



NX Lighting Controls

Operation &
Maintenance Manual

Table of Contents

System Overview	4
Building Blocks	6
Energy Savings Strategy & Code.....	8
NX Lighting Control System Best Practices	10
Comprehensive Support Options	12
Warranty Information	14
System Programming Guide	18
NX Site Manager Quick Start Guide	21
NX Mobile App Quick Start User Guide	31
Service And Maintenance Guides	49

One Lighting Control Platform for a Connected World

Thank you for your purchase of NX Lighting Controls System. This operations and maintenance manual will provide you with the necessary information to operate and maintain your NX Lighting Controls System. The contents of this manual include information on the following:

- NX System Overview
- Software User Guide
- Recommended Routine Maintenance
- Factory Support
- Warranty Information
- NX Product Information

Current has included product specification and installation sheets for each individual product. These documents have been incorporated into the appendix located at the end of this document. You should refer to the appropriate installation guide when looking for information regarding a specific component or device.

Thank you again for your purchase of a NX Lighting Controls System. If you require any additional assistance contact our NX Lighting Controls support team at (800)-888-8006.





ONE SYSTEM WIRED AND WIRELESS

Inside and Out

INDOOR & OUTDOOR DEPLOYMENT

Single System for any commercial site spanning indoor and outdoor applications

CONNECTED LIGHTING PORTFOLIO

Broad offering of NX Enabled Luminaires that simplify installation and system costs

INTELLIGENCE IS IN OUR DNA

Utilizes a Distributed Network Architecture (DNA) to eliminate single point of failure to deliver unmatched reliability and scalability

SITE MANAGEMENT

NX Network provides single user interface for system maintenance and configuration

BUILDING INTEGRATION

The NX system is BTL certified ensuring a seamless experience with existing building management systems



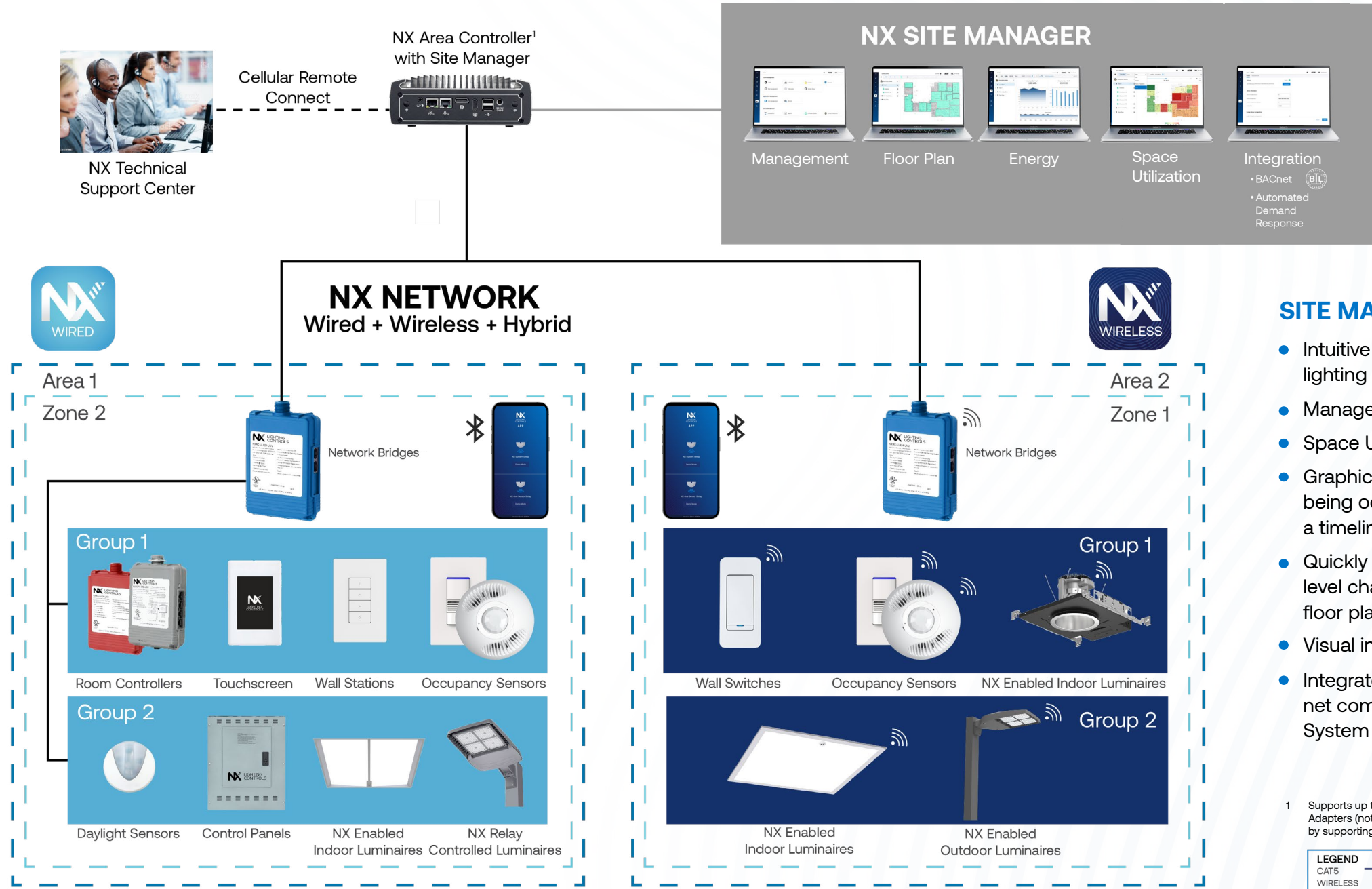
Building Blocks

NX System Overview

The NX Lighting Controls System provides all the building blocks necessary for a secure, on-premise enterprise lighting management system. The system not only controls lighting, but also provides actionable information to Building Owners and Facility Managers to create energy efficient spaces and improve occupant experience.

NX LIGHTING CONTROL SYSTEM

- Network of device and luminaires organized by Areas / Zones / Groups (AZG)
- NX wired & wireless devices and connected luminaires control lighting using relays and 0-10V dimming
- Wired devices connect using CAT5 cables and provide auto-configuration for basic code compliance
- Wireless devices are grouped together and communicate using secure AES 128-bit encrypted 2.4GHz wireless mesh technology based on the IEEE 802.15.4 standard. Network bridges manage NX Zones and connect wired and wireless zones to the NX Network
- NX Lighting Controls mobile app provides simple tool for quick device and system adjustments
- The NX Area Controller with Site Manager provides Building Owners & Facility Managers with multi-building lighting control, insights into their lighting system, and integration with Building Management Systems (BMS)



SITE MANAGER

- Intuitive web-based, comprehensive lighting management console
- Manage lighting schedules
- Space Utilization Application (Optional)
- Graphically view how spaces are being occupied within a facility over a timeline
- Quickly respond to requests for light level changes or reported issues from floor plan views
- Visual insights into energy usage
- Integrate the lighting system to any BACnet compatible Building Management System (BMS)

¹ Supports up to 1,000 NX Devices, Additional NXAC2 Site Manager Adapters (not shown) have the ability to expand the NX Network by supporting up to 1,000 additional NX Devices each.

LEGEND
 CAT5
 WIRELESS

PLATFORM SNAPSHOT					
Space Type	Architecture	Deployment	Connectivity	Integration Options	Advance Solutions
Interior & Exterior	Distributed	Standalone & Network	Wired, Wireless, Hybrid	Contacts, BACnet™, OpenADR 2.0a/2.0b	SpectraSync™

Energy Savings Strategy & Code

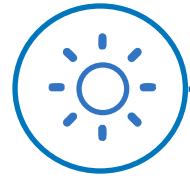
Code Compliance at Every Level of Scalability

From a single standalone room or luminaire solution to a complete networked building approach, NX can maximize energy savings and meet or exceed today's energy code requirements.



HIGH END TRIM

An artificial maximum light output set below actual maximum light output for each space



CONTINUOUS DAYLIGHTING

Automatically turns lights down to a reduced level based on the amount of daylight present in a space

DAYLIGHT OFF

Automatically turns the lights off based on the amount of daylight



DEMAND RESPONSE

A defined temporary reduction of lighting load or load shedding in response to a request from an energy authority such as a utility or regional transmission operator



BMS INTEGRATION

The data exchange for control and monitoring from a facilities Building Management System or Energy Management System using a common protocol such as BACnet™



FULL OFF

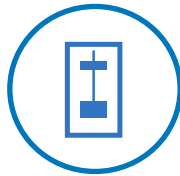
Automatically turns the lights off within a set period of time after all occupants leave the space

PARTIAL ON

Automatically turns lights on to a reduced level between full on and full off when occupants enter the space

PARTIAL OFF

Automatically turns lights down to a reduced level between full on and full off after all occupants leave the space



LOCAL CONTROLS

Manual lighting controls that control all the lights in that space and requires human intervention

MULTI-LEVEL CONTROL

Providing additional light levels in a space beyond Full ON and Full OFF

PLUG LOAD CONTROL

Automatically turns off designated receptacles in response to all occupants leaving the space or time of day



SCHEDULING

Controls light levels based on facility schedule

ASTRONOMICAL TIME CLOCK

Controls light levels based on sunrise/sunset and project location



SETBACK

Automatically turns lights down to a reduced level after all occupants leave the area



STANDARDS & CODES	IECC-2021	ASHRAE-2022	TITLE 24 PART 6 2023	LUMINAIRE	ROOM	BUILDING
INDOOR						
High End Trim				•	•	•
Local Control	C405.2.2.3	9.4.1.1 (a)	130.1 (a)	•	•	•
Multi-Level Control	C405.2.2.2	9.4.1.1 (b)	130.1 (b)	•	•	•
Scheduling	C405.2.2.1	9.4.1.1 (j)	130.1 (c) 4	•	•	•
Occupancy Sensor Full OFF	C405.2.1.1	9.4.1.1 (h)	130.1 (c) 6	•	•	•
Occupancy Sensor Partial ON	C405.2.1.1	9.4.1.1 (c)	130.1 (c) 5	•	•	•
Occupancy Sensor Partial OFF	C405.2.1.2	9.4.1.1 (g)	130.1 (c) 6	•	•	•
Continuous Daylighting	C405.2.3	9.4.1.1 (e)	130.1 (d)	•	•	•
Plug Load Control		8.4.2	130.5 (d)		•	•
Demand Response			130.1 (e)	Contact Closure	Contact Closure	BACnet™
BMS Integration				Contact Closure	Contact Closure	BACnet™
OUTDOOR						
Astronomical Time clock	C405.2.5(2)	9.4.1.4 (b)	C405.2.2.3	•		•
Setback	C405.2.5(3)	9.4.1.4 (d)	C405.2.2.3	•		•
Daylight OFF	C405.2.5(1)	9.4.1.4 (a)	C405.2.2.3	•		•
Demand Response				Contact Closure		BACnet™
BMS Integration				Contact Closure		BACnet™

Network Topology

NX Lighting Control System Best Practices

Current's NX Distributed Network Architecture (DNA) uses two networks for communication and control. Each is designed to support NX's DNA: SmartPORT™ for the local area network and NX networked™ for the wide area network. Current recommends the following parameters for best practice design:

NX networked

Communication backbone for area control. All NX networked devices must be daisy chained from any single NX networked Segment port from an Area Controller

- 328 ft per daisy chained segment– Ethernet, Cat5e or better
- Up to 64 devices per NX networked port (See last bullet)
- NX networked is a powered network; do not connect NX networked Cat5 cables to standard Ethernet devices. Consult factory if additional network segments are required
- Number of ports can be expanded using POE switch (see diagram)
- Total number of NX networked devices cannot exceed 500 per Area Controller

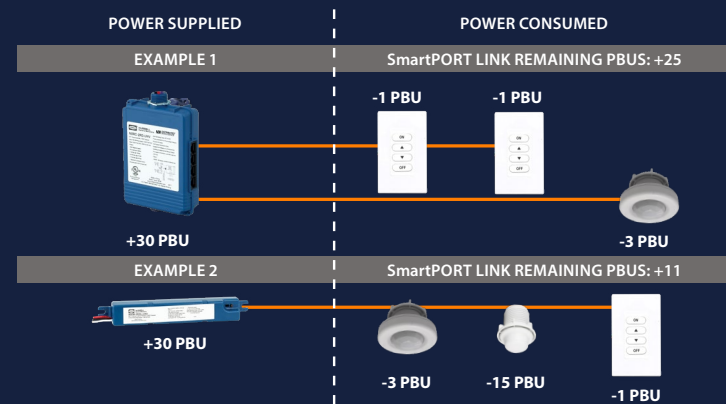
SmartPORT™

Communication backbone for zone level control. Bridges connect NX networked and SmartPORT layers.

