GeNetix Manual

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Latest Update, 2026-03-30

Contents

Edition Notes

This GeNetix User Manual includes a description, safety precautions, installation, and operation instructions for the GeNetix series of networking products as of the release date of this edition.

ChamSys continually strives to provide the most powerful and stable solution for all of our GeNetix products. As such, we are making continual improvements to the software & firmware available to all of our users. To unlock the full potential of your product we suggest downloading and installing the latest MagicQ and/or QuickQ software to update your GeNetix device.

Detailed installation & update instructions can be found in the updating GeNetix firmware section.

Trademarks

Copyright Notice

Manual Use

Intended Audience

Any person installing, operating, and/or maintaining this product should completely read through the guide that shipped with the product, as well as this manual, before installing, operating, or maintaining this product.

Disclaimer

ChamSys believes that the information contained in this manual is accurate in all respects. However, ChamSys assumes no responsibility and specifically disclaims any and all liability to any party for any loss, damage or disruption caused by any errors or omissions in this document, whether such errors or omissions result from negligence, accident or any other cause. ChamSys reserves the right to revise the content of this document without any obligation to notify any person or company of such revision, however, ChamSys has no obligation to make, and does not commit to make, any such revisions. Download the latest version from https://secure.chamsys.co.uk.

Safety Notes

- Do not open the GeNetix Product unless you are a skilled person authorised and trained by ChamSys in GeNetix Product maintenance and repair. The GeNetix Product contains components with voltages that may shock.
- Do not use the GeNetix Product if the power cables are damaged in any way.
- Repairs should only be undertaken by authorised service representatives. There are no user serviceable parts inside GeNetix Products.
- If liquids are spilt over the GeNetix Product then remove power immediately, and seek advice from your authorised service representative.
- When transporting the GeNetix Product ensure that there are sufficient people to carry the GeNetix Product.
- Ensure safe installation of GeNetix Products, so that the unit cannot slip off or fall from it operated position.

Using This Manual

Indicates some useful information to add to your knowledge and experience.

Indicates some additional information that may be relevant.

A Warning statement indicates situations where damage may occur, people may be harmed, or there are serious or dangerous consequences of an action.

A Caution statement indicates there may be unwanted or undefined consequences of an action, or potential for programmed data loss or an equipment problem.

GeNetix Products

The GeNetix Product range includes:

GeNetix GS5IP	5 port IP rated Gigabit network switch. AC or PoE powered.
GeNetix GS8	8 port PoE sourcing Gigabit network switch. 4 ports PoE++ 4 ports PoE+. AC powered.
GeNetix GW2O	2 port wall mount DMX node with 5 pin female XLR connectors. Connect via network with PoE.
GeNetix GW2I	2 port wall mount DMX node with 5 pin male XLR connectors. Connect via network with PoE.
GeNetix GN2	2 port DMX node box. Front panel display. Connect via network or direct to MagicQ PC via USB. Powered via USB or PoE.
GeNetix GN4IP	4 port IP65 rated DMX node box. Connect via network. Powered via Mains or PoE.
GeNetix GN5	5 port DMX node with MIDI, Timecode and 10Scene. Front panel display. Connect via network or direct to MagicQ PC via USB. Powered via AC or PoE.
GeNetix GN8	8 port Output only DMX node. Front panel display. Connect via network. Powered via AC.
GeNetix GN10	10 port rack mount DMX node with MIDI, Timecode and 10Scene. Front panel display. Connect via network or direct to MagicQ PC via USB. Powered via AC or PoE.
GeNetix 10Scene Store	Simple Store and Playback of 10 static Lighting scenes. 48v or PoE powered, DMX output and 10Scene Wall Plate support
GeNetix 10Scene Wall Plate	10 button wall plate for triggering scenes on MagicQ/QuickQ/GeNetix devices.
GeNetix 10Scene Contact	10 button device for triggering scenes on MagicQ/QuickQ/GeNetix devices also provides 10 individual, highly configurable contact inputs.
GeNetix GD4IP	Compact 4-port IP65-rated DMX Splitter that features a single DMX Input to 4 DMX outputs.
GeNetix GD10	10-port DMX Splitter that features two DMX Inputs to 10 DMX outputs with configurable split modes.

GeNetix GN10R	10 port rack mount DMX Node with MIDI, Timecode and 10Scene. Front panel display. Connect via network or direct to MagicQ PC via USB. Powered via AC or PoE. Output through RJ45 ports.
GeNetix GN10P	10 port rack mount DMX Node with MIDI, Timecode and 10Scene. Front panel display. Connect via network or direct to MagicQ PC via USB. Powered via AC or PoE. Output through Phoenix ports.

The GS5IP and GS10 are simple unmanaged gigabit network switches and therefore there is no configuration required.

GD4IP splitters also require no configuration as all output ports will duplicate any data received from the input port.

The GD10 splitter allows for configuration from their inbuilt buttons to choose the split mode for input DMX.

GW20, GW2I, GN2, GN4IP, GN5, GN10, GN10P and GN10R network nodes are highly configurable from MagicQ and QuickQ consoles, and also via the onboard web interface. GN2, GN5, GN10, GN10P and GN10R also can be configured from their inbuilt front panel.

Please note when using PoE to power GeNetix products a shielded coaxial/cable must be used.

GeNetix Package Contents

GeNetix products ship with the following package contents:

GeNetix GS5IP	• PowerCON TRUE1 Cable • Quick Start Guide
GeNetix GS8	• PowerCON TRUE1 Cable • Quick Start Guide • Pair of GeNetix Rack Ears
GeNetix GW20	• Quick Start Guide • White Faceplate
GeNetix GW2I	• Quick Start Guide • White Faceplate
GeNetix GN2	• USB-C Cable • Quick Start Guide • DIN Rail Mount • Set of Rubber Feet
GeNetix GN4IP	• PowerCON TRUE1 Cable • Quick Start Guide

GeNetix GN5	· PowerCON TRUE1 Cable · Quick Start Guide · DIN Rail Mount · 10Scene Connector · Pair of GeNetix Rack Ears · Set of Rubber Feet
GeNetix GN8	· PowerCON TRUE1 Cable · Quick Start Guide · Set of Rubber Feet
GeNetix GN10	· PowerCON TRUE1 Cable · Quick Start Guide · 10Scene Connector · Set of Rubber Feet
GeNetix GN10R	· PowerCON TRUE1 Cable · Quick Start Guide · 10Scene Connector · Set of Rubber Feet
GeNetix GN10P	· PowerCON TRUE1 Cable · Quick Start Guide · 10Scene Connector · Set of Rubber Feet
GeNetix 10Scene Store	· DIN Rail Mount · Set of Rubber Feet
GeNetix GD4IP	· PowerCON TRUE1 cable · Quick Start Guide
GeNetix GD10	· PowerCON TRUE1 cable · Quick Start Guide

GeNetix Philosophy

GeNetix network products enable DMX data, media data and control data to be distributed throughout the lighting rig from control consoles to fixtures. GeNetix products can be used with any lighting console or media server - they are independent of MagicQ and QuickQ products.

GeNetix products are designed and engineered in the UK by ChamSys Ltd, and are designed for reliability. Wherever possible, all components are mounted on a single circuit board to avoid the need for interconnecting cables.

GeNetix products use professional locking Ethercon connectors for all network connections, avoiding the limited lifetime associated with traditional RJ45 network plugs and sockets.

GeNetix GN4IP, GN5, GN8, GN10, GN10P, GN10R, GS5IP, GD4IP, GD10 and GS8 use professional locking power connectors for power input and accept voltages from 90V to 250V AC.

GeNetix products support being powered via Power over Ethernet (PoE) - the GeNetix GW20, GW2I, GN2, GN4IP, GN5, GN10, GN10P, GN10R and 10Scene Store can be powered directly by their PoE input (such as from the GeNetix GS8) reducing the number of cables in a system.

GeNetix Network Nodes

The GW20, GW2I, GN2, GN4IP, GN5, GN8, GN10, GN10R and GN10P make up the network nodes in the GeNetix range.

All GeNetix network nodes support the following except where noted:

- DMX512 out and in *
- Configurable DMX timings
- ANSI E1.20 RDM for discovery and configuration of fixtures using ArtRdm
- Art-Net 4
- sACN (streaming ACN) including priorities
- DMX Test pattern generation
- DMX Synchronisation between ports and devices *
- DMX Fallback mode (DMX loops in and out) *
- DMX Merging of multiple sources through a single port *
- Configurable Lost Network behaviour
- Storage of Scenes
- Record and Playback Scenes from MagicQ / QuickQ console
- Send / Retrieve Scenes from MagicQ console
- Identify mode
- Configuration from MagicQ and QuickQ consoles and systems over ChamNet
- Configuration from web server
- Configuration over Art-Net (DMX port configuration only)
- Saving, Loading and Resetting of User Configs
- Factory Presets (standard node setups, for example: Art-Net 0..9)
- Factory Reset
- Locking / unlocking of the node
- Firmware update (from MagicQ and QuickQ)

The GN8 Node is an output only node and does not support DMX512 In, DMX

synchronisation, DMX Fallback mode or DMX Merging.

GN5 & GN10 Range Additional Features

The GeNetix GN5, GN10, GN10R and GN10P provide the following additional features:

- LTC timecode in and out
- MIDI timecode in and out
- MIDI notes in and out
- MIDI beat clock
- MIDI change control and system exclusive messages
- Trigger of Scenes from 10Scene Wall Plates
- Trigger of Configs from 10Scene Wall Plates
- 10Scene Gateway functionality

10Scene Store Philosophy

<!-- vale BritishSpelling.Spelling = NO --> The GeNetix 10Scene Store is a single universe wall or DIN Rail mounted standalone playback device that stores 10 static lighting Scenes (cues) which can be recalled with connected 10Scene wall plates. The 10Scene Store can be programmed in a number of different ways, via it’s DMX Import Port (5-pin XLR Input or Wago) by taking a snapshot of the incoming DMX values to store scenes, via Network using the web server to snapshot scenes or loading scenes directly from either a MagicQ or QuickQ control system.

Note - When a DMX Input is connected to the 10Scene Store via its 5-Pin or Wago DMX Input connector, it will pass through the received DMX Input to the device DMX Output. The device is also then automatically placed into programming mode. Pressing and holding any button on a 10Scene Wall Plate will store the current DMX Input values to that Scene. When another console is connected to the 10Scene Store and sending data to the device (Art-Net or sACN), then the 10Scene Store does not enter programming mode, but can be set to pass this through to it’s DMX Output. This allows the 10Scene store to operate as a stand alone device, recalling static scenes stored onto the device. But when a guest/visiting console is connected to the device via network this can take over. <!-- vale BritishSpelling.Spelling = YES -->

Networking

GeNetix products support Art-Net 4, along with ACN Streaming DMX network protocols. The DMX512 ports are fully configurable with DMX packet length, framing rate, and timings.

All GeNetix products ship with a 10.X.X.X IP address and 255.0.0.0 Subnet Mask as standard. For most situations when just connecting a single GeNetix product to a MagicQ or QuickQ console this IP address does not need to be changed.

It is important that any consoles, PCs or Macs that will be communicating with GeNetix products are set with a static IP addresses within the IP address range that is set on the GeNetix.

GeNetix products have inbuilt Ethernet switches with auto MDI/MDIX detection, so when connecting directly between a PC/Console and GeNetix products a cross over Ethernet cable is not required.

If you change the IP address of the GeNetix product it will not show up again in Net Manager until you have reconfigured the network on your system to be within the same range as the Interface.

Unlocking MagicQ

GeNetix GN5, GN10, GN10P and GN10R nodes fully unlock MagicQ PC/Mac Software when connected over USB or network.

GeNetix GN2 & GN4IP nodes unlock MagicQ PC/Mac Software into Core mode when connected over USB or network.

Note that when connected via USB the GeNetix Device will unlock the connected PC System only. When unlocking MagicQ PC systems via Network, GeNetix Nodes will unlock 2 MagicQ devices over network only. When 2 or more MagicQ devices (PC's or Consoles) are on the network then no MagicQ unlocking is performed. Adding multiple GeNetix devices does not unlock further systems.

For Example:

1 x GN10 networked to 2 x MagicQ PC systems - both fully unlocked via Network 1 x GN10 networked to 1 x MQ500M and 1 x MagicQ PC system - PC system is fully unlocked via network 1 x GN10 networked to 2 x MagicQ PC systems and 1 x MQ500M - No unlocking is performed as now 3 MagicQ systems on the network 2 x GN10 networked to 2 x MagicQ PC systems - Both fully unlocked via Network 2 x GN10 networked to 3 x MagicQ PC systems - No unlocking is performed as now 3 MagicQ systems on the network

GeNetix 10Scene Store, GD4IP, GD10, GS5IP, GS8, GW2I, GW20 and TouchScenes do not unlock MagicQ at all.

Configurable DMX Timings

The DMX refresh rate, break time, frame time and MAB time are fully configurable.

Configuration is from the front panel, MagicQ Net Manager, via Art-Net and also from the web server.

ANSI E1.20 RDM

GeNetix network nodes support RDM which is enabled by default. GeNetix Nodes support RDM when used as a USB Interface for MagicQ PC Systems (GN2, GN5, GN10, GN10P, GN10R), all GeNetix Nodes also support ArtRDM for discovery and configuration of fixtures when connected to a controller supporting ArtRDM.

The GeNetix nodes only perform RDM operations when requested by the MagicQ, QuickQ console or other lighting console. They do not perform discovery on start up, or at predefined intervals - they only perform RDM discovery when explicitly requested by the console. This ensures that show critical DMX operation is not affected by RDM.

RDM on the node can be disabled on a menu option from the front panel and from the MagicQ console.

The node can also be set into a RDM Read Only mode. In this mode the GeNetix node will respond to RDM GET commands to receive information but will block all RDM SET commands. This enables users to discover the lighting rig, but not to change it.

Art-Net Support

GeNetix network nodes support Art-Net V1,2,3 and 4.

They will respond to an Art-Poll with an Art-Poll Reply in Art-Net V4 format.

The node IP address, subnet mask and node name can be configured over Art-Net.

The port protocol, universe and direction can be configured over Art-Net. The node name and IP Address can also be set over Art-Net.

sACN Support

GeNetix network nodes fully support sACN. GeNetix nodes join multicast groups as per the specification.

The nodes handle sACN priorities on a per universe basis. Sources for a particular universe will be timed out after 5 seconds of not receiving any sACN data from that source.

GeNetix Quick Start

GeNetix nodes offer quick setup options for common user scenarios.

To ensure connection to GeNetix products users must ensure the device is in the same IP range as the lighting controller.

Common Scenario 1: Receiving Art-Net

GeNetix Nodes are capable of receiving Art-Net from a lighting console and outputting DMX. Users can accomplish this by navigating to the Quick Setup option on the Main Menu of the GeNetix Node.

Users have four options for quick setup in regards to Art-Net output:

- GeNetix node Ports will output starting from Art-Net Universe 0
- GeNetix node Ports will output starting from Art-Net Universe 1
- All ports output Art-Net Universe 0
- All ports output Art-Net Universe 1

Common Scenario 2: Receiving sACN

GeNetix Nodes are capable of receiving sACN from a lighting console and outputting DMX. Users can accomplish this by navigating to the Quick Setup option on the Main Menu of the GeNetix Node.

Users have two options for quick setup in regards to sACN output:

- GeNetix node Ports will output starting from Universe 1
- All ports output sACN Universe 1

For finer control of the starting universe for the GeNetix node users can navigate to the Starting Universe option on the main menu, there the user can adjust the starting universe through use of the encoder.

Ports will increase sequentially from the starting universe number set.

Common Scenario 3: Receive Art-Net, Output DMX and Input received LTC timecode from the GeNetix Node to the lighting console

GeNetix Nodes are capable of receiving and outputting LTC or MIDI timecode whilst simultaneously outputting DMX.

For ease of use it's recommended to use the previously mentioned quick setup to assign the ports on the GeNetix node to output through either Art-Net or sACN.

- Connect LTC/MIDI generation device to the corresponding port on the back of the GeNetix Node.
- Navigate from the GeNetix node main menu to Timecode > IN > Mode and select Art-Net.
- Ensure Timecode > OUT > Mode is disabled.
- Ensure a network cable is connected between the GeNetix Node and either a lighting console or PC/Mac running MagicQ.
- In MagicQ navigate to Setup > View Settings > MIDI Timecode and set Timecode Decode to Art-Net

LTC/MIDI timecode is available on the GN5, GN10, GN10P and GN10R. The GN2 is not able to receive or output LTC/MIDI.

Connections

GeNetix Nodes

GeNetix Nodes support industry standard protocols Art-Net and sACN, GeNetix nodes primarily differ in the number of DMX ports. GeNetix GN2, GN5, GN8, GN10 GN10P and GN10R all feature an inbuilt display for node configuration and displaying device status. The GeNetix GN5, GN10, GN10P and GN10R feature additional connections supporting MIDI, Timecode and 10Scene.

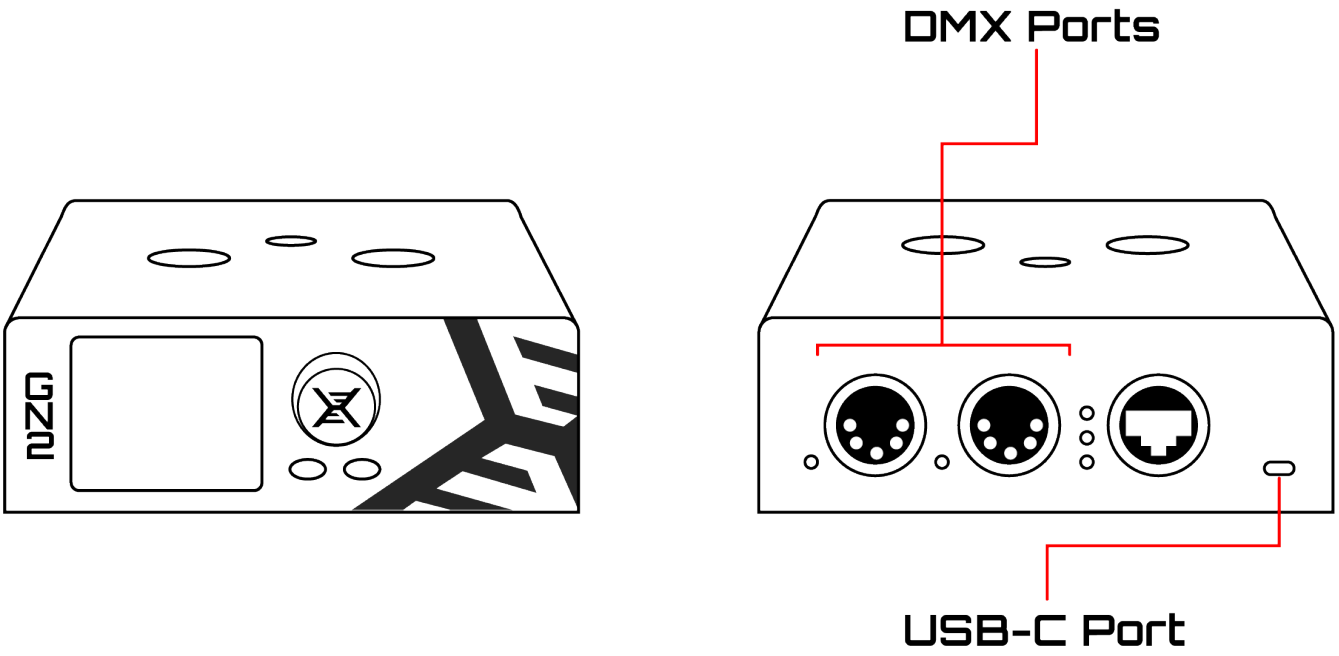
All GeNetix Nodes except the GN8 can be powered via PoE, with the GN2, GN5, GN10, GN10P and GN10R supporting PoE Mode A and Mode B. The GW2I and GW20 nodes are powered only via PoE, supporting Mode A only (PoE over the data pair). In addition to PoE power, the GN2 can be USB powered via it's USB-C port. In addition to being PoE powered the GN5, GN10, GN10P and GN10R can be powered via their mains Line Input.

GN2

The GN2 can operate as an Art-Net or sACN Node utilising it's network connection or can also be used as a USB-DMX interface for MagicQ PC Systems. The GN2 will unlock MagicQ PC Systems when connected via either USB or Network into 'Core Mode'.

When unlocking PC based systems via Network, there is a limit of 2 MagicQ sessions in the network. When a 3rd MagicQ instance is connected (this could be a console or another PC system), network unlock for all devices will be stopped.

The GN2 can be either PoE powered or powered via it's USB-C port.



The GN2 can run in network mode but still be powered from USB - provided that it is not connected to a PC running MagicQ - if MagicQ is detected it will be switched to USB mode.

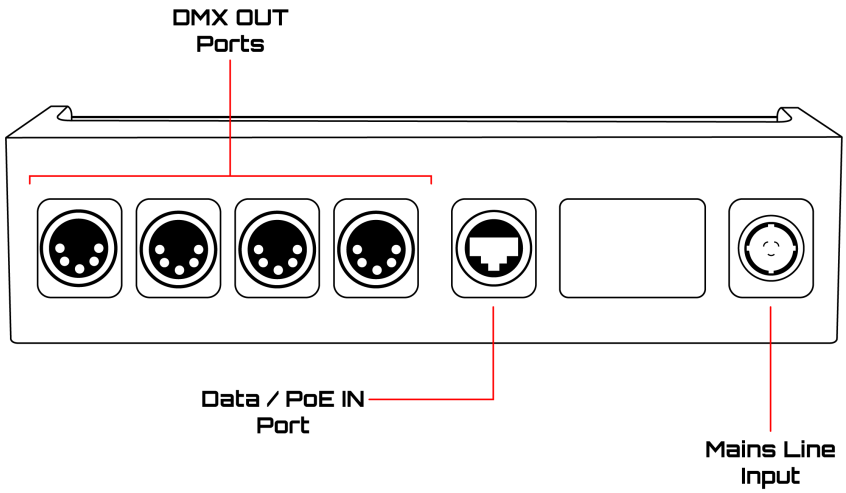
GN4IP

The GN4IP can operate as an Art-Net or sACN Node utilising it's network connection. The GN2 will unlock MagicQ PC Systems when connected via Network into 'Core Mode'.

When unlocking PC based systems via Network, there is a limit of 2 MagicQ sessions in the network. When a 3rd MagicQ instance is connected (this could be a console or another PC system), network unlock for all devices will be stopped.

The GN4IP can be either PoE powered or powered via it's USB-C port.

