



## ETCNet2 Network Configuration Editor



**Version 2.0**



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# Introduction

## What is Network Configuration Editor?

ETC's Network Configuration Editor (NCE) is a spreadsheet-style software program designed to make configuring ETCNet2™ DMX and Video nodes easy. With NCE you can edit the parameters of any port on any node in an ETCNet2 system. Through an Ethernet connection, you can read the configuration of any node on the network, edit it offline, and send the configuration back to the node via the network.

**Note:** NCE is only compatible with ETCNet2 nodes running version 2.0 node code.

It does not work with ETC's older style Remote Video Interface (RVI), Remote Interface Unit (RIU) or with ETCNet2 nodes running ETCNet. If you have questions about the type of network you have, please call ETC Technical Services at the office nearest you:

ETC Americas 800/775-4382

ETC Asia +852 2799 1220

ETC Europe +44 (0)20 8896 1000

## Minimum requirements

These minimum requirements are for a personal computer running Network Configuration Editor.

- Pentium or compatible processor, 266MHz or better
- 32MB RAM
- Screen resolution should be set to 800X600 or greater
- Compatible with Windows® 95, 98, 2000, NT4 (with Service Pack 5 and later)  
**Note:** Windows 95 will require the WinSock 2 Update to run NCE. At the Microsoft website, search for "Winsock 2 Update". If you have any questions contact ETC Technical Services at one of the above numbers.
- Microsoft Internet Explorer 5.0
- Network Interface Card



# Installing NCE

## Install Network Configuration Editor

To install the ETCNet2 Network Configuration Editor (NCE):

1. Insert the diskette labeled "NCE Disk 1" into the floppy drive on your personal computer.
2. On your desktop, double-click **My Computer**.
3. Double-click **3-1/2 Floppy (A:)**.
4. Double-click the **Setup.exe** icon and follow the instructions on your screen.

Two additional diskettes are included with the installation that must be installed separately from NCE. They contain the DMXNode.bin and VidNode.bin files for the ETCNet2 DMX and Video nodes. These files are self-extracting executable files that are used to update software on ETCNet2 nodes.

To install the DMXNode.bin and VidNode.bin files (follow the same procedure for both diskettes):

1. Insert the diskette labeled DMXNode.bin.
2. On your desktop, double-click **My Computer**.
3. Double-click **3-1/2 Floppy (A:)**.
4. Double-click the **dmx\_A2.0.0.9.0.0\_R0.0.81\_E3.1.exe** file (**vid\_A2.0.0.9.0.0\_R0.0.81\_E3.1.exe** for the VidNode.bin disk).

**Note:** You must install the .bin files in the default directory. NCE is programmed to look in the default directory and will not update nodes properly if the .bin files are not stored there.

## Network Settings

IP addresses for ETCNet2 nodes are automatically set by NCE based on the IP address of the PC that Network Configuration Editor is installed on. Manual editing of network addresses is password protected.

You also must set an IP address for any personal computer you plan to use on an ETCNet2 network. ETC recommends that the personal computer used on an ETCNet2 network is dedicated to that network so changes to network settings are kept to a minimum.

**Note:** If the computer you wish to use is currently being used on a non-ETCNet2 network please consult your Network Administrator before changing the IP, Subnet Mask or Gateway addresses.

### Default Network Settings for your personal computer

Prior to changing any Network settings on your personal computer please record the current settings in the following spaces below.

- IP Address \_\_\_\_\_
- Subnet Mask \_\_\_\_\_
- Gateway \_\_\_\_\_

To use your personal computer on an ETCNet2 network that does not use a network router (i.e. hub/concentrator only), ETC recommends the following default settings:

- IP Address            10.101.1.101
- Subnet Mask        255.255.0.0
- Gateway            10.101.1.101

**Note:** If you have a network that does include a network router, you must set the Gateway address to that router.

Each additional computer on an ETCNet2 network must have it's own IP address which must be different from any other computer on the same ETCNet2 network. Select from the following default range of IP addresses for an additional personal computer running NCE:

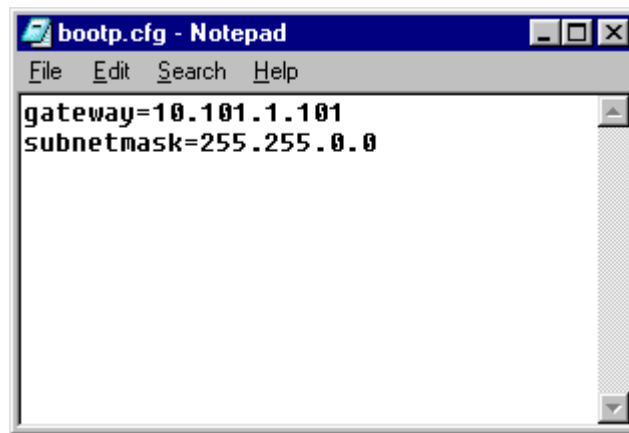
|              |              |
|--------------|--------------|
| 10.101.1.101 | 10.101.1.113 |
| 10.101.1.102 | 10.101.1.114 |
| 10.101.1.103 | 10.101.1.115 |
| 10.101.1.104 | 10.101.1.116 |
| 10.101.1.105 | 10.101.1.117 |
| 10.101.1.106 | 10.101.1.118 |
| 10.101.1.107 | 10.101.1.119 |
| 10.101.1.108 | 10.101.1.120 |
| 10.101.1.109 | 10.101.1.121 |
| 10.101.1.110 | 10.101.1.122 |
| 10.101.1.111 | 10.101.1.123 |
| 10.101.1.112 | 10.101.1.124 |

## *Change the bootp.cfg file settings*

In NCE version 2.0 there is a file installed in the NCE directory that requires configuration. The bootp.cfg file must be set to match the network settings on your personal computer.

