

STORM 24

(PN 70050)



Ethernet to 24 DMX output ports

Box Contents

- Storm24 (pn:70050)
- Straight connect Ethernet lead (pn:79102)
- IEC power cord (country dependent plug)
- User manual (pn: 50479)
- CD (pn:79106)

Physical Features

- 24 DMX (RJ-45) ports (output only)
- Gigabit Ethernet Connection
- LCD display provide status information on system and data flow

Software Features

- Refresh rate is configurable for each DMX port (1Hz to 44Hz per second)
- Break time is configurable for each DMX port (88us to 1ms)
- Mark After Break configurable for each DMX port
- All configurations are made through web browser.
- Graphical User Interface for creating and editing ports is flow-chart oriented and documents data flow as you configure it.

- Number of channels configurable for each DMX port (1 to 512)
- Supports following DMX over Ethernet protocols:
 - ESP
 - Art-Net
 - StreamingACN
 - KiNet
- DMX Generator and Stream snapshot (web)

Additional Features (Upgrade)

Stream Auditor: A status monitoring screen that includes data throughput statistics, DMX values in real time, and other information for troubleshooting, available through web page. Ability to peek into each stream and check current values through the web browser.

Safety

- Do not expose the unit to rain or moisture, doing this will void the warranty
- Do not remove the cover, there are no serviceable parts inside
- This unit is intended for indoor use only
- Since the Storm 24 is designed to run 24/7, the fan will always remain on, however it can be disabled if needed.



Basic Setup

ENTTEC Storm24 is a standard Art-Net node. Because of this, you can use the device with applications, consoles, desks, or controllers that are compatible with Art-Net to distribute Art-Net data via Ethernet network.

With the default profile, each DMX Port is mapped to its respective Art-Net Universe, allowing you to directly plug-in Storm24 without any changes or configuration necessary.

Getting Started

To begin your installation please follow these steps.

1. Unpack the unit from the box. Inspect the Storm24 for any damage that might have occurred in shipping, and verify that it looks to be in good condition before plugging it in to power.
2. The Storm24 occupies a single unit (1U) in a 19 inch rack. You may attach it to the rack either at this time or later after configuring it, if desired.
3. Attach a power cord with mains voltage to the IEC input on the back.
4. Using an Ethernet Cat5, Cat5E or Cat6 cable, connect the Storm24 to an Ethernet Network.

When the unit turns on, you will be able to see its initial IP address on the LCD panel which looks like w.x.y.z, where each letter is a number between 0 and 255. Note that IP address down for later use.

5. The LCD displays the IP address of the unit at all times (except when it's booting), but if not possible to check the LCD, NMU App (available for Windows & Mac) can be used to detect the Storm24 on your network. NMU can be downloaded here : www.enttec.com/nmu

Profiles

Profiles are essential to the operational philosophy of the Storm24. With a profile selected, the device knows how to utilize the many resources it can make use of to perform lighting control tasks.

Each Profile contains configuration information for some or all of the following:

DMX Ports

These are the physical OUTPUT DMX ports (1-24)

Ethernet Streams

These are the DMX over Ethernet universes. (Art-Net, ESP, KiNET, ACN)

Routing Diagram

The routing diagram is the visual representation of the Profile itself and it tells the Storm24 how frames are moved or routed inside the routing engine, as well as what to do with multiple sources of data that need to be merged, when that option is engages. Other special operations can be part of a diagram as well, such as Channel Shifter, Output Switch, etc.

Factory Profiles

The Storm24 has a set of factory profiles, to start you off. You're likely to see 2 or more of the following:

- Art-net -> DMX: This profile will take 24 Art-Net universes and convert them to 24 DMX signal on ports 1 to 24.
- Ethernet to DMX: This profile will take 24 DMX over Ethernet signal using the ESP protocol and convert them to 24 DMX signal on ports 1 to 24.

These profiles are just an example of what can be done with the Storm24, you can modify the factory profiles to accommodate your particular need, or create your own profile from scratch.

If you don't see any of the above, please contact support@enttec.com and we can send them to you. After that, you're on your own to make and edit profiles to suit your application!

