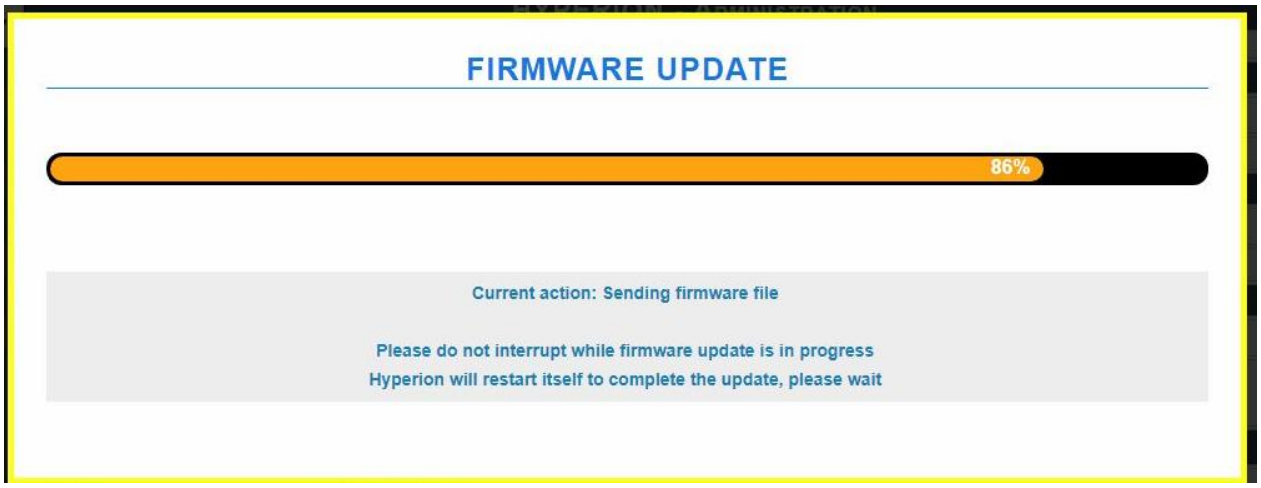
It is recommended to always update your Hyperion units to the latest firmware. Firmware files are released and available on www.enttec.com/hyperion.

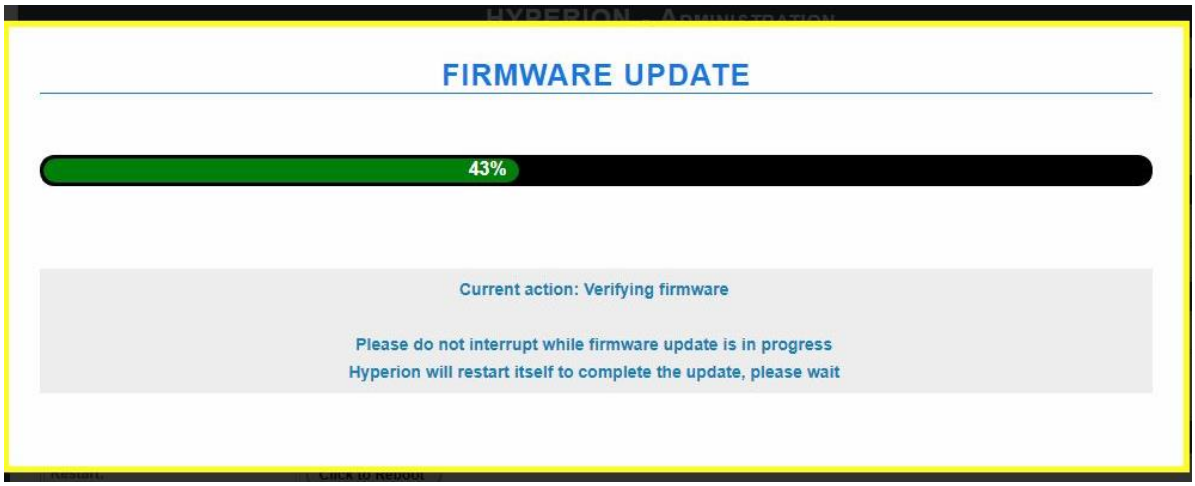
Firmware update option is under the Administration Menu. The steps for updating firmware are listed below:

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:

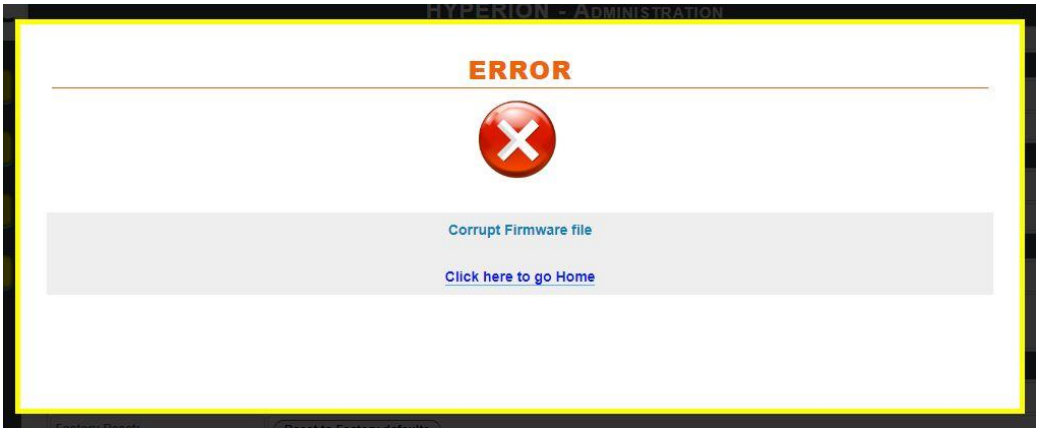




During step one and two: status LED will continue to blink. At step three, status LED will switch off for 30 seconds, then turn amber for roughly 10 seconds.

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.

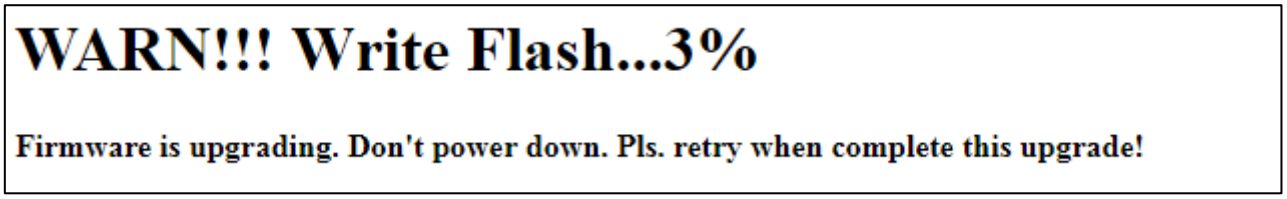
Tips and Tricks

Hyperion not found by NMU

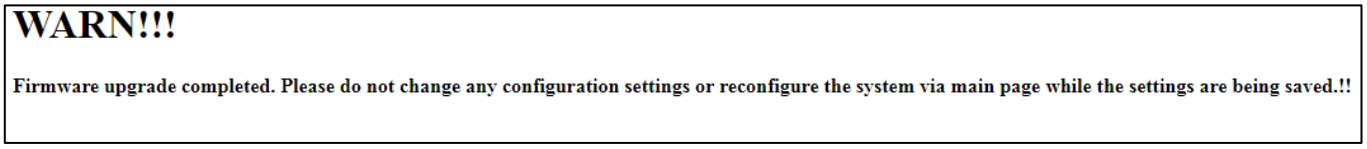
- If you just reset Hyperion (factory restore), it might not be discovered by NMU.
- However, after a reset, it will always be set to IP: **192.168.0.10**
- Simply follow the settings for your PC guide, to ensure your computer is on the correct network settings, so it can talk to Hyperion.
- Once you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