GeNetix GN4IP Network Switch



The GN4IP Scene Act button allows users to activate and deactivate scene 1 stored on the GN4IP, this can be used by holding the Scene Act button until the green LED flashes.

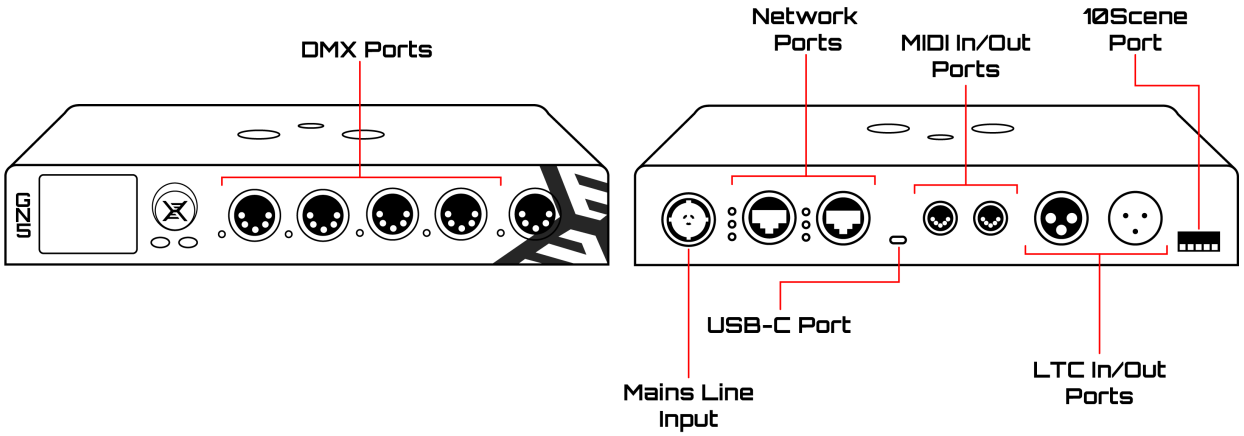
GN5

The GN5 operates as an Art-Net or sACN Node utilising it's network connection or can also be used as a USB-DMX interface for MagicQ PC Systems. The GN5 will unlock MagicQ PC Systems when connected via either USB or Network into Full 'Unlocked Mode'.

When unlocking PC based systems via Network, there is a limit of 2 MagicQ sessions in the network. When a 3rd MagicQ instance is connected (this could be a console or another PC system), network unlock for all devices will be stopped.

The GN5 can be either PoE powered or mains powered. When connecting to a MagicQ PC system via USB, the unit must be either Mains or PoE powered.

GeNetix GN5 Node



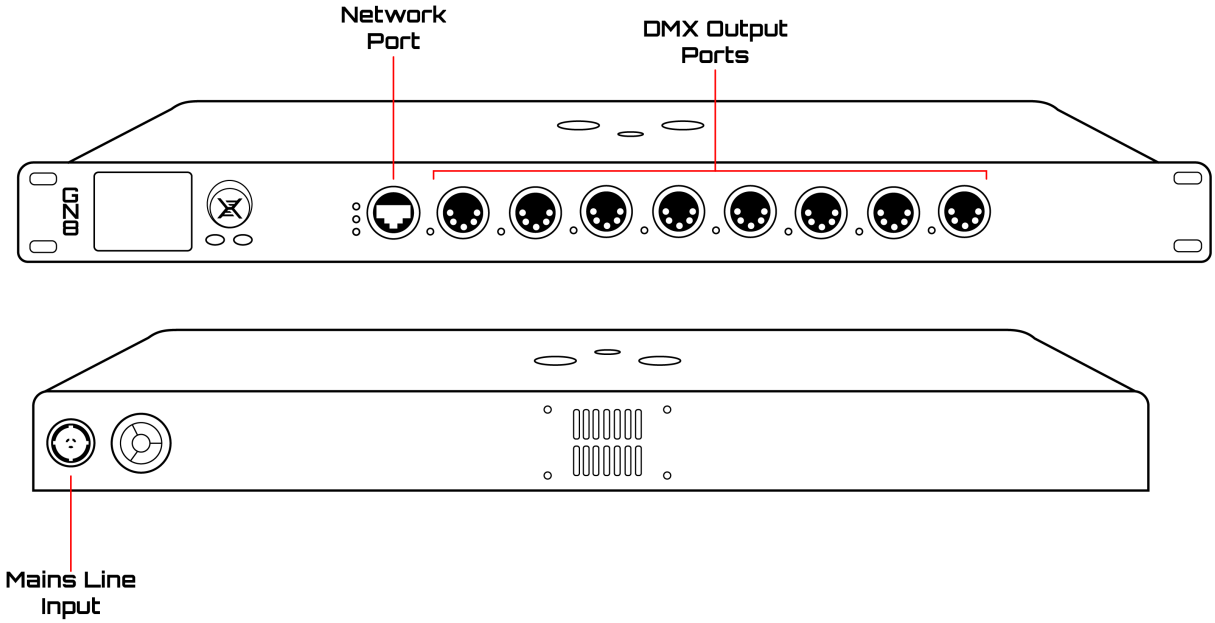
GN8

The GN8 operates as an Art-Net or sACN Node utilising it's network connection. The GN8 will not unlock MagicQ PC Systems when connected via Network.

The GN8 does not support a USB connection, it is a network only device. The GN8 does not support the Input of Art-Net or sACN data, it is a pure output device.

The GN8 is mains powered. When connecting to a MagicQ PC system via network, the unit must be Mains powered.

GeNetix GN8 Node

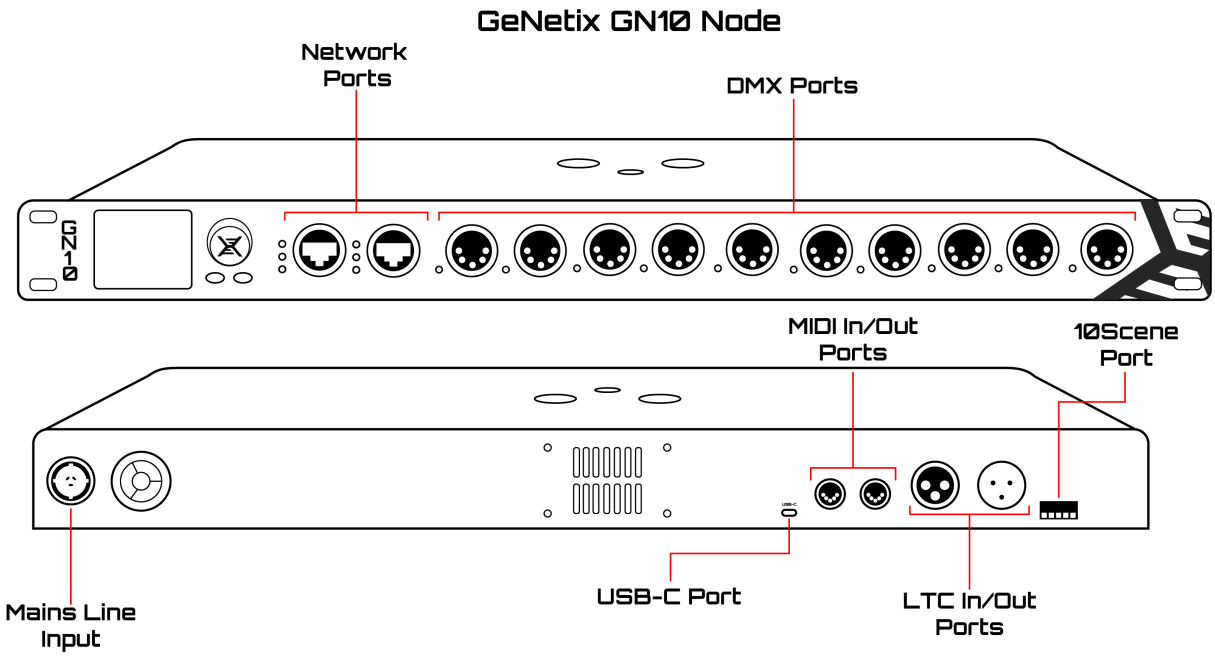


GN10

The GN10 operates as an Art-Net or sACN Node utilising it's network connection or can also be used as a USB-DMX interface for MagicQ PC Systems. The GN10 will unlock MagicQ PC Systems when connected via either USB or Network into Full 'Unlocked Mode'.

When unlocking PC based systems via Network, there is a limit of 2 MagicQ sessions in the network. When a 3rd MagicQ instance is connected (this could be a console or another PC system), network unlock for all devices will be stopped.

The GN10 can be either PoE powered or mains powered. When connecting to a MagicQ PC system via USB, the unit must be either Mains or PoE powered.



GN10R

The GN10R operates as an Art-Net or sACN Node utilising it's network connection or can also be used as a USB-DMX interface for MagicQ PC Systems. The GN10R will unlock MagicQ PC Systems when connected via either USB or Network into Full 'Unlocked Mode'.

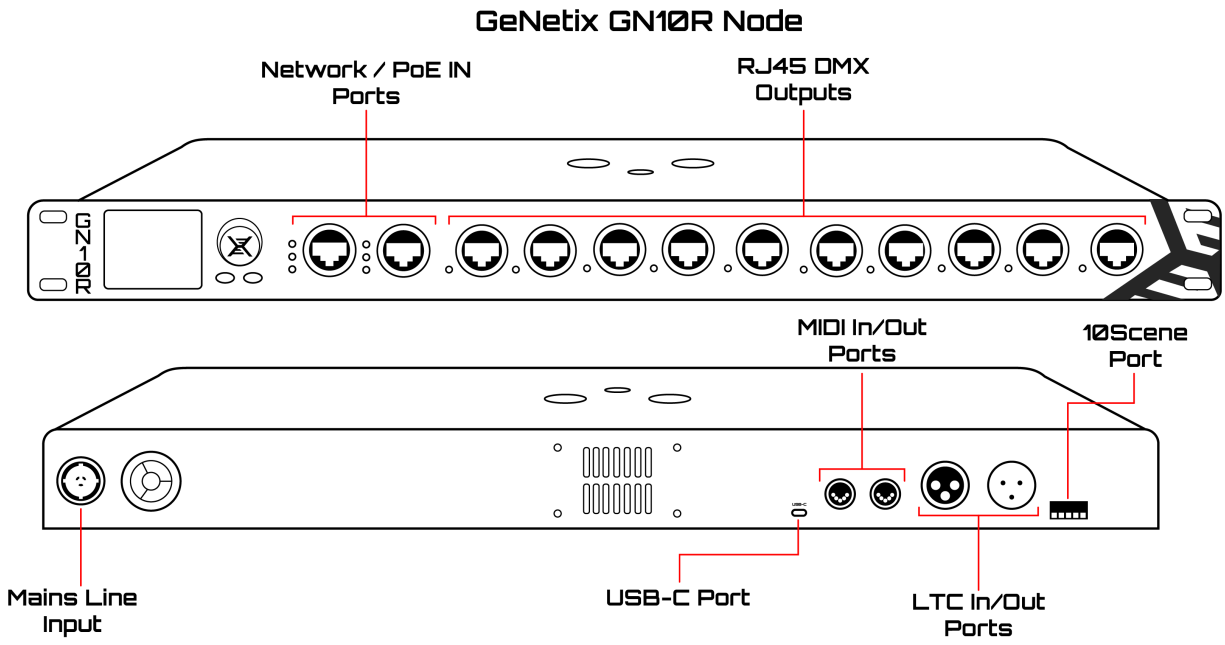
The GN10R differs from the GN10 in its ports, instead of traditional DMX output ports the GN10R instead utilises RJ45 output ports allowing for connections to be made using network cables instead of DMX cables.

When unlocking PC based systems via Network, there is a limit of 2 MagicQ sessions in the network. When a 3rd MagicQ instance is connected (this could be a console or another PC system), network unlock for all devices will be stopped.

The 10 Output ports on the GN10R cannot be used for networking.

The GN10R can be either PoE powered or mains powered. When connecting to a MagicQ PC system via

USB, the unit must be either Mains or PoE powered.



GN10P

The GN10P operates as an Art-Net or sACN Node utilising it's network connection or can also be used as a USB-DMX interface for MagicQ PC Systems. The GN10P will unlock MagicQ PC Systems when connected via either USB or Network into Full 'Unlocked Mode'.

The GN10P differs from the GN10 in its ports, the GN10P instead utilises Phoenix ports for DMX output instead of traditional 3 or 5-pin DMX.

When unlocking PC based systems via Network, there is a limit of 2 MagicQ sessions in the network. When a 3rd MagicQ instance is connected (this could be a console or another PC system), network unlock for all devices will be stopped.

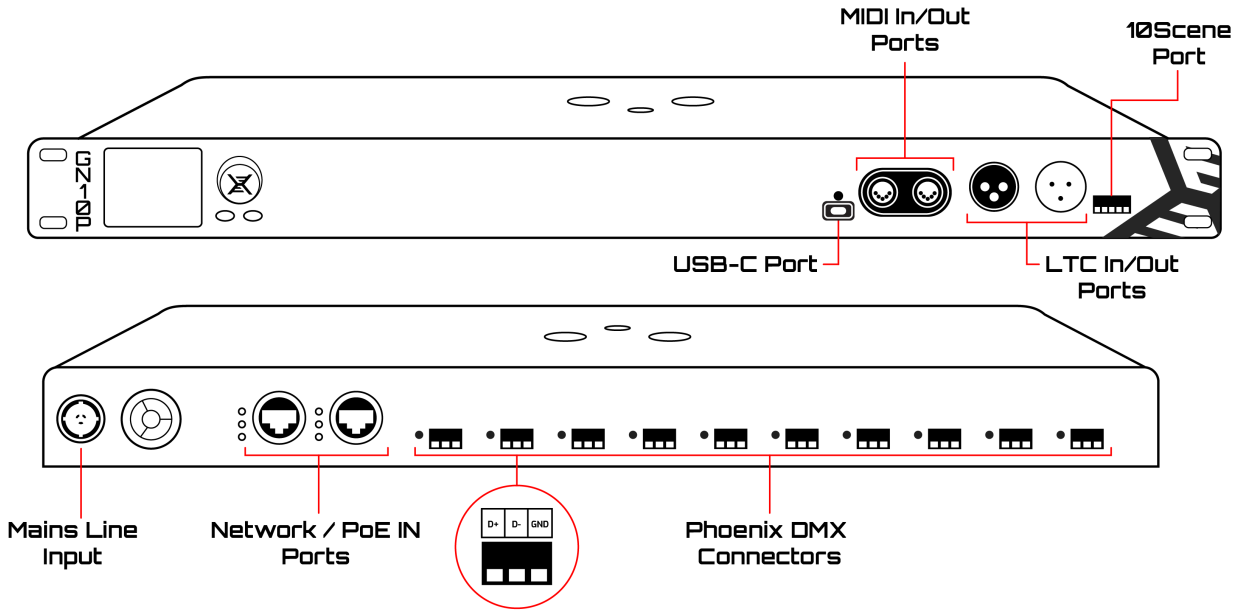
The GN10P can be either PoE powered or mains powered. When connecting to a MagicQ PC system via USB, the unit must be either Mains or PoE powered.

GN10P Wiring

The GN10P DMX ports require wiring using Phoenix connectors. The pin-out for the Phoenix connectors is as follows:

D+	D-	GND

GeNetix GN10P Node



USB Connection

The GN2, GN5, GN10, GN10P, GN10R have an optional USB connection, allowing them to be used in either USB or Network mode.

When a GeNetix node is connected via USB to a PC (Windows, Mac or Linux) with MagicQ running then the GeNetix node runs in USB mode, functioning as a MagicQ interface connected directly to the MagicQ application.

In USB mode it is treated just like a MagicQ Wing or Interface with the configuration being controlled from within MagicQ rather than from the GeNetix node. In this mode the node configuration is unused, although it is retained for when the node is used again in Network mode.

When in USB mode, the DMX outputs are configured in MagicQ from the Setup Window, VIEW DMX I/O. For GN5, GN10, GN10P and GN10R the MIDI, Timecode and 10Scene port are configured in MagicQ from the Setup Window, VIEW SETTINGS. The configuration is stored in the MagicQ show file as normal.

The node indicates USB mode on its front panel when in USB mode.

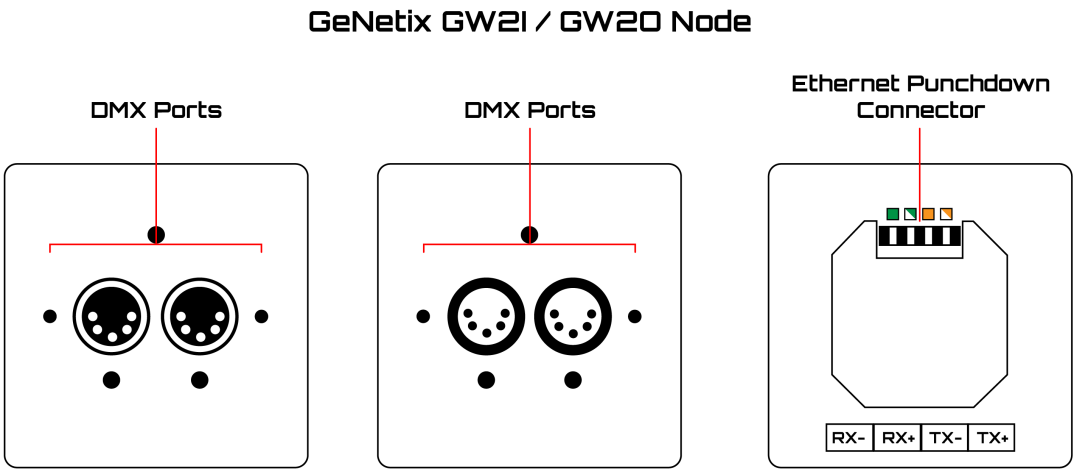
The node continues in USB mode even if the USB link is lost or MagicQ is stopped. To restart the node in Network mode, disconnect the USB or shut down the MagicQ and then power the GeNetix node on and off.

Note that firmware upgrade is only supported over ChamNet, not over USB. Firmware upgrade can be carried out from the free MagicQ PC/Mac software, and from MagicQ and QuickQ consoles.

GW2I / GW2O

GW2I / GW20 Wiring

The GW2I and GW20 nodes are wired using either Cat5e or Cat6 cable using their punch down terminals. When wired via T568B wiring the GW2's are wired as shown below:



When using PoE injectors these must support PoE Mode A (PoE over the data pair), many budget PoE injectors provide data over the unused data pair only. Care should be taken when selection a PoE device to power the GW2I / GW20 nodes. The GeNetix GS8 Gigabit PoE switch support PoE Mode A and Mode B and is ideal for powering all GeNetix Nodes.

GeNetix Switches

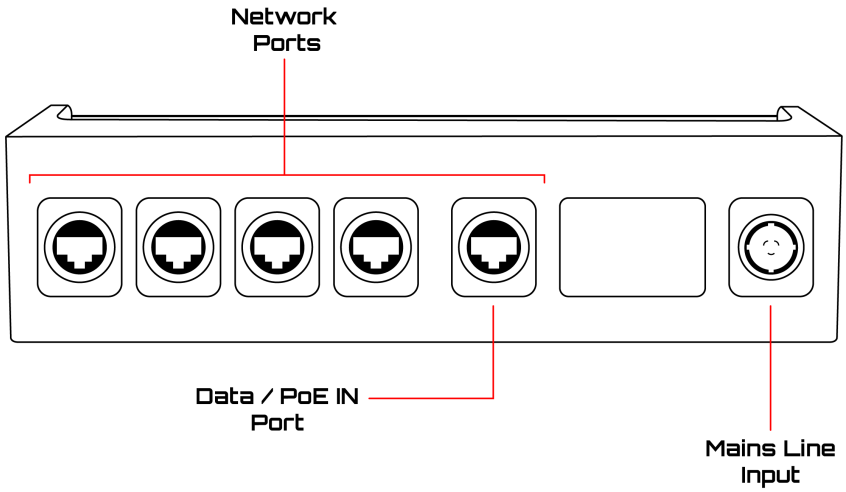
GS5IP

The GeNetix Switch 5IP or GS5IP is a five port IP65-rated unmanaged Gigabit network switch that can be powered via either mains power into its PowerCon True1 Mains Input connector or through PoE. The onboard Port Status LED's provide users a visual indication to the current active state of the ports as well as showing if the switch is running at Gigabit speed.

The GS5IP will not unlock any MagicQ PC Systems.

The GS5IP is a unmanaged network switch. Any network data received into the DATA IN port will be duplicated and outputted through all 4 ports. ChamSys Hardware and Software is not required to use this product.

GeNetix GS5IP Network Switch



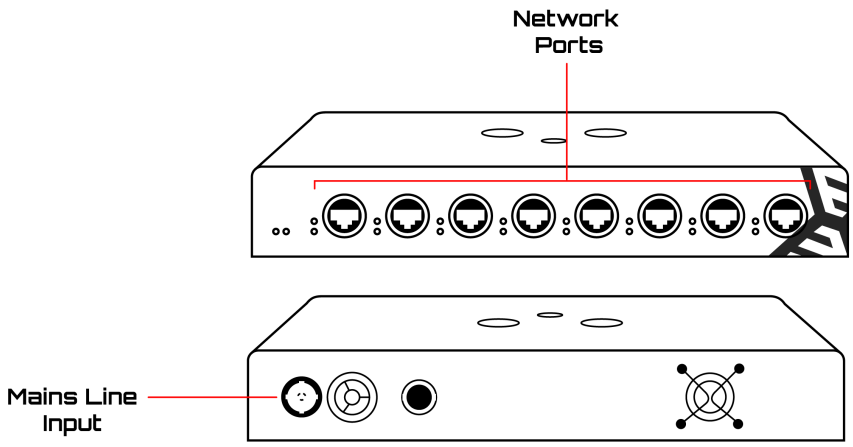
GS8

The GeNetix Switch 8 or GS8 is an eight port unmanaged Gigabit PoE network switch that provides a total output of up to 200W of Power over Ethernet across its eight ports. Ports 1 through 4 support IEEE 802.3bt up to 100W per port. In modes A & B, all ports 802.3af and 802.3at standards. The GS8 can be powered via the PowerCon True1 Mains input connector on the rear of the GS8.

The GS8 will not unlock any MagicQ PC Systems.