You may select between existing profiles via the menu, but to edit them and make new ones, you'll need to access the Storm24's web page. Read more about each of these ways to interact with the Storm24 in the following sections of the manual.

Changing from one profile to another can be done in a web browser window, via RS232 command, or with the touch of a few buttons on the front panel (LCD menu).

LCD Menu

The LCD Menu is navigated through the four panel buttons on the front of the unit.

The Menu button acts as the "Back" button, which takes you to the previous Menu/screen.

The Enter button goes into the selected option on the screen, and activating the option.



The Top & Bottom button are used to navigate/scroll through the options on any screen. The currently selected option is highlighted with a white background on the screen.

Main Menu

STORM24 - ART-NET-24-DMX
IP: 192.168.10.200
Packets: 512 / S
press a key to enter

Line1: displays the System Name and currently Selected Profile.

Line2: displays either the current IP address / DHCP Failed / disconnected, highlighting the current status of the network interface. The IP address is where the web interface can be accessed.

Line3: displays the amount of packets currently passing through the Storm24. This number of packets per second, can be used as an indicator of the activity of DMX on your network.

Pressing any of the panel buttons/keys will activate the next screen on the LCD Menu.

Selection Menu

1-load profile
2-Setup
3-Status
4-Restart

1-Load Profile

Lists all available profiles on the Storm24, list can be scrolled using up & down keys. Scrolling indicator is visible when the list allows scrolling.

Pressing Enter at the selected profile will activate the profile (some profiles might need a license to activate)

2-Setup

1-Change IP
2-Factory Reset

Setup screen allows changing the IP address of the unit via "Change IP" or doing Factory Reset.

Change IP

This screen further gives two options DHCP or Static IP. When Static IP is selected, the screen allows you to change the IP address using the top and bottom button to scroll the digits and the menu & enter buttons to select the segment. Once you are on the last segment of the IP address, pressing the Enter button, will activate the IP address. It will take a few seconds for the change to go through, please wait 30 seconds, before attempting to try again.

Change IP Address

IP: 192.168.001.003

Factory Reset

Activating Factory Reset, leads to a simple prompt confirming your action. Once confirmed, the Factory Reset will take a few seconds to run. It will end up deleting all your user created profiles, as well as any saved settings. Please use this only when needed, or as directed by ENTTEC support team.

F-Reset in progress
please wait ...

3-Status

Status Screen, allows the following two options:

1-System
2-Network

Both the Status screens are read-only and provide information about the system and Networking.

These require no user-input and serve as a way of checking the performance of the unit.

4-Restart

Restart Screen, when activated, prompts for the user to confirm the selection.

1-YES
2-NO

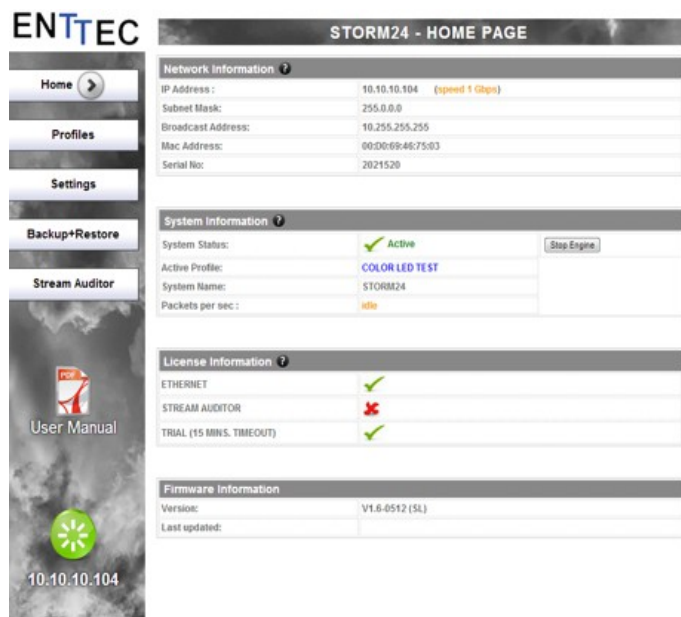
Once confirmed, Storm24 will stop the output engine and restart the system. While rebooting the LCD screen will change between a couple of screens, and the LCD Main Menu will only be visible, once the system is fully ready. (usually takes a minute)

System Restarting
Please wait ...