To change the bootp.cfg file settings:

1. Using Windows Explorer, browse to the NCE folder (default path is C:\ETC\EtcNet2 NCE).
2. Double-click on **bootp.cfg** (if it does not automatically open in Notepad, select Notepad in the **Open With** dialogue box).
3. Edit the bootp.cfg file so that the Gateway and the Subnet Mask match the Network Settings of your personal computer.
4. Save your changes and close Notepad.



## Setting the IP address on ETCNet2 Nodes

When ETCNet2 nodes are shipped from the factory, they do not have a valid IP address. They must be assigned an IP address via NCE. NCE automatically sets the IP address for ETCNet2 nodes via the **Network Address Server**.

**Note:** For a node with factory defaults to receive an IP address it must be powered on and connected to the network. Connect all nodes to the network prior to enabling Network Address Server.

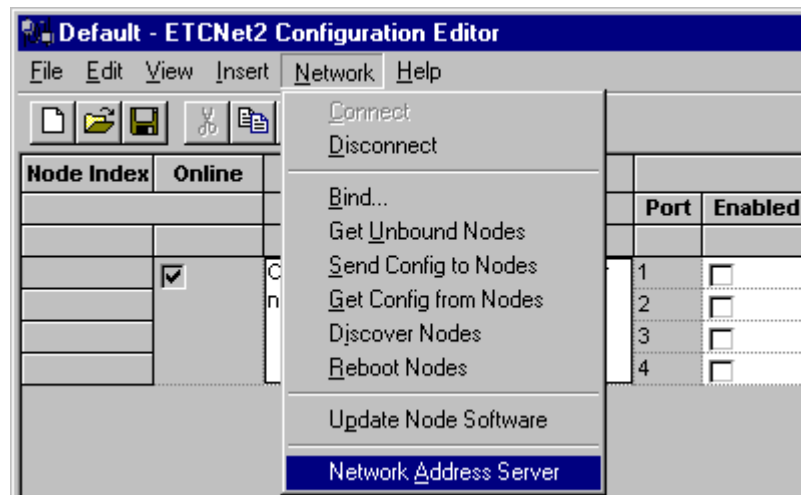
Enabling Network Address Server is a two step process, first you must connect NCE to the network, then you must enable Network Address Server.

To connect NCE to the network:

- Open the **Network** menu, click **Connect**.

To set IP addresses for ETCNet2 DMX and Video nodes:

- Open the **Network** menu, click **Network Address Server**



Once Network Address Server is enabled, it will send IP addresses to all ETCNet2 nodes (that are currently at factory defaults) on the network. No user intervention is required during this process.

On larger networks that employ a network switch or router, the Network Address Server resolves IP addresses for nodes on different network segments automatically.

**Note:** Any programmable switch or router to be used on an ETCNet2 network must be configured prior to using ETCNet2 nodes or Network Configuration Editor.

**Note:** To resolve IP addresses on nodes that currently have an IP address, see pp.9.

### *What to do if a Node has an IP address but the address is not compatible with the current network address scheme.*

It's possible that you may want to use a node that was previously used on a different network. If the IP address for that node is not compatible with the address scheme on your network you will need to assign it a new IP address.

The following procedure also resolves the IP addresses for a node in the event that it has the same IP address as another node already on the network.

To assign an IP address to a node that already has an IP address:

1. Connect the node in question to the network but do not power it on.
2. In NCE, enable **Network Address Server**.
3. Apply power to the node.

**Note:** Although there is a network function called **Reboot Nodes**, it will not do anything in this instance because the node you need to reboot has an IP Address that can not be "seen" with NCE. A node must be configured with a valid IP Address and properly connected to the network and NCE in order for **Reboot Nodes** to work.



# Overview

## *New Product Definitions*

**ETCNet2** - ETC's new Ethernet protocol suite, ETCNet2 supports IP addressing that allows the use of off-the-shelf Ethernet hubs and switches in networked systems.

**EDMX** - Ethernet DMX. On an ETCNet2 network there are 32,767 valid EDMX addresses (from 1-32,767).

**vPort** - A vPort is a sequential range of EDMX values assigned a numeric label. By default, a vPort contains 512 sequential addresses (and their associated EDMX values). See *Appendix A* for a table of vPorts and their default EDMX values.

**System** - A collection of networked or non-networked ETC devices connected via any of a variety of communication protocols for the control of a specific geographic area (i.e. Lobby, Theatre, Ballroom, etc.). A system may also refer to a specific family of controllers (Obsession system, Expression system, Unison system, etc.) It should be noted that a single network may connect several different systems.