The GS8 is a unmanaged network switch. Any network data received will be duplicated and outputted through all ports

GeNetix GS8 Network Switch



GeNetix DMX Splitters

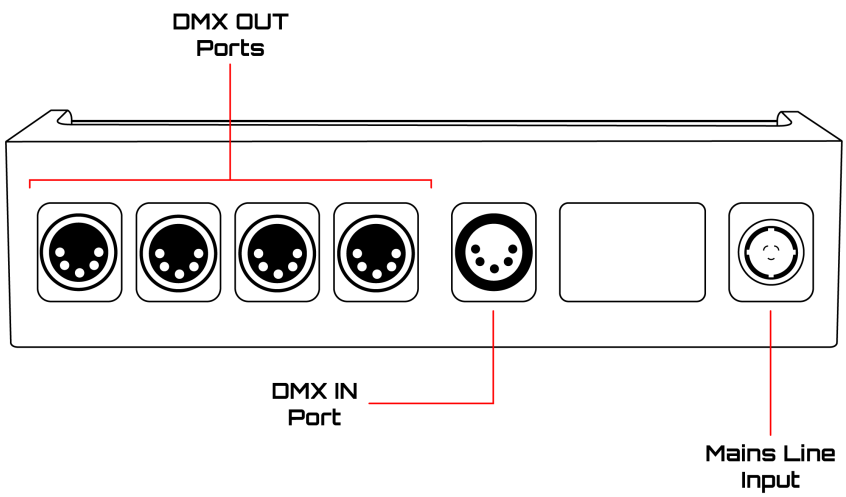
GD4IP

The GD4IP is a compact 4-port IP65-rated DMX Splitter that features a single DMX Input to 4 DMX outputs, alongside this is a RDM Disable button allowing users to strip out RDM data and retime the DMX signal. The onboard Port Status LED's provide users a visual indication to the active state of the ports.

The GD4IP is powered via its PowerCon True1 Mains input connector.

Any DMX data the GD4IP receives through its "DMX IN" port is duplicated to all outputs. RDM data can be enabled or disabled using the "RDM disable" button. ChamSys hardware and software is not required to use this product.

GeNetix GD4IP Network Switch



GD10

The GD10 is a 10-port DMX Splitter that features 2 DMX Inputs to 10 DMX outputs, alongside this is a RDM Disable button allowing users to strip out RDM data and retime the DMX signal. The onboard Port Status LED's provide users a visual indication to the active state of the ports.

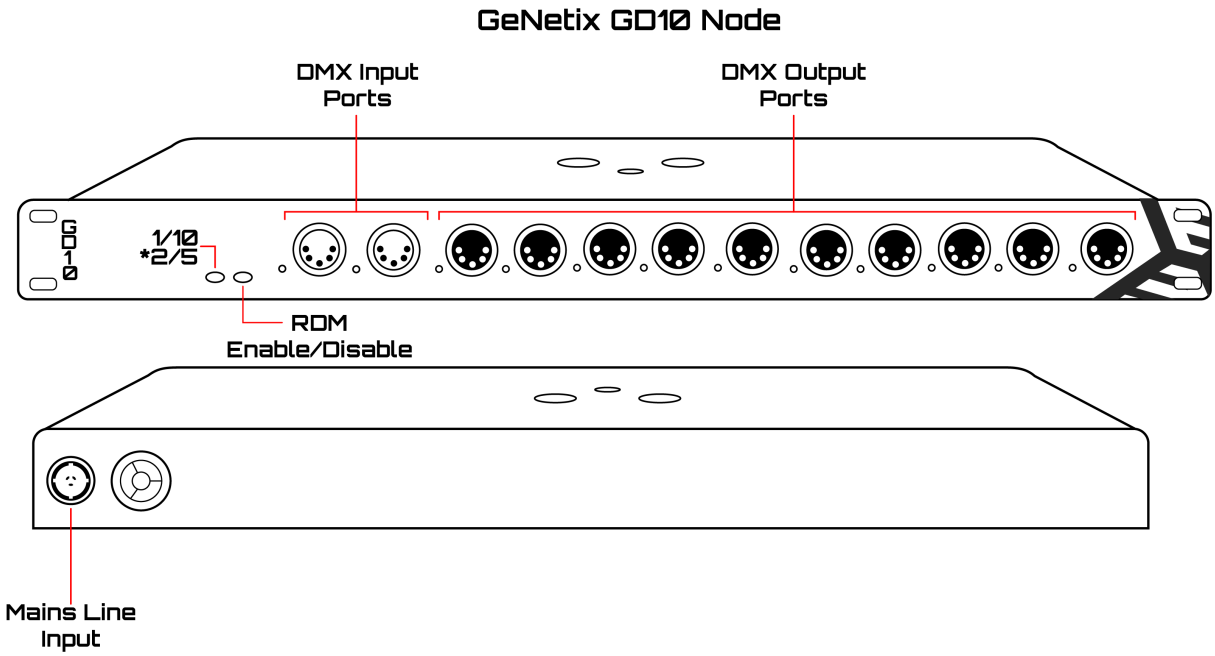
The GD10 offers two modes of operation:

1/10 mode where 1 source of DMX Input is split between all 10 DMX outputs.

2/5 mode where 2 sources of DMX Input is split equally between 10 DMX outputs with source 1 outputting through ports 1-5 and source 2 outputting through ports 6-10.

The GD10 is powered via its PowerCon True1 Mains input connector.

RDM data can be enabled or disabled using the "RDM enable" button. ChamSys hardware and software is not required to use this product.



GeNetix 10Scene Interfaces

10Scene Store

The GeNetix 10Scene Store is a single universe wall or DIN Rail mounted stand-alone playback device that stores 10 static lighting Scenes (cues) which can recall stored scenes through connected 10Scene wall plates or 10Scene Contacts. Users can load Scenes from either QuickQ or MagicQ show files or program via its in-built DMX Input port.

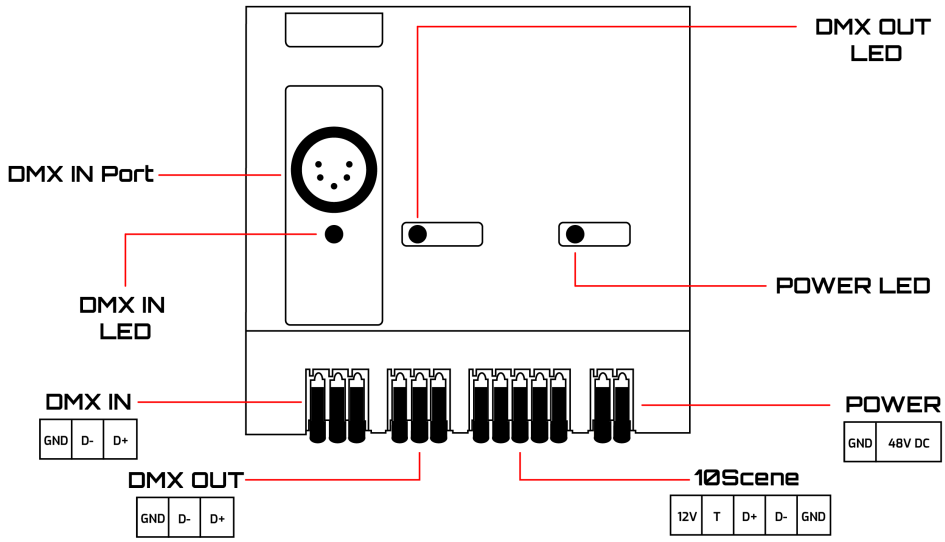
<!-- vale BritishSpelling.Spelling = NO -->

The 10Scene Store is powered by either PoE or external 48V power supply (not supplied). A suitable DIN Rail Mount power supply example is the Powerld DG-60-S48 which has been tested and proven with the GeNetix 10Scene Store. This simple installation device supports up to ten 10Scene wall plates, and features one DMX IN (XLR5 & Wago), one DMX OUT (Wago) and a network port.

<!-- vale BritishSpelling.Spelling = YES -->

The 10Scene Store can be configured via a MagicQ system or through the GeNetix Web Server.

GeNetix 10Scene Store



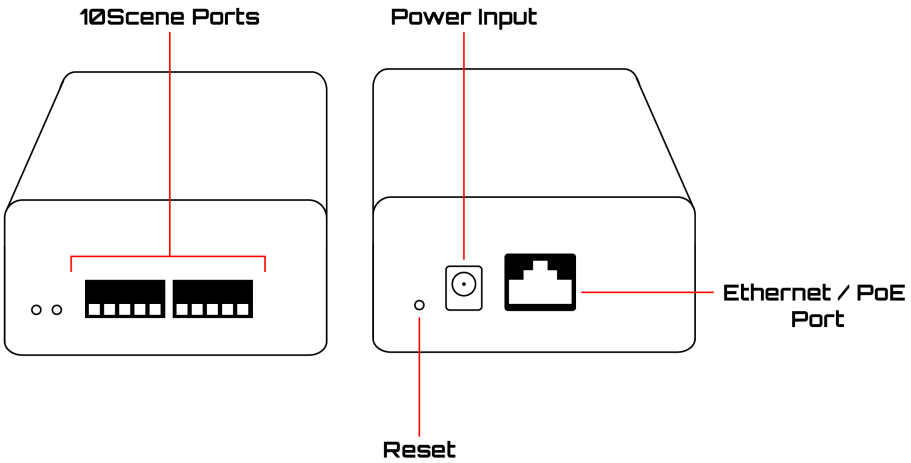
10Scene Gateway

The 10Scene Gateway is an interface allowing users to connect 10Scene Wall Plates/10Scene Contacts to MagicQ/QuickQ systems. Converting from 10Scene to the ChamSys remote protocol, allowing 10Scene Wall Plates or Contacts to integrate with MagicQ and QuickQ consoles.

2 10Scene ports allow users to connect up to 20 10Scene Wall Plates/10Scene Contacts, providing a perfect solution for adding user friendly control to installations.

The 10Scene Gateway is powered via either via PoE or an external power supply.

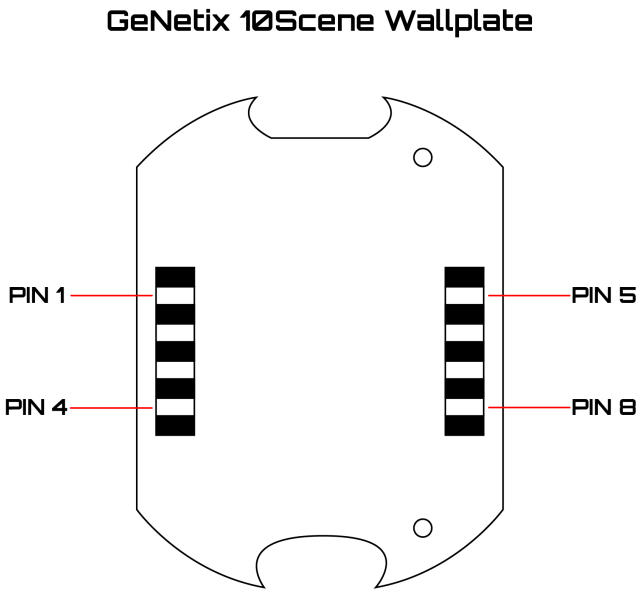
GeNetix 10Scene Gateway



10Scene Wall Plates

The 10Scene Wall Plate features ten 10Scene trigger buttons, with dual colour LED status indication.

Users can connect 10Scene wall plates directly to the QuickQ Rack or to the SnakeSys Gateway interface, where it can then integrate with any MagicQ or QuickQ system for remote Scene activation.



10Scene Contact

The 10Scene Contact features ten 10Scene trigger buttons, with dual colour LED status indication. Alongside this the 10Scene Contact offers ten individually configurable contact inputs allowing users to connect external contacts to the 10Scene Contact, allowing for external Scene triggering.

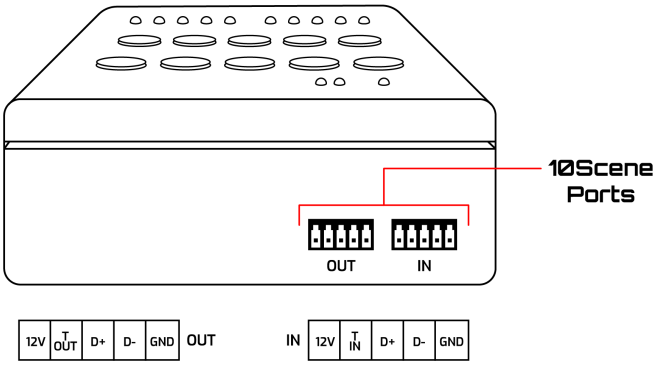
Users can connect 10Scene Contacts directly to the QuickQ Rack or to the SnakeSys Gateway interface, where it can then integrate with any MagicQ or QuickQ system for remote Scene activation.

10Scene Contact Wiring

The 10Scene Contact is wired using a Cat5e or Cat6 cable using the following configuration:

In Port		Out Port	
Pin 1	12V	Pin 1	12V
Pin 2	Trigger IN	Pin 2	Trigger OUT
Pin 3	D+	Pin 3	D+
Pin 4	D-	Pin 4	D-
Pin 5	GND	Pin 5	GND

GeNetix 10Scene Contact



GeNetix Nodes Quick Start

Overview

All GeNetix Nodes ship with a default IP address in the 10.X.Y.Z range, using a 255.0.0.0 subnet mask.

IP Address Configuration

*GN2, GN5, GN10, GN10P, GN10R Change IP via the device display/menu, Web Server, or ChamNet (Net Manager) using MagicQ/QuickQ consoles.

*GW20, GW2I, GN4IP Change IP via Web Server or ChamNet only.

Default Output Settings

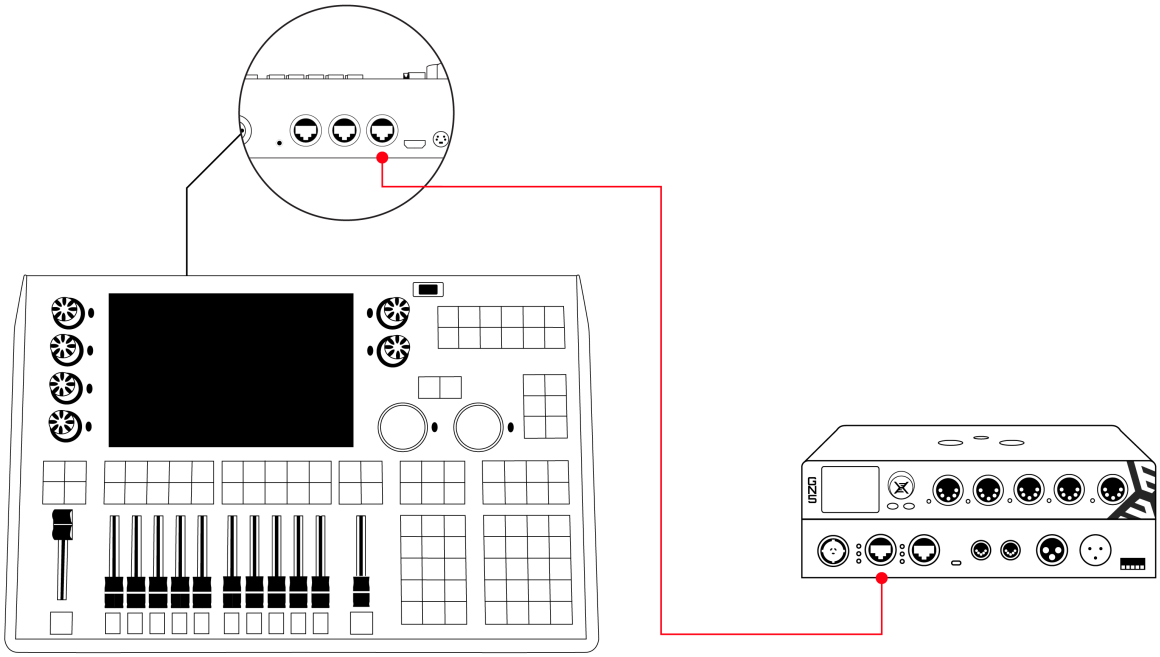
*Protocol: Art-Net (DMX Output mode)

*First DMX Output: Art-Net Universe 0

*Supported Protocols: Art-Net and sACN

Simple Setup: Direct Connection to a Lighting Console

In this setup, the GeNetix Node connects directly to the lighting console using a Cat5/Cat6 cable.



The steps below assume Art-Net is used as the Ethernet–DMX protocol.

Steps

*Connect a network cable between the lighting console and the GeNetix Node.

*Power On

GW20/GW2I: Requires a PoE injector.

GN2: Powered by USB or PoE.

GN4, GN5, GN10, GN10P, GN10R: Powered by PoE or mains.

*Set Console IP

Example: 10.0.0.10 with subnet 255.0.0.0.

Refer to your console's manual for instructions.

*Enable Art-Net Output on Console

Example (MagicQ):

Setup > View DMX I/O

Enable Universe 1

Set Out Type to Art-Net

Set first Universe Out Uni to Universe 0.

*Configure Node Ports

GN2, GN5, GN10, GN10P, GN10R: Use Quick Setup menu, select Art-Net 0..1 (Port 1 ⊠ Universe 0, Port 2 ⊠ Universe 1, etc.).

GW20, GW2I, GN4IP: Recommended to configure initially via MagicQ PC (custom IP & port settings). Use Net Manager:

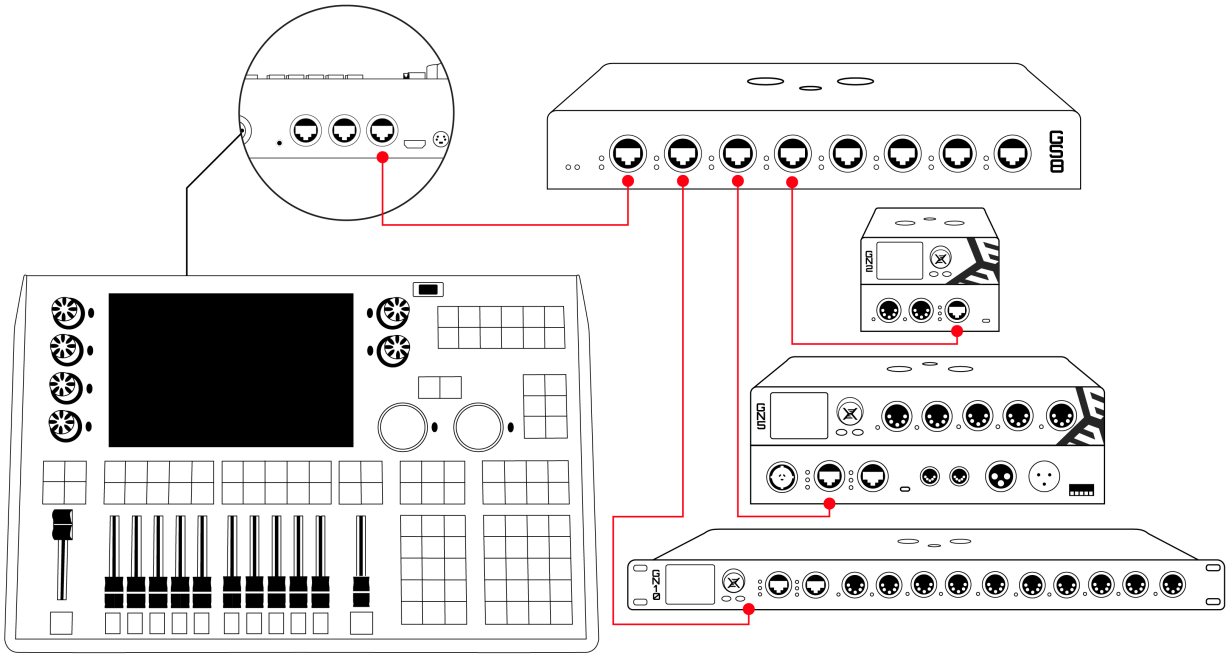
Setup > View DMX I/O > Net Manager.

*Verify DMX Output

Blue LED next to DMX port = DMX is being output from that port.

Multi-Node Setup: Using a Network Switch

In this setup, multiple GeNetix Nodes connect via a network switch (e.g., GeNetix GS8) to a lighting console — ideal for distributed stage setups.



Steps

*Connect the lighting console to the network switch.

*Connect each GeNetix Node to the network switch.

*Set Console IP — e.g., 10.0.0.10 / 255.0.0.0.

*Enable Art-Net Output on Console — as per Section 1, Step 4.

*Configure First Node Ports — as per Section 1, Step 5.

*Verify DMX Output — Blue LED indicates active DMX output.

*Repeat Steps 4–7 for each additional node, enabling more universes on the console as needed.