Web Interface

The Storm24 is configured, controlled and programmed through a web browser interface running on a computer system located on the same Local Area Network. Any modern web browser, such as Chrome, Firefox, Internet Explorer, Safari or Opera, running under any operating system, including Windows XP or Vista, Mac OS X or Linux can be used.

Throughout the Web Interface, helpful hints are displayed when a user hovers the mouse over the "Help" icon ?



Web: Profiles

From this screen you can manage your profiles.

As you will notice in the "Remarks" column, the factory default profiles are read only. If you wish to modify one of them, you will first need to copy the profile to some other name. Once the profile has been copied you can modify it to fit your particular needs.

Clicking on the Profile name will launch the profile in the profile-editor window.

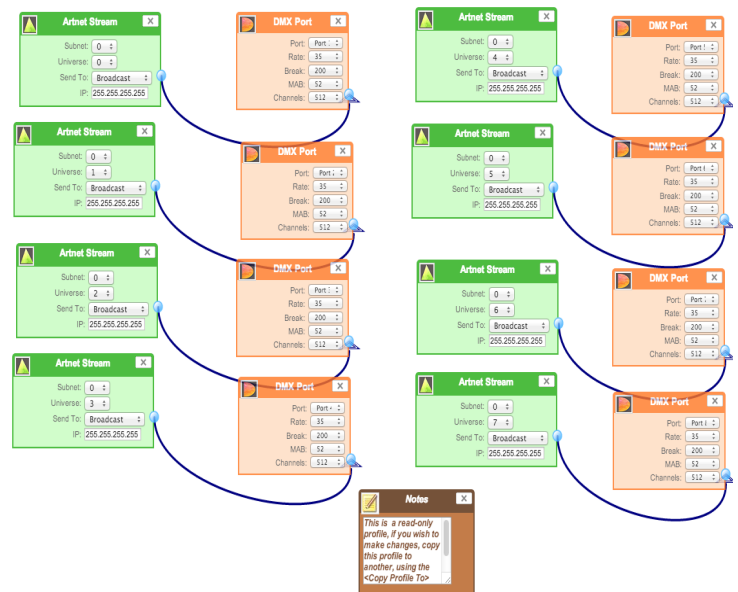
STORM24 - PROFILES				
Active	ID	Profile Name	Description	Remarks
	001	Art-NET24-DMX24	24 universe Art-Net to 24 Port DMX profile	Read-Only
	002	Art-Net0-DMX24	Art-Net Univ 0 to 24 DMX Ports	Read-Only
	003	Art-Net 0-16 to 24 DMX	16 Universe = 24 DMX Ports	

Buttons: Activate > Create New ^ Copy As ... Delete ?

Web: Profile Editor

Create a new profile or edit an existing one using the profile-editor. Opens up in a new page in your web browser. Select a module on the left and the right panel will provide help about that panel. Connect a module to another using wires from one point to another.

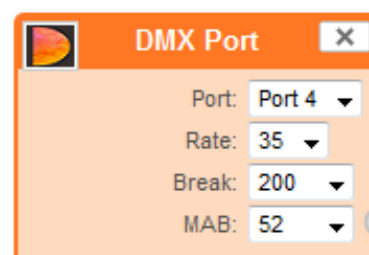
The direction of the wire (arrow) is important, the arrow signifies output, and reflects the flow of data.



Web: Profile Modules

Each profile is made up of two or more connected Modules or Actions. The relationship between them forms the layout of the data flow within the profile.