**Network** - A collection of ETCNet1 or ETCNet2 devices connected via Ethernet.

## *NCE and the ETCNet2 DMX node*

NCE allows you to configure the DMX512 and RFU ports on the ETCNet2 DMX node. Each DMX port may be defined as either an input or an output, regardless of the sex of the physical connector.

### *DMX Input*

When a port on the node is configured for Input, the node receives DMX512 from an external source and outputs EDMX to the ETCNet2 network.

### *DMX Output*

When a port is configured for Output, the node receives EDMX channels from the ETCNet2 network and outputs DMX512 to a DMX512 device.

## *EDMX and vPorts*

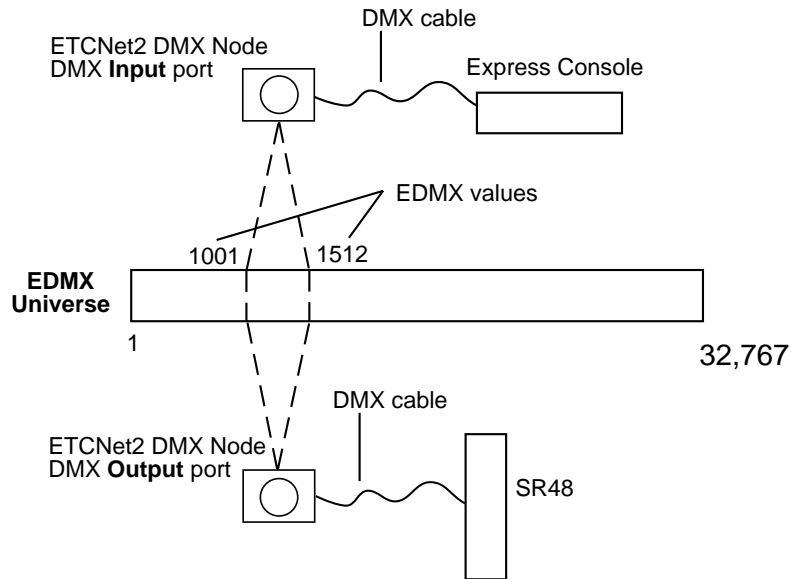
A vPort's group of addresses can be assigned (sequentially) anywhere in the range of 32,767 addresses allowed on an ETCNet2 network. There are 64 default vPorts on an ETCNet2 network. A vPort can be assigned to any DMX input or DMX output port on an ETCNet2 network.

Any DMX port may be mapped to specific addresses in the EDMX universe of 32,767 values. This is accomplished in one of two ways.

## 1. Editing EDMX numbers

When you have a device inputting DMX512 onto a ETCNet2 network you will typically have at least two ETCNet2 DMX nodes. One will generally serve as a DMX512 input and the other as a DMX512 output device. Match the EDMX Start values for each port on both nodes so that they communicate the correct values.

Editing EDMX numbers is the most flexible manner of numbering but can make for a lot of bookkeeping due to the large numbers involved.



## 2. Using vPorts

vPorts are virtual ports used by NCE that have nothing to do with the physical ports found on a DMX node. A vPort is a range of EDMX values assigned a numeric label. Once your vPorts are set up, you can assign them to physical ports without having to edit EDMX addresses.

There are 32,767 addresses in the EDMX universe. A vPort is a collection of up to 512 sequential addresses that can be placed anywhere within that range.

Each of the 512 addresses in a vPort has an EDMX value associated with it. In a default configuration, vPort 1 = EDMX addresses 1-512, vPort 2 = EDMX addresses 513-1024 and so on.

**Note:** NCE defaults to 64 vPorts. Additional vPorts can be created and will start with vPort 65.

# Getting Started

There are two approaches to creating a configuration in Network Configuration Editor. The first is to create a configuration for each node from scratch and then download the configuration to the nodes. A second, easier approach is to install your network with all of the nodes and then use the **Get Unbound Nodes** command in NCE.

## Building Configurations

To use the **Get Unbound Nodes** command you must have all nodes installed on the network and also have your personal computer properly configured.

Once your nodes are installed and your personal computer's IP address is set, you're ready to begin building a configuration.

### Connect to the network

Once you've opened NCE you must first connect your PC to the network.

To connect your PC to the network:

- On the **Network** menu, click **Connect**.

**Note:** The status bar along the bottom of the window shows information about devices on the network and whether or not your PC is connected.

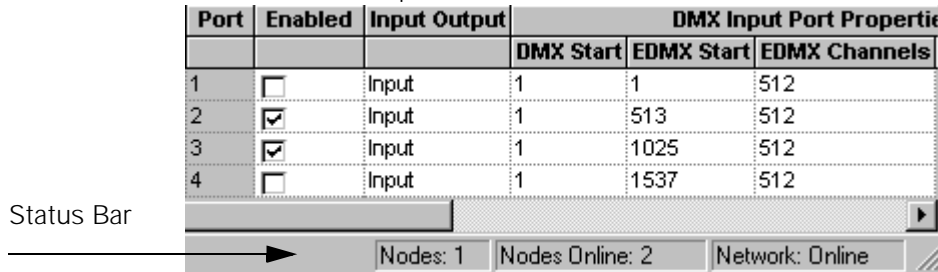
On the status bar:

Nodes = the number of nodes in the configuration.

