The NX Distributed Intelligence™ lighting control system is a simple and cost-effective tool that meets state and local energy codes and other requirements, while also providing the flexibility to help users feel comfortable. Using a small number of components, NX covers a wide variety of applications across commercial, institutional and industrial buildings. Using the same short list of products, the system scales from one office or one floor, to one building or across an entire campus. The NX mobile application can be used to make adjustments to the standard settings, and to customize the settings and lighting to get the most from the system.

This Design & Application Guide provides Engineers, Designers and Architects with detailed product information on the NX system and exemplifies how to design and specify a system. Facility Manager, Operating Engineers and Installing Contractors can also use this document to find additional information on the use of the NX system.

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4 The Value of NX
6 Meet Codes & Standards
8 Choosing System Architecture
10 Lighting Control Intent
12 Best Practices
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40 Project Support
NX Distributed Intelligence™ lighting control platform utilizes a Distributed Network Architecture (DNA) that connects intelligent devices including luminaires, controllers, panels, occupancy sensors, photocells, wall switches and dimmers. NX's fully distributed design means programming is stored at the device, and each control can function independently all the way down to the room, fixture and device level.

This approach eliminates operational dependencies on software, gateways and servers.

- NX is designed for commercial and industrial applications with panel, room-based and in-fixture controllers, sensors and wall switches, integration interfaces, and native BACnet® support for Building Automation Systems
- NX supports indoor and outdoor applications, wired, wireless and hybrid networked lighting control deployments
- NX is designed to self-configure, automatically meeting energy code requirements as devices are connected. Further configuration may be done using either the NX smartphone application (local) or a browser-based interface (networked)

**Complete Suite of Products**

NX Distributed Intelligence™ offers a broad portfolio of controllers, network devices, panels, sensors, and interfaces under one platform to address new construction and retrofit applications.

**Lighting Controllers**

- **In-Fixture Sensor Modules**
  - Luminaire-integrated design reduces complexity and design time
  - Intelligent auto-configuration
  - Bluetooth® enabled sensors available in five versions to address occupancy and daylight dimming

- **Radio Modules**
  - Provide HubbNET™ wireless mesh network communication
  - Robust and reliable IEEE 802.15.4 2.4GHz radio
  - Remote, in-fixture and on-fixture mounting options

- **Room Controllers**
  - Intelligent auto-configuration
  - Automatic code compliance
  - CAT5 plug and play connectivity
  - UL924 emergency solutions
  - Plug load controller available in split and full control, 15A and 20A options

**Wall Stations**

- **Wall Stations**
  - Attractive, architecturally-pleasing decorator style design
  - Plug and play integration with NX system
  - Multiple switch options available including SpectraSync™ CCT control

**Sensors**

- **SimpleTouch™ Graphic Wall Station**
  - Full-color touch screen control of groups, presets and schedules
  - Flexible, user friendly interface
  - Customizable home screen and navigation

**Network**

- **Area Controllers**
  - Central component for enterprise solutions
  - Real-time programming and monitoring
  - Native BACnet® support

**Interfaces**

- **Network Bridges**
  - Provides inputs to and outputs from the system
  - Options for contact closure, serial/AV, or 0-10V dimming
  - Simplified connections to HubbNET or SmartPORT™

**Plug Load Control**

- **Plug Load Control Room Controller Accessory**
  - Enables code compliance
  - Easily integrates with Room Controllers
  - Available in split and full control, 15A and 20A options

**In-Fixture Control**

- Luminare-integrated design
- Out-of-the-box operation
- User-friendly Bluetooth® App

**Room Control**

- Easy plug-in installation
- SmartPORT™ auto-configuration
- Adaptive energy efficient operation

**Networked Building Control**

- Networked solution
- Control and monitor software
- Integration with BAS

**Bluetooth Programming Interface**

- Plug n play
- Portable
- Enables easy mobile app access

**In-Fixture Sensor Modules**

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  - Options for contact closure, serial/AV, or 0-10V dimming
  - Simplified connections to HubbNET or SmartPORT™

These are the key components. See appendix or please visit [www.hubbellcontrolsolutions.com](http://www.hubbellcontrolsolutions.com) for a full list of NX products.

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NX integrated luminaires use the Device Setup App for wireless programming and scheduling, dramatically reducing the time it takes to configure or modify crucial settings.