- All SmartPORT devices are Cat5 daisy chain connected
- Up To 1,000 ft total cable length per SmartPORT Zone Segment
- Up to 32 NX Devices per SmartPORT Zone Segment

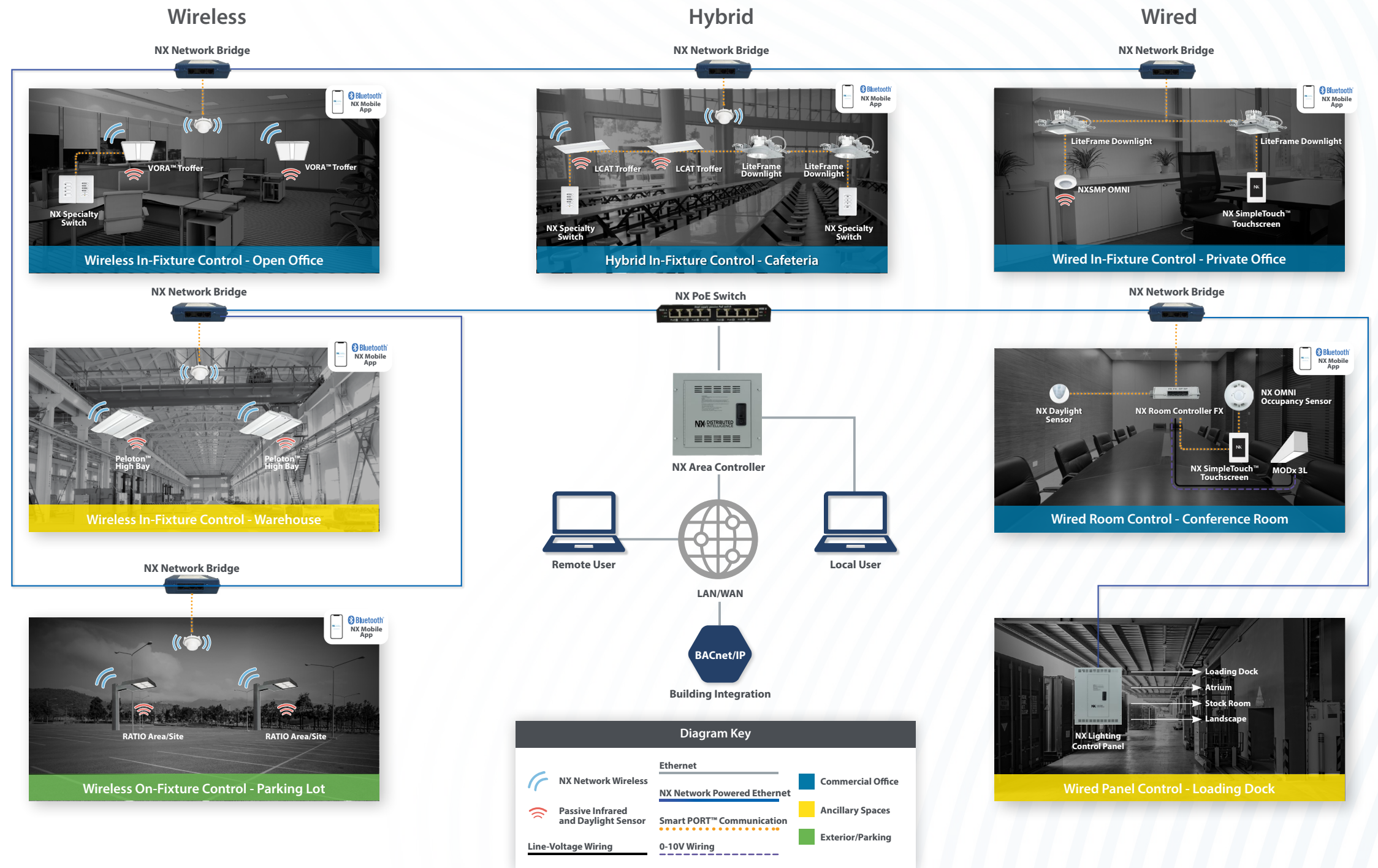
SmartPORT Power Budgeting

Each SmartPORT connection has a PBU (Power Budget Unit). SmartPORT devices either supply power (+ PBUs) to the network or draw power from it (-PBUs). For every device this is pre-calculated from factory. Below is a reference example for PBU calculation when designing a system.



Wireless Radio

Best practice indoor radio range for NXRM2-H is 100 ft. Actual range is dependent upon building construction and radio location. Best practice outdoor range is 300 ft.



Comprehensive Support Options

To Meet Project Needs

Contact Us

Call (800) 888-8006 and select one of the options listed below



Option 1
Tech Support



Option 2
Field Commissioning

Tech Support Hours: 7:00am - 7:00pm EST, Monday - Friday

Quotes, Applications, Layouts and Submittal Requests:
controls-Design@currentlighting.com

Technical Support (troubleshooting, specifications, programming):

currentlighting.com/controls/technical-services



Phone and Remote Support

While it is our goal to provide you with intelligent, simple and scalable control solutions, customer experience level and project complexity may necessitate additional support during the design development, construction and post-occupancy stages of a project. The support team is available for consultation to evaluate multiple control scenarios to identify the ideal lighting control device or system to meet energy code requirement and customer criteria. Additionally, our team of friendly and experienced professionals is enabled to assist on-site personnel, such as installation contractors, third party integrators, certified field technicians and facilities personnel, to quickly resolve issues and provide additional support.

Warranty

Current provides a 5-year limited warranty for LED luminaires and Lighting Controls devices.



On-site Support

Current offers on-site support service to ensure your project goes smoothly. While Current products are designed with simplicity in mind, some projects may benefit from a Field Service Engineer to perform an on-site pre-installation walk-through, after-hours and remote startup assistance, occupant training, sensor tuning, preset programming and other pre/post-occupancy services.

Design Services



Our team of lighting control system design professionals are available to provide sensor layouts, networked system design services and third party integration support for new and retrofit projects. Our goal is to provide you with on-time and accurate delivery of design deliverables optimized for your specific application, compliant with local building codes and project specifications.

The Institute



Classroom Education

Current offers cutting edge educational opportunities at Institute facilities across the United States. Our headquarters, located in Greenville, SC houses one of the industries largest training facilities with over 25,000 square-feet and is engineered to present a total solutions approach to your lighting and controls challenges.

Additionally, we have dedicated Institute facilities in North Carolina and Texas as well as Current facility classrooms for in-person instruction across the United States.

Virtual Education

Current's virtual education opportunities cover many facets of the lighting and controls industry including fundamentals, trends, technology, and product solutions. In addition, we can provide accredited continuing education (CEU) modules to help you maintain your certifications.

Engage with us in a way that's best for you!

- An online university with modules designed for self pace individual learning consumed on-demand.
- Live (private) instructor-led training private events for individuals within your own organization designed specifically for your needs.
- Live (public) instructor led training public events highlighting new technologies, continuing education, and lighting trends.

Warranty Information

Limited Warranty ("Warranty"): Subject to the exclusions set forth below, HLI SOLUTIONS, INC. ("HLI") warrants that the HLI branded occupancy sensors, daylight controls, lighting control panels, network devices and related products (collectively, "Products") will be free from defects in material and workmanship for a period of five (5) years from the date of the certificate of building occupancy or proof of installation, whichever occurs first ("Warranty Period"). If the certificate of building occupancy is not available or there is no proof of installation, the Warranty Period shall begin with the Product shipment date.

Exclusions: This Warranty only covers Product function and does not cover existing building and/or network performance or limitations, or any Product re-programming or field adjustments done by anyone that has not been authorized or certified in writing by HLI. Products that are identified by HLI as requiring on-site commissioning will only be covered by this Warranty if commissioned by HLI-certified personnel. Warranty coverage shall not apply to any equipment or integration services of another manufacturer used in conjunction with HLI Products or where factory-authorized cables are not used.

This Warranty applies only when the Products have been properly handled, stored, wired, transported, installed, operated and maintained in accordance with the applicable Specifications, including, without limitation, installation in applications in which ambient temperatures are within the range of specified operating temperatures and operation within the electrical values shown on the Specifications. HLI shall have no responsibility under this Warranty for any failure of the Products that results from external causes including without limitation: acts of nature; physical damage; exposure to adverse or hazardous chemicals or other substances; use of reactive cleaning agents and/or harsh chemicals to clean the Products; environmental conditions; vandalism; fire; power failure, improper power supply, power surges or dips, and/or excessive switching; fatigue failure or similar phenomena resulting from induced vibrations, harmonic oscillation or resonance associated with movement of air currents around the Product; animal or insect activity; fault or negligence of the purchaser of the Products, any end user of the Products and/or any third parties not engaged by HLI, improper or unauthorized use, installation, handling, storage, alteration, maintenance or service, including failure to abide by any product classifications or certifications, or failure to comply with any applicable standards, codes, recommendations, product specification sheets, use of Products with products, processes or materials supplied by the purchaser of the Products, any end user or third parties, or any other occurrences beyond HLI's reasonable control. In addition, HLI shall have no responsibility under this Warranty for any substantial deterioration in the Product finish that is caused by failure to clean, inspect or maintain the finish of the Products. During the Warranty Period some staining, chalking or fading may occur. This is normal aging of the finish and is not a manufacturing defect; therefore, it is not covered by this Warranty. Neither polycarbonate nor acrylic material used in the Products is warranted against yellowing, as yellowing may naturally occur over time due to normal aging. If the Products are used on existing foundations, anchorages or structures, the purchaser of the Products and/or any end user is solely responsible for the structural integrity of such existing foundations, anchorages or structures and all consequences arising from their use.

Adequate records (as determined by HLI in its sole discretion) of operating history, maintenance, and/or testing must be kept by the end user and provided to HLI upon request to substantiate that the Products have failed to comply with the terms of this Warranty. The Products are not warranted against costs that may be incurred in connection with changes or modifications to the Products required to accommodate site conditions and/or faulty building construction or design. In addition, the Products are not warranted against cost resulting from installation of third party components, failures of third party supplied components, or failures of HLI supplied Products caused by third party supplied components. This Warranty is not applicable to any product(s) which are not installed and operated in accordance with the current edition of The National Electric Code (NEC), the Standards for Safety of Underwriters' Laboratory, Inc. (UL), or the standards for the American National Standards Institute (ANSI), and with HLI instructions and guidelines for the Product. **THIS WARRANTY IS VOID WITH RESPECT TO ANY PRODUCT IF THE PRODUCT IS NOT USED FOR THE PURPOSE FOR WHICH IT WAS DESIGNED OR IF ANY REPAIRS OR ALTERATIONS ARE MADE BY ANY PERSON NOT AUTHORIZED BY HLI IN WRITING.**

Except as otherwise set forth herein, HLI does not warrant emergency batteries/inverters, replaceable consumables (such as printers or cartridges), computer hardware, mobile computing devices, software (other than firmware), commissioning systems, third party gear, and installation services, remote programming, professional services and other third party devices that are not manufactured by HLI, which are covered by the applicable third party manufacturer warranty (if any). Such third party manufacturer shall be solely responsible for the costs related to any claims associated with any such devices. Emergency batteries/inverters, occupancy sensors, daylight controls, lighting control panels and networked devices provided by HLI are warranted separately.