Nodes Online = the number of nodes on the network.

Network Online = pc is connected to the network.

Network Offline = pc is not connected to the network.



The screenshot shows a window titled "DMX Input Port Properties" with a table containing 4 rows and 6 columns. Below the table is a "Status Bar" with three indicators: "Nodes: 1", "Nodes Online: 2", and "Network: Online".

| Port | Enabled                             | Input Output | DMX Input Port Properties |            |               |
|------|-------------------------------------|--------------|---------------------------|------------|---------------|
|      |                                     |              | DMX Start                 | EDMX Start | EDMX Channels |
| 1    | <input type="checkbox"/>            | Input        | 1                         | 1          | 512           |
| 2    | <input checked="" type="checkbox"/> | Input        | 1                         | 513        | 512           |
| 3    | <input checked="" type="checkbox"/> | Input        | 1                         | 1025       | 512           |
| 4    | <input type="checkbox"/>            | Input        | 1                         | 1537       | 512           |

Status Bar: Nodes: 1 | Nodes Online: 2 | Network: Online

### Get Unbound Nodes

Build a new configuration file from nodes already on the network by using the **Get Unbound Nodes** command. When you start with a blank configuration, this command will add any nodes on the network to your configuration as new nodes. You must be connected to the network to get a configuration file from a node.

To get the configuration files from unbound nodes:

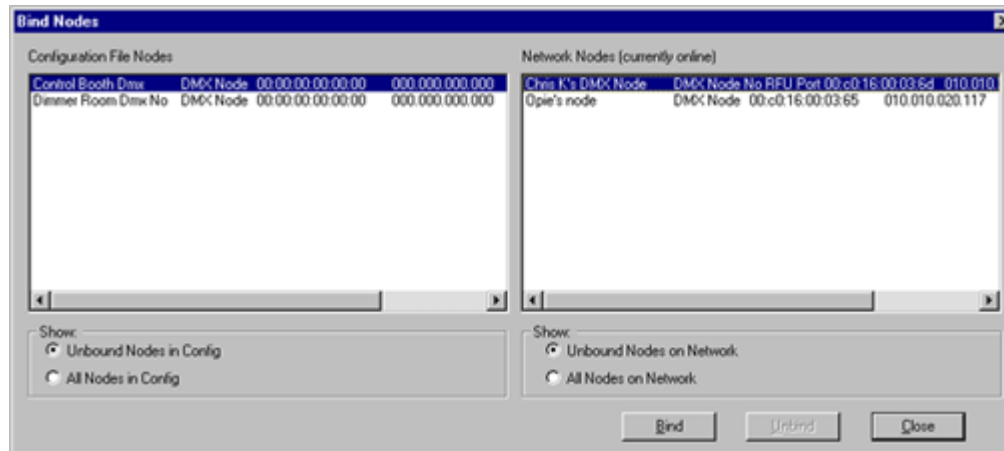
- On the **Network** menu, click **Get Unbound Nodes**.

Once the unbound nodes appear in your configuration file, proceed with editing parameters of the nodes. When the configuration is complete, download the configuration to the nodes to complete the process.

## Other Network commands

### Binding Nodes

If you've created the configuration offline you must bind the nodes in your configuration file to the physical nodes on the network. When planning your network, keep track of the MAC address's of your nodes. Use the MAC address to identify your nodes when working in the **Bind Nodes** display.



To bind configuration file nodes to physical nodes:

1. On the **Network** menu, click **Bind**.
2. In the **Bind Nodes** display, click a node in the **Configuration File Nodes** window and the corresponding node in the **Network Nodes** window, click **Bind**.

### Send a Configuration to a Node

Use the **Send Config to Nodes** command to update a node on the network with a configuration from your pc. Configuration file nodes must be bound to network nodes before sending a configuration to a node.

- On the **Network** menu, click **Send Config to Nodes**.

**Note:** To send a config to a specific node, highlight the node (or nodes) and follow the same procedure.

### Read a Configuration from a Node

Use the **Get Config from Nodes** command to update an existing configuration file. Configuration file nodes must be bound to network nodes to be able to get a configuration from a node.

To get the configuration from a node:

- On the **Network** menu, click **Get Config from Nodes**.

**Note:** To get a config from a specific node, highlight the node (or nodes) and follow the same procedure.

## *Discover Nodes*

The **Discover Nodes** feature sets any ETCNet2 node running in ETCNet1 mode into ETCNet2 mode (i.e. a node previously connected to an Expression console).

**Note:** Discover Nodes does not allow ETCNet1 devices (ETCNet Remote Interface Unit or ETCNet Remote Video Interface) to operate in ETCNet2 mode.

To set all nodes on the network in ETCNet1 mode to ETCNet2 mode:

- On the **Network** menu, click **Discover Nodes**.

## *Reboot Nodes*

The **Reboot Nodes** feature is used in the event that you want to reboot your nodes remotely.