Quick Reference

GeNetix Node Default IP: 10.X.Y.Z / 255.0.0.0

Default Protocol: Art-Net

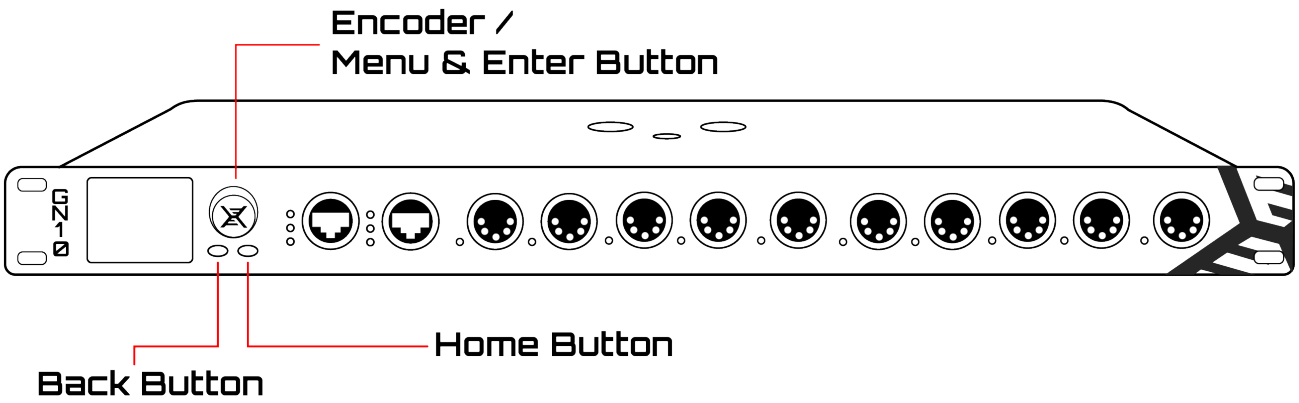
Node DMX Port LED Status: Blue = DMX Output Active

Node Navigation

Node Encoders & Buttons

The GN2, GN5, GN8, GN10, GN10P and GN10R Nodes can be configured via their in-built display, via MagicQ/QuickQ consoles and their Web server. When configuring GeNetix devices via the in-built display, the node can be navigated in the following way:

Node Navigation

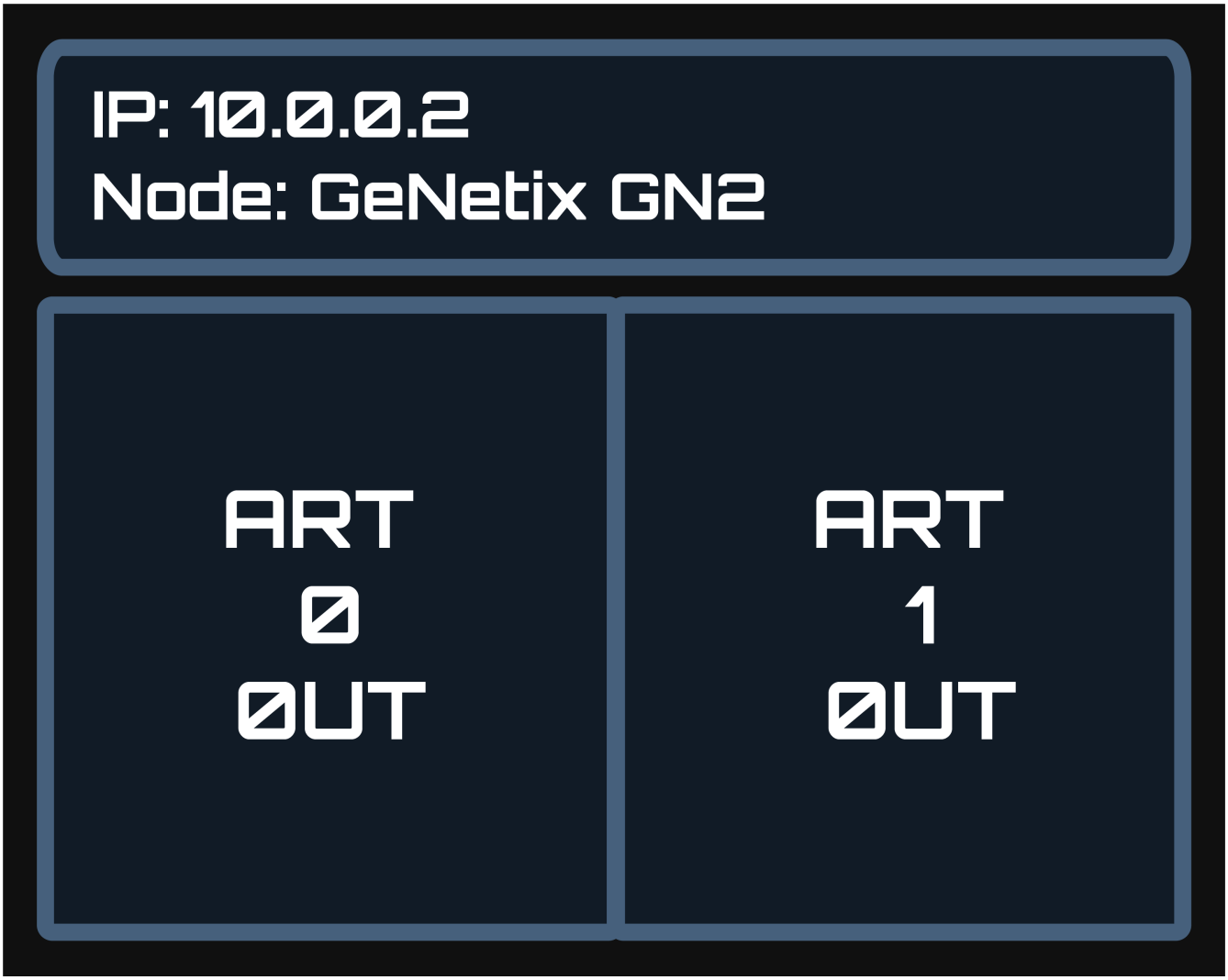


The Encoder is pressed to access the Node Menu, then used to scroll through menu option and pressed to select the menu item or confirm options. The Back button moves up a level from the current menu level. The Home button will return back to the Node Home Display no matter which menu option is currently on the display.

Node Home Display

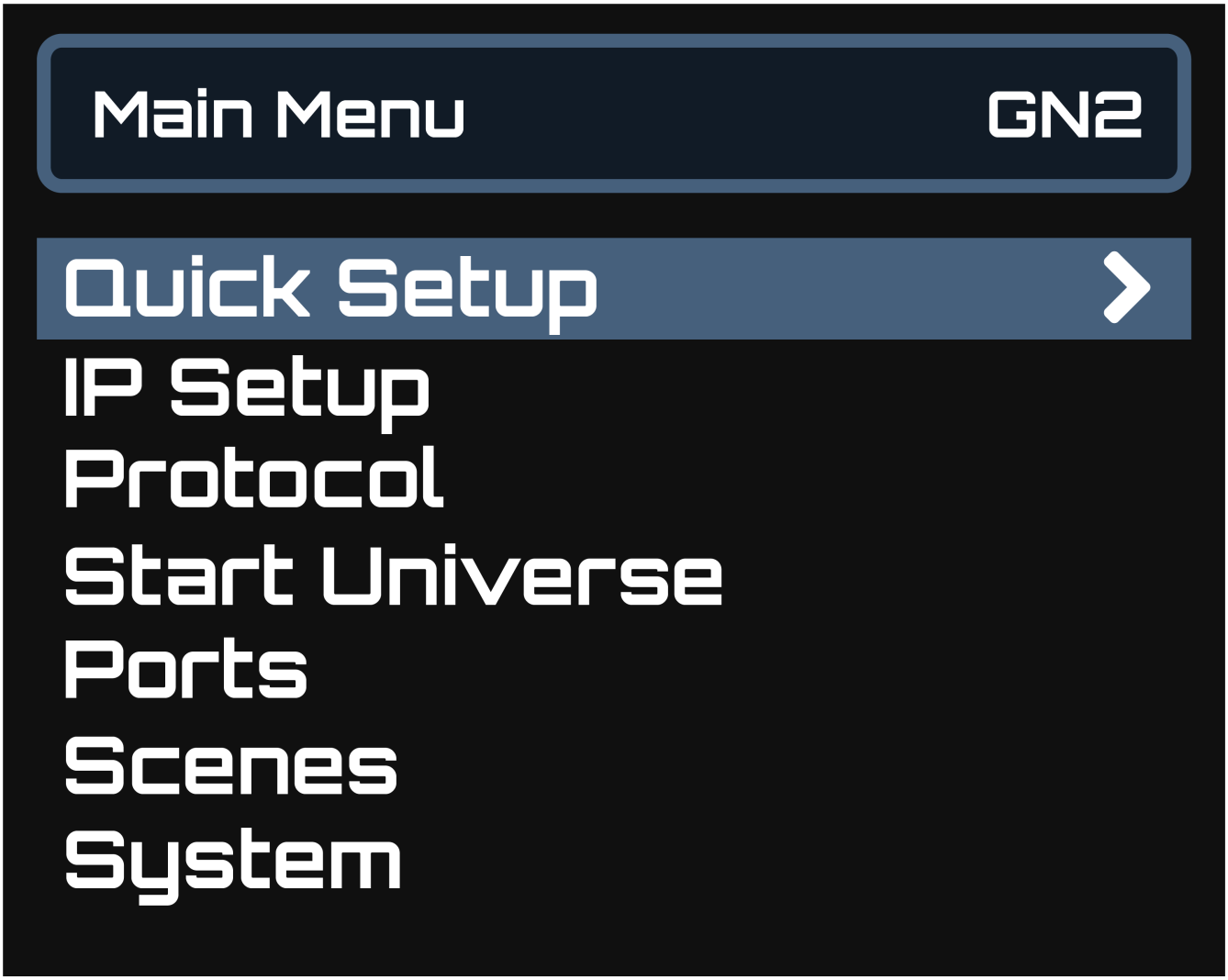
The home display shows the status of the node, along with the device IP address, Name and Port configuration. On GN5 and GN10 nodes the home display will also display incoming Timecode and MIDI messages.

The Port configuration boxes change in their highlighted colour in line with Node Ports colours, see Ports section for details.



Menu Navigation

Pressing the encoder knob from the home display will enter the main menu. Main menu options are described in the preceding sections.


Main Menu
GN2
Quick Setup
IP Setup
Protocol
Start Universe
Ports
Scenes
System

Quick Setup

The Quick Setup menu contains a choice of 6 common preset Node configurations. These configurations are:

Table 1. Quick Setup Menu Options

Menu Option	Menu Action
Art-Net 0..1	Sets Node into Art-Net mode, sets Ports to sequential universes with Port 1 set to Art-Net Universe 0, Port 2 to Art-Net Universe 1 and so on.
Art-Net 1..2	Sets Node into Art-Net mode, sets Ports to sequential universes with Port 1 set to Art-Net Universe 1, Port 2 to Art-Net Universe 2 and so on.
Art-Net 0..0	Sets Node into Art-Net mode, sets all Ports to the same Art-Net Universe - Art-Net 0. All ports will output Art-Net Universe 0.
sACN 1..2	Sets Node into sACN mode, sets Ports to sequential universes with Port 1 set to sACN Universe 1, Port 2 to sACN Universe 2 and so on.
sACN 1..1	Sets Node into sACN mode, sets all Ports to the same sACN Universe - sACN 1. All ports will output sACN Universe 1.
Splitter	Option available on GN5, GN10, GN10P and GN10R, in this mode device acts as a DMX Splitter. Sets port 1 to DMX Input, Ports 2 onwards output data received from Port 1. Art-Net / sACN input is ignored in this mode.

When using the GN5, GN10, GN10P and GN10R in Splitter mode RDM messages are not supported. RDM Messages are ignored / not passed through by the GN5, GN10, GN10P and GN10R when used in Splitter mode.

IP Setup

The IP Setup menu has two options to set the node to a default 2. or 10. IP address. Both of these options will set the node Subnet mask to 255.0.0.0. The Custom IP address option allows a custom static IP address and Subnet Mask to be set by the user on the node.

Table 2. IP Setup Options

Menu Option	Menu Action
2.X.X.X	Sets Node to a unique 2.X.X.X IP address based on the devices mac-address with a /8 (255.0.0.0) Subnet
10.X.X.X	Sets Node to a unique 10.X.X.X IP address based on the devices mac-address with a /8 (255.0.0.0) Subnet
Custom IP Address	Allows the node to be given a user configurable IP address and Subnet

Protocol

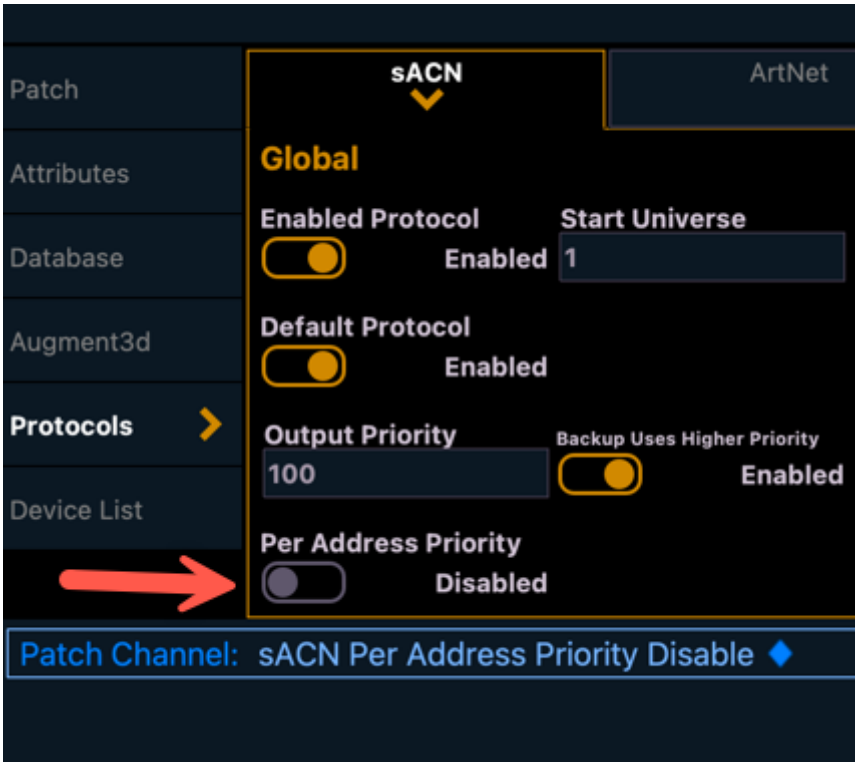
The Protocol Menu option is to quickly change the protocol setting for all ports of the Node.

Note that any custom protocol setting on individual ports is reset when recalling these options.

Table 3. Protocol Menu options

Menu Option	Menu Action
Art-Net OUT	Sets all Ports of the Node to Art-Net Output.
sACN OUT	Sets all Ports of the Node to sACN Output.
Art-Net IN	Sets all Ports of the Node to Art-Net Input.
sACN IN	Sets all Ports of the Node to sACN Input.

if using sACN with ETC Lighting consoles, ETC consoles default to 'per address' priority, where the sACN standard default to 'per universe' priority. We recommend that ETC users Disable Per Address Priority on the ETC consoles as show below.



Start Universe

The Start Universe menu option is used to set the node's Ports universe numbers sequentially starting from Port 1, the protocol menu option above defines the protocol used for the node's DMX ports. When setting the Start Universe, this also sets the Port universes for all ports of the node, with the ports universes increasing by 1 sequentially.

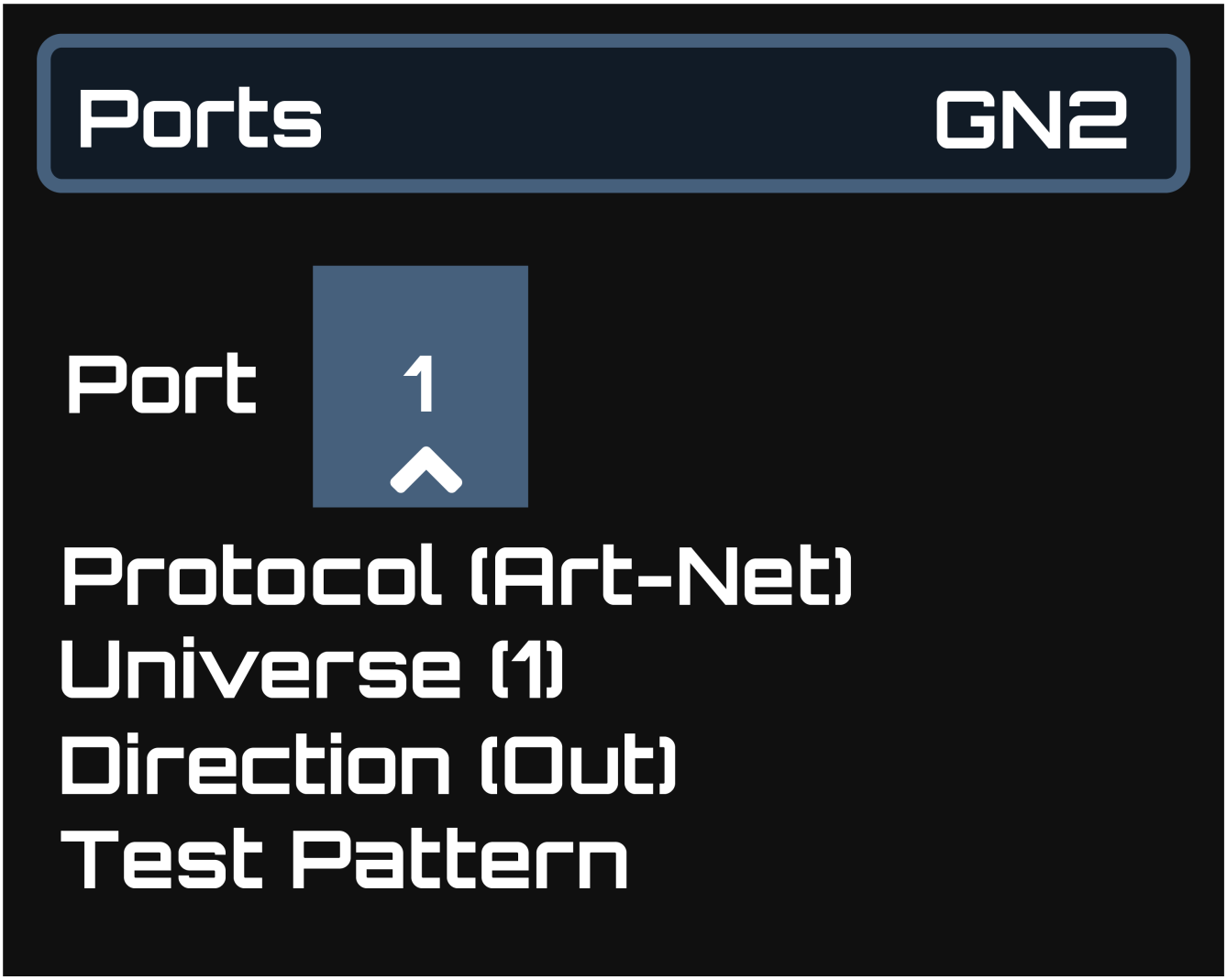
This setting overrides any manually set universe number configuration for ALL ports of the node and not just the first port of the node.

For example if the Node is set in Art-Net Mode and 'Start Universe' is set to 0, then Port 1 of the Node would be set to Art-Net 0 and Port 2 Art-Net 1 and so on. If 'Start Universe' is set to 10, then Port 1 would be set to Art-Net 10, Port 2 Art-Net 11, Port 3 Art-Net 12 and so on.

Ports

Port Configuration

Allows for individual Ports of the Node to be configured separately.



Port

The Port number relates to the physical DMX Port of the node.

Protocol

Protocol allows the selected port to be configured between Art-Net or sACN, there is also a 'none' option to disable port output.

Universe

Universe specifies the selected DMX Ports protocol universe number. For example is Port 1 has been select and Universe has been set to 10, the Port would output Universe 10 (either Art-Net or sACN, depending on the Protocol setting above).

Merge Mode

DMX merge mode determines the behaviour of the GeNetix Node when multiple sources of DMX are being input through a single port. Control of the connected fixtures can be adjusted between DMX sources depending on the Merge Mode set.

The configurable merge modes include:

- HTP - The highest data value received per channel will take control within the specified universe.
- LTP - The latest data value received per channel will take control within the specified universe.
- Highest IP - The data source with the highest IP address will control the output of the universe/port as a whole.
- Lowest IP - The data source with the lowest IP address will control the output of the universe/port as a whole.

Direction

Direction is used to set the selected DMX Ports mode from either DMX Output, DMX Input or DMX Fallback

Test Pattern

Test pattern will output a 'ramp' on all DMX channels of the selected Port from 0 to 255. As soon as this menu is exited the ramp on the port will stop. The test pattern automatically turns off after 60 seconds. The port LED shows purple whilst the test pattern is in operation.

Care should be taken using test patterns if any pyrotechnic or special FX devices are located on the DMX universe.

DMX Fallback

DMX Fallback enables fixtures on a single universe to be connected in a loop to two ports on the GeNetix node for redundancy. If a single cable is broken anywhere in the DMX loop, all fixtures can still receive DMX.

Each port can be set to Output, Input or Fallback.

When a port is set to Fallback it is by default operating as Input.

The node periodically checks for DMX being received in on the Fallback port, if after a time out of at least 2 seconds there is no input detected then it changes into Output mode, outputting the Art-Net or sACN universe configured.

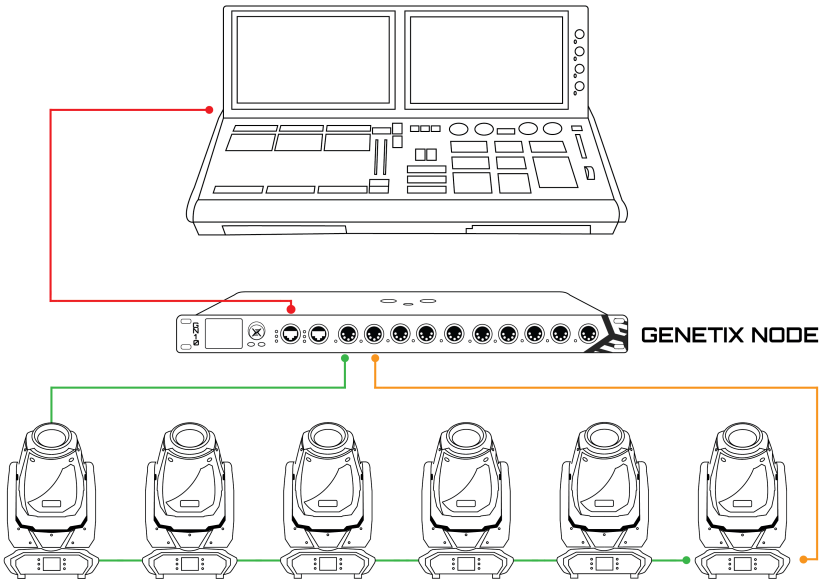
When operating as an output, it periodically briefly changes to an input to sense whether DMX data is now being received. If detected, the port stays as an input continuing periodic checking of the incoming DMX.

Different LED states are used to indicate if Fallback is configured, and in operation.

When using Fallback it is normal to set both the main output port and the Fallback port to decode the same Art-Net / sACN universe.

DMX Fallback is supported within a GeNetix node and also between multiple GeNetix nodes. For example, an installation could have a primary GN10 and a backup GN10 that provides both backup (in case the node fails) and DMX Fallback (in case of cable failure/fixture failure).

DMX Fallback is supported on the following GeNetix Nodes: GN2, GN5, GN10, GN10P, GN10R, GN4IP, GW2I, GW20



DMX Merging

DMX Merging enables fixtures on a single universe to be connected to multiple sources of incoming Art-Net to sACN data. Merging is supported on a per port basis, where individual ports on GeNetix devices can use different Merge settings.

Merging is enabled when two or more sources of DMX are input to a specific universe and a merge mode option is set on the port.

When more than one source is detected on a single universe, the corresponding port LED will change to a solid red colour.

HTP Merge

The highest data value received per DMX channel will take priority and be output to the DMX port. When using HTP merging, GeNetix Nodes support merging of up to 15 input sources (via Art-Net or sACN) per each port.