Remedy: If the Product(s) fail to comply with the terms of this Warranty and the end user (and the purchaser of the Product(s) if different from the end user) has fully complied with all of the obligations under this Warranty and the Terms and Conditions of Sale for HLI Solutions, Inc. including, without limitation, payment in full in respect of the Products, HLI, at its sole option, will repair or replace the Product(s) with the same or a functionally equivalent Product(s) or component part(s). Specifically, HLI will repair the Product, replace with a similar or like Product (as determined by HLI in its sole discretion), or issue a credit to the purchaser which may be used for future HLI product purchases. (The amount of such credit shall be calculated by HLI at its sole discretion). HLI reserves the right to use new, reconditioned, refurbished, repaired or remanufactured products or parts in the repair or replacement of any Product covered by this Warranty. This Warranty excludes any and all removal or reinstallation costs and expenses including, without limitation, labor and equipment required to remove and/or reinstall original or replacement Product(s) or parts, shipping costs to return nonconforming Products(s) or any damage that may occur during the return of any Product(s) to HLI. This Warranty only extends to the Products as delivered to, and is for the sole and exclusive benefit of, the end user of the Products at the original location. HLI reserves the right to use new, reconditioned, refurbished, repaired or remanufactured products or parts in the repair or replacement of any Product covered by this Warranty. This Warranty may not be transferred or assigned by the end user. The repair, issuing of future purchase credit or replacement of any Products or component part within the Products is the sole and exclusive remedy for failure of the Products to comply with the terms of this Warranty and does not extend the Warranty period. Warranty claims regarding Products must be submitted in writing within thirty (30) days of discovery of the defect or failure to an authorized HLI customer service representative. Products or component parts may be required to be returned for inspection and verification of non-conformance by HLI, but no Products or component parts will be accepted for inspection, verification or return unless accompanied by a completed return materials authorization form which can be obtained only from an authorized HLI customer service representative. HLI is not responsible for any costs and expenses incurred in connection with the shipment of Products to HLI, but HLI shall bear all cost and expense incurred in connection with the shipment of replacement Products to the end user.

NO OTHER WARRANTIES: THE FOREGOING WARRANTY TERMS ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES AND HLI EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED RELATING DIRECTLY OR INDIRECTLY TO THE PRODUCT(S), WHETHER ORAL, WRITTEN, OR ARISING BY COURSE OF DEALING OR USAGE OF TRADE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY HLI OR ANY EMPLOYEE, AGENT, DISTRIBUTOR OR OTHER SUPPLIER OF HLI PRODUCTS SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF THE WARRANTY. NO EMPLOYEE, AGENT, DISTRIBUTOR OR OTHER SUPPLIER OF HLI PRODUCTS HAS THE AUTHORITY TO MODIFY OR AMEND THIS WARRANTY WITHOUT EXPRESS WRITTEN AUTHORIZATION FROM HLI.

LIMITATION OF LIABILITY: IN NO EVENT SHALL HLI'S TOTAL LIABILITY IN RESPECT OF ANY AND ALL CLAIMS OF ANY KIND WHETHER IN CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE ARISING OUT OF OR IN CONNECTION WITH, OR RESULTING FROM HLI'S PERFORMANCE OR BREACH OF THIS WARRANTY, OR FROM HLI'S SALE, DELIVERY, RESALE, REPAIR, OR REPLACEMENT OF ANY PRODUCT(S) OR THE FURNISHING OF ANY SERVICE, EXCEED THE PURCHASE PRICE ALLOCABLE TO THE PRODUCT(S) THAT GIVE RISE TO THE CLAIM, AND ANY AND ALL SUCH LIABILITY SHALL TERMINATE UPON THE EXPIRATION OF THE WARRANTY PERIOD. IN NO EVENT SHALL HLI BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, MULTIPLE OR PUNITIVE DAMAGES, EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER AS THE RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR ANY OTHER THEORY, INCLUDING WITHOUT LIMITATION LABOR OR EQUIPMENT REQUIRED TO REMOVE AND/OR REINSTALL ORIGINAL OR REPLACEMENT PARTS, LOSS OF TIME, PROFITS OR REVENUES, LACK OR LOSS OF PRODUCTIVITY, LOSS OF USE OF THE PRODUCT(S) OR ANY ASSOCIATED EQUIPMENT, INTEREST CHARGES OR COST OF CAPITAL, COST OF SUBSTITUTE EQUIPMENT, FACILITIES, SYSTEMS, SERVICES OR DOWNTIME COSTS, DAMAGE TO OR LOSS OF PROPERTY OR EQUIPMENT, ANY INCONVENIENCE, COST OR DAMAGE ARISING OUT OF ANY DELAY IN PERFORMING, FAILURE TO PERFORM OR OTHER BREACH OF THE FOREGOING WARRANTY OR OBLIGATIONS UNDER SUCH WARRANTY, OR CLAIMS OF THIRD PARTIES AGAINST THE PURCHASER OF THE PRODUCTS OR THE END USER, ARISING OUT OF OR IN CONNECTION WITH THE SALE, INSTALLATION, USE OF, INABILITY TO USE, OR THE REPAIR OR REPLACEMENT OF THE PRODUCTS.

Right to Modify or Discontinue Warranty: This Warranty is effective for the purchases of Products on or after the effective date set forth herein and is in consideration of and is expressly subject to and conditioned by the terms set forth herein. HLI reserves the right to modify or discontinue this Warranty without notice provided that any such modification or discontinuance will only be effective with respect to any Products purchased after such modification or discontinuance.



System Programming Guide

EXTREMELY IMPORTANT: Do not attempt to commission any devices using the Area Controller with Site Manager without following the specific steps outlined in this document. It is highly recommended that the rooms be configured and named using the NX Lighting Controls App prior to discovery by NX Site Manager.

NX SYSTEM ARCHITECTURE

Understanding the architecture of the NX Lighting Control System is key to a successful installation. While NX is a completely distributed system, there are some unique features that greatly shorten and simplify the discovery and setup process. The NX Area Controller with the NX Site Manager web-based application (NXAC2-120-SM) is the key component used to create a networked system. However, prior to discovering devices on the NX Network, the recommended practice is to use the NX Lighting Controls App to configure each zone's devices (e.g., room controller and fixture module relays and dimmers, sensors, and switches) to ensure that the zone is operating as it should. After each zone has been configured and verified using the app, NX Site Manager is then used to discover and network the zones together. During the network discovery and setup process, NX Site Manager creates and stores a database which includes all the devices that make up the system and records a copy of the settings that reside in the devices. NOTE: Since the settings, programming, schedules, etc. are stored on each device, the NX Area Controller does not need to be online for basic control functions to operate. One exception to this rule is when integration with a Building Automation System (using BACnet/IP) is required. When integrating with a BAS, the NX Area Controller needs to be online, at all times, in order to communicate with the BAS.

Most control functions at the human level, take place within the logical construct of a Zone. That is, sensors, switches, relays, dimmers, etc. that interact to perform a local sequence of operation, do so through relationships established within a Zone. The link between these components is made through inclusion in a Group. A button is made to control a relay simply by these being members of the same group. Each Zone includes 16 groups providing a great deal of flexibility. Typically an occupancy sensor will be a member of all used groups assuring that all lighting in the Zone will be turned off. A Zone is analogous to a room or contiguous space in a building. See the following Key Terms section.

A number of Zones will typically be associated together within the logical construct of an Area. This association not only provides a way to organize a building or site, but establishes a layer of control that can span multiple Zones. For instance, ten rooms on the floor of a building will each have a unique local sequence of operation as individual Zones. By associating these ten rooms with an Area, they are automatically made children to the Area (floor) when viewed in the navigation tree within the Area Controller's GUI. And, it is now possible to perform local control functions that span all or part of the Zones on the floor (area). An example is a master on/off switch for the floor. See Area Level Switch in the Key Terms below.

An NX system may include one or more lighting control panels. These panels contain resources that will be associated into Zones during the commissioning process. The construct for programming panels within the NX system differs from the traditional concepts used with other panel product lines. Panels can contain relays, dimmers, low voltage inputs, and low voltage outputs. Additionally, low voltage switches and sensors connected to the panel's low voltage input terminals will appear as available resources during the discovery and commissioning process. Resources from a panel are individually commissioned into Zones making them usable for control. Again, Groups are the mechanism used for linking inputs to outputs.

The NX Room Controllers provide a unique twist on the typical construct of distributed controls. At this level, the system employs a hybrid architecture that takes advantage of local self configuration of devices to provide out of the box functionality and simplified commissioning. Room controllers, switches, and sensors physically connected together at the room level automatically configure into a Zone. The control parameters can be modified locally using the Manual Configuration process or by using the NX Lighting Controls App. When discovered by the NX Site Manager, the Room Controller Zone will remain intact and the configuration will persist during commissioning. It is not necessary to individually commission the devices that have already been programmed using the app.

INTRODUCTION

The NXAC-120 Area Controller is a web server which employs a standard browser as the user interface. No software is required, other than a web browser, to access the features of the NXAC user interface. Before attempting to use the Area Controller with your NX™ networked lighting control system, be sure that the Area Controller has been installed and configured as defined in the Installation Instructions shipped with the unit.

KEY TERMS

Area - a virtual segmentation that defines a portion of the site. This could be a floor, a wing, or a building on a site that has a cluster of buildings. A project may have up to 128 Areas.

Area Level Button - a button on a programmable switch station that is configured to control lighting in multiple zones.

Area Level Switch - a specialty switch station that is configured to control lighting in multiple zones

Commissioning (Area Controller) - the process of moving discovered devices into Areas and Zones where they will be programmed and made operational.

Decommissioning (Area Controller) - the process of moving a device from a Zone back to the Uncommissioned Devices folder. This erases all programming associated with the device(s).

Discovery - the process of querying the NX networked™ network to find connected NX devices. This process will generate a list of NX devices in the Uncommissioned Devices folder in the user interface navigation tree.

NX networked - the building wide POE network that interconnects the primary network components of the NX Control System.

Manual Configuration - the process by which a Room Controller Zone is reconfigured using the buttons and LED indicators provided on the room controller and switches

Resource - an individual switch, relay, dimmer, input, output, or sensor that is discovered by nature of it being contained in, or connected to, a network level device such as a panel, NXSP SmartPORT module or NXDCIO input output module.

Room Controller Zone - a room or contiguous space that uses one or more Room Controllers with associated room devices to provide distributed control functionality. A Room Controller Zone is treated as a single entity during the commissioning process.

Room Devices - switches, occupancy sensors, daylight sensor or other accessory devices that are physically connected by Cat5 cables to a Room Controller Zone.

Self Configuration - the process by which a Room Controller Zone is configured automatically to perform a prescribed sequence of operation as room devices are plugged into the SmartPORTs

Uncommissioned Devices - NX devices displayed in the "Uncommissioned Devices" folder in the user interface navigation tree. For the devices to be usable, they must first be commissioned.