To reboot all nodes:

- On the **Network** menu, click **Reboot Nodes**.

**Note:** To reboot a specific node, highlight the node (or nodes) and follow the same procedure.

## *Update Node Software*

To update node software you must first enable Network Address Server. Once Network Address Server is enabled you can update node software.

To update Software in all Nodes:

- On the **Network** menu, click **Enable Network Address Server**.
- On the **Network** menu, click **Update Node Software**.

**Note:** To update software for a specific node, highlight the node (or nodes) and follow the same procedure.

## *Network Address Server*

Enable the Network Address Server to download new software to an ETCNet2 node or to dynamically assign IP addresses to new nodes.

To enable Network Address Server:

- On the **Network** menu, click **Network Address Server**.



# Basic Configurations

NCE is designed to make configuring an ETCNet2 node easy. To meet the needs of all types of networks, NCE provides both basic and advanced levels of programming for all types of nodes.

NCE supports three types of ETCNet2 nodes:

1. DMX Node
2. DMX Node without RFU
3. Video Node

**Note:** Fields that are greyed out are not editable based on selected parameters.

## Configure an ETCNet2 DMX node

To configure an ETCNet2 DMX node you must first add a node to your configuration or get unbound nodes from the network.

To add a node to a configuration:

- Open the **Insert** menu and click **DMX Node**.

The default view shows **Node Properties** and **DMX Port Properties**. The screen shot below is the left side of the screen and shows **Node Properties**, which has two editable text fields, the **Node Name** and **Comment** fields.

Text entered in the **Name** field is stored in the node and will appear each time that node is bound to NCE, but text entered in the **Comment** field is only stored in NCE, not in the node.

| Node Properties |          |         |
|-----------------|----------|---------|
| Name            | Type     | Comment |
| ETC Node        | DMX Node |         |

To edit Node Name:

- Double-click in the **Name** field to place a cursor in the field then type the name you wish to assign to the node.

The right side of the display shows **DMX Port Properties**.

| Port | Enabled                             | Input Output |
|------|-------------------------------------|--------------|
| 1    | <input checked="" type="checkbox"/> | Input        |
| 2    | <input checked="" type="checkbox"/> | Input        |
| 3    | <input checked="" type="checkbox"/> | Input        |
| 4    | <input checked="" type="checkbox"/> | Input        |

### DMX Port Properties

**Port**

The **Port** column displays the DMX512 port number on your ETCNet2 DMX node.

**Enabled**

Check the box in the **Enabled** column to activate a DMX port.

**Input Output**

Click on **Input Output** to designate your port as either an input or an output. If a port is designated as Input, the Output Port Properties will be greyed out for that port.

### DMX Input Port Properties

When a port on the ETCNet2 DMX node is configured as Input, the port receives DMX512 from an external source, such as a console, and outputs EDMX onto the ETCNet2 network.

| DMX Input Port Properties |            |               |          |       |                                     |          |               |
|---------------------------|------------|---------------|----------|-------|-------------------------------------|----------|---------------|
| DMX Start                 | EDMX Start | EDMX Channels | EDMX End | vPort | HLL                                 | HLL Time | Port Priority |
| 1                         | 1          | 512           | 512      | 1     | <input checked="" type="checkbox"/> | 2        | 1             |
| 1                         | 513        | 512           | 1024     | 2     | <input checked="" type="checkbox"/> | 2        | 1             |
| 1                         | 1025       | 512           | 1536     | 3     | <input checked="" type="checkbox"/> | 2        | 1             |
| 1                         | 1537       | 512           | 2048     | 4     | <input checked="" type="checkbox"/> | 2        | 1             |

**DMX Start**

The number entered in the **DMX Start** column is the first DMX channel that the DMX Input port listens to.

**EDMX Start**

The number entered in the **EDMX Start** column is the first EDMX value output to the network. Valid numbers range from 1-32,767.

**EDMX Channels**

Enter a number between 1-512 in the **EDMX Channels** column to designate the number of EDMX channels you want to input. An EDMX port defaults to 512 channels.

**Note:** if there are fewer than 512 DMX channels being input, the number of EDMX channels will be reduced accordingly.

**EDMX End**

The **EDMX End** column will change to reflect the last EDMX channel used on the Input port. Changing the DMX Start, DMX Channels, or EDMX Start columns will cause the EDMX End column to increment or decrement accordingly.

**vPort**

Enter a number from 1-64 in the **vPort** column to use a default set of 512 EDMX channels. When you specify a vPort, NCE displays the default EDMX start address and EDMX end address for that vPort. A table of vPorts and their default values is located in *Appendix A* of this manual.

**Note:** When you assign a vPort, the DMX Start address defaults to 1.

Changing the DMX Start address to a number other than 1 will clear the vPort selection.

**Port Priority**

Use a **Port Priority** setting to determine which ports have control of any EDMX channels. A valid Port Priority is numbered from 1-20, 1 is the highest priority and 20 is the lowest.

Port Priorities are used to establish the relative priority or importance of a DMX port based on levels from 1-20 (1 having highest priority, 20 having lowest). When an EDMX channel is patched to more than one DMX input port, Port Priority determines which DMX port controls that channel. As a rule, DMX Ports with higher priority levels take control of EDMX channels from ports with lower priority levels.