- 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**



- 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

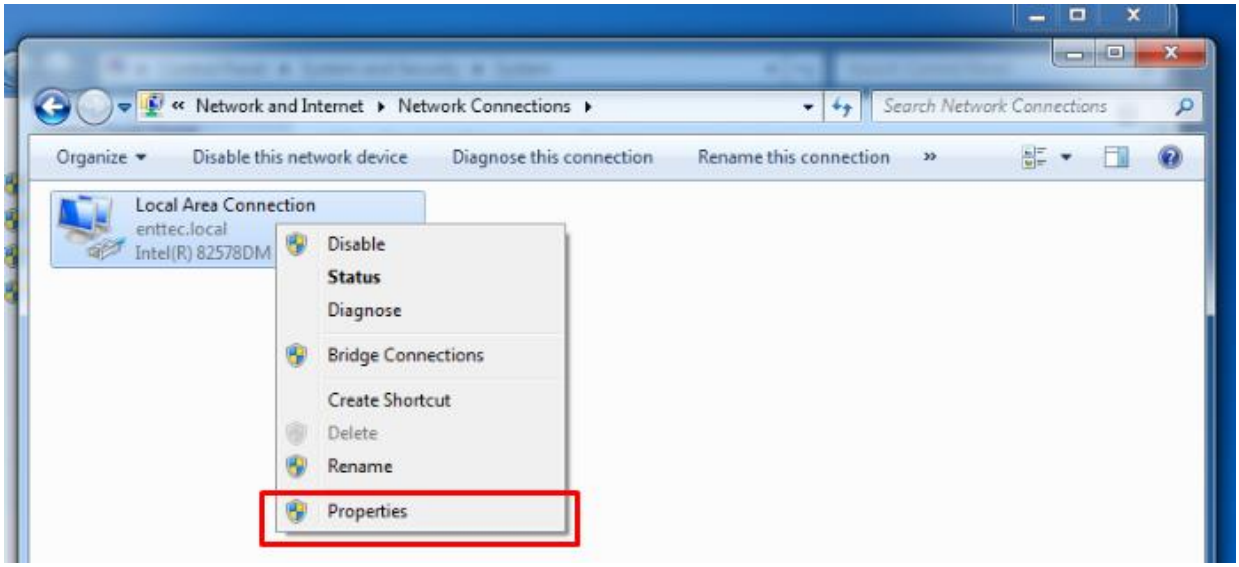
- Please wait 60 seconds and rediscover device using your software.
- If not discovered after 60 seconds, power cycle the device connected to Hyperion and rediscover