Zone - a room or contiguous space within an Area. Each Area may have up to 128 Zones.



NX Site Manager

QUICK START GUIDE

ABOUT THIS DOCUMENT

This document describes how to configure, monitor and control a NX Distributed Intelligence™ System with the NX Area Site Manager (Model # NXAC2-120-SM) Web-based Software Application.

IMPORTANT INFORMATION

This document does not cover the initial installation and setup of the NX Area Controller V2 hardware. Please refer to the [NX Area Controller with Site Manager Installation Instructions](#) if you are configuring this software for the first time.

The information and procedures in this document assume that:

An NX Area Controller V2 with Site Manager has already been installed and setup on your site.

You are familiar with the NX Lighting Controls App.

You have read the NX Area Controller with Site Manager Installation Instructions including the process for accessing the Login Page of the NX Site Manager application.

RELATED VIDEOS AND DOCUMENTATION

Links to videos showing the different functions of NX Site Manager are available in Site Manager's help. Click on the "?" button for help information.

[NX Area Controller with Site Manager Installation Instructions](#)

This guide covers the initial installation and setup of the NX Area Controller V2 and how to access the Login Page.

[NX Area Controller V2 with Site Manager Specification Sheet](#)

This guide describes key features, ordering instructions and typical network wiring diagrams for the NX lighting control network.

IMPORTANT: Do not attempt to commission any devices using the NX Site Manager without following the specific steps outlined in this document. It is highly recommended that the rooms be configured and devices named using the NX Lighting Controls App prior to discovery by NX Site Manager.

NX SYSTEM ARCHITECTURE

Understanding the architecture of the NX Lighting Controls System is key to a successful installation. While NX is a distributed system, there are some unique features that greatly shorten the discovery process and simplify the setup procedure. The NX Area Controller V2 with Site Manager (NXAC2-120-SM) is the central component on the network which communicates to all connected devices. During the setup process, a database is created and stored in the NXAC2-120-SM. The database contains all the system components and configuration settings. Since the settings, programming, schedules, etc. are stored in the NX devices, the Site Manager does not need to be online for basic control functions to operate. One exception is when integrating to a Building Automation System (BAS) via BACnet.

Most control functions take place within the logical construct of a Zone. Sensors, switches, relays and dimmers establish relationships within a Zone to interact and perform a sequence of operation. The link between these components is made through inclusion in a Group. Each Zone includes up to 16 Groups providing a great deal of flexibility. Typically, an occupancy sensor will be included in all the Groups that are created in the associated Zone assuring that all lighting in the Zone will be turned OFF when unoccupied. And a button on a switch can control a relay in the Zone simply by including the switch in the same Group within the Zone.

A Zone is analogous to a room or contiguous space in a building. See the Key Terms section.



Zones will typically be associated together within the logical construct of an Area. This association not only provides a way to organize a building or site, but also establishes a layer of control that can span multiple Zones. For instance, ten rooms on the floor of a building can each have a unique local sequence of operation as individual Zones. By associating these ten rooms with an Area, they are automatically made children to the Area (floor) when viewed in the Navigation Tree within the Site Manager's Graphical User Interface (GUI), making it possible to perform local control functions that span all or part of the Zones on the floor (Area). An example is a master ON/OFF switch for the floor. See Area Level Switch in the Key Terms section.

An NX system may include one or more room controllers, fixture modules or lighting control panels. These parent objects contain resources that will be associated with Zones during the commissioning process. These parent objects can contain relays, dimmers, low voltage inputs, and low voltage outputs. Low voltage switches and sensors connected to the parent objects will appear as available resources during the discovery and commissioning process. Resources from parent objects are individually commissioned into Zones making them usable for control. Groups are the mechanism used for linking inputs to outputs.

INTRODUCTION

The NX Area Controller V2 with Site Manager (NXAC2-120-SM) is a web server which employs a standard browser as the user interface. No software is required other than a standard web browser to access the features of the Graphical User Interface. Before attempting to use the NX Site Manager with your NX Lighting Controls System, be sure that the NX Area Controller V2 with Site Manager has been installed and configured as defined in the Installation Instructions shipped with the unit.

KEY TERMS

- Area** - A virtual segmentation that defines a portion of the site. This could be a floor, a wing, or a building on a site that has a cluster of buildings. A project may have up to 128 Areas.
- Area Level Button** - A button on a programmable switch station that is configured to control lighting in multiple Zones.
- Area Level Switch** - A specialty switch station that is configured to control lighting in multiple Zones.
- BACnet®** - A Data Communication Protocol for Building Automation and Control Networks (ANSI/ASHRAE Standard 135-2020)
- Commissioning** - The process of moving discovered devices into Areas and Zones where they will be programmed and made operational.
- Decommissioning** - The process of removing a device from a Zone back to its uncommissioned factory default state. This erases all programming associated with the device(s).
- Discovery** - The process of querying the NX Network to find connected NX devices. This process will generate a list of NX devices in the Discovered Navigation Tree in the user interface.
- NX Network** - The building wide network that interconnects the primary network components of the NX Lighting Control System.
- Manual Configuration** - The process by which a Room Controller Zone is reconfigured using the buttons and LED indicators provided on the room controller and switches.
- Navigation Tree** - displays all the NX system components and hierarchy.
- Resource** - An individual switch, relay, dimmer, input, output, or sensor that is discovered by nature of it being contained in, or connected to, a network level device such as a panel.
- Room Devices** - Switches, occupancy sensors, daylight sensors or other accessory devices that are physically connected to a Room Controller's SmartPORTs via Cat5 cables.
- Self-Configuration** - The process by which a Room Controller Zone is configured automatically to perform a prescribed sequence of operation as room devices are plugged into the SmartPORTs.
- Uncommissioned Devices** - NX devices displayed in the Discovered Navigation Tree that do not have a checked commissioned icon. For the devices to be usable, they must first be commissioned into an Area and Zone.
- Zone** - A room or contiguous space within an Area. Each Area may have up to 128 Zones.

STEP BY STEP CHECK LIST

1. Read this entire document
2. Have a plan for organizing the site
3. Make provision for identifying Areas and Zones
4. Setup the system
5. Discover the network and confirm that all devices are found and appear in the Discovered Navigation Tree.
6. Commission the devices by assigning them to the desired Zone in the Commissioned Navigation Tree.
7. Configure the devices
8. Backup the database

STEP 1 - READ THIS DOCUMENT

It is extremely important to follow the procedures described in this document, especially for when commissioning devices and for creating Zones. A successful project requires that the Commissioned Navigation Tree be properly constructed during the commissioning process.

STEP 2 - PLANNING

Before attempting to do any commissioning or programming, you should plan the organization of the site. While the system may be configured with all Zones residing in a single Area, it may be beneficial to divide the site into logical Areas, each with the appropriate Zones that are physically located in that Area. This will organize the Commissioned Navigation Tree and make navigating the site easier. For instance, a school with an East and West classroom wing, a core area, and exterior lighting might be setup with four Areas:

1. East Classroom Wing
2. West Classroom Wing
3. Core Area
4. Exterior Lighting

Each Area will then contain the appropriate Zones. For instance, the Core Area might contain:

1. Principal's office
2. Entry lobby
3. Gymnasium
4. Cafeteria
5. Auditorium

TIP: If there will be a need to have a master switch to control multiple Zones, these Zones must be located within a single Area. An Area level switch or Area level button cannot control lighting in multiple Areas.

STEP 3 - IDENTIFYING THE AREAS AND ZONES

STEP 3 - IDENTIFYING THE AREAS AND ZONES

It is highly recommended that the Areas and Zones (rooms) be named prior to discovery by the NX Site Manager. This procedure requires a Bluetooth® radio module or Bluetooth® enabled device and the NX Lighting Controls App running on a smart device. If this is not possible, it will be necessary to know the MAC address of the NX Network Bridge Modules (NXHNB2) associated with each Zone. This is the number directly below the bar code beginning with a zero. Extra stickers are provided on the NXHNB2 housing as a convenience. Make sure the sticker is visible after the NXHNB2 is installed.



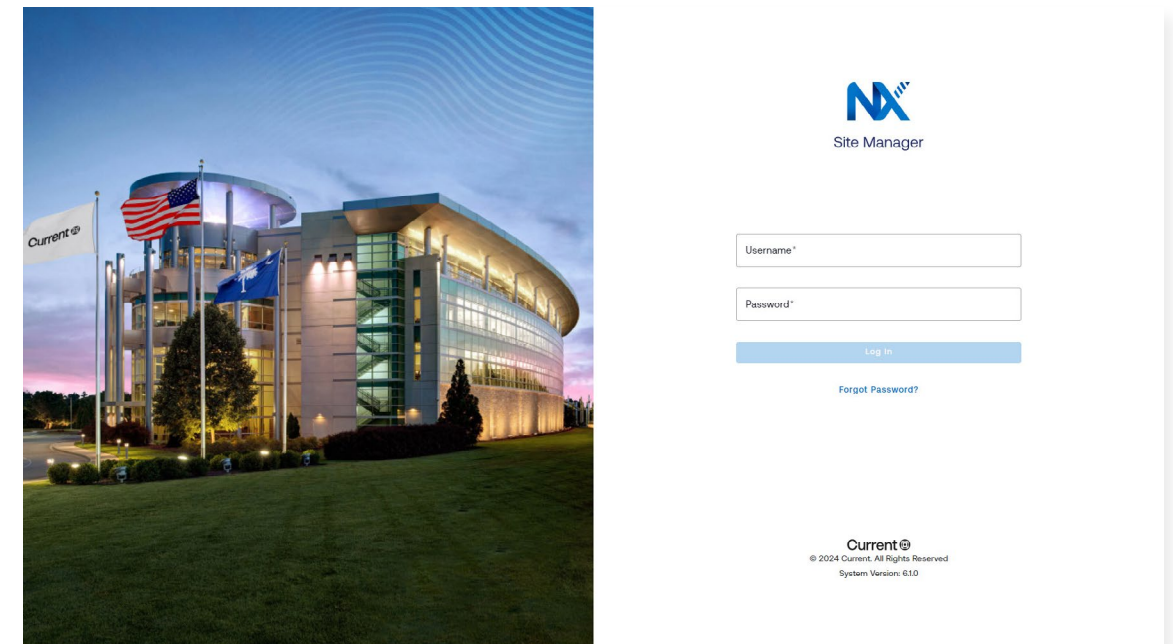
3.1 LOGGING INTO THE NX SITE MANAGER WEB BASED SOFTWARE APPLICATION

IMPORTANT: Users must adhere to the recommended browser requirements for their machine, for successful access:

- Google Chrome: 83.0.4103.106 (64-bit)
- Mozilla Firefox: 77.0.1 (64-bit) and up
- Microsoft Edge: 44.18362.449.0 and up
- Microsoft Chromium: Any version

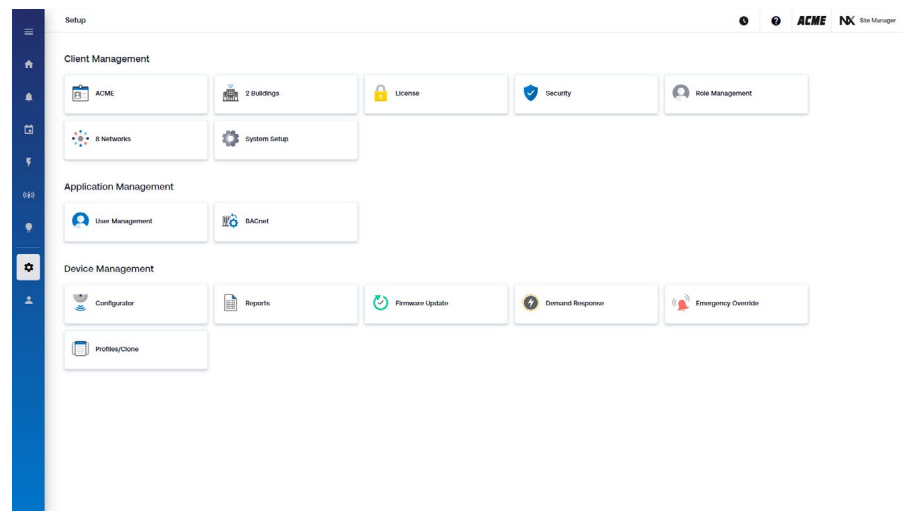
Follow the steps below to login to NX Site Manager:

1. Connect your PC/Laptop to RJ45 Port 1 on the Site Manager Controller.. Refer to the NX Area Controller V2 with Site Manager Installation Instructions for details on connecting to and configuring the network settings on your computer.
2. Login using the following: User name: 'sysadmin'; Password: 'Sal1234'.
3. See Login screen below



STEP 4 – SYSTEM SETUP

The Setup Dashboard is displayed by clicking on the Setup gear icon.