**Note:** A port will only take control of EDMX values when valid DMX is coming into the port

### DMX Output Port Properties

| DMX Output Port Properties |               |          |       |                          |          |                                     |
|----------------------------|---------------|----------|-------|--------------------------|----------|-------------------------------------|
| EDMX Start                 | EDMX Channels | EDMX End | vPort | HLL                      | HLL Time | Data Loss Port Disable              |
| 1                          | 512           | 512      | 1     | <input type="checkbox"/> | 0        | <input checked="" type="checkbox"/> |
| 513                        | 512           | 1024     | 2     | <input type="checkbox"/> | 0        | <input checked="" type="checkbox"/> |
| 1025                       | 512           | 1536     | 3     | <input type="checkbox"/> | 0        | <input checked="" type="checkbox"/> |
| 1537                       | 512           | 2048     | 4     | <input type="checkbox"/> | 0        | <input checked="" type="checkbox"/> |

**EDMX Start**

The number in the **EDMX Start** column displays the first EDMX address assigned to a port. Valid numbers range from 1-32,767.

**EDMX Channels**

The number in the **EDMX Channels** column, enter the number of EDMX channels you want assigned to that port. A maximum of 512 EDMX channels can be assigned to a port.

**EDMX End**

The **EDMX End** column is for display only and shows the last EDMX address assigned to a port.

**vPort**

Enter a number from 1-64 in the **vPort** column. Each vPort has a default set of 512 EDMX channels. When you specify a vPort, NCE displays the EDMX start address and EDMX end address for that vPort. A table of vPorts and their default values is located in *Appendix A* of this manual.

**HLL**

**HLL** is an abbreviation for Hold Last Look (Forever). If an ETCNet2 DMX node output port loses the EDMX stream from its source, the node will continue to play the last look for an infinite amount of time when the HLL box is checked.

**HLL Time**

**HLL Time** is also used in the event of a loss of EDMX input. If the HLL box is not checked, the node will check to see if an **HLL Time** is set. If a time is set, then the node will hold the last look for the amount of time specified. Time is displayed in seconds.

**Data Loss Port Disable**

The **Data Loss Port Disable** box is a special feature that allows you to determine the state of the DMX output port in the event of a loss of EDMX input. When this box is checked, and there is a loss of EDMX input, the DMX output port is disabled. When this box is not checked, and EDMX input is lost, the DMX output port goes to zero and continues to output zeros on the DMX line until EDMX input is reestablished.

## *Edit vPort Table*

To edit vPorts:

- On the **Edit** menu, click **Edit vPorts**.

### *EDMX values*

The default vPort table shows the list of **vPort ID** numbers in the left-hand column. To change the EDMX Start and EDMX Channels for a vPort, click in a text box in one of these columns and enter a new value.

**Note:** If a DMX port (Input or Output) is assigned to that vPort, the EDMX values will be updated in the configuration when the vPort is updated.

## *View menu*

There are a number of viewing options available that can be used to get specific information about your ETCNet2 nodes.

### *View Nodes*

To get information on Node Properties, and DMX Port Properties (including input and output port settings) select **View Nodes**.

To view Nodes:

- Open the **View** menu, click **Nodes**.

### *View vPorts*

To see what vPorts are used on any current input or output port, select **View vPorts**.

To view vPorts:

- Open the **View** menu, click **vPorts**.

### *View DMX Inputs*

To check settings for all of the DMX Input ports in your configuration, select **View DMX Inputs**.

To view DMX Inputs:

- Open the **View** menu, click **DMX Inputs**.

### *View DMX Outputs*

To check settings for all of the DMX Output ports in your configuration, select **View DMX Outputs**.

To view DMX Outputs:

- Open the **View** menu, click **DMX Outputs**.

## View Video Ports

To check settings for all of the Video ports in your configuration, select **View Video Ports**.

To view Video Ports:

- Open the **View** menu, click **Video Ports**.

## View RFU Ports

To check settings for any RFU ports in your configuration, select **View RFU Ports**.

To view RFU Ports:

- Open the **View** menu, click **RFU Ports**.

## View Node Addresses

There are many different types of network addresses used to define a node and its functions in an ETCNet2 network. These addresses are automatically set by NCE and do not require additional configuration by the user.

To see Node addresses:

- On the **View** menu, click **Node Addresses**.

| Node Properties |                 |                 |                     |               |             |
|-----------------|-----------------|-----------------|---------------------|---------------|-------------|
| IP Address      | Subnet Mask     | Gateway IP      | DMX Admin Multicast | DMX Multicast | MAC Address |
| 010.010.050.102 | 255.255.000.000 | 010.101.001.101 | 236.1.0.3           | 236.1.0.39    | 0:0:0:0:0   |
| 010.010.050.103 | 255.255.000.000 | 010.010.001.101 | 236.1.0.3           | 236.1.0.39    | 0:0:0:0:0   |

## View Node Details

The **Node Details** window is an expanded view of every parameter of the ETCNet2 nodes in your configuration. These parameters are primarily used by ETC personnel for diagnostics and troubleshooting.