LTP Merge

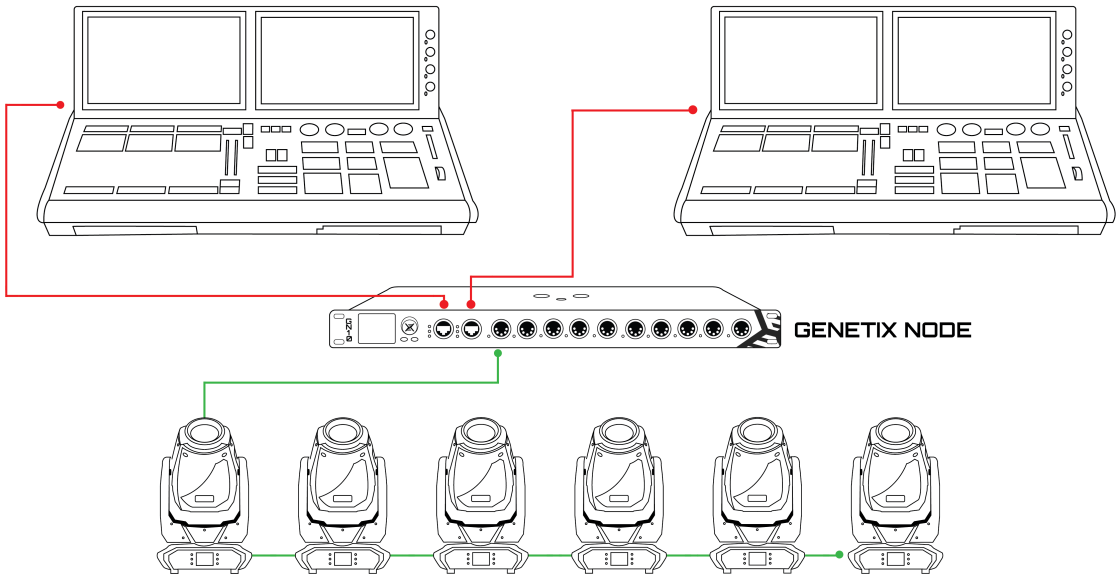
The latest data value received per DMX channel will take priority and be output to the DMX port. When using LTP merging, GeNetix Nodes support merging of streams for 2 input sources (via Art-Net or sACN) per each port.

Highest IP Address Priority

The data source with the highest IP address will take control of the universe / port as a whole.

Lowest IP Address Priority

The data source with the lowest IP address will take control of the universe / port as a whole.



DMX Port LEDs

On the GN2, GN5, GN10, GN10P, GN10R, GW2I and GW20 the following LED colours are used:

Port set to output:

LED Colour	Description
Dark Blue	Receiving good Art-Net/sACN data for this port (no Scene Active)
Red	Receiving good Art-Net/sACN data for this port from 2 or more sources (no Scene Active)
Cyan	Receiving good Art-Net/sACN data for this port (but Scene Active)
Green	No Art-Net/sACN being received for this port (but Scene Active)
Flashing Red	Test pattern being output
Off	No Art-Net/sACN being received for this port

Port set to Fallback:

LED Colour	Description
Yellow	DMX loop input being received

Purple	No DMX input - fallback in operation
Off	No Art-Net/sACN being received for this port

Port set to input:

LED Colour	Description
White	DMX input being received
Off	No DMX input

Note that during Identify all LEDs will be blue.

Scenes

GeNetix nodes support storage of 10 Scenes that can be recorded from the incoming Art-Net or sACN data. Scenes contain DMX data for one or more ports on the node. Scenes are recorded as static lighting states, they do not contain FX or other complex programming.

Recording of scenes can be initiated from the front panel of the Node, from MagicQ / QuickQ consoles and also via the Web server.

Each Scene can have a name and a fade time set.

Scenes can be replayed from the front panel of the Node, from MagicQ/QuickQ consoles or via the Web server. When a Scene is active the front panel display will show the Scene name and the DMX port LEDs will be cyan or green depending on whether incoming Art-Net / sACN data is still present.

Crossfading of scenes is performed on all channels - the use of fade times is therefore best when changing intensity and colours rather than on stepped attributes such as gobo wheels.

The complete set of Scenes can be managed from MagicQ, enabling easy control and modification of installations. The Scenes can be retrieved from the node to MagicQ - loaded into either the first 10 Playbacks or 10 items in an Execute Window. The Scenes can be stored back into the node from MagicQ from the Playbacks or Executes.

Scenes can be triggered from 10Scene Wall Plates or 10Scene Contacts when the 10Scene mode is set to Scenes or Only Scenes.

When set to Only Scenes, then one of the Scenes is active at all times - this is useful for simple installations without consoles.

When set to Scenes, Scenes are triggered from the 10Scene Wall Plate/10Scene Contact, but if all 10Scene buttons are off then no Scenes are active and the node operates normally passing through network data to DMX.

Configuring Scenes

Scenes can be recorded on the GeNetix node by pressing the STORE SCENE soft button from within MagicQ or via the Node Menu and selecting the Scene to store to from the choices in the dialog box. Alternatively from MagicQ press the RECORD button and select a Scene in the window. The GeNetix node stores the current state of its network data for all ports that are set as Outputs.

From MagicQ Scenes can be removed by SHIFT and the REMOVE SCENE soft button and selecting the Scene to remove. Only programmed Scenes will be shown in the dialog box. Alternatively press the REMOVE button and select a Scene in the window. The Scene is removed for all ports on the GeNetix node. The Scenes can be retrieved from the node to MagicQ by pressing the RETRIEVE SCENES soft button and choosing the option of either the first 10 Playbacks or 10 items in an Execute Window. Playbacks and Execute Items will only be generated for the Scenes that are present on the node. If no Scenes are programmed then no Playbacks / Execute Items will be created.

MagicQ will only retrieve values for patched channels on the console universes corresponding to the ports on the GeNetix node. If MagicQ has no heads patched then MagicQ will patch generic dimmers on

all the console universes corresponding to the ports on the GeNetix node prior to retrieving the Scene. This enables retrieving of Scene data even when the patch has been lost. The Scenes can be sent back to the node from MagicQ by pressing the SEND SCENES soft button and choosing from Playbacks or Executes. If the Playback or Execute Item is not present then no Scene will be created. MagicQ will send value 0 for any channels that are not patched.

Controlling Scenes

Scenes can be controlled from 10Scene Wall Plates or 10Scene Contact when the 10Scene mode on the GeNetix is set to Scenes or Only Scenes.

When set to Only Scenes, then one of the Scenes is active at all times – this is useful for simple installations without consoles.

When set to Scenes, then Scenes are controlled from the 10Scene Wall Plate/10Scene Contact, but if all 10Scene buttons are off then no Scenes are active and the node operates normally passing through network data to DMX.

System

Lost Data Input

How a node reacts when losing network data (Art-Net or sACN) can be configured:

The network is only considered to be lost when data for all network ports configured as Outputs is lost.

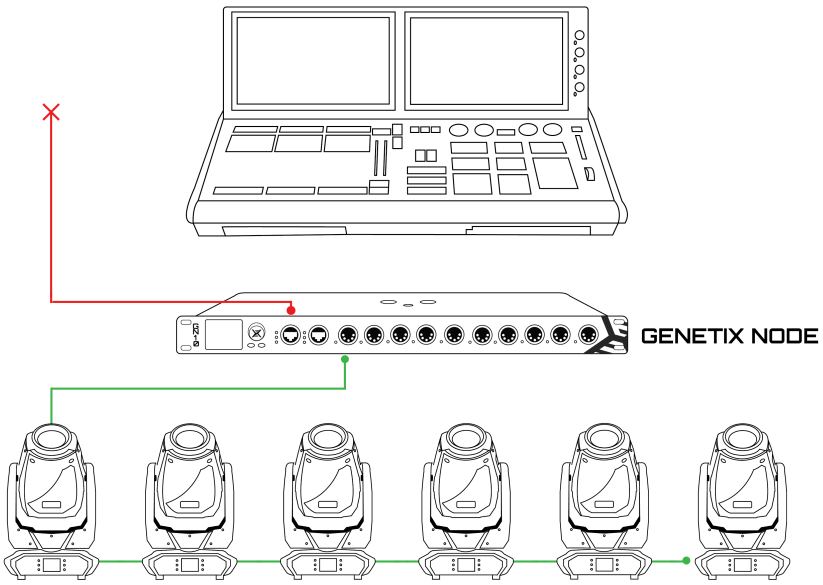


Table 4. Lost Data Input

Menu Option	Menu Action
Hold (default)	Holds the last output DMX values
Zeroes	Outputs DMX 0s on all channels
None	Stops outputting DMX
Scene	Outputs the contents of a Scene. If the Scene is not programmed for one or more ports then those port hold the DMX
Scenes Panel	Outputs the contents of a Scene selected from a 10Scene Wall Plate/10Scene Contact. If the Scene is not programmed for one or more ports then those ports hold their previous DMX. When a Scene is selected from the 10Scene Wall Controller in this mode the GeNetix device will not show the Scene as active as the DMX output will hold at the selected 10Scene Wall Controller scene output values until input data is received.

Sync Mode

GeNetix nodes support synchronised DMX output to reduce tearing. Synchronisation is controlled via ChamNet and is available when used with MagicQ consoles.

GeNetix nodes also support Art-Net and sACN synchronisation.

Table 5. Sync Mode

Menu Option	Menu Action
None	Sync Disabled
Multi Unit	…
Auto Detect (default)	…

RDM

GeNetix network nodes support ANSI E1.20 RDM.

The GeNetix nodes only perform RDM operations when requested by a console or controller. They do not perform discovery on start up, or at predefined intervals. GeNetix Nodes only perform RDM discovery when explicitly requested by the console. This ensures that show critical DMX operation is not affected by RDM

Options are:

Table 6. RDM

Menu Option	Menu Action
RDM Enabled (default)	Enables RDM (Remote Device Management) on all Ports of the Node
RDM Read Only	Allows the connected fixtures RDM data to be read by Lighting Consoles, but will not pass any RDM modify commands from controller to fixtures. This is particularly useful in fixed installations where venue staff may want to block fixtures DMX address and mode from being modified
RDM Disabled	Disables RDM on all ports of the Node

DMX Timings

Table 7. DMX Timings

Menu Option	Menu Action
DMX Frame	DMX Frame timing, range from 49 to 149us (default 56us)
DMX MAB	Mark after break timing, range from 12 to 99us (default 12us)
DMX Break	DMX Break timing, range from 92 to 9999us (default 176us)

Lock

GeNetix nodes support a lock PIN to prevent the configuration being modified from the front panel of the GeNetix and also optionally from all network interfaces. The PIN applies to each interface separately and each instance of MagicQ, QuickQ or web server.

When the lock PIN is active the PIN must be entered to use the menu system. The system can be

relocked from the menu. When unlocked, after 30 seconds of inactivity the device automatically locks again.

When set to "All Interfaces" the PIN also restricts access from MagicQ and QuickQ consoles and from the web server.

Users that forget their passwords will need to contact ChamSys support to get a recovery code. Each device has a unique recovery code.

Table 8. PIN

Menu Option	Menu Action
Unlock (default)	Node fully unlocked and configurable
Lock Device Only	Locks the devices in built display and buttons requiring PIN entry to unlock, device can be configured via the web server and console without need for PIN
Lock All Interfaces	Locks device, Web server and configuration from Console requiring PIN entry to unlock
Set Pin	Available when device is unlocked allowing customer device PIN to be set

Node Name

Allows a custom name to be given to the device. The Node Name is displayed on the home screen of the Node and also displayed in the web server and on MagicQ/QuickQ consoles. This is particularly useful when multiple nodes are present on the network to allow for Node Identification.

Factory Reset

This setting will reset the device back to it's original out of box configuration. All user data is erased after a Factory Reset, this includes all node settings including IP address, Port & Protocol settings, Scenes and User Configs.

User Configs

All nodes support the saving and recalling of configuration data as User Configs. Configs can also be triggered from 10Scene Wall Plates or 10Scene Contacts when the 10Scene mode is set to Configs. This is particularly useful for live environments for example at a festival, where a Wall Plate could be used to recall Configs changing the node Art-Net/sACN universes for quick change overs between controllers of the rig.

GeNetix nodes support 10 custom User Configs. Configs store the following Node configuration settings:

Table 9. Configs

Setting	**Stored in Configs**
Node IP address and Subnet	Yes
Ports Settings - Protocol, Universe, Direction	Yes
MIDI Settings	Yes
Timecode Settings	Yes
RDM Settings	Yes
DMX Timings	Yes
Lost Data Input Settings	Yes
10Scene Settings	Yes

Loading Configs does not change the contents of Scenes, Scene data is common for all Configs. Configs can be Saved, Loaded, Reset and Re-named via the Node Display, web server or from MagicQ consoles.

10Scene

The GN5, GN10, GN10R and GN10P 10Scene port can be used in the following configurations:

- None
- Scenes Optional (Default)
- Only Scenes
- User Configs
- Gateway

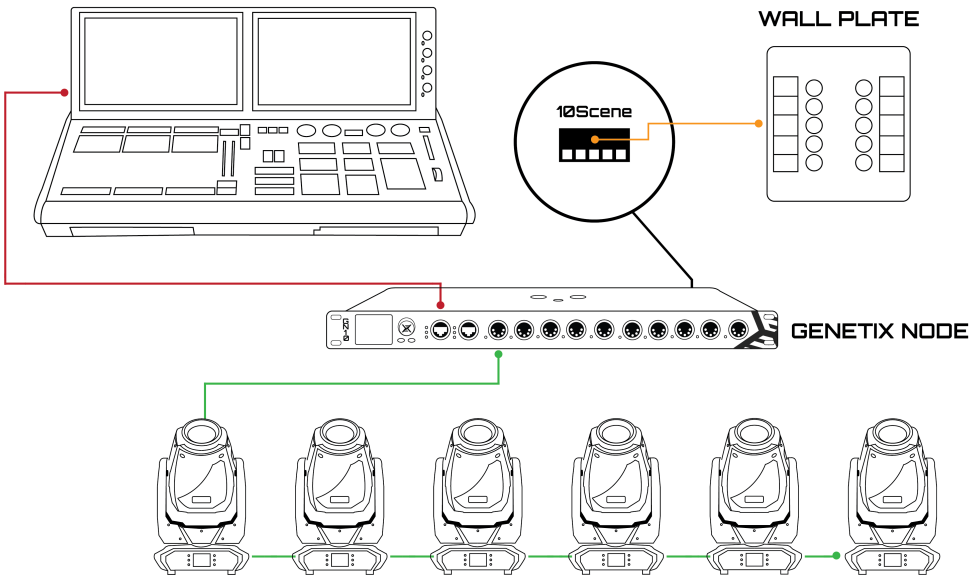
When set to Scenes Optional scenes can be activated and deactivated as required, when no 10Scene buttons are active the GeNetix node operates normally with DMX control from a console.

When set to Only Scenes it operates like a 10Scene Store - One Scene must always be active and DMX control from a console is not supported. This is designed for installs where there is no console.

When set to User Configs, pressing the 10Scene button loads configuration 1 to 10 depending on the button pressed.

When set to Gateway the 10Scene of the Node (GN5, GN10, GN10R and GN10P only) functions like a 10Scene Gateway. From MagicQ/QuickQ it is interchangeable with a 10Scene Gateway.

This setting also controls the behaviour of 10Scene external triggers, so it is visible on all GeNetix nodes regardless of whether they have a physical 10Scene port.



10Scene External Control

The Scenes on the GeNetix nodes can be controlled via external protocols. The options are

- None
- 10Scene App

- MIDI notes 0..9
- ChamSys Remote Ethernet Protocol (UDP Messages)
- DMX Input
- DMX Output

GeNetix only supports one Zone ID. The Zone ID supported is determined by the ChamNet ID of the GeNetix device. By default the ChamNet ID is 0 <!-- vale BritishSpelling.Spelling = NO -->(Def)<!-- vale BritishSpelling.Spelling = YES --> and the GeNetix will respond to 10Scene Zone 1. When the ChamNet ID is non zero then the Zone ID is the ChamNet ID.

The 10Scene App shows the names and state of the 10Scenes programmed in the GeNetix and enables Scenes to be selected. When the GeNetix node Lock Mode is set to Lock All Devices, then the PIN number of the GeNetix must be entered on the 10Scene App.

MIDI is only available on the GN5, GN10, GN10R and GN10P. To control a Scene send MIDI Note On for notes 0 to 9 with velocity greater than 0.

GeNetix supports the X command from ChamSys Remote Ethernet Protocol (UDP). GeNetix supports CREP with or without a header on UDP port 6553. GeNetix accepts both x and X.

Command	**Function**
<button id> , <state> X	10Scene zone 1 button with state
<zone id> , <button id> , <state> X	10Scene zone button with state

The 10Scene mode determines the action taken. Note that when the 10Scene mode is set to Gateway, then controlling of Scenes from the 10Scene App is not possible.

If state is not specified, then a button press and release is processed. Where state is specified, then it has the following functions:

State	**Function**
0	Button release (this causes the Scene changes)
1	Button press
2	Activate Scene
3	Release Scene (not supported if 10Scene mode is set to Only Scenes)
4	Toggle Scene

For example to activate Scene 2 send 2,2X.

The DMX Input and Output options allow users to activate Scenes via DMX, The DMX value determines the button as follows:

DMX Value	**10Scene Button**
0-9	No Scene Active
10-19	Scene 1

DMX Value	10Scene Button
20-29	Scene 2
30-39	Scene 3
40-49	Scene 4
50-59	Scene 5
60-69	Scene 6
70-79	Scene 7
80-89	Scene 8
90-99	Scene 9
100-255	Scene 10

10Scene Programming Mode

10Scene programming mode allows users to program new Scenes onto the GeNetix node from MagicQ PC/MagicQ/QuickQ. To enable programming mode, navigate to Setup, Net Manager and select the Options tab. Select 10Scene Programming Mode and set to enabled.

When in programming mode, holding one button on a 10Scene Wall Plate or 10Scene Contact for 5 seconds will cause MagicQ PC/MagicQ/QuickQ to record the current programming to that Scene, the Scene is successfully programmed when the Plate flashes blue after which the user will release the 10Scene button.

10Scene programming mode is only supported on GeNetix Nodes with 10Scene ports such as the GN5, GN10, GN10R and GN10P.

10Scene Priority

The 10Scene priority setting determines how 10Scene Wall Plates/10Scene Contact interacts when DMX input is seen. The options are:

Option	Function
0	Above Input (DMX input is overridden by 10Scene)
1	Below Input (10Scene is overridden by DMX input)

By default the 10Scene priority is set to Above Input. When enabled 10Scene data will override all other sources of received data. This means that if a 10Scene button is pressed, the Scene will be activated and its Scene output, however no other source of data will be outputted until the Scene is deactivated.

When set to Below Input, received data will override the 10Scene data. This means that if a 10Scene button is pressed, the Scene will be activated, but will not be output until there is no other source of data. In this state the active Scene on the connected 10Scene Wall Plate will flash red.

10Scene Priority is only supported on GeNetix Nodes with 10Scene ports such as the GN5, GN10, GN10R and GN10P.

Q-Sys Plugins

ChamSys provides plugins for QSC Q-Sys that utilise the ChamSys Remote Ethernet Protocol.

For the Q-Sys plugin to control a GeNetix node the nodes 10Scene External Control option must be set to ChamSys Remote Ethernet Protocol (CREP).

To set this on a GeNetix Node use the front panel display and navigate to System, 10Scene External Control and pick CREP. This option can also be set via the Web Interface or through MagicQ PC/MagicQ by navigating to Setup, Net Manager and selecting the Options tab where the option can be set.

The ChamSys GeNetix plugin supports the triggering of 10Scene buttons from Q-Sys.

The Q-Sys plugins functions via UDP messages and as such is only supported on the GN5, GN10, GN10R and GN10P.

Contact Triggers

The GN5, GN10, GN10P and GN10R support a Contact Trigger input, this is wired to 2 pins on the 10Scene Port on the devices.

Trigger Mode

The trigger mode determines whether the trigger input is activated on close or open of the circuit, and whether it persists when the circuit is reopened / closed.

The options are:

Table 10. Trigger Modes

Trigger Option	Function
Active while open	The trigger activates when the circuit is opened, and released when the circuit is closed
Active while closed	The trigger activates when the circuit is closed, and released when the circuit is opened
Persistent on open	The trigger activates when the circuit is opened and remains active
Persistent on close	The trigger activates when the circuit is closed and remains active

Trigger Scene

The GN2, GN10 and 10Scene Store support a trigger input on the 10Scene port.

The trigger input can be set to activate one of the ten Scenes when the trigger occurs.

MIDI & Timecode

The GN5, GN10, GN10P and GN10R support MIDI & LTC timecode input and output.

Timecode

The GN5, GN10, GN10P and GN10R support MIDI & LTC timecode in and out and can send and receive timecode over network via Art-Net timecode or ChamNet.

Timecode In

Timecode can be input as LTC through the 3pin female XLR LTC In connector or via MIDI via the 5 pin DIN MIDI connector. The GeNetix node can be configured to forward the timecode: as Art-Net timecode, as ChamNet timecode to a MagicQ or QuickQ console, or through one GeNetix to another.

The GeNetix node can be set to broadcast the timecode or to send it to a specific IP address. MagicQ consoles can be set to receive Art-Net or ChamNet timecode.

Timecode received on the LTC In or MIDI In ports is automatically retransmitted on the LTC Out and/or MIDI Out ports depending on the Timecode Out setting.

Timecode Out

The GeNetix node can be set to receive Art-Net or ChamNet timecode and forward it over the LTC Output and MIDI Output ports.

The Timecode Out setting determines which ports are used:

- None
- LTC
- MIDI
- LTC + MIDI

MIDI

The GN5, GN10, GN10P and GN10R support MIDI notes, MIDI CC, MIDI beat clock and MIDI system exclusive messages.

MIDI In

MIDI notes, beat clock and SysEx messages received via the MIDI In port can be forwarded over ChamNet to MagicQ and QuickQ consoles or from one GeNetix to another. There is no support for sending MIDI messages to 3rd party consoles over network.

MIDI can be sent to a MagicQ or QuickQ console on a specific IP address via the MIDI in transmit host IP option. If set to 0, then the GeNetix node broadcasts the MIDI messages.

MIDI notes, beat clock and SysEx messages received on the MIDI In port are automatically forwarded

out the MIDI out port as received.

