



dmXLAN node6x

User Manual

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The dmXLAN node6x is a versatile and powerful addition to any lighting network as it combines a 6-port DMX to Ethernet node with a 5-port Ethernet switch in a single 1U high unit. This fully programmable node can be controlled via the LCD menu display and encoder switch on the front panel or through the free ELC dmXLAN software available for download at www.elclighting.com.

The dmXLAN node6x has no fans and is therefore silent in operation. There is also a version of the node6x available with fully-isolated DMX ports (DLN6X-FI). Both versions can be ordered with optional Power over Ethernet for the three Ethernet sockets on the front panel.

The ELC dmXLAN node6x is available in the following variations:

DLN6X

DLN6X_FI	fully isolated
DLN6XPOE	Power over Ethernet
DLN6XPOE_FI	Power over Ethernet – fully isolated

Features

- 6 bi-directional DMX ports on the front panel, XLR, RDM compatible
- Supports sACN, Art-Net & Shownet
- Integrated switch with 3 Ethernet ports (Neutrik Ethercon) 10/100 MBit on the front and 2 Ethernet ports (regular RJ45 jacks) on the rear panel
- Remote programming and monitoring and fixture parameter override
- DMX input normal or backup
- DMX output normal, HTP, priority merging, softpatch (channel by channel), programmable merging with DMX channel control
- Local control via backlit display, rotary encoder/selector pushbutton
- Support for WYSIWYG, ESP, Capture

Connections

Network 10/100 Mbit Ethernet (on Neutrik Ethercon or RJ-45)

The network connection uses a standard UTP network connection.

DMX port pin out

<i>Pin</i>	<i>Description</i>
1	Ground/screen
2	Data –
3	Data +
4	–
5	–

All DMX ports are bi-directional (can act as input or output) with RDM preparation and can optionally be supplied in a fully isolated (FI) version.

The ports also have internal 120 Ohm terminator resistors and line biasing for RDM.

This product may only be used for
controlling dimmers and moving lights.
Using the product outside of these specifications
will remove all responsibility from the supplier.

Operation

The dmXLAN node3 can be operated in 2 ways; either through the front panel or the dmXLAN control software. The software can be downloaded from the ELC website at www.elclighting.com. The front panel control options will be explained below.

Main display



Encoder +/- Change the view on the display to see the device ID, IP address, status, software version, etc.

Press Encoder Enter the setup menu

Setup menu



Encoder +/- Select one of the setup items:

- Exit Setup
- View DMX
- DMX port 1
- DMX port 2
- DMX port 3
- DMX port 4
- DMX port 5
- DMX port 6
- Set ID
- Network Options
- Backlight

Press Encoder Activate the selected option

DMX view menu



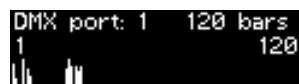
In this menu all the DMX channels going in or out of a DMX port can be visualized.

In select mode:

Encoder +/- Select one of the options:

- Set view mode

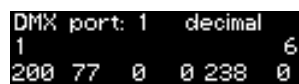
120 bars



40 bars



decimal



percentage



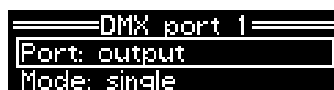
- Select one of the ports to view
- Back (go back to the setup menu)

Select the view mode (press encoder when on Mode, and change it to the desired setting and press the encoder again). Next, scroll to the DMX port and press the encoder to view it. When viewing, use the encoder to change the start channel or press it to go back.

DMX port menu



Select mode



Edit mode

In select mode:

Encoder +/- Select different item

Press Encoder Go to Edit mode

In Edit mode:

Encoder +/- Change the value of the item

Press Encoder Go to Select mode

DMX port as output

When a port is set up as a DMX output it can operate in the following modes;

- Disabled → the DMX output is disabled
- Outzero → the DMX sends out a DMX test signal with all channels at 0%
- Single → the output sends out the DMX values of the selected (primary) Art-Net universe. The DMX output is enabled the first time it detects the DMX universe on the network (or internal DMX inputs). If the universe on the network fails, the DMX output will go into DMX hold.
- Dual HTP → like single, but merges two DMX universes (primary and secondary) in highest takes precedence
- Dual LTP → like dual HTP but in latest takes precedence (on a channel by channel basis)
- Dual Custom → setting used when programmed via dmXLAN software
- Priority → as long as the primary universe is active, it will be on the output – otherwise the secondary universe is sent on the output
- Softpatch → setting used when programmed via dmXLAN software
- Flexpatch → setting used when programmed via dmXLAN software

The primary and secondary universes can be set to either Art-Net or sACN (streaming ACN, both draft R2 and release R3 are supported).

```
Mode: dual HTP
Primary: Art-Net 0.1
Secondary: sAcn 1
```

Select the primary or secondary and press the encoder to change it.

This will trigger the universe edit screen;

```
====Primary====
Type: Art-Net
Subnet: 0
```

This is where the universe type can be changed (Art-Net, sACN or disabled).

For Art-Net, you can set the subnet and ID. For sACN, you can set the universe and the range. The purpose of setting the range is to jump to universes on a higher number more easily (in increments of 100 up to 65000).

```
Resend: Art-Net 1.2
Rate: safe mode
Hold: always
```

The Resend option can be used to send the merged signal onto the network again as a new universe. This is helpful when – for example – 3 universes need to be merged together.