To see all available parameters of your nodes:

- On the **View** menu, click **Node Details**.

## Configure an ETCNet2 Video node

To configure an ETCNet2 Video node you must first add a node to your configuration.

To add a node to a configuration:

- On the menu bar, click **Insert** and click **Video Node**.

| Node Index | Online                   | Node Properties |            |         | Video Port Properties |                          |
|------------|--------------------------|-----------------|------------|---------|-----------------------|--------------------------|
|            |                          | Name            | Type       | Comment | Display Number        | Locked                   |
|            | <input type="checkbox"/> | ETC Video Node  | Video Node |         | CRT1                  | <input type="checkbox"/> |
|            |                          |                 |            |         | CRT1                  | <input type="checkbox"/> |

The ETCNet2 Video node is used to provide remote displays of your control system. There are only two properties of a video node that can be edited by the user.

### Display Number

Select CRT 1-CRT 8 to identify which video ports on the Obsession II<sup>®</sup> console you want the ETCNet2 video node to mimic.

| Monitor | Display                               |
|---------|---------------------------------------|
| CRT 1   | User one - CRT 1 - console            |
| CRT 2   | User one - CRT 2 - console            |
| CRT 3   | User one - expanded channel display 1 |
| CRT 4   | User one - expanded channel display 2 |
| CRT 5   | User two - CRT 1 - console            |
| CRT 6   | User two - CRT 2 - console            |
| CRT 7   | User two - expanded channel display 1 |
| CRT 8   | User two - expanded channel display 2 |

### Locked

Enable the Lock feature to lock the properties of a video port so that they can only be changed by Network Configuration Editor.

**Note:** In version 2.0 of NCE you must either lock both video ports or neither of the video ports. This is due to the fact that currently an Obsession processor and NCE treat video ports slightly differently.

## Nodes with Remote Focus Unit

### RFU Port Properties

ETCNet2 Video Nodes also support a Remote Focus Unit (RFU). There is one property that may be set for an RFU, **Multidrop**.

To view the RFU port properties of a video or DMX node:

- On the **View** menu, click **RFU Ports**.

| Node Index | Online                   | Node Properties |            |         | RFU Port Properties      |
|------------|--------------------------|-----------------|------------|---------|--------------------------|
|            |                          | Name            | Type       | Comment | Multi Drop               |
|            | <input type="checkbox"/> | ETC Video Node  | Video Node |         | <input type="checkbox"/> |
|            |                          |                 |            |         | <input type="checkbox"/> |

### Multidrop

Enable Multidrop if there is more than one RFU on a single RFU wire run to the node. Multidrop must also be enabled on any RFU used in a Multidrop configuration. See your Obsession II manual for further details regarding Multidrop RFU.

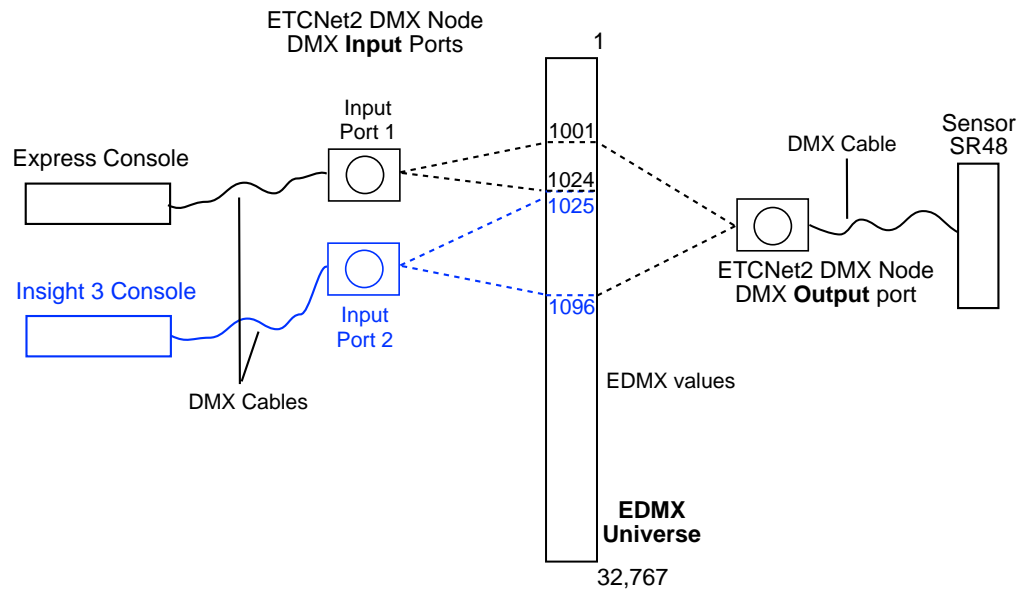


# Advanced Configurations

## Creating a DMX Offset

Network Configuration Editor also makes it easy to configure large networks with multiple nodes and with more than one console controlling the same dimmer rack.

For example, two consoles can send DMX512 levels to a single dimmer rack and share certain dimmers by programming offset EDMX addresses in Network Configuration Editor. In the following diagram there are two consoles controlling a single rack.