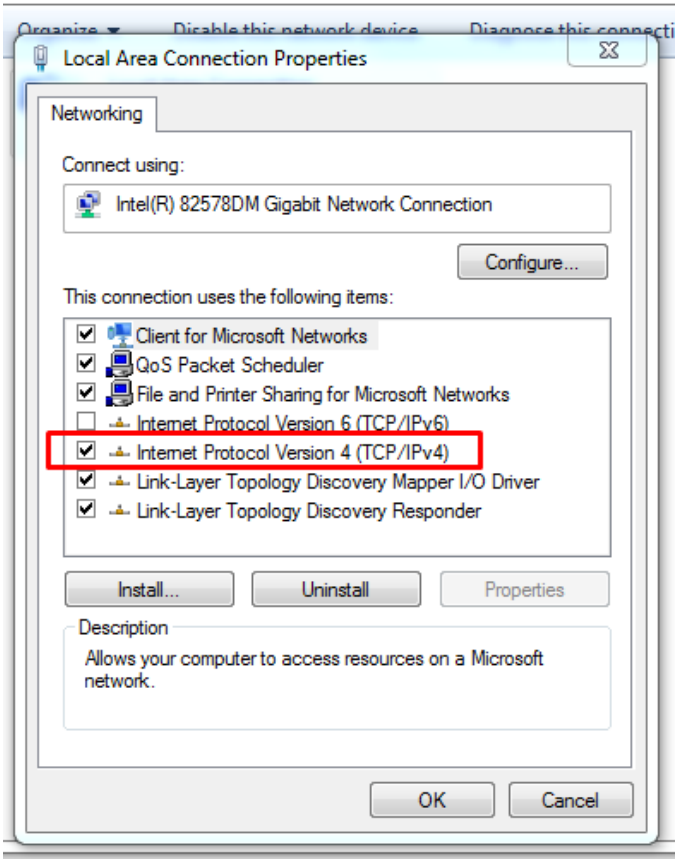
Settings for your Computer

Steps for Windows 7

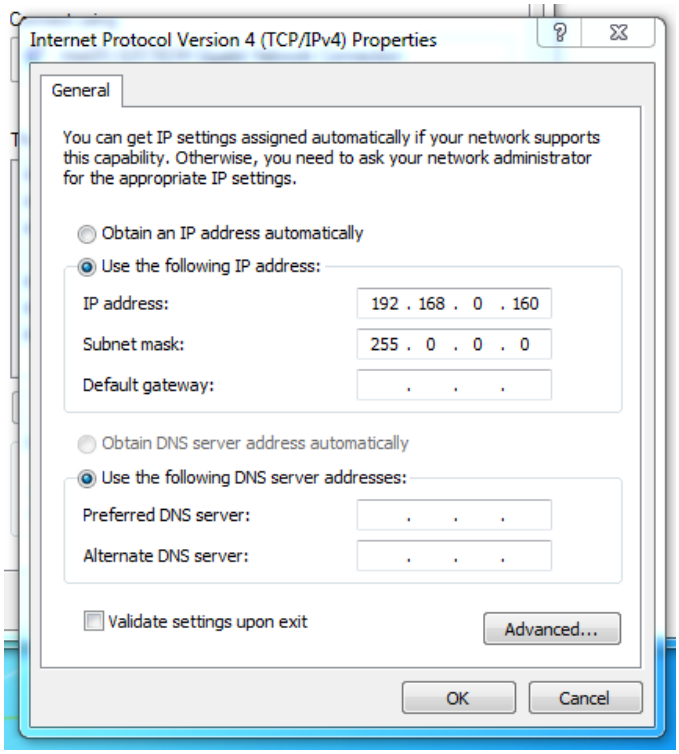
1. Click **Start>Control Panel>Network and Internet>Network and Sharing Center>Change adapter settings**

2. Select **Internet Protocol Version 4 (TCP/IPv4)**, then click **Properties**





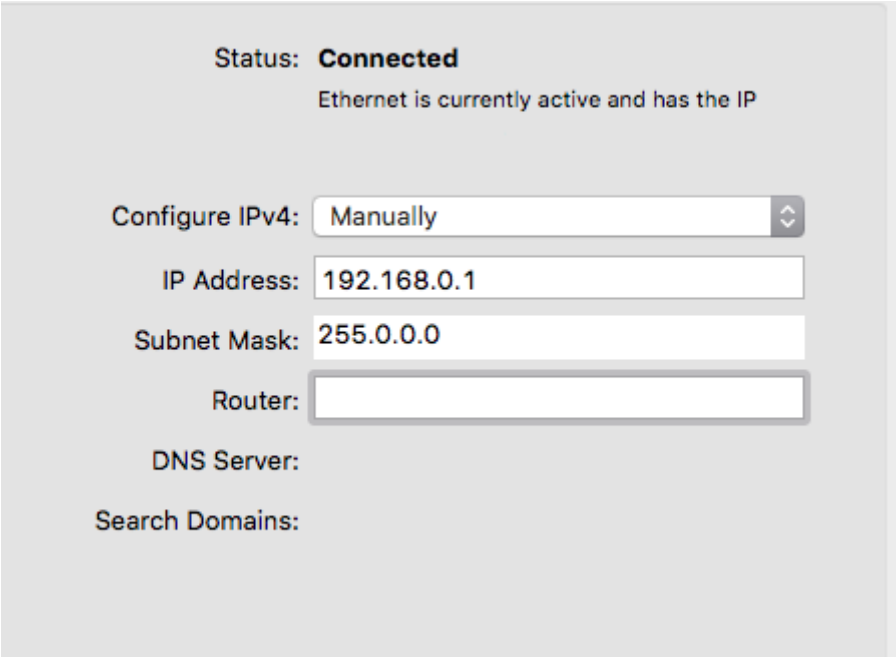
Select Internet Protocol Version 4 (TCP/IPv4)



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



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	
73912	**EU** Mains plug powerCON cable	
73913	**AU** Mains plug powerCON cable	