MIDI Out

MIDI notes, beat clock and SysEx messages received from a MagicQ or QuickQ console over ChamNet will be output from the MIDI Out port. <!-- vale BritishSpelling.Spelling = NO --> To send MIDI notes and SysEx messages out of MagicQ, set the MIDI out type in Setup, View Settings, MIDI/Timecode to "ChamNet Any Chan" or "ChamNet Req Chan". MagicQ then outputs any MIDI notes and SysEx messages from the Cue Stack N Macro to ChamNet and any direct MIDI out port. <!-- vale BritishSpelling.Spelling = YES --> === Quick Setup of LTC/MIDI Timecode

Proper LTC/MIDI Timecode is reliant on the setting of certain options in the GeNetix Node, following the below steps will ensure the successful connection between a GN5, GN10, GN10P or GN10R and a users lighting controller.

1. Connect LTC/MIDI generation device to the corresponding port on the back of the GeNetix Node.
2. Navigate from the GN5 node main menu to Timecode > IN > Mode and select Art-Net or ChamNet depending on requirements.
3. Ensure a network cable is connected between the GN5, GN10, GN10P or GN10R and PC/Mac running MagicQ and that both products are in the same IP range.
4. In MagicQ navigate to Setup > View Settings > MIDI Timecode and set Timecode Decode to match the Timecode IN mode selected in step 2.
5. Begin LTC/MIDI generation

MagicQ Configuration

When connected via USB, nodes act like a ChamSys USB to DMX interface. All configuration of DMX ins and outs can be controlled from the DMX I/O window.

When connected via Ethernet, nodes can be fully configured from the Net Manager window (Setup > View DMX I/O > Net Manager).

Inside of the Net Manager window are the below configuration options. The window is split into 4 tab views.

Devices View

The devices view displays an overview of all connected ChamNet network nodes. From the devices window each node's full configuration can be modified.

The following options are available in the Devices tab view:

ID

The ID field refers to the numerical order of devices connected to a users MagicQ system, alongside this the ID field allows users to set the ID for received ChamNet timecode.

Name

The name field displays the user configurable name for the GeNetix node. The default name for a GeNetix Node is based on the Node used, the GN5 for example has the default name "GeNetix GN5".

Status

The Status field displays whether the Node is detected by MagicQ, If experiencing issues with a GeNetix Node users are encouraged to check that the status field reads "Detected" when connected over network and "Detected (USB)", If not shown it is advisable to check the cable connection between a user MagicQ system and the GeNetix Node.

Type

The Type field display the type of GeNetix Node connected to the MagicQ system these types include;

- GN2
- GN5
- GN8
- GN10
- GN10R
- GN10P
- GW2I/O

- 10Scene Store

<!-- vale ChamSys.Spelling = NO -->

Config

The Config field refers to the current configuration of the ports on a users GeNetix Node these configuration options include;

<!-- vale ChamSys.Spelling = YES -->

- Custom -Shown when custom options are set on the Ports.
- sACN Out - GeNetix Node ports will output sACN starting from sACN Universe 1
- Art-Net Out - GeNetix Node ports will output Art-Net starting from Art-Net Universe 0
- sACN In - GeNetix Node ports will input sACN starting from sACN Universe 1
- Art-Net In - GeNetix Node ports will input Art-Net starting from Art-Net Universe 0
- Art-Net Out Same Uni - All GeNetix Node ports will output Art-Net from Art-Net Universe 0
- sACN Out Same Uni - All GeNetix Node ports will output sACN from sACN Universe 1
- Match Console Outputs - GeNetix Node ports will match the output configuration of the first 2/5/10 universes in MagicQ

Uni

The Uni field allows users to set the start universe on the GeNetix Node, ports will increase sequentially from the number set here.

IP Address

The IP Address field displays and allows users to change the IP address currently attributed to the GeNetix Node.

Subnet Mask

The Subnet Mask field displays the currently set subnet mask. The subnet mask distinguishes the network address and the host address within an IP address.

MAC Address

The MAC Address field displays the Unique Mac Address for the connected GeNetix Device.

Firmware

The firmware field displays the currently installed firmware version on the GeNetix Node, this field will also show the latest available firmware version for the GeNetix Node.

Up Time

The Up Time field displays the total time elapsed since the GeNetix Node was initially connected.

Sync

The Sync field refers to the GeNetix Nodes ability to synchronise DMX output to reduce tearing. Synchronisation is controlled via ChamNet and is available when used in conjunction with MagicQ consoles.

LED

The LED field allows users to set how the LED on a GeNetix Node act, the options include:

- Normal - LED's light when DMX is being input or output through a port.
- Off - LED's will stay off.
- Locate - All LED's will light up, this is usually used to identify a single node in a larger setup.
- Reserved

Active Scene

The Active Scene field allows users to select a scene stored on the GeNetix Node to output.

Trigger Scene

The Trigger Scene Field allows users to select a scene stored on the GeNetix Node to Output when a contact trigger is pressed.

Trigger Scene is only available on the GN5, GN10, GN10P and GN10R Nodes.

Lost Data

The Lost Data field allows users to set the behaviour of the GeNetix Node for when DMX data is suddenly lost, the options include:

- Hold DMX Output - The GeNetix Node will continue to Output the last figure it had received.
- No DMX Output - The GeNetix Node will cease to output any DMX.
- Zero DMX Output - The GeNetix Node will continuously output DMX at Zero.
- Scene 1-10 - Scenes Stored on the GeNetix Node can be set to output when data is lost.
- Scenes Panel - After data is lost users can output one of the 10 stored scenes on the GeNetix device through a 10Scene Wall Plate or 10Scene Contact.

RDM

The RDM field displays the options regarding RDM or Remote Data Management this functionality allows fixtures to communicate with consoles the options in this field are as follows:

- Enabled - GeNetix Nodes can request RDM discovery of fixtures and change them.
- Read Only - GeNetix Nodes can discover fixtures can not change them.
- Disabled - GeNetix Nodes can not perform RDM functions.

<!-- vale ChamSys.Spelling = NO -->

User Config

The User Config allows users to save and recall configuration data, a GeNetix Node is capable of storing 10 custom User Configs.

<!-- vale ChamSys.Spelling = YES -->

Factory Reset

The Factory Reset field when selected allows users to reset the GeNetix Node to its original out of box settings.

All user data including node settings, IP Addresses, Port & Protocol settings, Scenes and User Configs will be erased.

Lock

The Lock field allows users to enable a lock for the GeNetix Node and it's accompanying interfaces, the options available include:

- Device Only - Physical editing of the GeNetix Node will require a 4 digit pin code.
- All Interfaces - Physical editing of the GeNetix Node menu and control over web server will require a 4 digit pin code.

Timecode In

The Timecode In field allows users to select a configuration for the GeNetix node forward timecode: as Art-Net timecode, as ChamNet timecode to a MagicQ or QuickQ console, or through one GeNetix to another.

Timecode Host IP

The Timecode Host IP field allows users to configure how MIDI is sent to a MagicQ or QuickQ console on a specific IP address via the MIDI in transmit host IP option. If set to 0, then the GeNetix node broadcasts the MIDI messages.

Timecode Out

The Timecode out field allows users to configure how a GeNetix Node forwards Art-Net or ChamNet through the LTC or MIDI output ports on the rear of the GeNetix Node. The options available to users include:

- None - Timecode is not forwarded through any ports on the GeNetix Node.

- LTC - Timecode is forwarded through the LTC Port on the rear of the GeNetix Node.
- MIDI - Timecode is forwarded through the MIDI Port on the rear of the GeNetix Node.
- LTC & MIDI - Timecode can be simultaneously forwarded through both the LTC and MIDI ports on the GeNetix Node.

Timecode functionality is only available on the GN5, GN10, GN10P and GN10R.

MIDI In

The MIDI In field allows users to configure how MIDI notes, beat clock and SysEx messages are received via the MIDI In port. Options include ChamNet to MagicQ and QuickQ consoles or from one GeNetix Node to another.

There is no support for sending MIDI messages to 3rd party consoles over a network connection.

Upgrade Device

The Upgrade Device soft button allows users to update their GeNetix Devices over a network cable connection, the latest firmware upgrades available for GeNetix Devices will be bundled with the latest version of MagicQ.

Identify

The identify function can be toggled from the C encoder soft button inside of the Devices tab view.

When Identify mode is toggled on, all ChamNet devices' LEDs are set to off except for the selected device which is set into Identify mode. Stepping through the devices in MagicQ will Identify each device in turn.

When Identify mode is toggled off, all ChamNet devices return to their configured LED states.

GeNetix nodes with integrated screens indicate Identify mode by displaying an on-screen message in addition turning on all LEDs.

Ports View

The Ports tab within the Net Manager allows for more precise configuration of GeNetix Nodes ports, for users wishing to alter the input, output or protocol of individual ports of a GeNetix port.

Options View

The Options tab displays the options currently set on the GeNetix Node, different to the Devices tab the Options tab has options unavailable on the Device tab.

Set Pin

The Set Pin field allows users to set a 4 digit numerical code that is used to unlock the GeNetix Node when either the physical Node or interfaces are locked.

10Scene Mode

The 10Scene Mode field allows users to configure the behaviour of the 10Scene ports on the rear of the GN5, GN10, GN10P and GN10R options available to users include:

- Disabled - 10Scene functionality disabled
- Scenes Optional - Scenes are triggered from a 10Scene Wall Plate or 10Scene Contact, but if all 10Scene buttons are off then no Scenes are active and the Node allows network data to DMX.
- Only Scenes - At least one Scene will always be active, this is useful for installations without a console.
- User Configs - Select user configurations for the GeNetix Node.
- Gateway - the GeNetix Node acts as gateway between a 10Scene Wall Plate/10Scene Contact and a lighting controller.

10Scene Ext

The 10Scene Ext field allows users to configure how 10Scene is controlled from external sources these options include:

- 10Scene App - Users can activate and deactivate 10Scene buttons through the 10Scene App that comes bundled with a MagicQ/QuickQ installation.
- MIDI Notes 0-9 - Users can toggle the activation of 10Scene buttons by sending MIDI notes ranging from 0; which will activate button 1 to 9 which will activate button 10.
- CREP - CREP refers to ChamSys Remote Ethernet Protocol which allows users to send custom UDP messages to their device to activate and deactivate 10Scene Buttons.
- DMX Input - 10 scenes can b individually triggered via DMX input when controlled from a MagicQ or QuickQ console through a GeNetix Node. The DMX channel operates on a 0–255 range, with scenes assigned in steps of 10. A DMX value within 10–19 activates Scene 1, 20–29 activates Scene 2.
- DMX Output - 10 scenes can b individually triggered via DMX output when controlled from a MagicQ or QuickQ console through a GeNetix Node. The DMX channel operates on a 0–255 range, with scenes assigned in steps of 10. A DMX value within 10–19 activates Scene 1, 20–29 activates Scene 2.

10Scene Programming Mode

10Scene programming mode allows users to program new Scenes onto the GeNetix node from MagicQ PC/MagicQ/QuickQ. To enable programming mode, navigate to Setup, Net Manager and select the Options tab. Select 10Scene Programming Mode and set to enabled.

When in programming mode, holding one button on a 10Scene Wall Plate or 10Scene Contact for 5 seconds will cause MagicQ PC/MagicQ/QuickQ to record the current programming to that scene, the Scene is successfully programmed when the Plate flashes blue after which the user will release the

10Scene button.

10Scene Priority

The 10Scene priority setting determines how 10Scene Wall Plates/10Scene Contact interacts when DMX input is seen. The options are:

- Above Input (DMX input is overridden by 10Scene)
- Below Input (10Scene is overridden by DMX input)

By default the 10Scene priority is set to Above Input. When enabled 10Scene data will override all other sources of received data. This means that if a 10Scene button is pressed, the Scene will be activated and its Scene output, however no other source of data will be outputted until the Scene is deactivated.

When set to Below Input, received data will override the 10Scene data. This means that if a 10Scene button is pressed, the Scene will be activated, but will not be output until there is no other source of data. In this state the active Scene on the connected 10Scene Wall Plate will flash red.

CREP Commands

Toggle 10Scene Button	<button id> X
10Scene Zone 1 Press or Release	<button id> , <state> X
10Scene Zone Press or Release	<zone id> , <button id> , <state> X

Button ID refers to

Scenes View

The Scenes tab allows users to view and configure the scenes currently stored inside the GeNetix Node, each GeNetix Node is capable of storing 10 separate scenes that can be swapped as desired.

Send Scenes

The Send Scenes soft button allows users to quickly export scenes from a MagicQ system to the GeNetix Node users can choose between sending the 10 playbacks on the current page of MagicQ or the first 10 items from execute page 1.

Retrieve Scenes

The Retrieve Scenes soft button allows users to quickly import scenes from the GeNetix Node into MagicQ.

Web Server Configuration

The web configuration site can be accessed by navigating to the nodes IP address in the browser. The GeNetix product must be in the same IP address range as the connected browser device.

Only the 10Scene Store and GeNetix nodes have an on-board web server. GeNetix switch & splitter products are unmanaged.

Once connected, different configuration pages can be loaded by using the navigation menu on the left hand side of the page.

If viewed on a smaller device, this menu is automatically hidden and the "Hide/Show Menu" button can be pressed to view the menu.

Also shown within the page navigation is the current web server version and it's release date.

System Overview

The system overview page enables the current configuration of the connected node to be viewed at a glance.

The current name, serial number, IP address, subnet mask, firmware version, and bootloader version can be viewed in the top overview module.

The node can be reconfigured quickly by pressing the "Quick Setup" button and then selecting one of the preset configurations.

Also shown on this page are each of the individual port settings currently applied on the node.

Each port has it's own overview module, displaying the: port number, direction, status LED, port name, configuration type, and universe number.

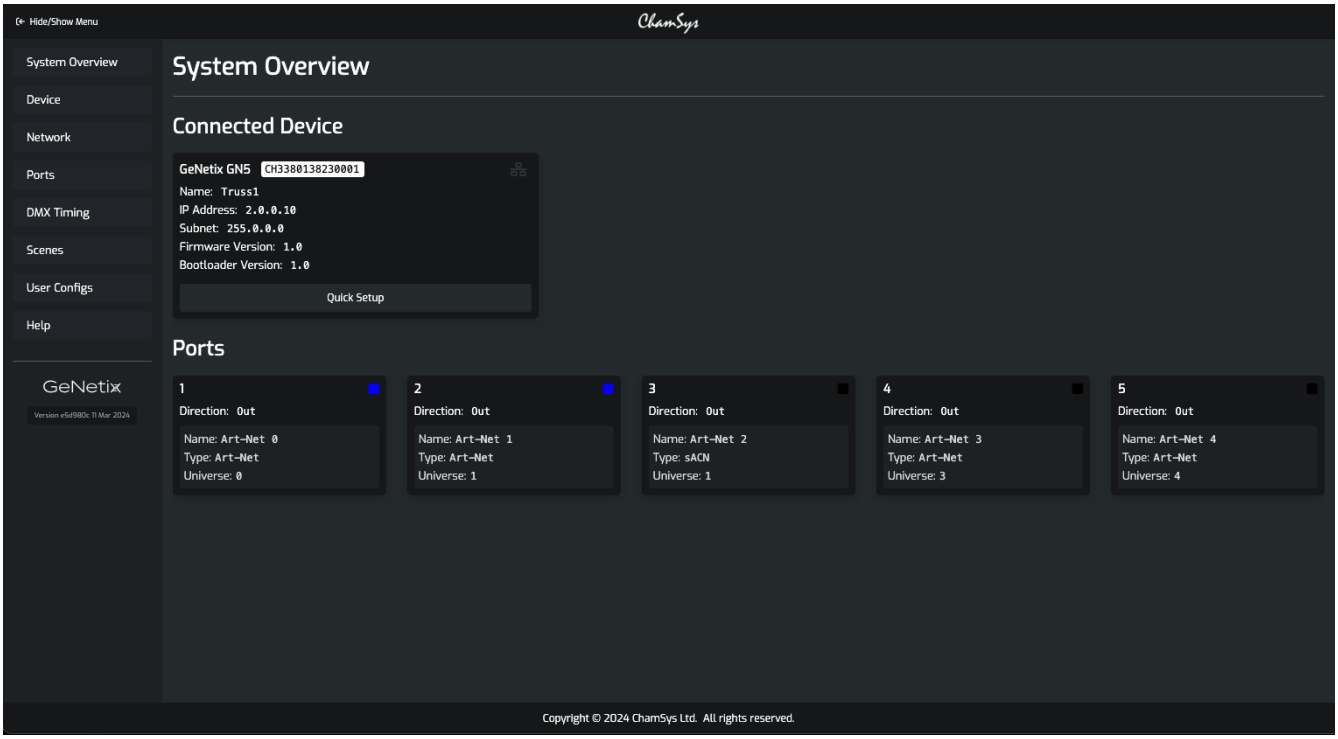


Figure 1. System Overview Page

Device Tree

At the bottom of the System Overview page is the web server device tree. The device tree allows for multiple nodes to be configured from a single connection in the browser.

Nodes can be added to the device tree by pressing the "+ Add GeNetix Device" button. When selected, entering the IP address of the new device and pressing "Add" will join the chosen node to the tree.

The root device (the node the browser is visiting) is always displayed on the very left of the device tree. The root device connection never changes.

To configure the remote node, simply press the "Connect" button and the web page will instantaneously load the configuration from the chosen device.

GeNetix nodes can be removed from the device tree by pressing the "Remove" button.

Device trees can be exported and imported between nodes on the network.

To export a device tree select the "Export Device Tree" button. When pressed, a file will be downloaded containing a list of IP addresses of all nodes in the tree. The "Export Device Tree" function is only available once nodes have been added to the device tree.

To import a device tree select the "Import Device Tree" button. When pressed, choose the previously exported device tree file. The "Import Device Tree" function is only available if no nodes have been added to the device tree.

If configuring a remote device, a message is displayed at the top of the configuration site at all times.

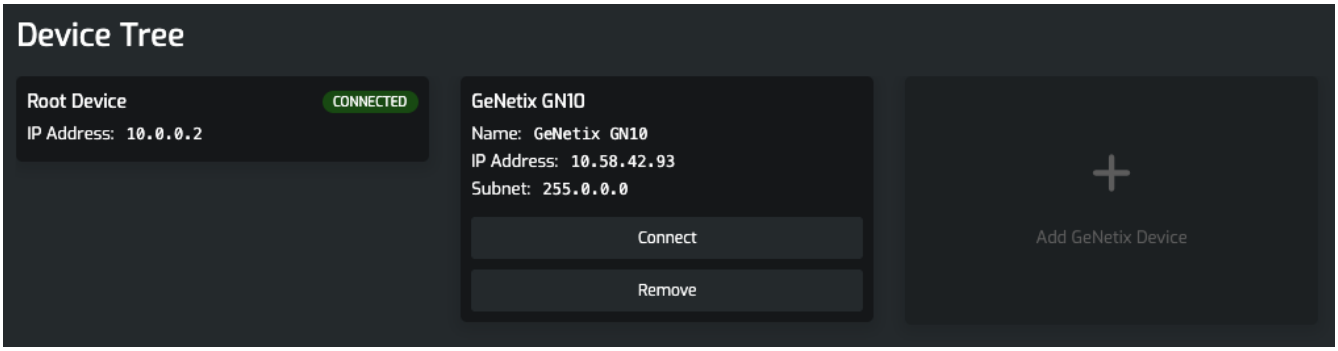


Figure 2. Device Tree Module

Device

The device configuration page enables core system settings to be modified. Inside the configuration module, the node name, RDM setting and Lost Input Data settings can be changed.

Also found in the top module are additional options to toggle identify, the node LEDs and, if connected to the internet, check if a firmware upgrade is available for the node. These can be found by pressing the 3 vertical dot icon in the top right of the module.

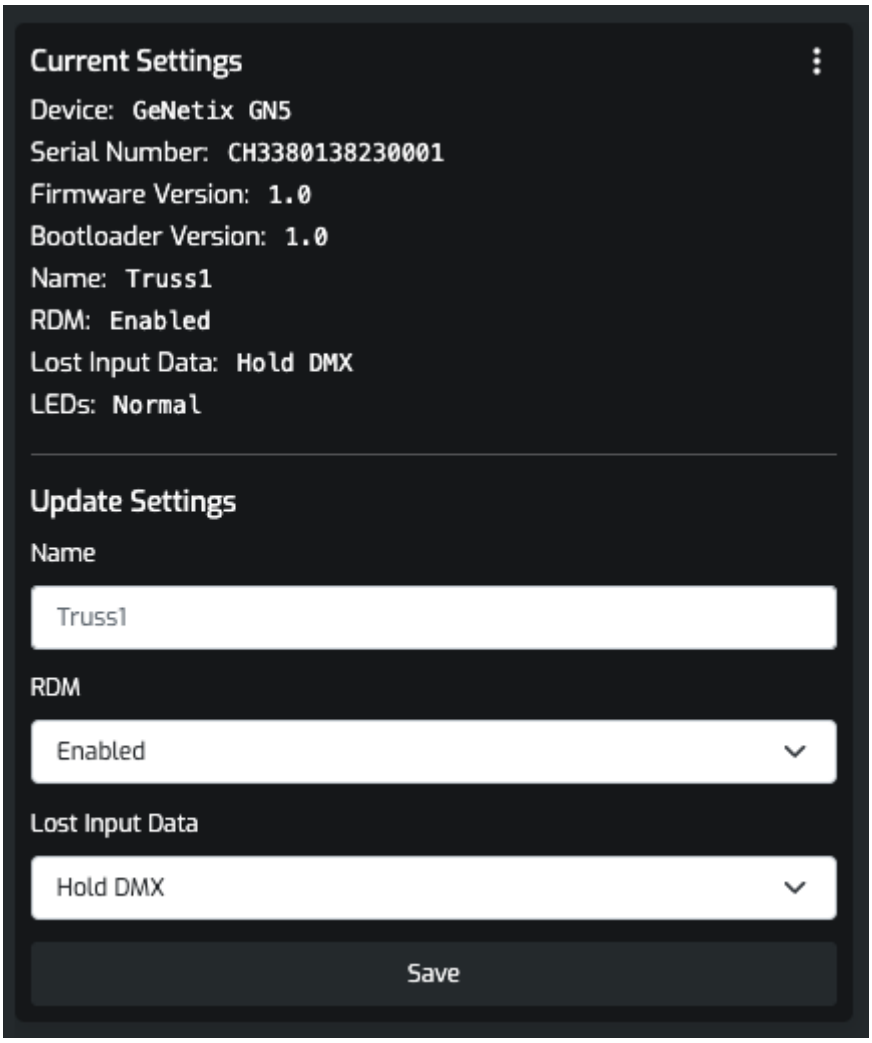


Figure 3. Device Configuration Module

Network

The network configuration page allows for both the IP address & subnet mask of the node to be modified.