NX DISTRIBUTED INTELLIGENCE™

HUBBELLCONTROLSOLUTIONS.COM
Code Compliance at Every Level of Scalability

From a single standalone fixture 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

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

Multi-level control - Provides 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 Timeclock - Controls light levels based on sunrise/sunset and project location

Continuous Daylighting  - Automatically turns lights down to a reduced level or off 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 facility’s Building Management System or Energy Management System using a common protocol such as BACnet®

Continuous Daylighting - Automatically turns lights down to a reduced level or off based on the amount of daylight

Plug Load Control

Demand Response

BMS Integration

Astronomical Timeclock

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

Demand Response

BMS Integration

Loads and Codes

The NX Distributed Intelligence system has solutions for every project type, all that’s needed is a list of loads and which energy codes are required.

NX Room Controllers, in-fixture controllers, sensors and wall switch stations are selected based more on the project scope and design intent rather than on cryptic rules. Combined with an array of accessories and a native BACnet building automation interface, the system will work with other systems. It has toolsets to allow large systems to network together to control multiple buildings with one system.
Choosing The Right System Architecture

All systems, including lighting controls, have a structure of hierarchy and topology, known as a system architecture. In commercial and industrial lighting control applications, a system architecture must be evaluated against several criteria, including security, performance, and flexibility. Most lighting control systems have a fixed structure, requiring certain devices to be a part of any system, no matter how small. Many systems also have a centralized hierarchy, where a master device commands the entire system. These rules can be difficult to understand and apply, and a new design is needed for each new project.

The NX system utilizes the Distributed Network Architecture, or DNA. Each part in the NX system always knows what its role is. This structure allows NX to scale from a single intelligent fixture to an entire building or campus using only parts needed for the task without, central processors or gateways. NX systems are flexible, easy to design with and can be used in a wide variety of applications, including education, office, industrial and outdoor venues.

The NX system uses a secure wired, wireless or hybrid topology. Deployment within the topology requires using room or fixture-based controls, sensors and wall switch stations. Where the ceiling is accessible, low-voltage Cat5 cable connects the system together. When areas controlled by NX are not as accessible, wireless accessories can be added anywhere along the way. NX allows any combination of these networks. The system can be configured and managed wirelessly using the mobile App designed for both Android™ and iOS platforms.

Centralized Distributed

In-fixture or Circuit Level Control

NX systems have a strong heritage in circuit-level control using devices that switch and dim large areas at once. Unlike traditional lighting relay panels, Room Controller devices can be placed within the area they control and are wired for group control. Ceiling/wall sensors and wall switch stations provide inputs, and NX automatically configures to meet basic code requirements. In-fixture controls are the ultimate in distributed control, where each luminaire can switch and dim itself. Fixtures can include occupant and light detection, meeting most codes out of the box, without installing other devices. NX even has relay panels built on the same DNA as the other choices, allowing for multiple design paths.

Distributed Network Architecture (DNA)

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Wired, Wireless and Hybrid

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NX: Best in Class Intelligent Lighting Controls System

While meeting and exceeding energy codes, NX is easy to design with, install and configure. The Distributed Network Architecture (DNA) of NX is reliable and scales for any size project. NX allows for project completion on time and budget, without wondering if the system can meet standards. Hubbell Control Solutions provides world-class service and support every step of the way, including a 5-year warranty.
Energy Savings

Lighting comprises 17% of the total energy consumption in a building. While commercial lighting energy use continues to decline as a result of increased LED lighting efficacy and more stringent energy codes, there are still opportunities for energy savings. For example, additional savings can be seen through controlling plug loads and the deployment of dimmable LED luminaires controlled with occupancy or daylight sensors.

Additional HVAC Savings

Native BACnet® Integration with Building Management Systems (BMS) allows an exchange of occupancy and daylight information to help manage energy strategies and promote additional energy efficiency improvements through other building systems, such as HVAC. Integrating lighting control equipment through BACnet has the added benefit of reducing the initial equipment cost, reducing wall and ceiling clutter by eliminating the need for duplicate sensors and leveraging Hubbell Controls Solutions advanced sensor technology. Enabling BMS control of dimmable LED luminaires may represent an additional point of control which reduces the overall thermal load within a conditioned space.
NX Lighting Control System Best Practices

Hubbell’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 HubbNET™ for the wide area network. Hubbell recommends the following parameters for best practice design:

HubbNET
Communication backbone for area control. All HubbNET devices must be daisy chained from any single HubbNET Segment port from an Area Controller
- 328 ft per daisy chained segment – Ethernet, CAT5e or better
- Up to 64 devices per HubbNET port (See last bullet)
- HubbNET is a powered network; do not connect HubbNET 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 HubbNET devices cannot exceed 500 per Area Controller

SmartPORT
Communication backbone for zone level control. Bridges connect HubbNET 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. See tables on pages 36-39 for PBU allocation by device. Below is a reference example for PBU calculation when designing a system.

