CONVERGING SYSTEMS

e-Node/dmx™ Internet Protocol Adapter

CS-Bus™ Internet Interface Adapter and Commissioning Tool

Enables Up to 32- Third-Party DMX Lighting Devices to be Accurately Controlled, Color Enhanced (if color) and Controlled via the Ethernet

Enables RGB or RGBW Fixtures to be Accurately Dimmed without Color Shifts

Enables Third-Party Automation Systems to Easily Control and Receive Feedback from DMX Fixtures

Enables Apple iPADS®, Smart phones and Other Browser-Equipped Devices to Control DMX Fixtures

Built-in Web Server for Standalone Operation

Sophisticated PC application included for DMX addressing and configuration

Intelligent Adapters | e-Node™/dmx 3rd party DMX Fixture Adapter

Background

The e-Node/dmx™ is a state-of-the color computer/translator that can be used to enable any third-party DMX fixture to be quickly, accurately and inexpensively supported from any leading automation or lighting control system that currently supports Converging Systems' CS-BUS messaging format. The controller is also ideal for those hybrid applications where one or more Converging Systems ILC-100/400 color controllers (with .001% dimming capabilities) which support constant voltage LED devices and our FLLA linear lighting strips are located alongside 3rd party DMX fixtures which need to be controlled from the same automation platform. Support for 1, 3 and 4-channel DMX fixtures as well as extended programming options for greater than 4-channel support guarantees that nearly every DMX fixture in the market can be supported by virtually every automation and lighting systems in the marketplace using the e-Node/dmx™. Rich adoption of the Converging Systems' CS-Bus command set guarantees nearly universal support for the e-Node/dmx™.

Operation

The e-Node™ supports Internet Protocol (IP) which can be connected to any remote system, operator or application that can address IP. All native commands, responses and error messages required to commission, control, and monitor DMX fixtures are available through the e-Node/dmx™ and can be easily managed through the supplied e-Node™ Pilot (PC) application. And if the system is connected to a Wireless (802.11b/g/n) Access Point or a wired network switch, built-in web server pages are available which can be viewed with any browser to control supported equipment though a built-in web-page User Interface.

Set-Up and Configuration

A built-in 32-bit processor simplifies setup and enables easy upgrade to future-proof the device. The e-Node/dmx™ is designed for plug-n-play operation. Its network address (IP) is set dynamically without user intervention through a built-in DHCP server. In addition, uPnP and SDDP protocols allow seamless discovery. Network settings (for static IP addressing) can be easily changed though the e-Node™ Pilot application or through the embedded web pages viewable though any browser. Many popular automation systems have drivers available for e-Node™, so only its network address typically has to be customized!

Applications

The e-Node/dmx™ provides a seamless interface to third-party control devices, touchsceens and keypads from Crestron, Control 4, Elan Home Systems, Lutron, RTI, Savant, Vantage as well as others. Built-in bi-directional operation enables color pickers and sliders on automation/lighting systems to respond to changes in the color state for each DMX fixture. In addition for environments without third-party control systems, the e-Node™ provides built-in robust web pages with a set of easy to navigate keypad images motifs for standalone control. When connected to a network switch or wireless Access Point, any e-Node/dmx™ connected DMX fixture can be controlled through web pages which can be controlled through Apple iPads, PDAs and smartphones with internet browsers. And as a bonus, when the e-Node™ is connected to a supported third-party lighting panel such as Lutron, scene selections made on those lighting panels can control DMX fixtures without requiring multiple DMX processors or slow host-based processor/drivers (old-school) which only understand the antiquated RGB color space which has inherent concept of hue-accurate dimming.

Features

- Up to 32-DMX n-color colors can be daisy-chained
- Embedded color computer manages color calculations to enable hue-accurate dimming
- Hue Accurate While Dimming (HAWD) Capability
- Can be located up to 328 feet away from controlled devices which can be extended with Ethernet extenders
- Support of from Control4,Crestron, Elan Home Systems, Key Digital, Leviton/Bitwise, ON Controls, RTI, Savant, Vantage and others
- Bi-directional control and no host-based processing overhead.
- Support for standard RJ-45, Philips RJ-45 and industry standard XLR connections