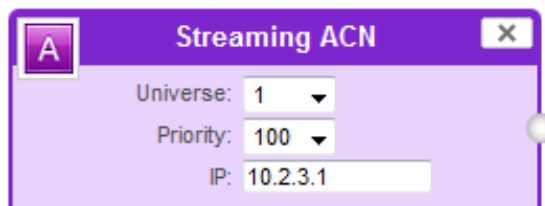
The following modules are available:



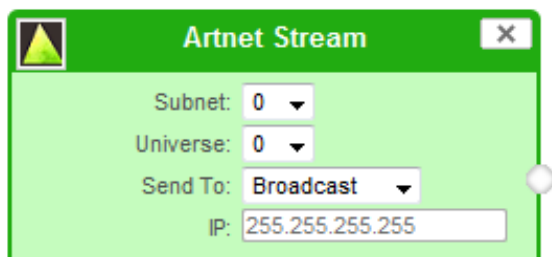
The DMX port represents one of the physical ports on the rear of this unit, select which port you want to use by using the drop down.

- Rate: refresh rate to send DMX (frames per second)
- Break: Break time (micro sec) between each DMX frame (default is 200)
- MAB: Mark After Break time (micro sec) default is 52
- Channels: Number of channels to send in 1 Universe (default is 512)

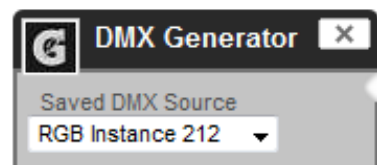
Limitation: Same DMX port cannot be re-used in the same profile



Streaming ACN: "IP address" is the destination address used when the stream is sending data only (default is disabled = 0.0.0.0)

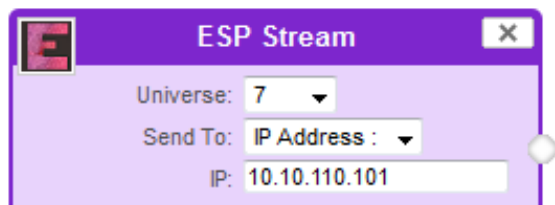


Art-Net Stream: "Send IP address": is the destination address used when the stream is sending data only.

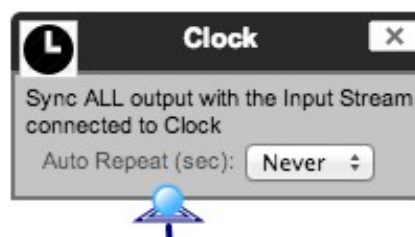


DMX Generator: Define your own custom DMX Channel values and assign the selected ones.

Snapshot feature can be used to capture values from an input stream. All modifications can be done using the DMX Grid Page.



ESP Stream: ENTTEC Show protocol DMX over Ethernet stream (ESP). IP address is the destination address used when the stream is sending data only.



Clock: Allows you to synchronize ALL DMX output only when the connected Input Stream is received.

- Auto-repeat allows user to repeat the output once every "number of seconds" regardless of Synced Stream
- Default behaviour [Auto-repeat = Never]: Will only refresh DMX when Synced Stream is received



Kinet Stream: For example: You can connect Kinet Stream to an Art-Net Stream to convert and output as Art-Net. (Kinet stream is supported as input only)

The Clock module can be used to make sure the output is always synced to the "latest universe" - especially if the source adds a delay to each universe. This will keep all outputs in sync with the latest one.

Firmware Update

You can update the firmware on the Storm24, via the web browser. Get the new firmware files (they are available on website: www.enttec.com/storm24). Download them to your desktop and then follow instructions in the Storm24's web browser page, under the Settings section.

Note: While the firmware is being updated, please do not power off the unit, please wait until the web-page is processing. (up-to 5 minutes)

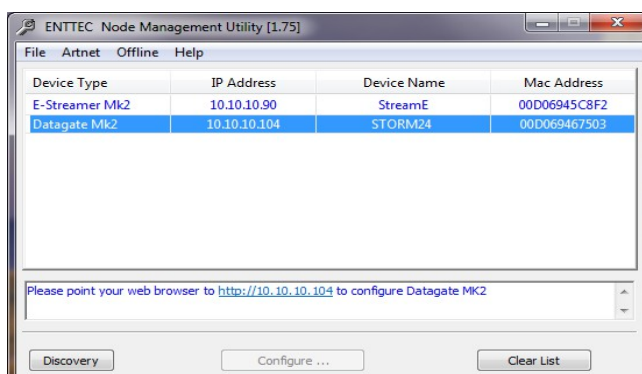
If the web-page does not refresh automatically, please open the home page on the browser manually, and verify that the update has succeeded.