<table>
<thead>
<tr>
<th>POWER SUPPLIED</th>
<th>POWER CONSUMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAMPLE 1</td>
<td></td>
</tr>
<tr>
<td>SmartPORT Link Remaining - PBUs: +25</td>
<td></td>
</tr>
<tr>
<td>-1 PBU</td>
<td>-1 PBU</td>
</tr>
<tr>
<td>-3 PBU</td>
<td>-1 PBU</td>
</tr>
</tbody>
</table>

Wireless Radio
Best practice indoor radio range for NXRM-H is 100 ft. Actual range is dependent upon building construction and radio location. Best practice outdoor range is 300 ft. Actual range is dependent upon a clear line of sight.
SpectraSync™ Color Tuning Technology enables dynamic control over the lighting of indoor spaces. Control indoor spaces based on the needs of the application, specific activities throughout the day and preferences of the occupants with three distinct SpectraSync™ Color Tuning Technologies. For additional details please click the SpectraSync™ logo above.

**Dim to Warm**
Dim to Warm mimics the familiar warming effect that occurs with traditional incandescent sources as they are dimmed. (Available with 2200K-3000K)

**Tunable White**
Tunable White offers the ability to tailor correlated color temperature (CCT) to the occupants personal preference, enhancing task visibility, material and colors and the aesthetics of the space. (Available with 2700K-5000K or 2700K-6500K)

**Scheduled White**
Scheduled White creates an environment that mimics the rhythm of natural light or follows an alternative user-defined schedule throughout the day, enhancing an occupant's mood and well-being. (Available with 2700K-5000K or 2700K-6500K)

When paired with SpectraSync™ enabled luminaires, NX delivers a comprehensive color control solution, simplifying setup and code compliance through self-configuration and a Bluetooth® interface with mobile application.
### CONTROL INTENT: CLASSROOM (800 SQ FT) Wired - Room Control

**SOLUTION STRATEGY**
- Use NX Room Controllers for cost effective energy code compliance in simple room applications.

**BEST PRACTICE LAYOUT**
- Place the occupancy sensor as close to the center of the room as possible free of obstructions.
- The daylight sensor should be placed near the window aperture and aligned to the middle of the opening for accurate measurement.
- Switch stations should be located near each door and teacher’s station for convenient access.
- All scene control switch stations should be located near the front of the classroom for convenient adjustment of lighting levels during instruction.

**OPERATIONAL DESCRIPTION**
- 0-10V Dimming
- 2 Controllable zones
- 2 Daylighting zones
- Auto ON to 80% upon occupancy
- Daylighting configured for continuous dimming
- Manual control – Full ON, All OFF, Private Scenes, and Raise/Lower
- UL924 compliance with integral luminaire battery back-up
- NX Device Setup Mobile App for system programming

### CLASSROOM (950 SQ FT) Wireless - Room Control

**SOLUTION STRATEGY**
- Use NX wireless enabled fixtures throughout the space to reduce installation complexity.

**BEST PRACTICE LAYOUT**
- All luminaires are enabled with NX smart sensors to provide optimal coverage for occupancy detection.
- For daylighting only one smart sensor located near the window aperture should be enabled for daylight harvesting.
- Switch stations should be located near each door and teacher’s station for convenient access.
- All scene control switch stations should be located near the front of the classroom for convenient adjustment of lighting levels during instruction.
- All switch stations can be wired to NX enabled luminaires through CAT5 connections eliminating need for NX room controllers.

**OPERATIONAL DESCRIPTION**
- 0-10V Dimming
- 2 Controllable zones
- 2 Daylighting zones
- Auto ON to 80% upon occupancy
- Daylighting configured for continuous dimming
- Manual control – Full ON, All OFF, Private Scenes, and Raise/Lower
- UL924 compliance with integral luminaire battery back-up
- NX Device Setup Mobile App for system programming