The Setup tiles are used to configure the following:

Client Management

- Client Information
- Building Information
- Software License Keys
- Security Information
- Role Management
- Networks
- System Setup

Application Management

- User Management
- BACnet Configuration

Device Management

- Device Commissioning and Configuration
- Report Generation
- Firmware Update
- Demand Response Configuration
- Firmware Update
- Demand Response Configuration
- Emergency Override Configuration
- Profiles/Clone

STEP 4.1 – CLIENT INFORMATION

Click on the Client Information tile to display the Client Information page which is used to configure the General Client Information, Holidays and Custom Holidays.

STEP 4.2 – BUILDINGS Click on the Buildings tile to display the building currently configured. Click on a building's tile to display the Building's Information page, which is used to configure the building's name, address, longitude/latitude, contact information, electricity cost per Kilowatt, building image and building hours. To add a new building click on the +Add Building button.

STEP 4.3 – LICENSE

Click on the License tile to import software licenses to unlock optional software features.

STEP 4.4 – SECURITY

Click on the Security tile to configure the number of password reset question, the inactive user session timeout, and the security certificate mode.

STEP 4.5 – ROLE MANAGEMENT

Click on the Role Management tile to add, view, change and delete roles. Click on the +Add Role button to add a role and assign permissions and building assignments to the role.

STEP 4.6 – NETWORK MANAGEMENT

Click on the Networks Management tile to add and configure NX Site Manager Adapters which are used to expand the NX Network.

STEP 4.7– SYSTEM SETUP

Click on the System Setup tile Management tile to configure the NX Site Manager's IP address, DNS servers, NTP server, system date & time, perform database management and software updates, manage log files, check state of scheduled jobs, restart processes and configure system wide facility rates (e.g. override duration time).

STEP 4.8 – USER MANAGEMENT

Click on the User Management tile to add, view, change, and delete users. Click on the +Add User button to add a user and assign the user roles and permissions.

STEP 4.9 – BACNET

Click on the BACnet tile to configure BACnet general settings (including object to export), and virtual device ID information.

STEP 4.10 – CONFIGURATOR

Click on the Configurator tile to add, view, change, and delete Areas, Zones, Groups, Presets, Schedules. Discover, commission, program and control devices using the Configurator.

STEP 4.11 – REPORTS

Click on the Reports tile to view and export zone and device summary reports.

STEP 4.12 – FIRMWARE UPDATE

Click on the Firmware Update tile to select device firmware files and to update one or more devices based on the selected firmware files.

STEP 4.13 – DEMAND RESPONSE

Click on the Demand Response tile to configure up to 10 demand response levels per zone. For each level, relay states, dimming levels and CCT temperatures can be configured for individual devices or all devices.

STEP 4.14 – EMERGENCY OVERRIDE

Click on the Emergency Override tile to configure the emergency device settings per zone. For each zone, relay states, dimming levels and CCT temperatures can be configured for individual devices or all devices.

STEP 4.15 – PROFILES/CLONE

Click on the Profiles/Clone tile to create zone schedule profiles and clone to multiple zones.

STEP 5 – DISCOVER THE NETWORK

Once you are logged in, you can now start the device discovery process. NOTE: It is recommended that Zones should be given logical names during the device installation and setup process prior to discovering the network using Site Manager. The NX Lighting Controls App - NX System Setup tool can be used to name a Network Bridge Module for a Zone. This name will be displayed in the Discovered Navigation Tree after Site Manager discovery.

1. Click on the Configurator tile
2. Select a Building and Adapter
3. Click on the Discover button
4. Select the type of Discover type and click on the associated Discover button

If there are additional adapters that have devices that need to be discovered, you can select another adapter and start another discovery at the same time another adapter's discovery process in in progress.

The time required to complete the discovery process will be dependent upon the number of devices on the network.

After discovery completes, a message will be displayed indicating successful discovery. To see the discovered devices, click on the Setup gear icon and reselect the Configurator tile. After selecting a building and adapter, the devices associated with that adapter will be displayed.

STEP 6 – COMMISSION DEVICES

The first step in commissioning is to create at least one Area. Smaller systems will likely use a single Area to contain all the Zones. The system can support up to 128 Areas.

6.1 CREATING AN AREA

Areas must be created manually prior to creating any Zones. To add Area(s) perform the following steps:

1. Click on the Configurator tile
2. Select a Building and Adapter
3. On the Commissioned Navigation Tree, click on the "+" button to add a new Area.
4. Name the Area
5. Click on the Add button to add the Area to the Commissioned Navigation Tree.
6. Create additional Areas as needed

6.2 ADDING ZONES TO AN AREA

Zones can be easily added to an Area by performing the following steps:

1. On the Commissioned Navigation Tree, click on the Area's "+ zone" button (located to the right of the Area name)
2. Name the Zone
3. Click on the Save button to add the Zone to the Area
4. Create additional Zones as needed

6.3 ADDING DEVICES TO ZONES

Devices can be added to a Zone by performing the following steps:

1. On the Discovered Navigation Tree, select one or more devices
2. Commission the devices into a Zone by:
 - Method 1: Drag and drop the devices into a zone, or
 - Method 2: Select the Commission button on a device's details page and use the Area and Zone drop downs to select the Area and Zone the device should be placed into
3. Device(s) will be placed into that Area and Zone

6.4 ADDING GROUPS TO ZONES

Groups are the mechanism used for linking inputs to outputs. Up to 16 Groups can be created for a Zone and devices can belong to 1 or more

Groups. To create a Group, perform the following steps:

1. On the Commissioned Navigation Tree, select a Zone
2. Select the Groups tab
3. Click on the "+ Group" button
4. On the Add Group window – name the Group, select Devices for the Group and control/test the Group
5. Click on the Save button to save the Group
6. Create additional Groups (up to 16) as needed

6.5 ADDING PRESETS TO ZONES

Presets are scenes that can be used by devices such as relays, dimmers and switches. Up to 16 individual presets can be configured per Zone and can set fade, CCT, dim levels and relay states. To create a Preset, perform the following steps:

1. On the Commissioned Navigation Tree, select a Zone
2. Select the Presets tab
3. Click on the "+ Preset" button
4. On the Add Preset window – name the Preset, enable/disable the Preset, specify the Fade Time, and select the devices and their settings for the Preset
5. Click on the Save button to save the Preset
6. Create additional Presets (up to 16) as needed

6.7 ADDING PRESETS TO ZONES

Presets are scenes that can be used by devices such as relays, dimmers and switches. Up to 16 individual Presets can be configured per Zone and can set fade, CCT, dim levels and relay states. To create a Preset, perform the following steps:

1. On the Commissioned Navigation Tree, select a Zone
2. Select the Presets tab
3. Click on the "+ Preset" button
4. On the Add Preset window – name the Preset, enable/disable the Preset, specify the Fade Time, and select the devices and their settings for the Preset
5. Click on the Save button to save the Preset
6. Create additional Presets (up to 16) as needed

6.8 ADDING SCHEDULES TO ZONES

Schedules are programmed timed events that can affect a Group state or activate Presets throughout the day. Up to 99 individual Schedules can be configured per Zone. To create a Schedule, perform the following steps:

1. On the Commissioned Navigation Tree, select a Zone
2. Select the Schedules tab
3. Click on the "+ Schedule" button
4. On the Add Schedule window – name the Schedule, enable/disable the Schedule, specify the Schedule Type, Offset, Occurrence, and the Action that should occur at the scheduled time.
5. Click on the Save button to save the Schedule
6. Create additional Schedules (up to 99) as needed

STEP 7 - CONFIGURING (PROGRAMMING) THE DEVICES

Once devices have been assigned to their respective Areas and Zones and the Commissioned Navigation Tree is finalized, the next step typically is to start configuring the devices. Configuring devices means selecting a device from either the Discovered or Commissioned Navigation Trees which will then display that device's detail page. Configure the device's parameters to meet the control intent. Configuration also involves creating/adding Groups, assigning devices to those Groups, creating Presets (if applicable) and Schedules.

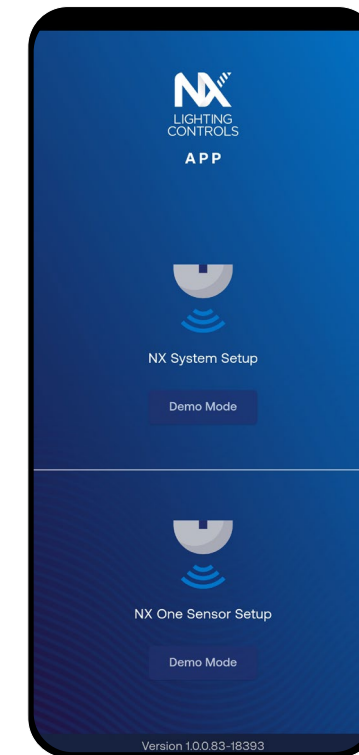
STEP 8 - BACKUP THE DATABASE

Once the system has been fully programmed, it is recommended to make a copy of the Site Manager's database. To back-up the database, perform the following steps:

1. Click on the Setup gear icon
2. Click on the System Setup tile
3. Click on the General Data Management tab
4. Backup the database by clicking on the Backup button for either:
 - Method 1: Backing up the database with real-time data (large)
 - Method 2: Backing up the database without real-time data (small)



NX Mobile App
QUICK START USER GUIDE



The NX Lighting Controls mobile app is a free to use mobile application for programming NX Lighting Control Systems or Standalone Bluetooth Sensors. The app allows you to discover and configure wired and wireless devices and setup groups and zones for both standalone and networked NX sites.



NX SYSTEM ARCHITECTURE

Understanding the architecture of the NX Lighting Controls System is key to a successful installation.

Most control functions take place within the logical construct of a Zone. Sensors, switches, relays and dimmers establish relationships within a Zone to interact and perform a sequence of operation. The link between these components is made through inclusion in a Group. Each Zone includes up to 16 Groups providing a great deal of flexibility. Typically, an occupancy sensor will be included in all the Groups that are created in the associated Zone assuring that all lighting in the Zone will be turned OFF when unoccupied. And a button on a switch can control a relay in the Zone simply by including the switch in the same Group within the Zone.

A Zone is analogous to a room or contiguous space in a building.