NMU

NMU (Node Management Utility) is a free Windows and OSX application that is used to manage compatible ENTTEC DMX over Ethernet nodes. NMU will not directly allow you to configure the Storm24 itself, but it can help you find your unit's IP address and then open a browser window to make the required changes.

To employ the NMU, follow this set of instructions:

1. If you have not already done so, download and proceed to install the application from www.enttec.com/nmu
2. Ensure that your Storm24 is hooked up physically by Ethernet cable to the same physical network as the computer on which you will run the NMU.
3. Start the application.
4. Press the Discovery button.
5. Select Storm24.
6. An IP Address will be shown next to any Storm24 which are located.

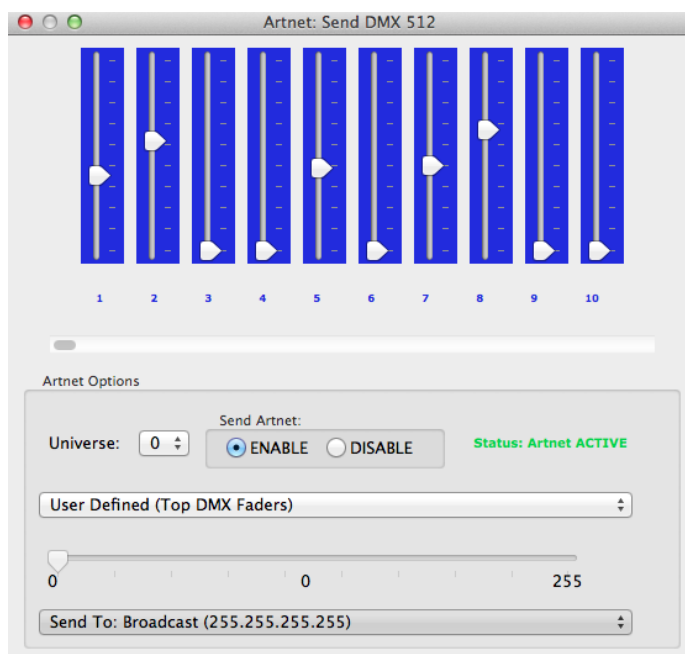


Art-Net Send Test

NMU can also be used to troubleshoot the DMX output on your Storm24. Art-Net Test can be accessed from the top menu: Art-net → Art-net **Test**.

When first opened, the Art-Net is set to Disabled, please set it to Enabled, and then you can use either the DMX faders to test one or more DMX channels, or use the test-patterns from the options available.

The Storm24 should be set to Art-net to DMX profile



Connector pin out

DMX pinout (RJ-45):

- Pin1: Data +
- Pin2: Data -
- Pin7: Ground

RS232:

- Pin 2: TX
- Pin 3: RX
- Pin 5: Ground

Specifications

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

Item	Value
Input Voltage	90 – 260V AC
Input Frequency	50/60Hz
Weight	3.96lbs / 1.8kg
Shipped weight	5.78 lbs / 2.6kg
Length	18.25" / 463.1mm
Width	8.07" / 210mm
Height	1.72" / 43.6mm
Op Environment	0°-50°C
Connectors	24 DMX Output (RJ-45) Ports 1x RJ45 ethernet connector 1x RS232 connector 2x USB host connector (un-used)
Power Consumption	15 to 20 W
Certification	CE, FCC certified

Ordering Information

Storm24 and related products can be ordered from our website or through your ENTTEC dealer using the following part numbers.

Part Number	Description
70050	Storm24
70704	Stream Auditor License
70053	DMX (Female) To RJ45 (Male) 1m Cable
79126	0.5m 5-pin DMX Cable
79133	2m 5-pin DMX Cable

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