---

**BILL OF MATERIALS**

**CLASSROOM (800 SQ FT) Wired - Room Control**

<table>
<thead>
<tr>
<th>QTY</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>NXRC2-2RD-UNV</td>
<td>Room Controller with 2 dimming outputs</td>
</tr>
<tr>
<td>1</td>
<td>NXS5-OMDT1</td>
<td>Occupancy sensor</td>
</tr>
<tr>
<td>1</td>
<td>NXS5</td>
<td>Daylight sensor</td>
</tr>
<tr>
<td>1</td>
<td>NXS5-ORLO</td>
<td>ORLO Specialty Switch</td>
</tr>
<tr>
<td>2</td>
<td>NXS5-6</td>
<td>On/Off Specialty Switch</td>
</tr>
<tr>
<td>12</td>
<td>LCAT24-35MLG-EDU1</td>
<td>2x4 CAT LED Troffers</td>
</tr>
</tbody>
</table>

**CLASSROOM (950 SQ FT) Wireless - Room Control**

<table>
<thead>
<tr>
<th>QTY</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>LCAT24-35MLG-EDU1-NXSW</td>
<td>CAT LED Troffers, NX Wireless Enabled with Sensor</td>
</tr>
<tr>
<td>2</td>
<td>NXRC-2RD-UNV</td>
<td>Room Controller with 2 dimming outputs</td>
</tr>
<tr>
<td>2</td>
<td>NXS5-6</td>
<td>6 button scene station</td>
</tr>
<tr>
<td>3</td>
<td>LCAT-24-35MLG-EDU-NXSWD</td>
<td>LCAT LED Troffers, NX Wireless Enabled with Dual Smart-PORTs and Sensor</td>
</tr>
<tr>
<td>1</td>
<td>NXS5-6</td>
<td>6 Button Programmable Smart Switch</td>
</tr>
<tr>
<td>2</td>
<td>NXS5-6</td>
<td>On/Off Specialty Switch</td>
</tr>
</tbody>
</table>

---

*Note: Drawings not shown to scale and are intended as illustrative example of the application.*
MULTIPURPOSE ROOM (950 SQ FT)

SOLUTION STRATEGY

- Use NX Room Controllers for multipurpose rooms and partitionable spaces
- 0-10V Dimming
- Manual control – Full ON, All OFF, Preset Scenes, and Raise/Lower
- UL924 compliance with integral luminaire battery backup
- Room can divide into two rooms with 2 dimmable zones each or combine into a single room with 4 dimmable zones
- Room combine to be done with automatic partitioning with NXWPS partition sensor
- NX Device Setup Mobile App for system programming (including partitioning)

BEST PRACTICE LAYOUT

- Place 1 occupancy sensor in the center of each partitionable space for optimal coverage
- Switch stations should be located near each door for convenient access
- Each partition space should be configured identically
- Utilize a NXWPS partition sensor for automatic room combine functionality
- Place a partition sensor combined with an NXCI on one side of the partitioned space
- The corresponding partition reflector should be placed on the opposite side of the partition directly across from the NXWPS

OPERATIONAL DESCRIPTION

- Use NX wireless enabled fixtures for multipurpose rooms and partitionable spaces
- All luminaires are enabled with NX smart sensors to provide optimal coverage for occupancy detection
- Switch stations should be located near each door for convenient access
- Each partition space should be configured identically
- All switch stations and partition sensors can be wired to NX enabled luminaires through CAT5 connections eliminating need for NX room controllers
- Utilize a NXWPS partition sensor for automatic room combine functionality
- Place a partition sensor combined with an NXCI on one side of the partitioned space
- The corresponding partition reflector should be placed on the opposite side of the partition directly across from the NXWPS

KEY

- MAIN POWER
- CATS
- NXRC2-2RD-UNV
- NXOS-OM-DT5
- NXWPS
- NX HubbNET™
- NXHBN2
- NXSW-SS
- LCAT24-35MLG-EDU1
- LCAT LED Troffers
- LCAT24-35MLG-EDU1-NXSWD
- LCAT LED Troffers, NX Wireless Enabled with Dual SmartPORTs and Sensor
- NXSW-SS
- 6 button scene station
- NXCI
- NX Bridge
- NX SW-SS
- CAT5
- Wireless
- In-Fixture Sensor
- NXWPS
- Main Power (120/277V)
- 0-10V Dimming
- Auto ON to 80% upon occupancy
- Manual control – Full ON, All OFF, Preset Scenes, and Raise/Lower
- UL924 compliance with integral luminaire battery back-up
- Room can divide into two rooms with 2 dimmable zones each or combine into a single room with 4 dimmable zones
- Room combine to be done with automatic partitioning with NXWPS partition sensor
- NX Device Setup Mobile App for system programming (including partitioning)

