ARCHITECTURAL CONTROL SYSTEMS

BUILDING FACADE

HOTEL LOBBY

AIRPORT TERMINAL

FOUNTAIN

SPECIALTY RETAIL

Pathway®
Connectivity Solutions

PATHWAY CONNECTIVITY

PRODUCTS USED IN THESE APPLICATIONS MAY INCLUDE

CHOREO DIN-MOUNT ARCHITECTURAL CONTROLLER
PWCHOREO DIN

Headless programming and playback controller, with all the power of Choreo touchscreen and Cognito[2]. Log into the remote UI using a laptop or mobile device, and make programming adjustments from wherever you need to be.

COGNITO[2] THEATRICAL LIGHTING CONTROL CONSOLE
PWCOG DT

The theatrical controller that aids in programming automated luminars, color mix LEDs and conventional loads using Task Oriented Navigation and Natural Language Control.

NSB (Networked Sliders and Buttons)
PWWSI NPOE or N485

Using a PoE or RS485 multi-drop backbone, these button and sliders trigger memories and actions on Cognito[2] or Choreo. Decora® form factor modules may be arranged in one to six gang wall stations.

VIA 12-PORT INSTALLATION ETHERNET SWITCH
PWVIA RM P12 RJ45EC SFPSLOT POE

The rackmount entertainment-class gigabit PoE Ethernet switch with SFP+ fiber that forms the protective redundant ring and backbone of the entire network.

VIA 16-PORT DIN-MOUNT ETHERNET SWITCH
PWVIA DIN P16 RJ45 SFPSLOT POE

DIN-mount, entertainment-class PoE Ethernet switch that connects and powers the controllers, and wall stations.

Like all VIAs, this switch is fully managed by Pathscape and features PoE allocations and reporting, port bandwidth usage, VLANs, IGMP, RSTP, EAPS, DHCP and LLDP. It also has presets for Dante QoS.

eLink LIGHTING PROTOCOL ROUTER
PWELINK RM P2

The Pathway eLink is a PoE-enabled entertainment Ethernet lighting router designed to bridge two distinct Local Area Networks, capable of several functions where network isolation and security is a concern.

PATHPORT DIN-MOUNT DMX/RDM GATEWAY
PWPP DIN P4

A compact 4-Port gateway for securely encoding, routing and decoding DMX512/RDM data over an Ethernet lighting control network.

Pathports are legendary for their advanced feature set including slot-by-slot patching accepting multiple sources, crossfade on priority change and signal loss behaviors.

DIN-MOUNT DMX DEMULTIPLEXER (D2A)
PWINF DIN D2A

Converts DMX512 to 0-10VDC (source or sink) for control of LED drivers, Mark 7-type fluorescent ballasts, or solid state relays. Extremely versatile problem solver for lighting networks.