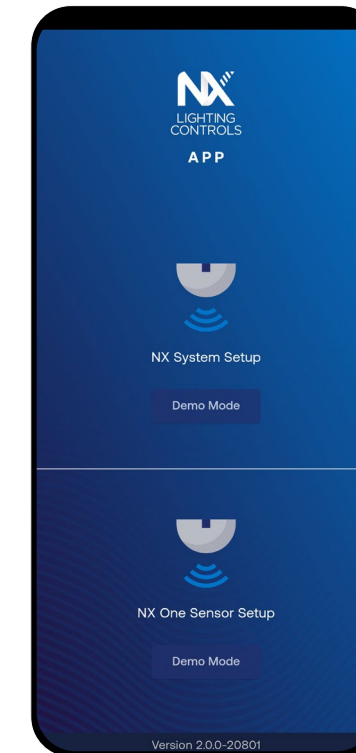


Zones will typically be associated together within the logical construct of an Area. This association not only provides a way to organize a building or site, but also establishes a layer of control that can span multiple Zones. For instance, ten rooms on the floor of a building can each have a unique local sequence of operation as individual Zones. By associating these ten rooms with an Area, they are automatically made children to the Area (floor).

An NX system may include one or more room controllers, fixture modules or lighting control panels. These parent objects contain resources that will be associated with Zones during the commissioning process. These parent objects can contain relays, dimmers, low voltage inputs, and low voltage outputs. Low voltage switches and sensors connected to the parent objects will appear as available resources during the discovery and commissioning process. Resources from parent objects are individually commissioned into Zones making them usable for control. Groups are the mechanism used for linking inputs to outputs.

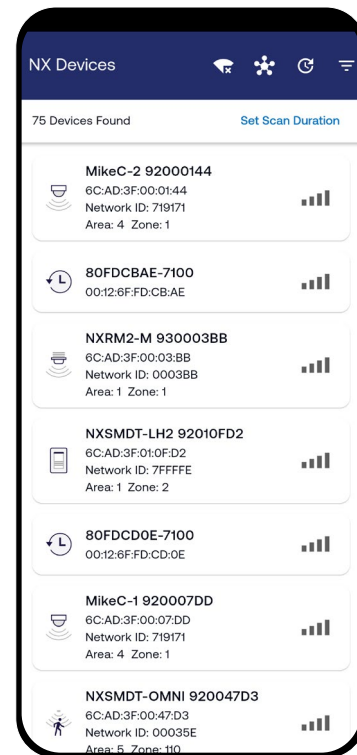
HOMEPAGE

Once the NX Lighting Controls App has been installed on a mobile device, the NX Lighting Controls App's icon will appear on the device. To open the app, simply select the icon on the device. Upon opening the app, the app's homepage will be displayed where you can choose to setup an NX System or an NX One Sensor. This Quick Start User Guide covers the NX System Setup section of the app.



CONNECTING TO A BLUETOOTH® ENABLED NX DEVICE

Upon selecting the NX System Setup option from the home screen, the user will be directed to the Device Discovery Page which will automatically begin to show all NX Bluetooth enabled devices that are in range. The Device Type, Device MAC Address, Network ID and Device Signal Strength will assist in locating the exact device the user is trying to connect to and configure. Note that if a Security Passcode has previously been enabled for the Device, you will be prompted to enter the Passcode prior to connecting. All NX Bluetooth enabled Devices are security enabled and can be protected against unauthorized connection through a security PIN.



There are several NX Devices that are Bluetooth enabled. Connecting to a Bluetooth enabled NX Device will allow configuration of that individual device's settings in addition to any NX devices that are connected to it via a wired SmartPORT or FX Port connection.

NAVIGATING THE APP

Once a device is selected from the NX Devices Bluetooth Discovery page, the app will display a list of all the connected devices within a Zone that are available for programming.

At the bottom of the screen the following functions are available:

Configurator

- Commission selected device into an Area & Zone
- Program device specific settings
- Create Zone presets
- Create Zone schedules
- Wink a device
- Create profiles with device settings

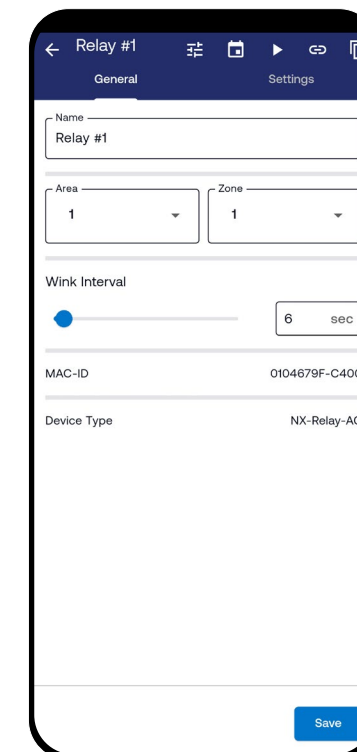
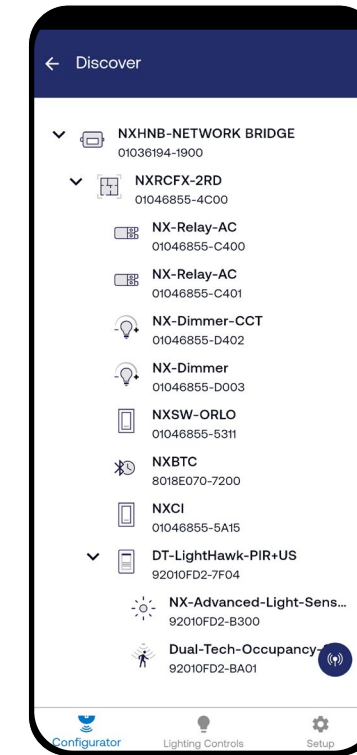
Lighting Controls

- Control group(s) within a selected Area & Zone

Setup

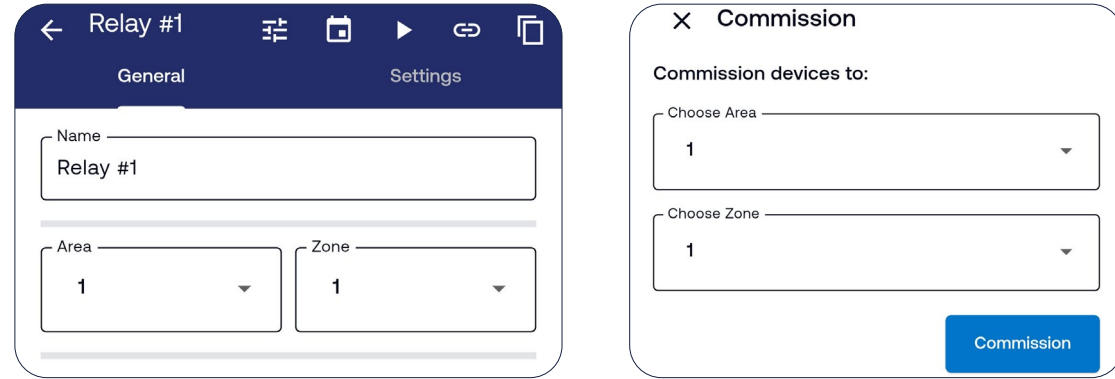
- Select holidays
- Specify device location (latitude/longitude)
- Specify open & close times
- Set date and time
- Perform firmware updates
- Perform a master reboot

Tapping a device will open the device's configuration screen.



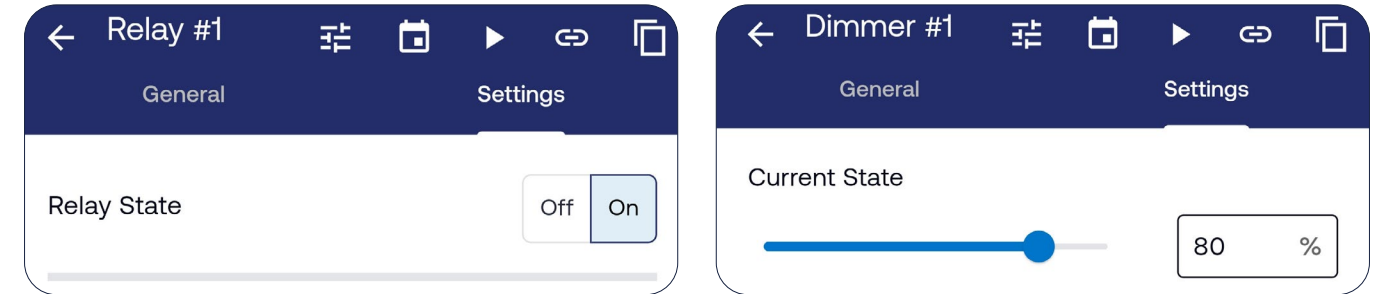
COMMISSIONING DEVICES INTO AREAS AND ZONES

To commission a device into a specific Area and Zone, either select the Area and Zone from the device's General settings or select the Commission icon at the top of the device's configuration page and select the Area and Zone, then press "Commission".



RELAYS AND DIMMERS

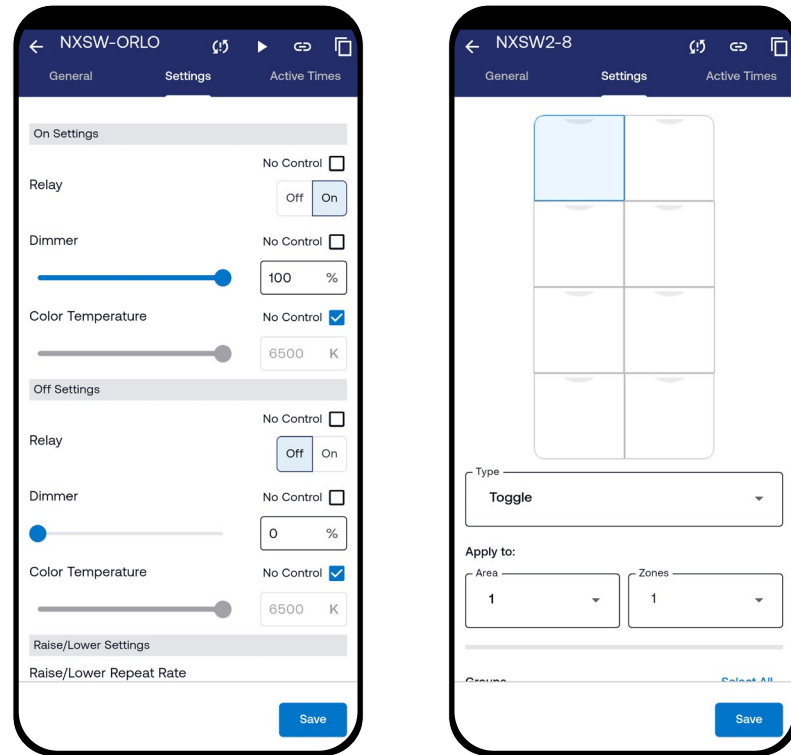
To configure the relays and dimmers the user will simply select the corresponding relay or dimmer from the device list. The configuration screens for both relays and dimmers offer control of connected lighting loads. The Relay Control button on the relay screen and the Dimmer Control Slider on the dimmer screen will control the lighting loads in real time. All other selections are settings for each device's behavior based on occupancy, priority or group to which they are associated.



Relays and dimmers must be included in at least one Group in order to function with other devices in the same Zone. Note: By default, all relays and dimmers are assigned to Group 1 until configured by a user. To select a Group, scroll to the bottom of the screen to select from up to 16 available Groups.

