e-Node™ Internet Protocol Adapter

CS-Bus™ Internet Interface Adapter and Commissioning Tool

Enables CS-Bus Devices to be Remotely Commissioned, Monitored and Controlled via the Ethernet

Built-in Web Server for CS-Bus Device Standalone Operation

Enables Third-Party Automation Systems to Easily Control and Receive Feedback from CS-Bus Equipment

Enables Apple iPADS[R], Smart phones and Other Browser-Equipped Devices to Control CS-Bus Equipment

Support for Motor and Lighting Control Products

Sophisticated PC application included for CS-Bus setup and configuration

Background

The e-Node™ is a state-of-the Intelligent Internet Protocol controller which is designed to enable wired or wireless (Ethernet) control of nearly a limitless range of facility automation clients/devices. Its factory defaults allow the e-Node™ to communicate and control a wide range of CS-Bus™ compatible motor and lighting control devices. In addition, **any** device that supports RS-232-C or RS-485 communications can be controlled as well with optional factory-provided drivers. This makes the e-Node™ a tremendously robust communication tool for Ethernet connectivity--the rapidly evolving control interface standard in the world. In addition to control, the e-Node™ combined with the e-Node™ Pilot (PC) application allows all CS-Bus™ controllers (motor and lighting), as well as CS-Bus™ keypad user interface devices and CS-Bus integration/connectivity adapters (including occupancy sensors, photosensors, and third-party hardware legacy adapters) to be installed, commissioned, customized, and remotely monitored (and controlled) either on-site or remotely by the installer without any factory support or intervention.

Operation

The e-Node™ provides an Internet Protocol (IP) data stream that can be connected over the Internet to any remote system, operator or application that can address the Internet. All native commands, responses and error messages required to commission, control, and monitor CS-Bus™ devices are available through the e-Node™ 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

Easy Setup and Configuration

A built-in 32-bit processor simplifies setup and enables easy upgrade to future-proof the device. The e-Node™ is designed for plug-n-play operation. Its network address (IP) is set dynamically without user intervention through a built-in DHCP server. 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™ provides a seamless interface to third-party control devices, touchsceens and keypads from AMX, Crestron, Control 4, Elan Home Systems, Vantage as well as others. 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 CS-Bus™ device connected to the e-Node™ can be controlled through web pages which can be browsed and controlled through Apple iPads, PDAs and nearly all 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 CS-bus™ lighting and motor controllers without requiring an existing zone (on that panel) to be dedicated for the connection whatsoever.

Features

- CS-Bus™ control accessory
- 32-bit embedded microprocessor simplifies setup and commissioning of CS-Bus™ devices
- Supports up to 255 CS-Bus™ controllers
- Can be located up to 4000 feet away from controlled devices

- Easy to install/small format form factor
- Enables Automation systems by AMX, Control 4, Crestron, Elan Home Systems, Vantage and others to control CS-Bus™ equipment through Internet Protocol
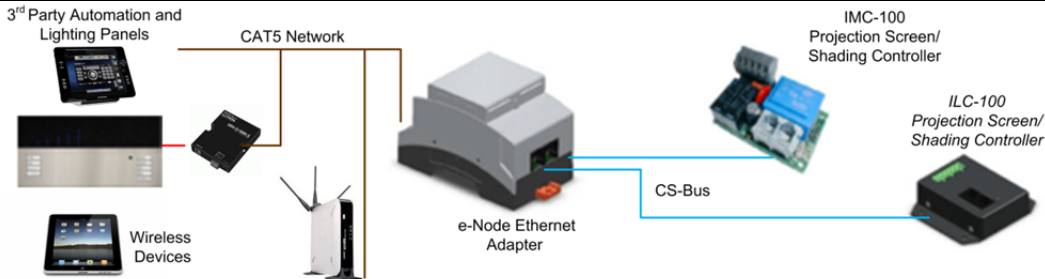- Web server with customized HTML device controller buttons

Specifications

Feature	Detail
IP Control	Intelligent Internet Protocol Adapter designed to enable Ethernet control of compatible CS-Bus™ clients
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	Two RJ-25 for CS-Bus™ (2 separate bus channels/connectors).
Alternate I/O	Additional functionality set with on-board jumpers
Ethernet Link Wiring	Standard CAT5 connects e-Node to PC, router or other Ethernet source. Maximum cable length 328' (100 m). Ethernet network and cable provided by others
Power Requirements	10v-25v DC via 2-pin indexed detachable connector, 250 ma. @12vdc standard
Power Supply	External UL-listed 12v DC power supply, 250ma. Optional POE available
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

Overview

Wiring

Applications The e-Node™ is ideal for a variety of applications. Not only can this innovative tool be used on a one-time basis by the installer to set-up and customize the smallest lighting or motor control networks, the e-Node™ is the product of choice to dramatically reduce the installation time of CS-Bus motor and lighting controllers within the largest deployments within hi-rise hotels/luxury suites, campus-wide headquarters and government agency complexes. For installation without existing (expensive) automation systems, easy-to-control web-pages available from the e-Node™ provide instant automation capabilities for home theaters and residential lighting systems. And finally where an automation system is already installed, the e-Node™ is the critical communication link between those systems which support Ethernet and its own robust CS-Bus™ network, allowing two-way communication and feedback for touchscreens, keypads, and other on-screen displays. Your application may be easily adapted from our core technology.

➢ Ethernet connectivity interface for popular automation systems

➢ iPAD(R) and Smartphone webpage-enabled control for lighting and motor products

➢ Streamlined parameter updating tool for CS-Bus controllers

➢ Troubleshooting tool for CS-Bus networks

➢ Cost efficient commissioning tool for small to large scale CS-Bus networks

➢ Enables remote web-based access without expensive home automation systems

➢ Bi-directional communication for feedback

➢ Enhances 3rd party lighting panels with web-page and Smartphone access