

Introduction

NetDMX-Mini is an Art-Net/sACN(E1.31) to DMX512 interface. It is capable of driving a single universe differential DMX output from Art-Net/sACN over a wired Ethernet network. Device IP, Art-Net/sACN and DMX Speed Settings are adjustable directly from your Browser interface. A single 3-pin DMX output plug is provided to connect directly to your target DMX system. IP & Operational Mode is indicated by a simple Red-Blue LED, and a Reset button is included to Reboot the device, or reprogram factory settings.

Specifications

IEEE 802.3 compatible Ethernet Controller, Integrated MAC and 10BASE-T

Isolated RJ45 Ethernet Connection

Power Input : 5-24V across Power and Ground connections of 3pin plug, reverse protected

Single Universe Art-Net II & III and sACN E1.31 decoding DMX512 data, outputting @ 44Hz/35Hz/25Hz (selectable)

Parts Supplied

NetDMX-Mini Interface, 3-pin JST-XH to 3-pin DMX cable, spare 3-pin JST-XH cable

2-pin JST-XH power cable, 2.1x5.5 barrel-plug adaptor, 1m Ethernet Cable

Product Connections

The rear of the NetDMX-Mini has 2 connection ports:

Power: 2-pin JST-XH connection, Ground and Power (5-25V). The power cable supplied can either be connected directly into the barrel-plug adaptor so that a standard power supply can be used, or the red/black power cable ends can be wired into a 500mA fused supply of (5-24v) using Wago connections

DMX out: 3-pin JST-XH connection, the supplied cable will work with all 3pin DMX connections, but if the DMX output needs to be hardwired you can connect the JST cable direct to Ground, Data- and Data+ connection using screw terminal or Wago connections

LAN Ethernet Connection

The NetDMX-Mini can be configured for almost any IP setting, although a default IP of 192.168.1.201 is supplied with the unit. In general this will match the subnet-IP of your home router/hub (192.168.1.x), if not then you can adjust your router subnet IP to 192.168.1.x. The NetDMX-Mini can be connected directly to one of your router LAN Ports. Once connected it can be accessed from a PC that is also connected to that same Network.

Device IP

The NetDMX-Mini IP number is show on the flashing LED on the top of the device, and is repeated once on power up (or after you press the reset button briefly)

Each RED flash will count a digit of the IP (blue is shown between each count).

A break in led colour means 'next octet'

For example, displaying the first IP octet '192' would show:

R-b-----R-b-R-b-R-b-R-b-R-b-R-b-R-b-R-b-R-b-----R-b-R-b-[gap/no LED]
1 1 2 3 4 5 6 7 8 9 1 2

Browser Configuration Mode

To access the browser configuration, the NetDMX-Mini must be put in Configuration mode. Configuration mode is available only if there is no DMX data being sent to the device. To activate Configuration mode you should open your PC browser (most browsers are supported) and type into the URL bar 192.168.1.201 and press return. A web-browser page for the device will appear with the following options:

Ethernet Settings & IP Configuration

IP Address: It is possible to set the IP Address of the NetDMX-Mini to any value within the class A/B/C range. Many Art-Net devices will use standard IP addresses of 10.x.x.x or 2.x.x.x

SubNet Mask: A choice of **A**(255.0.0.0), **B**(255.255.0.0) or **C**(255.255.255.0) are available

MAC Address: This is not adjustable and is a unique number created for the supplied unit

[SAVE] New IP configuration will not take place until NetDMX-Mini has power cycled, Reset, or Rebooted.

Protocol & Universe

Protocol: Select either Art-Net or sACN (E1.31) (unicast only) to match the DMX Data Protocol coming from the host

Art-Net/sACN Universe: These values can be configured to match the requirements of your system.

Art-Net Net: any value in the range 0-127

Art-Net Universe: Art-Net : any value in the range 0-255

sACN Universe: any Value in the range 1-32767

[SAVE]: New Art-Net/sACN settings will take immediate effect after they are saved.

DMX Speed

Select between MAX (fastest, 44Hz), 35Hz and 25Hz (slowest) to adjust for your fixture needs

[SAVE] Saves this setting which will take immediate effect

Rebooting Device

Pressing [REBOOT] will restart the NetDMX-Mini interface (a bit like cycling the power)

Factory Reset

If you need to fully reset the NetDMX-Mini back to factory defaults for any reason (you may have put the device on an unreachable IP address), then press and hold the RESET button for 5 seconds, the LED will turn purple for that 5 seconds, after which it will flash RED/BLUE many times, this will indicate that a full reset has taken place

ArtNet or sACN Status

After power-up (or reset/reboot) and once the IP has stopped flashing on the top of the NetDMX-Mini label, the LED will go to a steady colour. **BLUE** = 'Art-Net' mode, and **RED** = 'sACN' mode' Once data is correctly received and decoded by the device this Blue (or Red) colour will blink steadily

Private Wired Network Connection

It is highly recommended that you move the NetDMX-Mini away from your home network and onto a private wired network connected directly between your PC and the NetDMX-Mini device. Generally your home network (192.168.1.x) could have lots of traffic that could affect the consistency of Art-Net/sACN data, and may cause disturbances within your DMX data.

To move NetDMX-Mini to a direct-wired network follow these instructions (MS Windows):

Go to Control Panel, select Network and Internet, then select Network and Sharing Center

In the left hand column, click on 'Change Adapter Settings'

'Local Area Connection' should be shown, double click on it

Under the 'Networking' tab, select the line that says 'Internet Protocol Version 4 (TCP/IPv4)'

Then click 'Properties'

Click the radio button beside 'Use the following IP address'

Enter your required IP address & Subnet mask (255.255.255.0) in the fields provided

NOTE : The IP Address entered here MUST match the NetDMX-Mini IP SUBNET for communications to work

Leave the DNS Settings blank, click OK then click Close

Plug in the NetDMX-Mini (if you haven't already done so)

Multiple Device Connections

If required you can add several NetDMX-Mini to your network and have them controlled from the same application. Each NetDMX-Mini would need to have a different IP address (x.x.x.201, x.x.x.202, x.x.x.203 etc) and be added to your application as a new device and patched accordingly. Your Ethernet connection can be split into several outputs using a simple and inexpensive Ethernet 4 or 8 way switch.

Art-Net/sACN Unicast, Multicast & Broadcast mode

It is recommended that Unicast mode is used when sending Art-Net/sACN data to the NetDMX-Mini.

Using Art-Net Broadcast is not recommended.

Art-Net Device Discovery & DHCP

There is the ability to discover IP addressing and device Information using ArtNetPoll, Some applications allow an Art-Net scan which will pickup the device details and make it quicker to configure. There is no DHCP function as IP addressing is Static only, utilising client port 6454.

Dimensions

Length : 58mm (including connector) - Width 25mm - Height 29mm

Software Compatibility

NetDMX-Mini works with all free and commercial Art-Net/sACN(E1.31) compatible software that can output Unicast data

Power Supply

It is recommended that you use a quality power source with this product, we recommend either a 5V or 12V supply capable of providing a minimum of 500mA, this can be connected to the barrel-plug adaptor (center +ve)

Mounting options

The NetDMX-Mini can be mounted in one of several way using the slots at the base of the device. Cable ties or Velcro strip are good options, but if you require the device to be DIN Rail mounted please contact us as we have an interface plate that be easily installed

Technical Support

email : sales@smartshow.lighting

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