NX WALL STATIONS

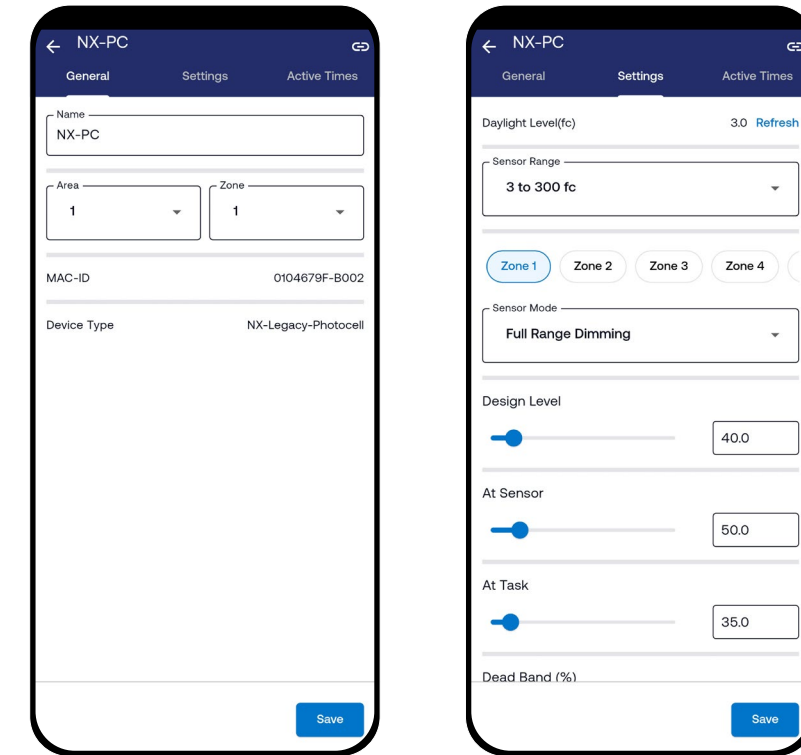
NX offers two categories of wall stations. Specialty Wall Stations are preprogrammed from the factory with default button configurations. These button configurations cannot be changed but the user does have the ability to adjust the settings. For example, an NXSW2-ORLO wall station is set to provide On, Off, Raise and Lower functions. The Programmable Smart Wall Stations, such as the NXSW2-8, have buttons that can be programmed to any of the available button types in the NX system and provide unique functionality. To begin configuring an NX Wall Station, simply select a switch from the device list screen to open the individual configuration page for that switch.



NX Specialty and Smart Wall Stations must be included in at least one Group in order to function with other devices in the same Zone. Note: By default, all devices are assigned to Group 1 until configured by a user. To select a Group, scroll to the bottom of the screen to select from up to 16 available Groups.

LEGACY DAYLIGHT SENSOR

To configure a Legacy Daylight Sensor, select the sensor from the device list. The Legacy Daylight Sensor can be configured to support up to 6 Daylighting Zones within the space. Note: At least one Daylighting Zone must be selected in order to calibrate the Legacy Daylight Sensor. The default sensor mode setting for all daylight sensors is None to prevent undesired operation until daylighting is configured. To configure the settings, use the pulldown menu to select the desired daylighting function. The configuration screen will display the applicable settings based on the selected sensor mode.



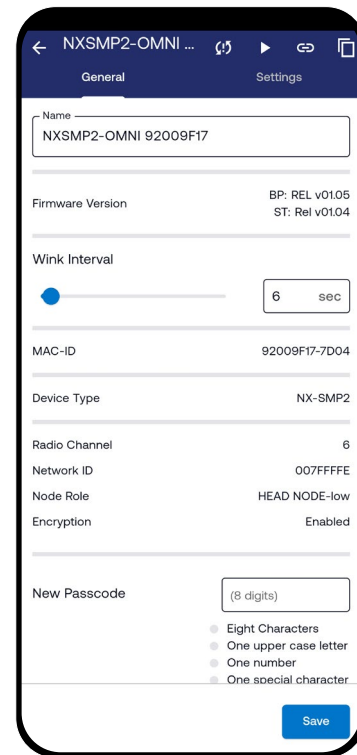
NX SMART SENSORS

NX Digital Smart Sensors are unique in that each sensor includes an embedded Bluetooth® radio, passive infrared occupancy sensor technology and a daylight sensor. Note: Certain models feature passive infrared and ultrasonic sensing technology.

To configure an NX Smart Sensor, select the desired sensor from the device list screen. Before configuring the Occupancy and Daylight sensor settings, it is strongly recommended to name the devices to assist with identification. To name a device, simply tap on the Name field, type in a name for the device and tap the Save button at the bottom of the screen.

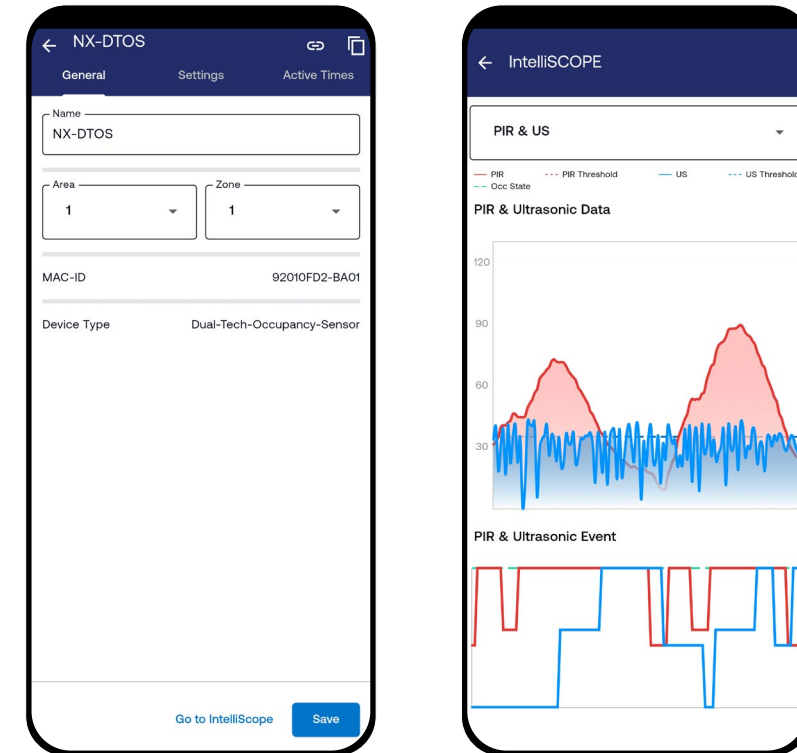
In addition to naming the device, it is also strongly recommended to set a passcode to prevent unauthorized Bluetooth connection to the NX system. To use this feature, the user should scroll to the New Passcode Setup and enter the desired passcode into the corresponding fields.

Note: ASCII characters can be used to create a passcode with a max of 8 characters.



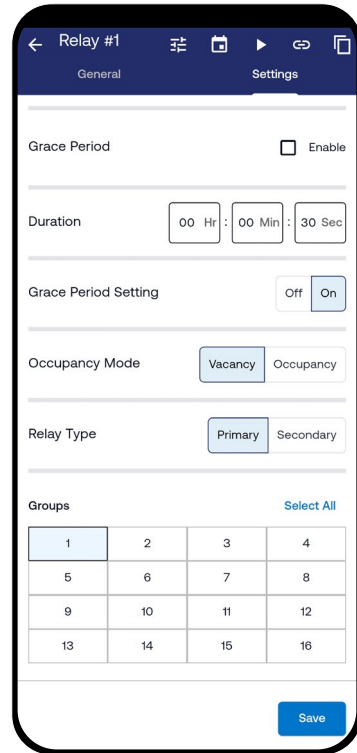
SMART OCCUPANCY SENSORS

All NX Digital Sensors come equipped with IntelliSCOPE™ for real time occupancy data visualization. To access IntelliSCOPE™, ensure you are on the NX Smart Occupancy Sensor's Configuration page. On the bottom of the page, select "Go to IntelliSCOPE" to open the IntelliSCOPE™ screen to view real time occupancy data for the corresponding sensor. To adjust the Passive Infrared and/or Ultrasonic sensitivity settings, simply return to the prior screen and select the Settings tab. This tool assists in precise calibration of the occupancy sensor all from a mobile device without physically accessing the sensor.



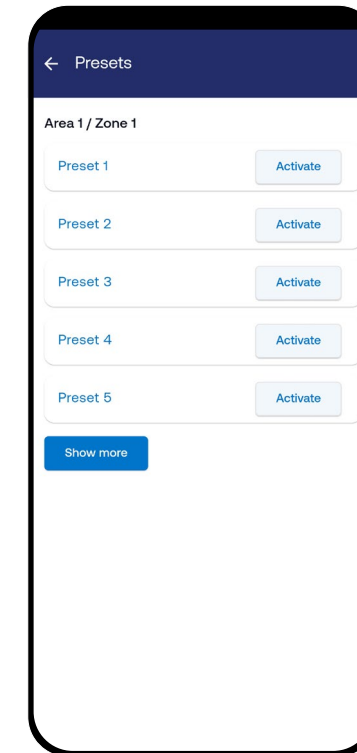
GROUPS

All devices must belong in at least one Group with a relay and/or dimmer in order to control any connected lighting loads. When configuring any NX devices, ensure that at least one Group is selected at the bottom of the Settings configuration screen. By default, all devices belong to at least one group until the user configures for a specific application.



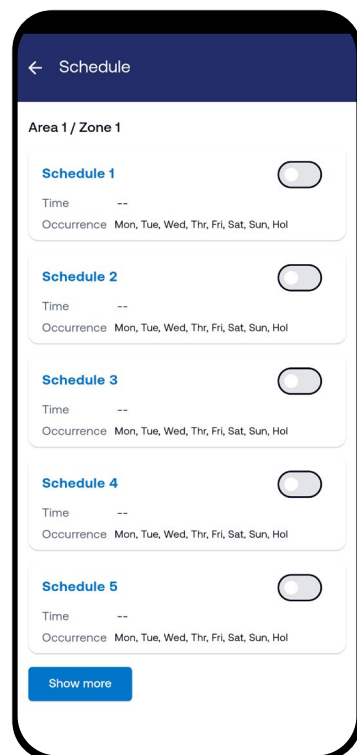
PRESETS

To configure Presets for a Zone, select a relay or dimmer from the device list screen. At the top of the device's configuration screen, select the Presets icon to display the first five presets for that Zone. To display additional presets, press the Show More button. Note: Each Zone can have up to 16 presets defined. On the Presets screen, select a Preset 1-16 in order to configure it. Once the selected Preset has been configured and saved, the Preset can be tested using the Activate button next to each Preset in the list.

