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## **nexgentec ArtNet Network driver (NGTSLC4ZARTNETNW)**

### **1. Disclaimer**

- Genesis Technologies does provide this driver as it is. There is no commitment to support, nor does Genesis Technologies assure a decent reaction time in case of a problem. Genesis Technologies can refuse all support, discontinue support, end the driver lifetime at any time. Genesis Technologies will not refund in any case licenses
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### **2. What is the nexgentec ArtNet Network driver? What is it used for?**

The network driver connects to the various nexgentec DMX and ArtNet processors.

Device drivers for Blinds and lights as well as relays are connecting to it and communicate thru it with the DMX or ArtNet devices on the bus.

The nexgentec ArtNet drivers are the replacement for all DMX Line drivers published by nexgentec or Genesis technologies.

All ever sold DMX or ArtNet Processors should run with this driver, no firmware update should be necessary. Contact support if your processor does not come online

### **3. Configuring the nexgentec DMX-Processors to work with this driver**

Default IP of the DMX Processors is set to 2.0.0.10. Set your computer to the address 2.0.0.1 / 255.0.0.0 and open your browser with the address 2.0.0.10

The web interface appear:

The screenshot shows a web interface for the NGT-HLCO4-DMX-V12 device. At the top, there is a blue header with the nexgentec logo on the left and the device name 'NGT-HLCO4-DMX-V12' and 'Version 1.32 - MAC ID: 00-60-35-67-01-52' on the right. Below the header, the interface is split into two main sections. The left section contains descriptive text about the device's capabilities, such as 'The device provides one ArtNet Node for the input or output port.' and 'The DMX output is working with 512 channels (1 Universe) in the Standard mode.' The right section, titled 'MAIN SETUP', contains configuration fields for 'ArtNet Node', including 'IP Address' (set to 2.0.0.10), 'Netmask' (set to 255.0.0.0), 'Short Name' (set to NGT-HLCO4-DMX-V12), and 'Long Name' (set to nexgentec ArtNet-DMX Processor V1.2).

Set the IP address to a fixed one inside of your network, and set the Interface mode to output.

# MAIN SETUP

## ArtNet Node

IP Address: 172.16.172.27

Netmask: 255.25.255.0

Short Name: NGT-HLC04-DMX-V12

Long Name: nexgentec ArtNet-DMX Processor V1.2

## Interface Mode

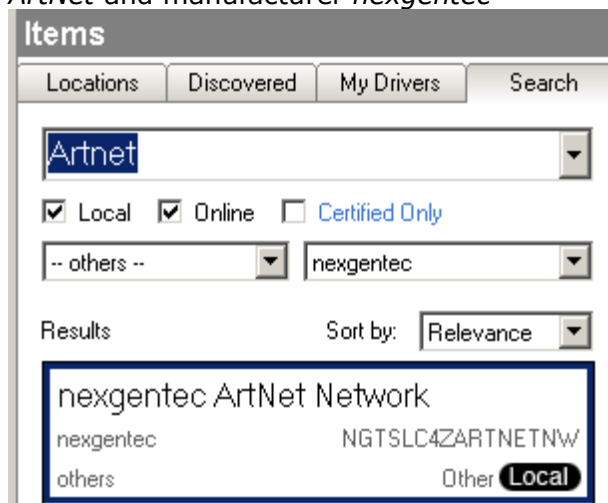
- Mode:  Set the Interface to Input Mode  
 Set the Interface to Output Mode

Click *SAVE* and exit the configuration, all other settings must be as default is

### 4. Adding and configuring the driver in Composer

Assuming that you have already downloaded the drivers and placed them in %USERPROFILE%\Control4\Drivers.