In this configuration, the Express console sends DMX512 to Input port 1 on the ETCNet2 DMX Node and the Insight 3 console sends DMX512 to Input port 2. A second ETCNet2 DMX Node is located in the dimmer room with port 1 configured as Output.

The parameters for DMX Input port 1 are:

- DMX Start = 1
- EDMX Start = 1001
- EDMX Channels = 24

*Continued on next page*

The parameters for DMX Input port 2 are:

DMX Start = 1  
 EDMX Start = 1025  
 EDMX Channels = 72

| Node Properties        |          | DMX Port Properties |                                     |              |                           |            |               |          |
|------------------------|----------|---------------------|-------------------------------------|--------------|---------------------------|------------|---------------|----------|
| Name                   | Type     | Port                | Enabled                             | Input Output | DMX Input Port Properties |            |               |          |
|                        |          |                     |                                     |              | DMX Start                 | EDMX Start | EDMX Channels | EDMX End |
| Control Booth Dmx Node | DMX Node | 1                   | <input checked="" type="checkbox"/> | Input        | 1                         | 1001       | 24            | 1024     |
|                        |          | 2                   | <input checked="" type="checkbox"/> | Input        | 1                         | 1025       | 72            | 1096     |
|                        |          | 3                   | <input type="checkbox"/>            | Input        | 1                         | 1025       | 511           | 1535     |
|                        |          | 4                   | <input type="checkbox"/>            | Input        | 1                         | 1537       | 512           | 2048     |

The parameters for DMX Output port 1 are:

EDMX Start = 1001  
 EDMX Channels = 96

| Node Properties      |          | DMX Port Properties |                                     |              |                            |               |          |  |
|----------------------|----------|---------------------|-------------------------------------|--------------|----------------------------|---------------|----------|--|
| Name                 | Type     | Port                | Enabled                             | Input Output | DMX Output Port Properties |               |          |  |
|                      |          |                     |                                     |              | EDMX Start                 | EDMX Channels | EDMX End |  |
| Dimmer Room Dmx Node | DMX Node | 1                   | <input checked="" type="checkbox"/> | Output       | 1001                       | 96            | 1096     |  |
|                      |          | 2                   | <input type="checkbox"/>            | Output       | 513                        | 512           | 1024     |  |
|                      |          | 3                   | <input type="checkbox"/>            | Output       | 1025                       | 512           | 1536     |  |
|                      |          | 4                   | <input type="checkbox"/>            | Output       | 1537                       | 512           | 2048     |  |

**Note:** Certain fields in the above screen shots are minimized so that the graphics will fit on the printed page.

## Appendix A - Default vPort table

Use the default vPort table is for reference when working with NCE.

| vPort | EDMX#       | vPort | EDMX#         | vPort | EDMX#         | vPort | EDMX#         |
|-------|-------------|-------|---------------|-------|---------------|-------|---------------|
| 1     | 1-512       | 17    | 8,193-8,704   | 33    | 16,385-16,896 | 49    | 24,577-25,088 |
| 2     | 513-1,024   | 18    | 8,705-9,216   | 34    | 16,897-17,408 | 50    | 25,089-25,600 |
| 3     | 1,025-1,536 | 19    | 9,217-9,728   | 35    | 17,409-17,920 | 51    | 25,601-26,112 |
| 4     | 1,537-2,048 | 20    | 9,729-10,240  | 36    | 17,921-18,432 | 52    | 26,113-26,624 |
| 5     | 2,049-2,560 | 21    | 10,241-10,752 | 37    | 18,433-18,944 | 53    | 26,625-27,136 |
| 6     | 2,561-3,072 | 22    | 10,753-11,264 | 38    | 18,945-19,456 | 54    | 27,137-27,648 |
| 7     | 3,073-3,584 | 23    | 11,265-11,776 | 39    | 19,457-19,968 | 55    | 27,649-28,160 |
| 8     | 3,585-4,096 | 24    | 11,777-12,288 | 40    | 19,969-20,480 | 56    | 28,161-28,672 |
| 9     | 4,097-4,608 | 25    | 12,289-12,800 | 41    | 20,481-20,992 | 57    | 28,673-29,184 |
| 10    | 4,609-5,120 | 26    | 12,801-13,312 | 42    | 20,993-21,504 | 58    | 29,185-29,696 |
| 11    | 5,121-5,632 | 27    | 13,313-13,824 | 43    | 21,505-22,016 | 59    | 29,697-30,208 |
| 12    | 5,633-6,144 | 28    | 13,825-14,336 | 44    | 22,017-22,528 | 60    | 30,209-30,720 |
| 13    | 6,145-6,656 | 29    | 14,337-14,848 | 45    | 22,529-23,040 | 61    | 30,721-31,232 |
| 14    | 6,657-7,168 | 30    | 14,849-15,360 | 46    | 23,041-23,552 | 62    | 31,233-31,744 |
| 15    | 7,169-7,680 | 31    | 15,361-15,872 | 47    | 23,553-24,064 | 63    | 31,745-32,256 |
| 16    | 7,681-8,192 | 32    | 15,873-16,384 | 48    | 24,065-24,576 | 64    | 32,257-32,767 |







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