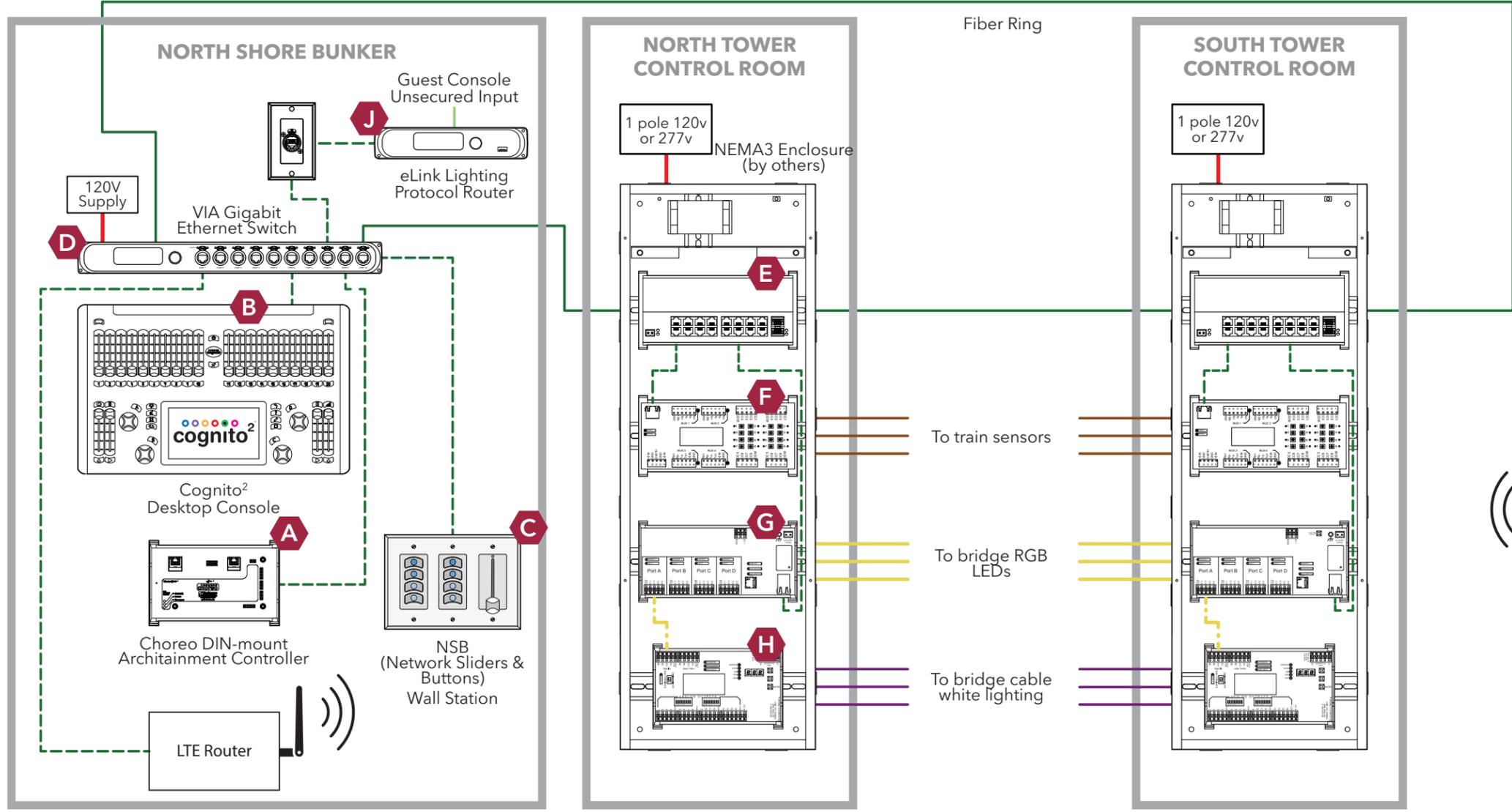### NSB 485 ARCHITECTURAL GATEWAY
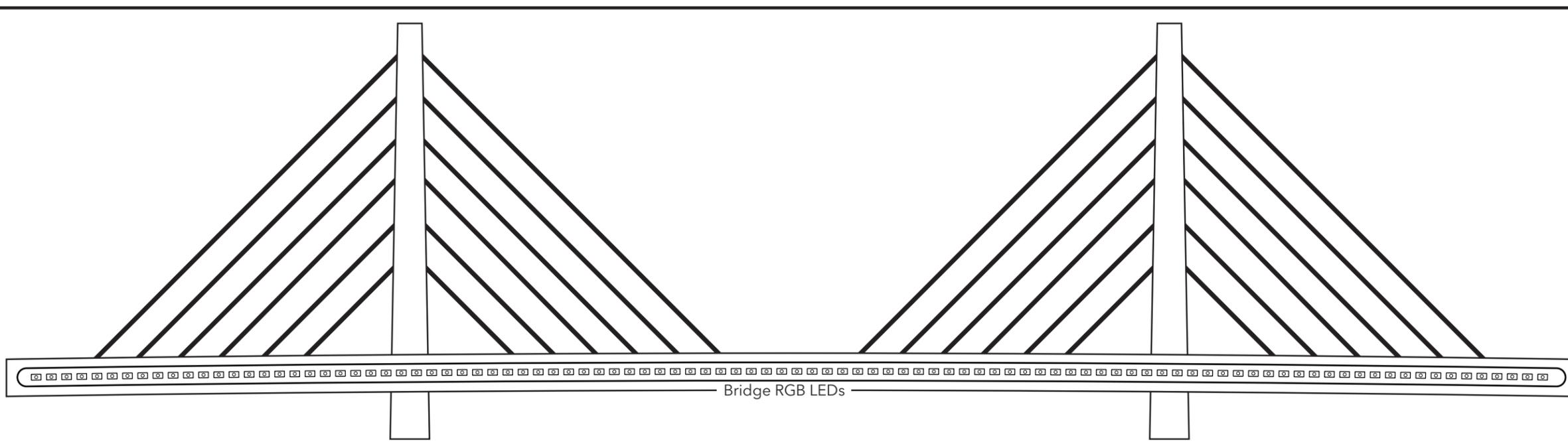**PWGW DIN N, NC8, NC16**

Connects and powers NSB 485 wall stations, as well as accepts dry contact closure inputs for triggering Memories and other Show Control events on Choreo or Cognito[2] controllers.

SYSTEM APPLICATIONS NOTES

REFER TO ONE-LINE SCHEMATIC

A In this application, **Choreo DIN-mount (PWCHOREO DIN)** is the main architectural control system. Using a laptop or mobile device connected to the network, you have full control of Choreo's interface, making programming easy from any location inside or outside your venue. Choreo and Cognito[2] show files are compatible and can be shared across the network. No need for USB show-file transfers.

B **Cognito² (PWCOG DT)** is the hands-on live action lighting console. Visiting production companies may want to operate their show lighting with a console they bring with them, referred to as a "Guest Console". Either the Cognito[2] or the guest console connect to the VIA switch for programming and playback of shows for special events, for example. Cognito[2], powered by an external PSU or by PoE, is designed for tabletop use (standard) or for installation in a 19" equipment rack.