The Rate option can be used to set the rate of the dmXLAN node6x to either;

- Sync → the DMX output is synchronized to the universe data on the network. This is the fastest (lowest latency) setting.
Note: some equipment might not cooperate with this setting very well.
- Fixed rate → use this setting if the sync mode doesn't work (40/33/25 fps)
- Safe mode → this mode has a long break and Mark After Break – to be used if none of the above mentioned settings work

The Hold option means that the DMX port will keep sending out the last received data on the network for as long as it does not receive new data from the network. The default for this option is 'Always'. This setting can be changed to time out after a chosen time interval.

DMX port as input



```
Port: input
Mode: normal
Universe: Art-Net 0.1
```

When a port is set up as a DMX input it can operate in the following modes;

- disabled → the DMX input does nothing
- normal → any valid DMX is sent onto the network (and internal use) using the selected universe (Art-Net)
- backup → the DMX input will not send data if the selected universe is present on the network. If the selected universe is not present on the network for several seconds and the input has valid DMX, then it will send DMX data. If another sender starts sending the same universe, the input will go back into backup mode.

Set ID



```
ID: 000
Save Cancel
```

If the node3 is being controlled by the dmXLAN software, an ID can be assigned to the unit. The ID can be useful for preprogramming of the network.

Use the encoder in "Select" and "Edit" mode to change the 3 digits of the ID. The digits are in hexadecimal format (16 possibilities 0-9, A-F). This means you can have up to 4095 different ID's in the system (ID 000 means that the ID is not used ---).

Network options

```
====Network Settings====
Address: 192.168.1.112
Netmask: 255.255.255.0
```

```
====Address====
192.168.1.112
```

Select “Address” and press the encoder to change the IP address, using the “Select” and “Edit” modes to change the values. The netmask can be set to Ethernet 255.0.0.0 / 255.255.0.0 / 255.255.255.0 or select Set to Default.

For normal Art-Net operation, the netmask should be set to 255.0.0.0 and the IP address should be between 2.0.0.1 and 2.254.254.254.

Backlight

```
====Backlight Settings====
Allways ON
Save
```

The backlight can be set to always be on or to time out after a chosen time interval.

Factory defaults

```
====Factory Defaults====
Cancel
Set Defaults
```

Restore the settings of the node6x to the default values.

Technical specifications

Power:	100-240 VAC 47-440 Hz 10VA max
Dimensions:	485 x 170 x 45 mm (19" 1U)
Weight:	2.5 kg

General safety instructions

Read all instructions - especially the safety requirements - in the user manual before use. Save these instructions - the safety and operating instructions should be retained for future reference. Carefully follow all instructions.

Cleaning

Disconnect all connected supply and signal cables before cleaning the unit. Clean with a dry cloth. Do not use any liquids or aerosols on the unit.

Usage

Do not use the unit near water or moisture. - Do not block any ventilation openings, they are necessary for the essential airflow within the unit and protect it against overheating. - Install in accordance with the manufacturer's instructions. - Do not insert any objects through the ventilation slots of the unit, as these could come in contact with live parts or could cause short circuits. This could cause electric shock and/or fire. - Do not install near any heat sources such as radiators, stoves or other apparatus (including amplifiers) that produce heat. - Unplug this apparatus during lightning storms or when unused for long periods of time. Do not place the unit on unstable surfaces. – Do not place any objects on the power cord. Protect it from being walked on or pinched particularly at the plugs and the point where they exit from the device. If the power cord or the mains plug is damaged, let a qualified technician replace it immediately. - Do not defeat the safety purpose of the grounding plug. A grounding plug has two blades and a third grounding connection. The third grounding connection is provided for your safety. If the provided plug does not fit in your outlet, consult an electrician for replacement of the obsolete outlet.

Servicing

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way such as; damage to the power supply cord or plug, spillage of liquids, objects falling into the apparatus, exposure to rain or moisture, abnormal operation or falling damage. In all of the previous conditions, disconnect the main plug immediately and call your distributor or technical support!

Cautionary instructions

Maintenance and service of the device may only be carried out by qualified service personnel, as when opening and /or removing coverings of the device live parts may be exposed causing the risk of an electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

WARNING

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,
DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE**

Declaration of Conformity

We,

Manufacturers name: ELC lighting b.v.

Manufacturers address: Weerijns 8
5422 WV Gemert
the Netherlands

Herewith take the full responsibility to confirm that the product

Product Category: Lighting control equipment

Name of product: ELC-DLN6X / ELC-DLN6X_FI

Which refer to this declaration are manufactured in the Netherlands and complies with the following product specifications and harmonized standards:

Safety: LVD (Low Voltage Directive) 2014/35/EU, EN62368-1

EMC: 2014/30/EG, EN55032

ROHS (II): 2011/65/EU

With the presumption that the equipment is used and connected according to the manual, supplied with the equipment. All signal input- and output connections must be shielded and the shielding must be connected to the ground of the corresponding plug.

Gemert, February 16, 2018

ing. Joost van Eenbergen