BILL OF MATERIALS

<table>
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<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>2</td>
<td>NXRC2-2RD-UNV</td>
<td>Room Controller with 2 dimming outputs</td>
</tr>
<tr>
<td>2</td>
<td>NXOS-OM-DT5</td>
<td>Occupancy sensor</td>
</tr>
<tr>
<td>2</td>
<td>NXSW-SS</td>
<td>6 button scene station</td>
</tr>
<tr>
<td>12</td>
<td>LCAT24-35MLG-EDU1</td>
<td>2x4 LCAT LED Troffers</td>
</tr>
<tr>
<td>2</td>
<td>NXHBN2</td>
<td>NX Bridge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QTY.</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>LCAT24-35MLG-EDU1-NXSWD</td>
<td>LCAT LED Troffers, NX Wireless Enabled with Dual SmartPORTs and Sensor</td>
</tr>
<tr>
<td>8</td>
<td>LCAT24-35MLG-EDU1-NXSW</td>
<td>LCAT LED Troffers, NX Wireless Enabled with Sensor</td>
</tr>
<tr>
<td>2</td>
<td>NXSW-SS</td>
<td>6 button scene station</td>
</tr>
</tbody>
</table>
**RECREATION SPORTS AREA (5000 SQ FT)**

**Wireless - In-fixture Control**

### SOLUTION STRATEGY

- Manual ON/OFF control
- Use NX wireless enabled fixtures throughout the space including the outdoor areas to reduce installation complexity

### BEST PRACTICE LAYOUT

- Connect both wall switch stations to the room controller
- Install 2 button wall switch stations near the door to control all lights
- Tie the room controller to the rest of the space using the radio module
- For outdoor space, use NX enabled outdoor fixtures integrated with NOXFM

### OPERATIONAL DESCRIPTION

- 2 daylight zones, sensors are integral to fixtures
- 3 Schedule Presets (weekday, weekend, holidays)
- Manual control via 2 button wall stations
- Schedule outdoor lighting
- Auto ON to 50% upon occupancy (indoor only)
- Daylight dimming
- Programmable by Area Controller
- UL924 compliance via battery back-up

### BILL OF MATERIALS

<table>
<thead>
<tr>
<th>QTY</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>PEL2-59MM-FPW-EDU-NXSW</td>
<td>Peloton High Bay Fixture with NX wireless</td>
</tr>
<tr>
<td>1</td>
<td>NXRZC-1RD-UNV</td>
<td>Single zone room controller</td>
</tr>
<tr>
<td>8</td>
<td>AL-D 16L-80 3K0X4 UNV PCB-T</td>
<td>Alpha Outdoor Fixtures with Photocontrol - Twist-lock® Cell</td>
</tr>
<tr>
<td>8</td>
<td>NOXFM-1RD-UNV</td>
<td>On-fixture module</td>
</tr>
<tr>
<td>2</td>
<td>SCLNX</td>
<td>PIR outdoor sensor in the fixture</td>
</tr>
<tr>
<td>2</td>
<td>NXSX-2</td>
<td>2 Button Programmable Smart Station</td>
</tr>
<tr>
<td>1</td>
<td>NXRH-H</td>
<td>Radio module</td>
</tr>
<tr>
<td>2</td>
<td>NXSX-SS</td>
<td>Specialty Scene Switch</td>
</tr>
</tbody>
</table>

---

**ART ROOM (500 SQ FT)**

**Wired - In-fixture Control with SpectraSync™**

### SOLUTION STRATEGY

- Use NX wired, SpectraSync enabled LCAT LED Troffers for color tuning and code compliance

### BEST PRACTICE LAYOUT

- Use a dedicated wall station for color tuning control
- Deploy a simple ON/OFF switch to turn all lights ON/OFF for non-working hours
- Place the CCT wall station near the whiteboard and the On/Off switch near the door

### OPERATIONAL DESCRIPTION

- 0-10V dimming loads
- 1 daylight zone (teacher station)
- 4 dimmable zones (3 general lighting and 1 teacher station)
- Daylight dimming
- Master manual ON/OFF control at door
- Tunable white, preset scene control at door
- Tunable white scenes: Art Learning, Teacher Presentation, Art Fun and Nap
- Auto ON to 50% upon occupancy
- Programming via NX Device Setup App
- UL924 compliance via battery back-up