Changing the node IP address or subnet mask to a value outside of the reachable network range may disconnect the GeNetix node from the connected device. The web server will additionally confirm this action if detected.

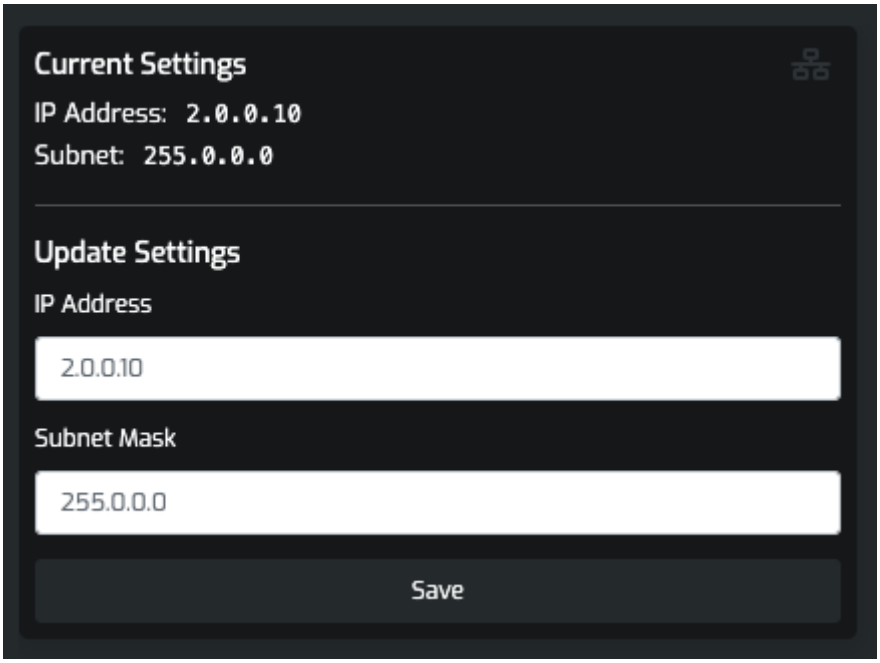


Figure 4. Network Configuration Module

Ports

The port configuration page allows for each of the node ports to be configured. Each port has it's own configuration module and can be selected by clicking the circle select box to fine tune that ports settings.

Multiple ports can be configured at the same time by selecting the "Multi-Select Ports" option or by holding shift and then clicking on each port.

Once selected, the port's: direction (in/out), name, output/input type, and universe number can be modified. Once adjusted to the desired configuration, the selected ports settings can be saved by pressing the "Save" button.

At all times the current port settings are displayed at the top of the page.

To quickly configure all ports on the connected node, the "Quick Configure" wizard button can be pressed in the top right of the page. This opens a module whereby a direction, output/input type and start universe are entered. When the "Configure Ports" button is pressed, the node is reconfigured to the desired settings, sequentially numbering the ports from the start universe entered.

If devices have been added to the Device Tree and the browser is currently connected to the root device, the port information from all other nodes in the device tree can be displayed by selecting the

"Show External Ports" toggle switch.

When using "Quick Configure", if sACN is selected along with a start universe of 0, the system will auto-adjust the start universe to 1. 0 is not a supported start universe for sACN but is supported for Art-Net.

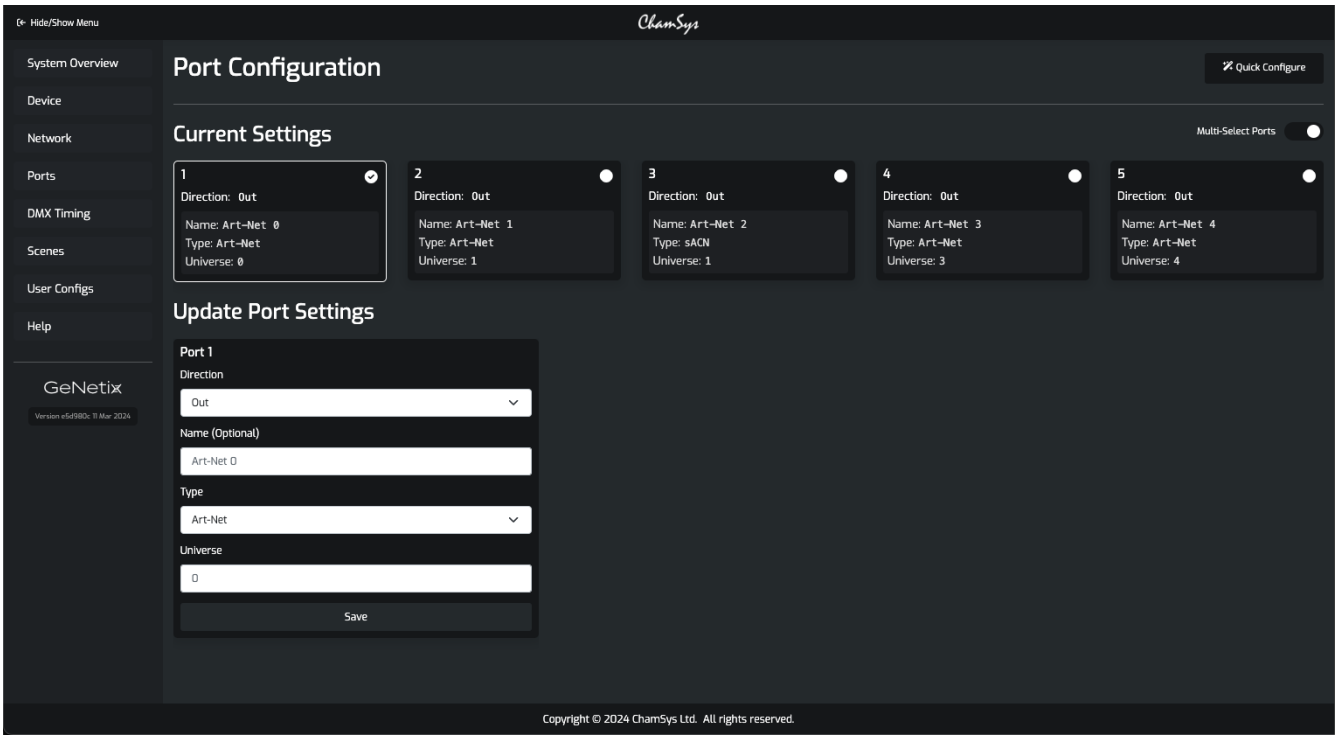


Figure 5. Port Configuration Page

DMX Timing

The DMX timing configuration page enables core timing values of the out-going DMX to be modified. Inside the configuration module, the separate: frame timing, MAB and break timing can be changed.

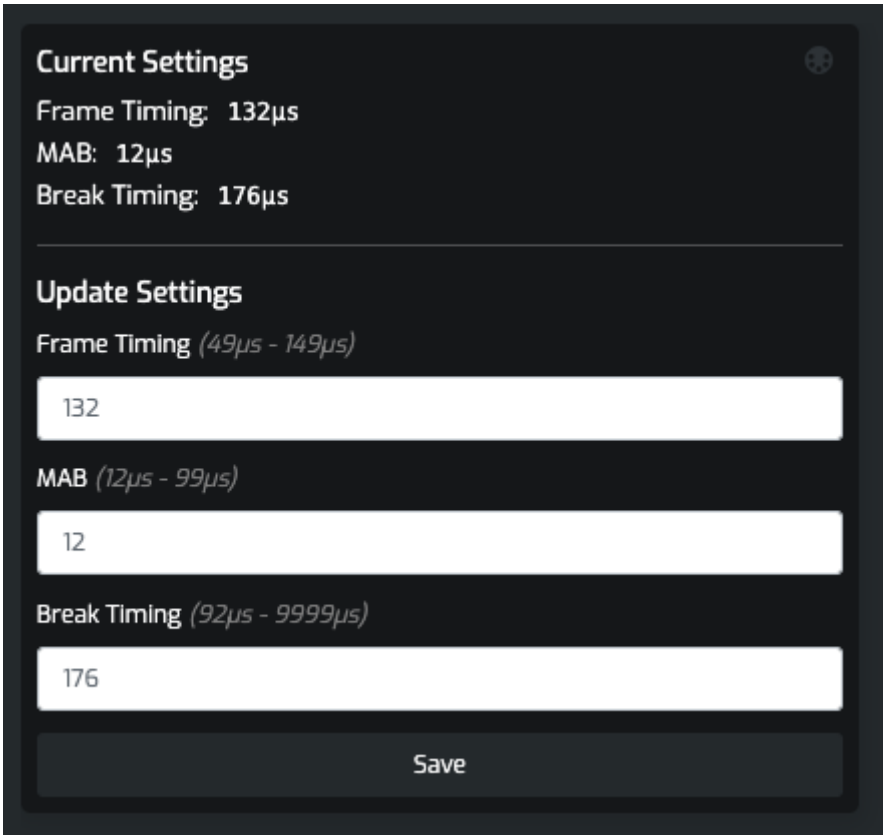


Figure 6. DMX Timing Configuration Module

10Scene

The 10Scene configuration page allows for both the node's 10Scene & TouchScene connection options to be configured.

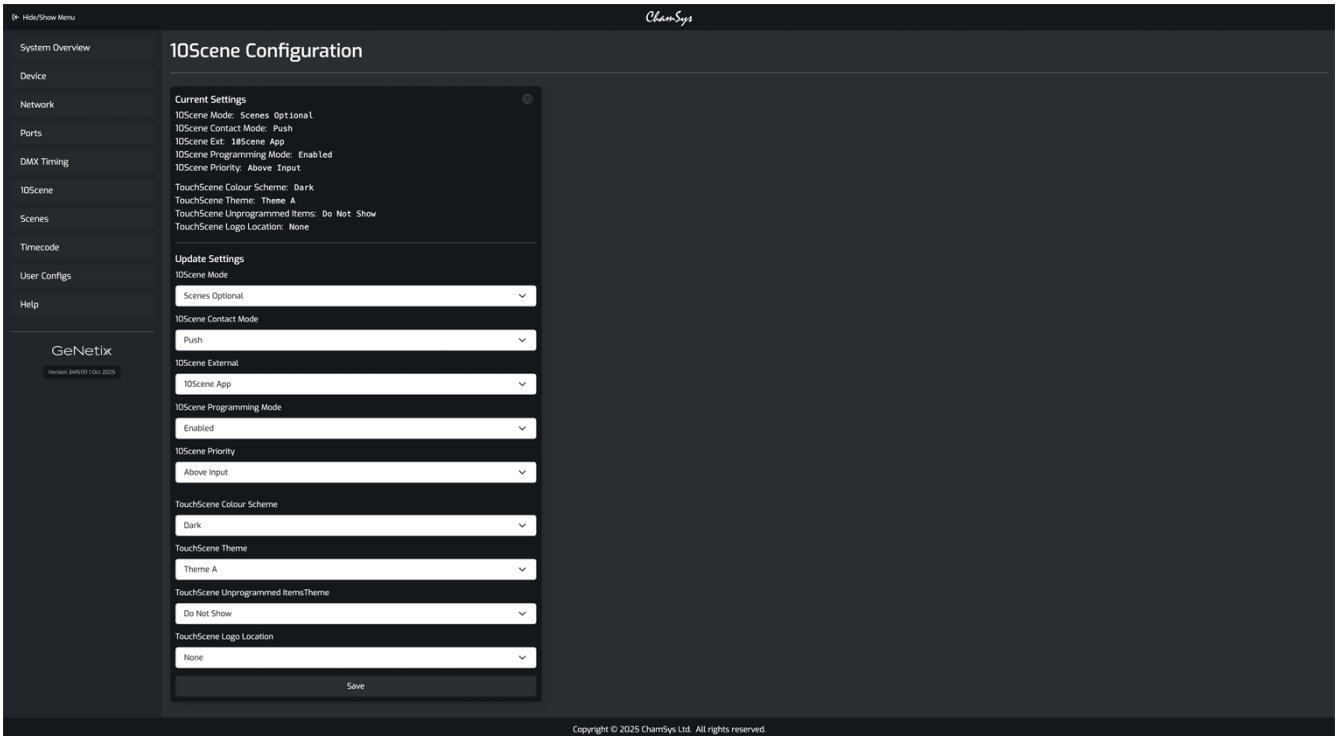


Figure 7. 10Scene Configuration Page

Scenes

The scene page allows for the on-board scenes to be toggled, recorded, erased, and basic settings modified. The page can be viewed in one of two modes: "Configure" (the default page view) or "Playback Only".

The mode can be changed by selecting the button located in the top right corner.

Configure Mode

At all times 10 slots are displayed on the page. If a slot is completely blank it is labelled "+ Add Scene", clicking the empty slot will record the current output of the node to that scene slot.

If a scene is recorded to that slot, the scene's name and fade timing are displayed.

If the node is not configured for DMX output, no scene data will be recorded when attempting to add a scene.

In the top right of each scene slot are controls to play (green triangle) icon, replace/record over (red circle icon), and erase (white trash icon) that particular scene. When a scene is active, "ACTIVE" is displayed in the top left of that slot and the play icon is replaced with a stop (green square) icon.

To edit a recorded scene's name or fade time, new values can be entered into the respective boxes. Hitting the "Save" button will save that scene's new name and/or timing.

Playback Only Mode

When in Playback Only mode, 10 slots are displayed on the page. The controls for each slot are simplified, limiting control to only activating or deactivating a 10Scene slot. No configuration of names or timing can be performed while in Playback Only mode.

A Scene can be activated by pressing the large play (grey triangle) icon at the centre of any inactive 10Scene slot. Similarly, a Scene can be deactivated by pressing the large stop (grey square) icon at the centre of any active Scene.

When activated, the Scene's fade timing is displayed via the green progress bar at the top of the Scene slot.

Contact Trigger Configuration

Supported on the GeNetix GN5, GN10, GN10P, GN10R, & 10Scene Store are the options for launching and configuring a scene when the 10Scene contact trigger pin is activated. On these products an additional module is shown at the bottom of the page allowing for this scene to be defined.

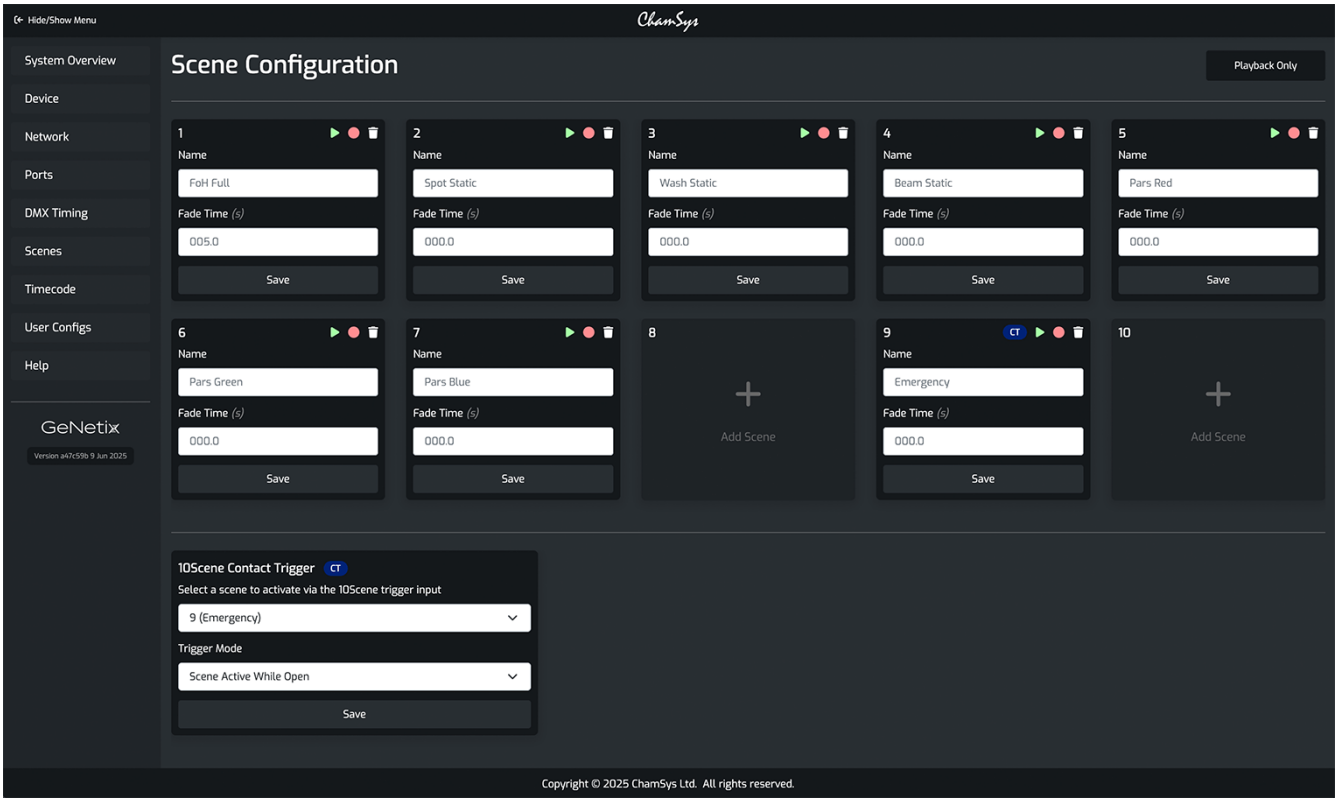


Figure 8. Scenes Configuration Page

Timecode

The timecode configuration page allows for the node timecode options to be modified. Inside the configuration module, the: net transmit type, net transmit host, timecode input port, and timecode output port can be configured.

On the right side of the page is the timecode monitor module. When monitoring is enabled and being received, a green icon is indicated within the monitor module. When monitoring is disabled, a red icon is indicated within the monitor module. If monitoring is attempted by the connected node but is not receiving timecode, monitoring will automatically be switched off.

Pausing or switching off the timecode monitor does not disable timecode on the node.

Enabling the timecode monitor will increase network traffic between the host machine and the GeNetix node.

Net Transmit Type

The net transmit type field defines how timecode will be retransmitted over the network. The supported node can transmit the incoming timecode source as Art-Net timecode or ChamNet timecode. This options is called "Timecode In" inside MagicQ & QuickQ.

Net Transmit Host

The net transmit host field defines where the incoming MIDI or timecode source is sent over the network. When set to 0 (0.0.0.0), the GeNetix node will broadcast the incoming messages. This option is called "Timecode Host IP" inside of MagicQ & QuickQ.

Input Port

The input port field defines how the node will receive the incoming timecode source for retransmit. The supported node can read timecode from either of the MIDI or LTC ports on the rear of the unit. When set to "Auto", the node will automatically detect which port timecode is being input on.

Output Port

The output port field defines how the node will additionally output the incoming timecode source. The supported node can output over the LTC, MIDI, or both ports on the rear of the unit.

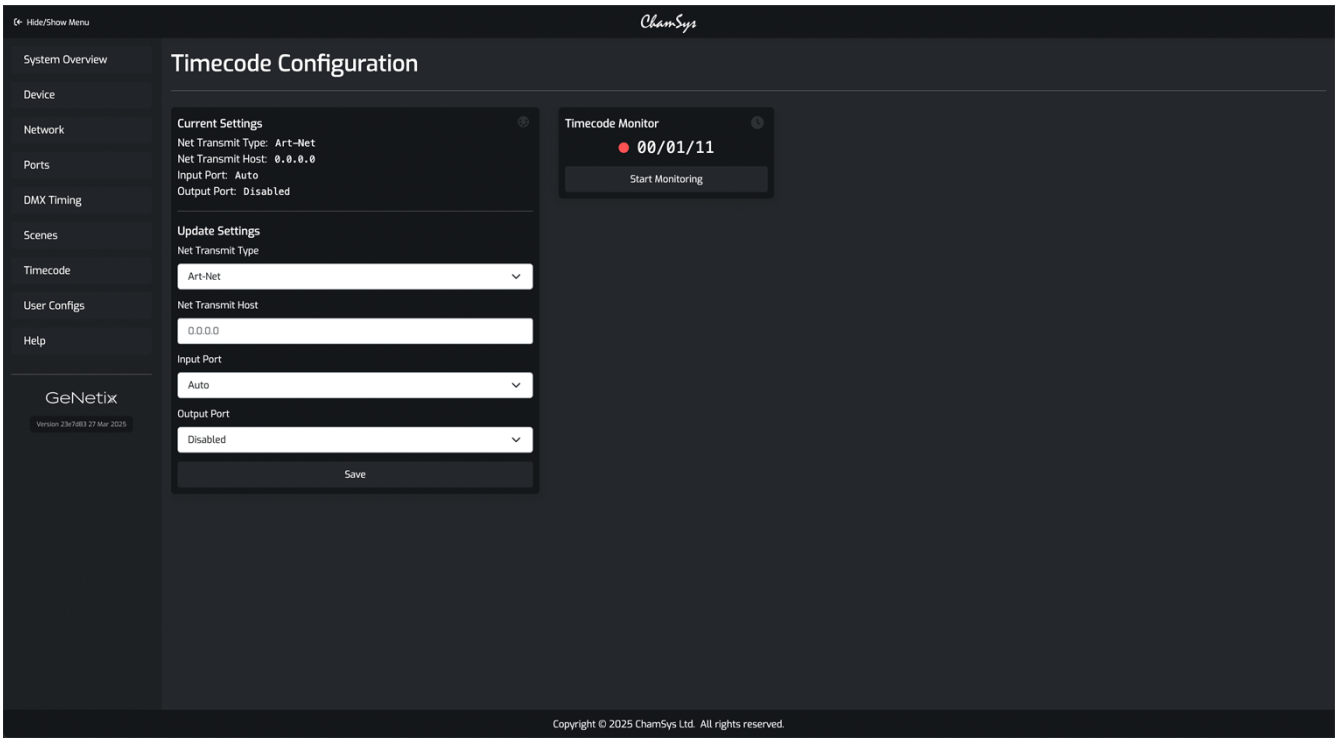


Figure 9. Timecode Configuration Page

User Configs

The User Configs page allows for custom user configurations to be saved, recalled or cleared. The node settings can be saved to 1 of 10 slots allowing for quick reconfiguring of the node to user favourited settings.