4.1. Start Composer, go to *System Design* and select the tab *Search* in the right top window. Search for *ArtNet* and manufacturer *nexgentec*



4.2. Drag and drop the *nexgentec ArtNet Network* driver into the wished room. Click on it and find the Properties page. (Hovering with the mouse over the Properties will show up hints)

Properties   Documentation   Actions   Lua	
-> Info	01.05.2015 11:22 - Driver/Version - 4.01.17 running
Driver name	NGTSLC4ZARTNETNW
-> Licensing	01.05.2015 11:22 - Licensing/Check - Unlicensed: Grace period ends Fri May 1 17:21:52 2015
Mac of the Controller	000FFF57A8CA
Activation key	
-> Config	
IP address	172.16.40.16
Frames per second	20
Accuracy at high system load	Skip steps, keep scene/ramp length
-> Log	
Lua window	None
Online logserver	None
Log period (h)	1
Log auth	

### 4.3. Properties

- -> Info: Does show the driver health info
- Driver name: The product identification of the driver
- -> Licensing: Shows info about licensing status
- Mac of the Controller: Inserted automatically
- Activation key: Insert here the license key which is displayed in the driver dashboard after you bought a license and assigned it to the system. Once assigned in the Dashboard the license may jump in automatically once the driver connects to the online services
- IP address: Insert the IP of the DMX or ArtNet processor
- Frames per second: ArtNet supports different frame rates, the driver can be set to send out minimal 10 frames, maximal 40 frames per second to the Processor  
Be aware that higher frame rates mean higher load for the Control4 processor
- Accuracy at high system load: As Director can be busy with other tasks when running a light scene the driver can skip steps to keep the scene/ramp durations or it can extend the duration to not jump in bigger steps as defined by the scene/ramp
- -> Log / Lua window: Selects the log level printed out in Lua window from Composer. Use the level *Debug* to see what the driver do.
- -> Log / Online log server: If a persistent problem appears that cannot be solved from the installer support may ask you to activate a decent level. Do not use until support ask you to do so
- Log period (h): The time frame the log should output
- Log auth: Developer can give you a code to see more logs. Usually not really interesting, only for in deep debug

### 4.4. Connections

If the *nexgentec ArtNet Network* was installed before all device drivers, the connections should be done automatically, for the records a picture

nexgentec ArtNet Network				
Name	Type	Connection	Input/Du...	Connected To
<b>Control Outputs</b>				
ArtNet Network	Control	ARTNET_NETW...	Output	nexgentec ArtNet Switch->ArtNet Network, ...

## 5. Device variables

In Programming a variable "online" can be used to send notifications if the gateway is offline. It is true when connected, false if disconnected

## 6. Device driver installation

See the manual from the device drivers

## 7. Known issues

As mentioned in the Properties section: Higher framerates will cause higher load on the Control4 processor. Director is still a single thread; all drivers have to share the same resources

C4 OS is not a real time operation system. Playing advanced light scenes the driver relies on a recurring timer from Director. Having Director busy from other drivers or other tasks may break the timer for this drivers and a noticeable staggering effect may appear. Activate in this case the debug mode *Debug* for the LUA Window. You will see the following messages:

*08.04.2015 14:46:10.519 - Proxy/ArtNet Player - Warning. Player skipped 2 executions, you will see staggering lights.*

We have measured the following system load on a HC-800 with one *nexgentec ArtNet Network* driver and 520 *nexgentec ArtNet Dimmer* drivers during ramp of 512 channels: ~8% CPU. (Without refreshing of Navigators)

High CPU load will be generated once the dimmer and switch drivers are refreshing the Navigators with light levels. Again we tested with the same system and refreshing 8 Navigators after a light ramp: 60% CPU. If more Navigators are refreshed or the light levels are also reported during ramp the CPU load may easily exceed 90%.

What to do when Controller overloads or lights show staggering effects:

- In big projects you should go down with the framerate until you see the steps during a light ramp. Then go a little higher with the framerate that the steps are not noticeable.
- Possibly have a look to the Directors log to identify what is having Director busy. Also remove every task you can from the main Controller. Do not run Director and Navigator on the same Controller
- Dimmer and switch driver do have the possibility to adjust when a light level should be refreshed, start/during/end of the ramp or scene. For RGB fading effects we recommend to hide the light drivers itself and only make a scene availabl. Set all light drivers but one to never refresh the light values. One driver should report values to get the scene feedback. Also using load groups only one driver need to provide feedback.

## 8. Updates / Support

Updates are available on: <<<https://technet.genesis-technologies.ch>>>

Bugs should be reported to: [info@genesis-technologies.ch](mailto:info@genesis-technologies.ch)