### BILL OF MATERIALS

<table>
<thead>
<tr>
<th>QTY</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>LCAT24-276TML6-EDU-NXES</td>
<td>LCAT LED troffer, NX and SpectraSync enabled</td>
</tr>
<tr>
<td>1</td>
<td>NXSX-OD-WH</td>
<td>On/Off Specialty Switch</td>
</tr>
<tr>
<td>1</td>
<td>NXSX-CCT-WH</td>
<td>Color Tuning Specialty Switch</td>
</tr>
</tbody>
</table>
COMMERCIAL OFFICE
PRIVATE OFFICE (120 SQ FT)
Wired - In-fixture Control

SOLUTION STRATEGY
- Auto ON to 50% upon occupancy
- Programming via NX Device Setup App

OPERATIONAL DESCRIPTION
- Auto ON to 50% upon occupancy
- Manual control - ON.Raise/Lower/OFF
- UL924 compliance via battery backup
- Programming via NX Device Setup App

SOLUTION STRATEGY
- Use Prescolite downlights and Litecontrol fixtures (for architectural effect) in the conference room (along with LCAT family troffers)
- All fixtures come NX Enabled (wired option) - for ease of future reconfiguration and centralized control
- Where possible, utilize the dim to OFF drivers to reduce total installed cost per fixture

BEST PRACTICE LAYOUT
- Place the NXAVM module close to the audio/visual control equipment (50 ft or less)
- Place the scene button station near the entry door
- Recommend using scene switch stations whenever deploying dim to OFF fixtures

OPERATIONAL DESCRIPTION
- Auto ON to 50% upon occupancy
- Scene selection in conference room
- Audio/visual integration
- UL924 compliance via battery backup
- Add 1 daylight zone

BILL OF MATERIALS

<table>
<thead>
<tr>
<th>QTY</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>LF4SLDM1NXE-4LFSL15L35K8W5T</td>
<td>Prescolite Downlights (with NXE control option)</td>
</tr>
<tr>
<td>1</td>
<td>3L-R-D-4-50F-C1-35K-D60-1C-UNV-W1-NXES**</td>
<td>Litecontrol Recessed Linear (with NXES control option)</td>
</tr>
<tr>
<td>11</td>
<td>TCAT24-35MLG-ED1U-NXES**</td>
<td>Columbia Recessed Troffers (with NXES control option)</td>
</tr>
<tr>
<td>1</td>
<td>NXSW-SS</td>
<td>Specialty Scene Switch</td>
</tr>
<tr>
<td>1</td>
<td>N0HBN2</td>
<td>NX bridge</td>
</tr>
<tr>
<td>1</td>
<td>NXAVM</td>
<td>Audio/visual interface</td>
</tr>
</tbody>
</table>

**Uses a dim to off driver
CONTROL INTENT

SOLUTION STRATEGY

• Use NX Room Controller and NX UL924 Load Controller for corridor applications.

BEST PRACTICE LAYOUT

• For corridor applications it is recommended to utilize ultrasonic only sensors for optimized coverage and detection.
• Place occupancy sensors appropriately throughout corridor ensuring that weekly spaced and are placed at the center of the junction.
• For required emergency lighting utilize a NXRC-UL924 load controller.

OPERATIONAL DESCRIPTION

• 0-10V Dimming Loads
• Auto On to set level
• Weekday, holiday, and weekend scheduling for active/inactive sensing times for occupancy detection.
• UL924 compliance via NXRC-UL924 Load Controller.
• NX Device Setup Mobile App for system programming.

BILL OF MATERIALS

<table>
<thead>
<tr>
<th>QTY.</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NXRC2-2RD-UNV</td>
<td>Room Controller with 2 dimming outputs</td>
</tr>
<tr>
<td>1</td>
<td>NXRC-UL924</td>
<td>UL924 Emergency Lighting Load Controller</td>
</tr>
<tr>
<td>2</td>
<td>NXOS-OMDT5</td>
<td>Occupancy sensor</td>
</tr>
<tr>
<td>10</td>
<td>LCAT22-3MLG-EDU1</td>
<td>2x2 LCAT LED Troffers</td>
</tr>
</tbody>
</table>

CONTROL INTENT

SOLUTION STRATEGY

• Use NX Room Controller and NX UL924 Load Controller for restroom and multi-stall restroom applications.

BEST PRACTICE LAYOUT

• For restroom applications it is recommended to utilize ultrasonic only sensors for optimized coverage and detection.
• Place occupancy sensors appropriately spaced in restrooms to provide optimal coverage.
• For required emergency lighting utilize a NXRC-UL924 load controller.