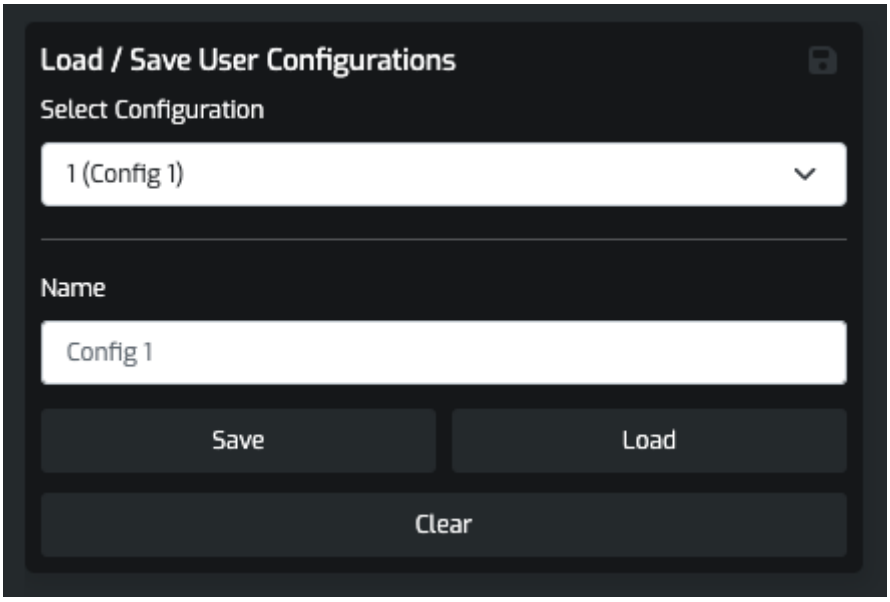


Figure 10. User Configs Module

Help

The help & support page details the most recent GeNetix documentation location along with warranty and support contact information.

At the very bottom of the page are some details of the node model number, serial number, firmware version, bootloader version and web server application version.

These details may be useful if contacting ChamSys Support.

PIN Locking / Unlocking

When the GeNetix node is placed in a PIN locked state, the web configuration page can be unlocked by entering the correct 4-digit pin into the unlock module.

When entered correctly the web page will automatically refresh, enabling configuration from the web page.

If the PIN is entered incorrectly the page is locked for a few seconds, not allowing any further PIN attempts until the timer has expired. On further failed PIN attempts the lockout time is increased.

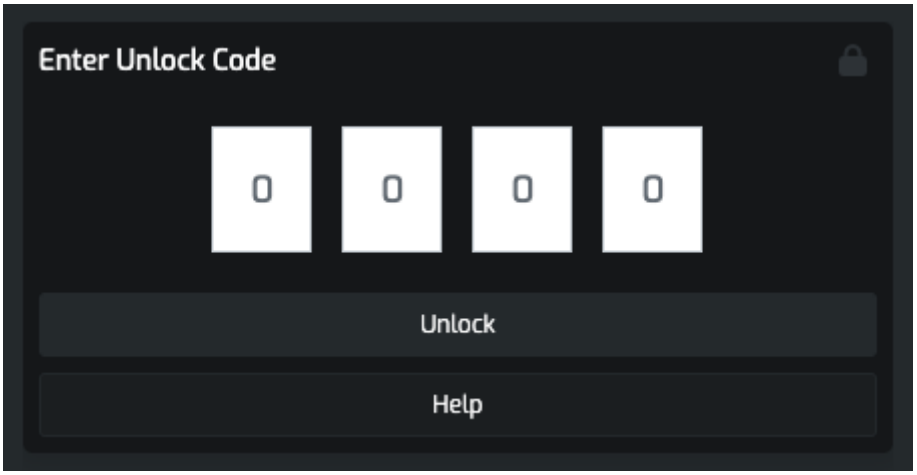


Figure 11. PIN Entry Module

Error Messages

When an error occurs the web configuration page will blank all controls and present one of the following error codes.

NOSERV	The web page can no longer connect or the connection was refused to the GeNetix node. This can occur if the node is powered off but the web page is still loaded. Typically rebooting the node will re-establish an active connection.
INVDATA	The web page was able to establish a connection to the node but the data returned to the browser has failed the validation check. Please contact ChamSys Support if experiencing this error.

Feature Comparison

GeNetix Nodes Comparison

Table 11. GeNetix Nodes Comparison

Firmware Function	GW20	GW2I	GN2	GN4IP	GN5	GN8	GN10	GN10R	GN10P	10Scene Store
Connection to MagicQ via USB	N	N	Y	Y	Y	N	Y	Y	Y	N
Connection to MagicQ via Network	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
DMX512 in and out	Y	Y	Y	Y	Y	N (Out Only)	Y	Y	Y	Y
Configurable DMX Timings	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Art-Net	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
sACN	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ANSI E1.20 RDM	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
DMX Fallback	Y	Y	Y	Y	Y	N	Y	Y	Y	N
DMX Synchronisation	Y	Y	Y	Y	Y	N	Y	Y	Y	N
Node Identify	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Scenes	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Recall Scenes with fade times	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Front panel display	N	N	Y	N	Y	Y	Y	Y	Y	N
ChamNet Support	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Configurable from Art-Net	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Web server	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Factory Reset	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Factory Presets	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firmware update	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saving and recalling User presets	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lock / unlock node	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Firmware Function	GW2O	GW2I	GN2	GN4IP	GN5	GN8	GN10	GN10R	GN10P	10Scene Store
LTC and MIDI Timecode to/from Art-Net/ChamNet	N	N	N	N	Y	N	Y	Y	Y	N
MIDI notes to/from MagicQ/QuickQ via ChamNet	N	N	N	N	Y	N	Y	Y	Y	N
Trigger of Scenes from 10Scene Wall Plates/10Scene Contact	N	N	N	N	Y	N	Y	Y	Y	Y
Trigger Presets from 10Scene App	N	N	N	Y	Y	Y	Y	Y	Y	Y
10Scene Gateway functionality	N	N	N	N	Y	N	Y	Y	Y	N
Unlock of MagicQ PC Demo Mode	N	N	Core Mode	Core Mode	Full Unlock	N	Full Unlock	Full Unlock	Full Unlock	N

GeNetix Switches Comparison

Table 12. GeNetix Switches Comparison

Firmware Function	GS5IP	GS8
Gigabit Network Speed	Y	Y
Unmanaged Switch	Y	Y
IP65 Rated	Y	N
Rack Mountable	N	Y - 1U height
Truss Mountable	Y	Y
Can be powered via PoE	Y	N
PoE Output from Switch	N	Y - Supports PoE++ (ports 1-4), PoE+ (ports 5-8). Total 200w output
Unlock of MagicQ PC Demo Mode	N	N

3rd Party Console Support

GeNetix products are compatible with 3rd party / other manufacturer consoles. GeNetix Nodes support industry standard protocols such as Art-Net and sACN and are fully compatible with 3rd party consoles and software supporting these protocols when used as an Ethernet-DMX node.

There are some features of GeNetix Nodes which use ChamSys ChamNet protocol, which are not compatible with 3rd party consoles such as sending of MIDI notes over Network.

3rd Party Consoles Support with GeNetix Nodes

Table 13. 3rd Party Consoles GeNetix Nodes Compatibility

Firmware Function	GW20	GW2I	GN2	GN4IP	GN5	GN8	GN10	GN10P	GN10R
Connection to 3rd Party Consoles via USB	N	N	N	N	N	N	N	N	N
Connection to 3rd Party Consoles via Network	Y	Y	Y	Y	Y	Y	Y	Y	Y
DMX512 in and out	Y	Y	Y	Y	Y	N (Out Only)	Y	Y	Y
Configurable DMX Timings	Y - via Web server only	Y - via Web server only	Y - via Web server/ Node display	Y - via Web server only	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display
Art-Net	Y	Y	Y	Y	Y	Y	Y	Y	Y
sACN	Y	Y	Y	Y	Y	Y	Y	Y	Y
ANSI E1.20 RDM	Y	Y	Y	Y	Y	Y	Y	Y	Y
DMX Fallback	Y	Y	Y	Y	Y	N	Y	Y	Y
DMX Synchronisation	N	N	N	N	N	N	N	N	N
Node Identify	N	N	N	N	N	N	N	N	N
Scene Storage	Y - via Web server only	Y - via Web server only	Y - via Web server only	Y - via Web server only	Y - via Web server only	Y - via Web server only	Y - via Web server only	Y - via Web server only	Y - via Web server only
Recall Scenes with fade times	Y - via Web server only	Y - via Web server only	Y - via Web server/ Node display	Y - via Web server only	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display

Firmware Function	GW2O	GW2I	GN2	GN4IP	GN5	GN8	GN10	GN10P	GN10R
Firmware update	N - via ChamSys consoles only	N - via ChamSys consoles only	N - via ChamSys consoles only	N - via ChamSys consoles only	N - via ChamSys consoles only	N - via ChamSys consoles only	N - via ChamSys consoles only	N - via ChamSys consoles only	N - via ChamSys consoles only
Saving and recalling User presets	Y - via Web server only	Y - via Web server only	Y - via Web server/ Node display	Y - via Web server only	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display
Lock / unlock node	Y - via Web server only	Y - via Web server only	Y - via Web server/ Node display	Y - via Web server only	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display	Y - via Web server/ Node display
LTC and MIDI Timecode to/from 3rd Party Consoles	N	N	N	N	Y - Art-Net Timecode only	N	Y - Art-Net Timecode only	Y - Art-Net Timecode only	Y - Art-Net Timecode only
MIDI notes to/from 3rd Party Consoles	N	N	N	N	N	N	N	N	N
10Scene Gateway functionality with 3rd Party Consoles	N	N	N	N	N	N	N	N	N

GeNetix Firmware Release Notes

Version 3.20

- Fix issue with using with ETC consoles with sACN "Per Address priority" packets. (MT-0046605)
- Fix issue with DMX data glitches on the last 4x ports of a GN10 when using a combination of Inputs and Outputs or Fallback mode on those ports. (MT-0046796)
- Fix for not adding 1 to the Start Universe when the protocol was changed from Art-Net to sACN. (MT-0047610)
- Added support for TouchScene configuration via the web server.
- Added support for showing if the Fallback mode has become active in MagicQ (v1.9.8.2+) in Net Manager⊠View ChamNet⊠Ports.
- Added support for identifying nodes via the Art-Net identify command.
- Added support for more DMX test patterns from the device menu for a port.

Version 3.10

- Added support for DMX input when using the 10Scene Priority option. (MT-0046657)
- Fix an issue with the 10Scene Trigger Panel Disable/Enable mode not working correctly with the 10Scene Contact options.

Version 3.00

- Improvements to web server features.
- Added support for Scene triggering via DMX input or DMX output on Port 1, Channel 1.
- Modified the 10Scene Gateway mode message filtering to match 10Scene Gateway device.
- Added an option to set the priority of a 10Scene Wall Controller versus incoming data from e.g. console controller. (MT-0043200)
- Added an option for disabling the programming mode of a 10Scene Wall Controller.
- Fix issue with outputting scenes when a port is in fallback mode. (MT-0045083)
- Fixed an issue with the DMX In/Out factory test for the GN8.
- Fixed an issue where intermittently when changing the Port settings in the web server the connection would get lost.
- When Port protocol is sent to None do not flash the Lost Data Input warning. (MT-0043693)
- Fix for sACN output when changing protocol or universe.
- Added 10Scene Contact support
- Added TouchScene support

Version 2.40

- Fix for issue when using sequential IP addresses with multiple nodes that included GN5, GN10, GN10P and GN10R devices.
- Fix for updating the IP address when loading a User Config.
- Add "Playback Only" mode to the web server Scenes view.
- Fix for applying User Configs via the web server after configuring from a Quick Setup option.
- Fix for correctly toggling Scene 10 via the web server. Previously the Scene would activate but report an error.

Version 2.31

- Add support for GeNetix GN8.

Version 2.20

- Add support for GeNetix GN10P and GN10R.
- Web server improvements, adding 10Scene configuration, port merging, and timecode control.

Version 2.11

- Fix for RDM discovery when ports are set to sACN.
- Fix for reporting of Universes above 4095 in Art-Net Poll Reply.
- Fix for network output memory leak introduced in V2.10 that would cause the network output to stop after the device had been running for a few hours.

Version 2.10

- Fix issue where CREP scene 10 would not work for any states.
- Add support for CREP state command 4 (toggle). (MT-0041878)
- Fixes for missing MIDI messages.
- Fix for LTC timecode to work with a larger gain range. (MT-0041701)
- Fixed an issue with Identify mode when used with multiple devices.
- Fix for possible issue with devices restarting after a long period of time.
- Fix for some settings not resetting to factory default when done via MagicQ.
- Fix for storing scene name and fade time via MagicQ Send Scenes.
- Fix for removing an active scene via MagicQ.
- Fix for last scene activation on device start up.
- Improve message buffering for 10Scene messages.
- Improvements to RDM discovery time.

- Fix for sACN priority handling when the same value. (MT-0042210)
- Fixes for sACN multicasting.
- Improvements to web server features.

Version 2.00

- Implemented detection of multiple data sources on a single port, the affected port on the GeNetix product will turn red (Home Screen and Port LED).
- Add support for Merging (HTP, LTP, Highest IP and Lowest IP options) this can be configured in the net manager ports menu.
- Added in menu option for Timecode input port selection.
- Add support for Identify to work when the device is PIN locked.
- Add a "Reset Configuration" option for resetting individual configurations.
- Add support for a Lost Data mode of "Scenes Panel" feature where control can pass from the console to the GeNetix device.
- Show Art-Net timecode on the GeNetix device when the Timecode input option is selected.
- Add support for some characters that were not supported for naming, previously only `.` - _ < and > were supported in port names.
- Added additional scene and panel enable/disable trigger mode options.
- Added 10Scene external control support, 10Scene external control support includes the 10Scene App, MIDI Notes 0-9 and CREP (ChamSys Remote Ethernet Protocol).
- Fix 10Scene Wall Plates not seen by MagicQ when connected via GN5 / GN10. (MT-0040464)
- Fix 10Scene Wall Plates unable to set ID and ID ignored by GN5/10. (MT-0040465)
- Fix 10Scene Wall Plate ID being ignored when connected to GN5/10. (MT-0040466)
- Resolve issue with some GeNetix devices getting stuck in factory test mode.

Version 1.04

- Add support for GeNetix GN5 & GN10.

Version 1.01

- Initial release version.

Firmware Upgrade

GeNetix network nodes can be upgraded from MagicQ and QuickQ software.

Firmware upgrade is only supported over ChamNet, not over USB. Firmware upgrade can be carried out from the free MagicQ PC/Mac software, and from MagicQ and QuickQ consoles.

MagicQ and QuickQ software packages contain the latest firmware for GeNetix devices. Update the installed MagicQ or QuickQ software to the latest release to access the latest GeNetix firmware versions.

In MagicQ PC on the top toolbar click on Setup and select Net Manager to open the Net Manager window. Detected GeNetix devices will be shown in the window. Click on the device to be upgraded and press the UPGRADE DEVICE soft button. Select the required firmware version. MagicQ only shows firmware versions valid for the chosen device.

In order to upgrade a GeNetix device it must be in the same IP address range as the MagicQ system. If MagicQ is using a 2.x.x.x IP address then ensure the GeNetix device is also using a 2.x.x.x IP address.

If the Device Manager title bar indicates "INVALID NET" ensure the IP address selected for MagicQ in Setup, View Settings, Network, IP Address, is set to the IP address of a valid network adapter on the PC/Mac/Linux system.

The 10Scene Store, GW20, GW2I, and GN2 firmware is named firmware_5000_XXXX, where "XXXX" indicates the version number. For the GN5, GN8, GN10, GN10P and GN10R the firmware is named firmware_5100_XXXX where "XXXX" indicates the version number. Firmware is stored in Documents\MagicQ\firmware.

GeNetix nodes start up in a boot firmware, indicated by a red message displayed on the front panel screen, before starting the main application firmware. During firmware upgrade the nodes return to the red boot state, indicated by a "downloading" on screen message. If for any reason the main application fails to upgrade then the GeNetix node will again return to the boot state and can be upgraded again.

Care of Your GeNetix Product

To keep your GeNetix Product in best condition please observe the following recommendations:

- Keep liquids away from the GeNetix Product. Drinks spilled over a GeNetix Product may cause irreparable damage.
- Keep the GeNetix Product out of direct sunlight - place the GeNetix Product in the shade.
- Do not block the ventilation grills on the rear panel, side, and underneath the GeNetix Product.
- Do not use the GeNetix Product outside its operating temperature range. The maximum operating temperature for all GeNetix products is 40°C unless stated otherwise on the product specification label.
- Handle the GeNetix Product with care when moving or transporting it. The GeNetix Product contains components that may be damaged by shock. Always use a padded flight case wherever possible.
- Do not use solvents or cleaners to clean the GeNetix Product. Do not rub firmly on the metal or plastic surfaces - this may cause the paint or lettering to be removed. Gently use a damp cloth to clean the panels.

Glossary

Below are a few commonly used terms to help with getting started with GeNetix Nodes.

10Scene

The 10Scene range comprises wall panels and interfaces allowing a GN5, GN10, GN10P or GN10R to be controlled from a simple wall panel or the 10Scene App.

Art-Net™

Art-Net is a network protocol that allows DMX to be carried over an Ethernet network. Art-Net™ is designed by and copyright Artistic Licence Holdings Ltd.

DMX or DMX512

DMX is the standard way for a console to communicate with lighting fixtures. DMX cables should be used to carry the data, other types of cable may cause flickering and other problems. QuickQ can output DMX directly and can also transmit DMX data over an Ethernet network using a protocol such as Art-Net, or sACN.

DMX Address

Each fixture has its own starting DMX address, which is different for every fixture on a single DMX universe.

DMX Channels

DMX512 has 512 individual DMX channels on each universe of DMX.

DMX Universe

A collection of 512 DMX Channels is referred to as a Universe of DMX.

IP address

All Ethernet devices have an IP address to identify them. IP addresses take the form `A.B.C.D`, where ABCD are numbers between 0 and 255 with dots in between them. Typical Lighting Networks will use either a 10. or 2. IP address scheme for the first Part of the IP address (this would be letter A in the previous example). GeNetix nodes ship with a 10. IP address by default. When setting up a network all the devices on the network should have a different IP address, but they should all be within the same range (for example 2. or 10.) and on the same subnet GeNetix devices only use IPv4 addresses.

MIDI

MIDI is an acronym that stands for Musical Instrument Digital Interface. It is a way to connect devices that make and control sound, such as synthesisers and sequencers. It can be used to trigger lighting from an audio device such as a digital keyboard.

Remote Data Management (RDM)

RDM is an extra protocol added to DMX. It does not require any extra cabling than normal DMX and allows fixtures to communicate with the console.

sACN

sACN is a protocol used to transmit DMX data over Ethernet. sACN can be trickier to get working

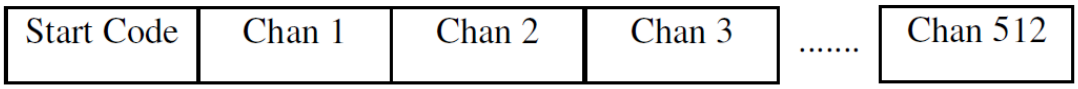
than Art-Net but can work better than Art-Net when there is large amounts of DMX data (>40 universes) on a network.

DMX, Ethernet and Art-Net

DMX

DMX data is transmitted in a serial form. This means that there is one cable carrying the data, which is sent bit by bit (a bit is a 1 or 0), one after another. The entire transmission of DMX data for a DMX universe is known as a DMX Packet.

The DMX Packet consists of a start code and 512 channel levels.



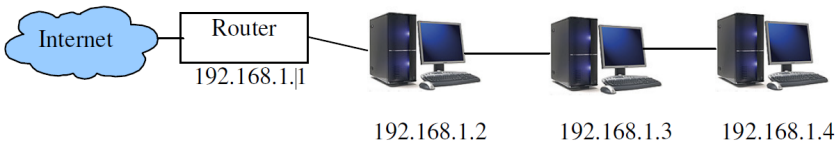
The start code for DMX is generally 0. The channel section contains the level for that channel.

Ethernet

Ethernet is the technology used to connect computers on a network. Most computers use a protocol called TCP/IP (Transmission Control Protocol Over Internet Protocol) to communicate over an Ethernet network.

Ethernet transmits the IP address (address of a computer on the network) of the sending computer, followed by the IP address of the receiving computer, followed by the data. The IP addresses allow the data to be routed to the correct computer.

On a typical office network, computers will have an IP address of 192.168.1.x, where x is between 0 and 254 (255 is a reserved address). These IP addresses are generally assigned dynamically by the Router on the network using a protocol called DHCP.



The computers use a subnet mask of 255.255.255.0. This specifies which range of IP addresses are on the local network. In the example above 255.255.255.0 specifies a range of from 192.168.1.0 to 192.168.1.255 which is a total of 256 addresses.

Art-Net

What Is Art-Net?

Art-Net is a royalty-free communication protocol, developed by Artistic License used to transmit DMX information over a network.

An Art-Net network typically uses the 2.x.x.x or 10.x.x.x IP Address scheme using a subnet of 255.0.0.0. It is important to ensure that Art-Net data using the 2.x.x.x IP address scheme is not routed onto the

internet.

Ideally you should set up a separate network between your QuickQ console and the Art-Net devices.

Unlike normal office networks, the IP address must be in the range 2.x.x.x or 10.x.x.x, where x is between 0 and 255.

The subnet mask must be set to 255.0.0.0. This means configuring the address of each piece of equipment on the network manually. QuickQ products are typically set to 10.x.x.x. from the factory.

FCC Part 15 Notice

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference; and

(2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference with radio and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

You may also consult your local ChamSys Ltd dealer or an experienced radio/TV technician for assistance.

NOTICE: The FCC regulations provide that any changes or modifications not expressly approved by ChamSys Ltd could void the user's authority to operate the equipment.

[image] | *image55.jpeg*

Disposal and Recycling of Unwanted Consoles

Please be aware that ChamSys products must be disposed of in accordance with the WEEE disposal and recycling regulations. ChamSys products must not be disposed of through normal household waste.

For non-UK customers please contact your local distributor.

For UK customers, please contact us on +44 (0)23 8023 8666, or email ChamsSys Support.

WEEE Producer Registration Number; `WEE/FF5605UX`.

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GeNetix Warranty Certificate

Thank you for purchasing a GeNetix Product.

All GeNetix Devices come with a two-year warranty, for warranty terms and conditions, please visit our website at https://www.chamsys.co.uk

For Warranty claims please contact the dealer you purchased the console from. If you are based outside of the UK please contact your local dealer. Your local dealer can be located here: https://secure.chamsys.co.uk/contact