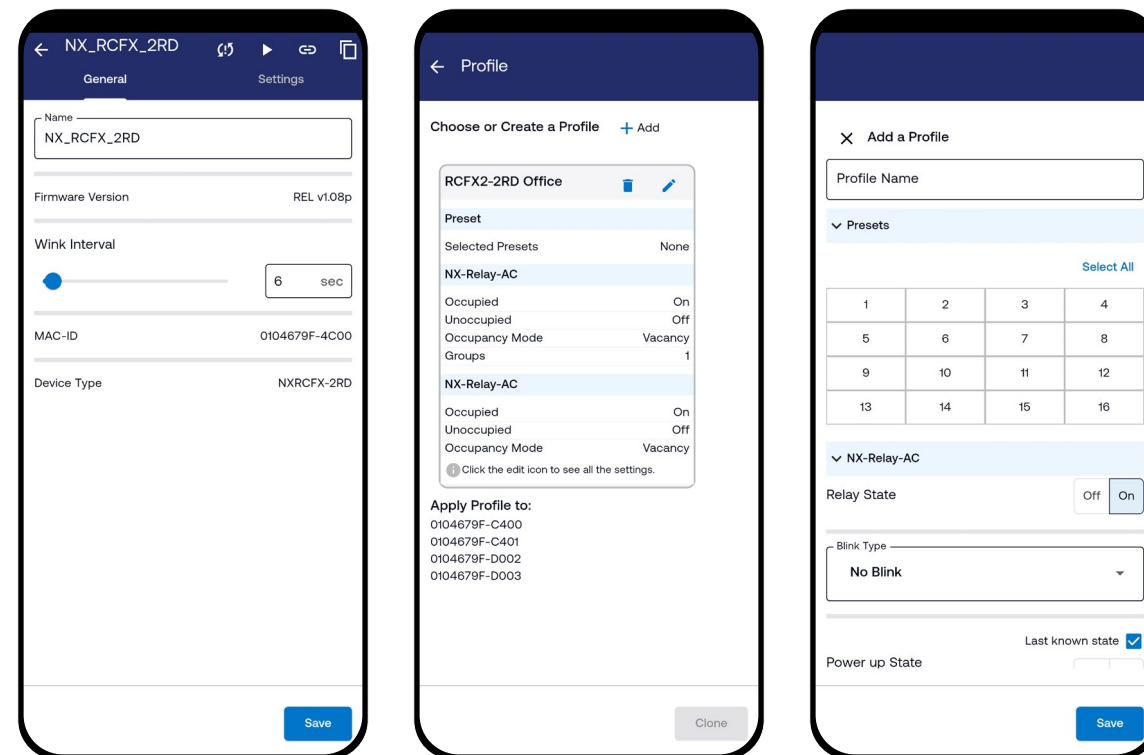


SCHEDULES

To configure Schedules for a Zone, select a relay or dimmer from the device list screen. At the top of the device's configuration screen, select the Schedules icon to display the first five schedules for that Zone. To display additional schedules, press the Show More button. Note: Each Zone can have up to 99 schedules defined. On the Schedules screen, select a Schedule in order to configure it. Once the selected Schedule has been configured and saved, the Schedule can then be enabled or disabled. Note: The location and time must be set for a schedule to operate correctly. These can be set from the Setup page.



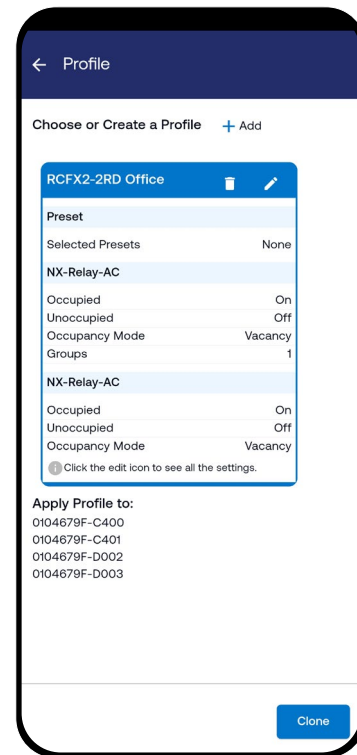
The NX Lighting Controls app allows users to save (copy) settings from an individual device such as an occupancy sensor, a relay or a dimmer setting and re-use (clone) it on another device of the same type. To use this feature, select a device from the device list screen. At the top of the device's configuration screen, select the Profile icon to choose or create a profile. To create a profile, press "+ Add" and name the profile and configure the settings for that device. Press Save to save the profile. Note: Multiple profiles for this specific device type can be created.



DEVICE CONFIGURATION PROFILES / CLONING SETTINGS (Continued)

To edit a profile, select the profile, then select the pencil icon. To delete a profile, select the profile, then select the trash can icon.

To clone a profile's settings to another device, return to the device list screen and select a similar device from the device and select its Profile icon. To apply the previously created profile's settings, select the profile and press the Clone button to copy the profile settings to the device.





Service And Maintenance Guides

SERVICE GUIDE

This guide contains important information you will need to ensure your ownership experience is a good one. NX Lighting Controls is committed to ensuring that you have the support you need to address any number of technical questions in the field. Our support ranges from a variety of services including:

- Sensor Layout and Tuning
- Onsite Startup
- Telephone Startup
- Onsite Performance-Verification and Walkthrough
- Customer-Site Solution Training
- Onsite Support
- Remote Diagnostics
- Onsite Programming

Please retain this guide for future reference. It contains information on service, maintenance, and more. Thank you again for your purchase of a NX Lighting Controls system. If you require any additional assistance contact our support team at (800) 888-8006.

SERVICE COVERAGE AND SUPPORT

Startup and Support Plans

From the first contact through the final system adjustment, NX Lighting Controls Technical Sales and Service personnel adhere to the highest level of professionalism and responsiveness. Because we value our customers so highly, we ensure that they will receive full corporate support throughout every phase of a sale. Below are our services that we offer to help you and your staff ensure your NX Distributed Intelligence system is up and running.

Pre-Wire / Construction Visit

NX Lighting Controls offers Pre-wire / Construction support with our Certified Field Technicians. Our technicians can be utilized to support your needs at any point during the construction timeline with items such as training, punch list items, or programming support.

Commissioning Services

FSP-CC	Pre-Wire/ Construciton Visit, Day One
FSP2-CC	Additional Pre-Wire/ Construction Visit Days

System Startup

NX Lighting Controls Certified Field Technicians are also a resource to ensure your system is up and running day one. Our technicians can be on site to ensure that your system is configured and operating properly, staff is trained on how to operate and maintain your system, as well as keep your installation small by having us do the setup for you.

Commissioning Services

FS1-CC	Start-up Day One
FS2-CC	Additional Pre-Wire/ Construction Visit Days
FSW-CC	Start-up Day One, Nights or Weekends
FSW2-CC	Additional Consecutive Start-up Days, Nights or Weekends

On-Site System Adjustment

As your facilities needs change over time requiring your system to be reconfigured our technicians can be on-site to help optimize or reconfigure your controls system through one of our On-Site System Adjustment packages.

Commissioning Services

FSS-HCS	Site Adjustment Visit, Day One
FSS2-HCS	Additional Consecutive Site Adjustment Days

On-Site Training

If you need additional education or staff turnover has left you without an in-house expert to operate and maintain your system, you can purchase an additional day of on-site training. This training would also be an ideal time to make any minor adjustments or programming changes. Contact Technical Services to schedule your individualized training session.

Institute Center Training

The NX Lighting Controls can be easily controlled, reprogrammed, and monitored through either our NX Site Manager software or NX Mobile App. To maximize the benefits these software packages provides, NX Lighting Controls offers a variety of training courses at our headquarters in Greenville, SC. The cost of these classes is minimal, are available throughout the year, and are comprehensive in their overview through hands-on training sessions.

Go to www.currentlighting.com/resources/the-institute to see course dates and registration details.

MAINTENANCE GUIDE

Listed in this section the user will find recommended service procedures for their NX Lighting Controls System. If additional assistance is required in servicing your system or you require replacement components please contact our support team at (800)-888-8006.

IN-FIXTURE MODULES - No maintenance required.

ON-FIXTURE MODULES - No maintenance required.

SMART SENSOR MODULE - No maintenance required.

DIGITAL ROOM CONTROLLER - No maintenance required for digital room controller devices.

NETWORK BRIDGE MODULE - No maintenance required for network bridge modules.

LIGHTING CONTROL PANELS - Visually inspect installation periodically. Keep air flow around devices clear of obstructions. Lighting Control Panels generally require a minimum of 12in. of clearance above, below and in front of enclosure.

SmartPORT MODULES - No maintenance required.

LOW VOLTAGE SWITCH STATIONS - Clean the front surface with a soft towel or fabric medium lightly dampened with a mild cleaning solution that is non-ammonia based. Recommended cleaning interval is approximately every six months. Do not spray cleaning solutions directly at any Low Voltage Switch Station. Any liquid entering products with line (mains) or low voltage may reach components, cause personal injury, damage the equipment, and void the warranty.

GRAPHIC WALL STATIONS - Clean the front surface with a towel or fabric medium lightly dampened with a mild soap and water. Do not use ammonia-based cleaners or touch screen interface. Recommended cleaning interval is every six months. Do not spray cleaning solutions directly at any graphic wall station and apply gentle pressure when wiping surface to avoid damage to the screen. Any liquid entering products with line (mains) or low voltage may reach components, cause personal injury, damage the equipment, and void the warranty.

SENSORS - No maintenance required.

NETWORK AREA CONTROLLER - Visually inspect installation periodically. Keep air flow around devices clear of obstructions. Network Area Controllers generally require a minimum of 12in. of clearance above, below, and in front of enclosure. Area controller should be locked and installed in a temperature- controlled environment.

Replacement Procedures

If any of your NX Distributed Intelligence system components need to be replaced, each product must be installed in accordance with the installation instructions shipped with the product. Reference instructions for all NX components can also be found in the Appendix section of this manual. Below is a summary of the steps that will be followed when replacing products. These steps are not a substitute for the dedicated installation instructions shipped with replacement products. All products must be installed by a licensed and trained professional.

Digital Room Controller

- **Step 1:** Follow all local safety precautions and safety precautions detailed in installation guide shipped with the replacement product.
- **Step 2:** Remove existing Digital Room Controller.
- **Step 3:** Install Replacement. Follow installation guide provided with replacement product. (Reference copy of the installation guide can be found in the appendix of this manual)
- **Step 4:** Commission Device. Utilize either the NX Site Manager software or NX Mobile App to recommission the device (reference guides can be found in the Software User Guide section of this manual).

Network Bridge Module

- **Step 1:** Follow all local safety precautions and safety precautions detailed in installation guide shipped with the replacement product.
- **Step 2:** Remove existing Network Bridge Module.
- **Step 3:** Install Replacement
- **Step 4:** Commission Device. Utilize either the NX Site Manager software or NX Mobile App to recommission the device. (reference guides can be found in the Software User Guide section of this manual)

Lighting Control Panels - Lighting Control Panels are pre-built panels manufactured by NX Lighting Controls. Contact Technical Service for replacement information.

Low Voltage Switch Stations

- **Step 1:** Follow all local safety precautions and safety precautions detailed in installation guide shipped with the replacement product.
- **Step 2:** Remove existing Low Voltage Switch Station.
- **Step 3:** Install Replacement. Follow installation guide provided with replacement product. (Reference copy of the installation guide can be found in the appendix of this manual)
- **Step 4:** Commission Device. Utilize either the NX Site Manager software or NX Mobile App to recommission the device. (reference guides can be found in the Software User Guide section of this manual)

Graphic Wall Stations

- **Step 1:** Follow all local safety precautions and safety precautions detailed in installation guide shipped with the replacement product.
- **Step 2:** Remove existing Graphic Wall Station.
- **Step 3:** Install Replacement. Follow installation guide provided with replacement product. (Reference copy of the installation guide can be found in the appendix of this manual)
- **Step 4:** Commission Device. Utilize either the NX Site Manager software or NX Mobile App to recommission the device. (reference guides can be found in the Software User Guide section of this manual)

Sensors

- **Step 1:** Follow all local safety precautions and safety precautions detailed in installation guide shipped with the replacement product.
- **Step 2:** Remove existing Sensor.
- **Step 3:** Install Replacement. Follow installation guide provided with replacement product. (Reference copy of the installation guide can be found in the appendix of this manual)
- **Step 4:** Commission Device. Utilize either the NX Site Manager software or NX Mobile App to recommission the device. (reference guides can be found in the Software User Guide section of this manual)

Network Area Controllers are prebuilt and manufactured by Current Lighting. Contact Technical Service for replacement information and service support.





ARCHITECTURAL AREA LIGHTING

BEACON

COLUMBIA LIGHTING

COMPASS

DUAL-LITE

EXO

FORUM

KIM LIGHTING

KURT VERSEN

LIFESHIELD

LITECONTROL

NX LIGHTING CONTROLS

PRESCOLITE

Current - HLI Brands

701 Millennium Blvd.
Greenville, SC 29607

currentlighting.com/prescolite

© 2023 HLI Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

(Rev 11/30/21)

Operation & Maintenance Manual_R02