C **NSB - Networked Sliders and Buttons (PWWSI N485 or NPOE)** stations are fully customizable with 2 or 4 button inserts and single, dual or triple slider inserts. Make wall stations 1 to 6 gangs wide, powered either by PoE or multi-drop RS485.

Each button or slider is easily mapped to a Choreo or Cognito[2] Memory, which in turn can operate lighting levels or trigger any other Show Control event such as starting a SMPTE clock, running a Playlist or even relinquishing control to other high-priority devices.

D **VIA Switches** live at the very heart of the Pathway Connectivity ecosystem. Entertainment-class Ethernet switches with advanced management features support distribution of streaming data for audio, video and lighting control applications.

The **VIA 12-Port Rack-mount Installation Switch (PWVIA RM P12 RJ45EC SFPSLOT POE)** in this application provides connection and Power-over-Ethernet for attached devices, but more importantly, a Gigabit fiber backbone for connecting the rest of the network. With two SFP+ fiber ports on the rear, the VIA allows for connecting a network over long distances that convential Category cable cannot support. It also provides redundancy with EAPS Ring Protection, where the two fiber ports create a network ring. One port is designated as the Primary and the other the Secondary; any breakage or interruption of traffic on the Primary port immediately activates the Secondary port in a split second, so the show never goes down due to equipment or cabling faults.

E In the tower control rooms there are **VIA 16-Port DIN-mount (PWVIA DIN P16 RJ45 1GSFP POE)** switches. These PoE switches connect the NSB 485 Gateway, Pathport DIN-mount 4-Port Gateway and DIN-mount Demultiplexer. The switch also has two SFP fiber ports to connect it to the main fiber network ring.

F The **NSB 485 Gateway (PWGW DIN NC16)** shown here has 16 dry contact closure inputs for simple switches or sensors, which can be programmed to trigger playback of a Choreo/Cognito[2] Memory or other Show Control event.

In this application, "train sensors" laid out on the bridge would be activated by a passing train, triggering the bridge RGB LEDs, creating an effect of the lights following the train as it crosses the bridge at any speed.

G The **Pathport 4-Port DIN-mount DMX/RDM Ethernet Gateway (PWPP DIN P4)** provides robust DMX-over-Ethernet routing, with advanced features such as RDM, crossfade between DMX sources, DMX output speed and signal loss behavior. This system uses Pathway Secure sACN ensuring only the qualified controllers can operate the system.

In this application, the gateway routes DMX/RDM to the bridge RGB LED fixtures and the D2A interfaces.

H The **DIN-mount DMX Demultiplexer (PWINF DIN D2A)** converts DMX512 to 0-10VDC for control of LED drivers or solid-state relays. In this application, it is driving the white lights on the bridge cabling.

I VIA and Pathportconnect to the **SixEye device monitoring and management cloud**. This gives operators and integrators an eye on their system 24/7 from any location in the world. SixEye monitors online status of all devices, including uptime, firmware versions, IP setup, RDM responder count and can message you if anything goes offline.

Management features include remote rebooting, DMX Hold and DMX level status, PoE device reboot and port enable/disable. Custom control panels give end users secure and simple access to triggering programmed events.

J **eLink Network Protocol Converter and Router** includes real-time DMX-over-Ethernet protocol conversion, allowing access to only certain DMX slots for a temporary/touring console for special events. The Pathway eLink isolates lighting network data from console configuration traffic and building automation systems and can secure open streaming protocols.

Bridge RGB LEDs

Fiber Ring

NORTH SHORE BUNKER

Guest Console
Unsecured Input

J eLink Lighting
Protocol Router

D 120V
Supply

VIA Gigabit
Ethernet Switch

B cognito²

Cognito²
Desktop Console

A Choreo DIN-mount
Architainment Controller

C NSB
(Network Sliders &
Buttons)
Wall Station

LTE Router

**NORTH TOWER
CONTROL ROOM**

1 pole 120v
or 277v

NEMA3 Enclosure
(by others)

E

F

G

H

To train sensors

To bridge RGB
LEDs

To bridge cable
white lighting

**SOUTH TOWER
CONTROL ROOM**

1 pole 120v
or 277v

I

SixEye
CONNECTED

Wire Key	
	Line Voltage
	0-10V (Belden 5320FL)
	DMX512 (Cat5)
	DMX512 Jumper
	RS485 (Cat5)
	Ethernet w/ PoE
	Ethernet
	Ethernet Fiber

Client

Job

Date

Pathway
Connectivity Solutions

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A pioneer in entertainment lighting, Pathway Connectivity is renowned for solid, easy-to-use equipment with comprehensive, robust features.

Our reputation for innovation and reliability is based on over thirty years commitment to enhancing the functions and interoperability of lighting systems around the world.

For demonstration and training videos, visit our Pathway Connectivity YouTube Channel at
www.youtube.com/pathwayconnectivity