OPERATIONAL DESCRIPTION

• 0-10V Dimming Loads
• Auto On to set level
• Weekday, holiday, and weekend scheduling for active/inactive sensing times for occupancy detection.
• UL924 compliance via NXRC-UL924 Load Controller.
• NX Device Setup Mobile App for system programming.

BILL OF MATERIALS

<table>
<thead>
<tr>
<th>QTY.</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>NXRC2-1RD-UNV</td>
<td>Room Controller with 2 dimming outputs</td>
</tr>
<tr>
<td>2</td>
<td>NXRC-UL924</td>
<td>UL924 Emergency Lighting Load Controller</td>
</tr>
<tr>
<td>2</td>
<td>NXOS-OMDT1</td>
<td>Occupancy sensor</td>
</tr>
<tr>
<td>10</td>
<td>LCAT22-MLG-EDU1</td>
<td>2x2 LCAT LED Troffers</td>
</tr>
</tbody>
</table>
**CONTROL INTENT**

**SOLUTION STRATEGY**
- Use NX in-fixture wired for the indoor spaces (Each fixture becomes individually addressable for ease of reconfiguration in future)
- Tie all zones and areas together with an Area Controller that will act as one common user interface
- The bridge and NXRM-H radio module, joins the parking lot and outdoor areas to the indoor areas
- Hubbell Outdoor Ratio fixtures integrated with NX wireless, for parking lot
- All indoor fixtures have standard 0-10V drivers. Outdoor fixtures are dim to OFF

**BEST PRACTICE LAYOUT**
- Place the bridge and radio module within 100 ft or less, of at least one wireless device
- Do not exceed 32 fixtures per bridge
- A bridge is required for every 32 fixtures wrap within a zone
- Add additional bridge for extending the zone beyond 32 fixtures

**OPERATIONAL DESCRIPTION**
- Auto ON to 50% upon occupancy
- Continuous daylight dimming (Common Office Area)
- Manual control – ON/Raise/Lower/OFF
- Weekday, holiday and weekend schedule for all indoor
- Holiday schedule for outdoor parking
- UL924 compliance via battery backup
- Programming via area controller

---

**BILL OF MATERIALS**

<table>
<thead>
<tr>
<th>QTY.</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LCAT24-35MLG-EDU-NXES</td>
<td>LCAT LED Troffers (with NXES Control option)</td>
</tr>
<tr>
<td>12</td>
<td>RAR2-120L-110-3K7-3-UNV-A4-DB-NXWE</td>
<td>Ratio area/site luminaire</td>
</tr>
<tr>
<td>12</td>
<td>NXOFM-1RD-UNV</td>
<td>7-pin On-Fixture wireless control module for use with outdoor fixtures</td>
</tr>
<tr>
<td>1</td>
<td>NXAC</td>
<td>NX Area Controller</td>
</tr>
<tr>
<td>8</td>
<td>NXSW-ORLO</td>
<td>ORLO Specialty Switch</td>
</tr>
<tr>
<td>4</td>
<td>NXHBN2</td>
<td>NX Bridge</td>
</tr>
<tr>
<td>1</td>
<td>NXRC-18-UNV</td>
<td>Room Controller with 1 Relay, Non Dimming</td>
</tr>
<tr>
<td>1</td>
<td>NXRM-H</td>
<td>Radio module</td>
</tr>
<tr>
<td>1</td>
<td>NXSP*</td>
<td>SmartPORT™ module</td>
</tr>
<tr>
<td>1</td>
<td>NXHDI*</td>
<td>Network Interface module</td>
</tr>
</tbody>
</table>

*Also requires a power supply and an enclosure where these need to be mounted, please refer to the NXHDI spec-sheet for details.

---

**KEY**

- Main Power (120/277V)
- NX HubbNET™
- CAT5
- Wireless Connection

**Wireless Connection**

(Parking Lot and Common Office Wirelessly Connected)

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**Notes:**
1. Each bridge can connect only up to 32 fixtures
2. The bridges are self powered from the HubbNET

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**HUBBELLCROSSOLUTIONS.COM**
CONTROL INTENT

SOLUTION STRATEGY
- Use NX wireless enabled fixtures with photocell for top deck of parking garage
- Use NX wireless fixtures with integrated sensors for parking stalls and driving aisles
- NX wireless enabled fixtures for entry and exit, and stairwell areas
- Programming via Area Controller

BEST PRACTICE LAYOUT
- For the interior floor parking aisles, group every two luminaires together to ensure better sensor coverage when an occupant walks by
- Tie all areas together over NX wireless network
- Install bridge with the radio module within 100 ft of at least one fixture
- Ensure that every wireless fixture less than 100 ft from the next wireless fixture