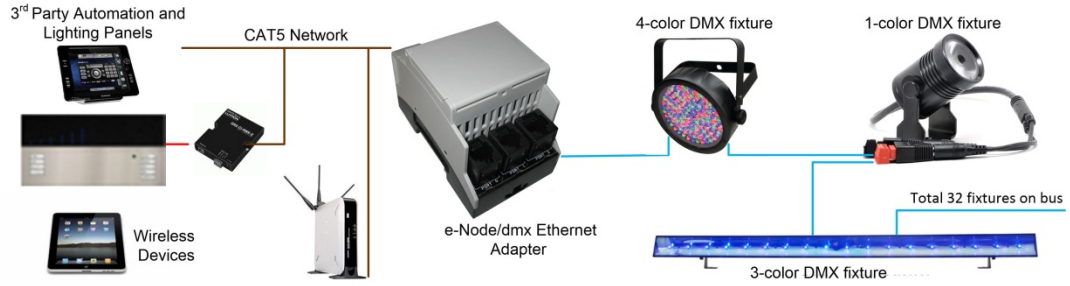
Specifications

Feature	Detail
IP Control	Intelligent Internet Protocol Adapter designed to enable Ethernet control of 1-channel, 3-channel, 4-channel (and n-channel) DMX fixtures
Auto MDIX	No crossover cable required
Wireless Control	With 802.11 (b/g/n) Access Point (not supplied), remote access of configuration pages as well as embedded HTML control pages
Dynamic IP	Built-in DHCP client with AutoIP for zero configuration
Identification	Built-in NetBios discovery feature provides Windows-type naming convention on IP bus
Protocols	TCP, UDP, TELNET Client, ARP, ICMP, DLC, WINS, WEB Server, HTTP. DNCP, NetBIOS, SNTPO, CGI and XML processor,
MAC address	Unique registered MAC address
TCP/IUDP Support	Robust support of all functionality of the e-Node™ is also available using a rich set of UDP commands.
AJAX	HTTP support for sending commands and retrieving status using XML data
User Interface	-Embedded HTML control pages provide for remote support, firmware updates -e-Node™ Pilot application enables network clients and e-Node setup parameters to be customized

Feature	Detail
Bus Connections	RJ-45 (Port 2) for direct connection via CAT-5 to DMX fixtures (up to 32 DMX fixtures per e-Node/dmx)
Alternate I/O	CS-Bus connectivity for ILC-x00 family lighting controllers and IMC-00 family of motor controllers in alternative boot-up mode
Ethernet Link Wiring	Standard CAT5 connects e-Node/dmx to PC, router or other Ethernet source. Maximum cable length 328' (100 m). Ethernet network and cable provided by others
Power Requirements	10v-24v DC via 2-pin indexed detachable connector, 250 ma. @12vdc standard
Power Supply	External UL-listed 12v DC power supply, 250ma available separately.
Enclosure	Molded plastic enclosure-DIN Rail mounting. DIN Rail bracket not supplied.
Size	3.53" x 2.375" X 2.125" (89.66mm x 60.339mm x 53.98mm)
Weight	3.4 oz. (.10kg)
Manufacturing	Made in the USA
Compliance	-PCB UL listed -Power Supply—Separate UL listed Category 2 -FCC Certification -CE

Wiring

Overview



Applications

The e-Node/dmx™ is ideal for a variety of applications. Up to 32 3rd party DMX fixture regardless if it is a monochrome, 3 or 4-channel fixture, or even multi-channel device can be seamlessly controlled from any automation or lighting control system using the e-Node/dmx™ processor. In environments where more advanced color savvy devices are selected such as the Converging Systems' FLLA Linear Strips and ILC-x00 controllers or any Converging Systems ILC-x00 family-enabled OEM products, consistency and reliability of color control can be obtained. Specifically, the same driver meticulously documented and available for Converging Systems' CS-Bus protocol can be used to support ILC-x00 products or 3rd DMX fixtures. This saves programming time, expense and provides the greatest level of satisfaction to the customer. As a bonus, within each e-Node/dmx processor is a separate program that enables the e-Node/dmx to alternatively to be configured to drive ILC-x00 devices for demonstration purposes. (Only one mode is available at a time, so this is purely for dealer demonstration purposes and enables experimentation without the cost of purchasing an additional non-dmx enabled e-Node controller.) Your application may be easily adapted from our core technology.

- Ethernet connectivity interface for popular automation systems
- iPAD® and Smartphone webpage-enabled control for lighting and motor products
- Bi-directional cntl. for color sliders/pickers
- Widens support to nearly automation systems for DMX fixtures
- Enables remote web-based access without expensive home automation systems
- Expands Lutron control to all DMX Fixtures