OPERATIONAL DESCRIPTION
- Multi-zone daylight harvesting for exterior walls
- Full ON to 100% upon occupancy
- Dim to 50% upon vacancy
- Dusk to dawn photo ON/OFF/dim for top deck

BILL OF MATERIALS

<table>
<thead>
<tr>
<th>QTY.</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>VPS30NB-70/5K/TA/UNV/7PB-TL/BBT</td>
<td>Small Viper fixtures, black finish, with 7-pin receptacle (no control, ordered separately)</td>
</tr>
<tr>
<td>12</td>
<td>NXOFM-1RD-UNV</td>
<td>On-fixture module, daylight harvesting, scheduled dimming</td>
</tr>
<tr>
<td>33</td>
<td>ARS-24L5K-070-5M-U-NXSW</td>
<td>Arceos garage light fixtures with NX wireless control option with smart sensor</td>
</tr>
<tr>
<td>1</td>
<td>NXRC-1R-UNV</td>
<td>Room Controller with 1 Relay, Non Dimming</td>
</tr>
<tr>
<td>1</td>
<td>NXHB12</td>
<td>NX Bridge</td>
</tr>
<tr>
<td>1</td>
<td>NXRM-H</td>
<td>NX Radio Module</td>
</tr>
<tr>
<td>3</td>
<td>ESL4-35HL-FAW-EDU-NXOS</td>
<td>Escalate stairwell fixture with NX OMNI, PIR occupancy sensor, dimming daylight harvesting</td>
</tr>
<tr>
<td>1</td>
<td>NXAC-120</td>
<td>Area Controller</td>
</tr>
</tbody>
</table>

ZONE #1
(TOP DECK EXTERIOR)

ZONE #2
INTERIOR PARKING FLOOR

ZONE #3
OPEN WINDOW WALL

PARKING GARAGE (2000 SQ FT)

Wireless - In-fixture Control

AREAS
- Multi-level public parking garage
- Parking stalls and driving aisles
- Stairwells and elevator areas
- Top deck and exterior
- Entry and Exit

Note: Drawings not shown to scale and are intended as illustrative example of the application.

Note: Drawings not shown to scale and are intended as illustrative example of the application.
**CONTROL INTENT**

**SOLUTION STRATEGY**
- Deploy Hubbell's Peloton high bay fixtures with high mount integrated sensors
- Include the wireless option for individual fixture control and ease of installation
- With no wiring involved, it’s the most hassle free way of achieving out of the box code compliance in a challenging space

**BEST PRACTICE LAYOUT**
- Place majority of luminaires with emergency backup fixtures in the high activity storage aisle area and workstation areas
- Take advantage of any natural light available

**OPERATIONAL DESCRIPTION**
- UL924 via battery backup on select emergency fixtures
- Fixtures to be pre-configured with industrial commissioning profile
- Any additional programming via mobile App
- Zone based control limited to 2 aisle sensors per group for enhanced coverage upon occupancy

**AREAS**
- Low activity storage aisles
- High activity aisles
- Daylit workstations

**BILL OF MATERIALS**

<table>
<thead>
<tr>
<th>QTY</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>96</td>
<td>PEL4-40MM-N-EDU-NXSPWH</td>
<td>Peloton High Bay Fixture with NX Wireless</td>
</tr>
<tr>
<td>12</td>
<td>PEL4-40MM-N-ELL14-EDU-NXSPWH</td>
<td>Peloton High Bay Fixture with NX wireless and emergency backup, 10W</td>
</tr>
</tbody>
</table>

*Note: Drawings not shown to scale and do not reflect actual quantity of fixtures in shown space.*
APPENDIX
**APPENDIX**

NX System Components and Accessories

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Descriptor</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>NXP32-2-00SP-S</td>
<td>NX lighting control panel, 120/277VAC input, 32 relay capacity, 32 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP08-2-00SP-S</td>
<td>NX lighting control panel, 120/277VAC input, 8 relay capacity, 8 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP48-3-483L-S</td>
<td>NX lighting control panel, 120/347VAC input, 48 relay capacity, 48-30A /1P latching relays, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP32-3-243L-S</td>
<td>NX lighting control panel, 120/347VAC input, 32 relay capacity, 24-30A /1P latching relays, 8 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP32-3-323L-S</td>
<td>NX lighting control panel, 120/347VAC input, 32 relay capacity, 32-30A /1P latching relays, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP24-3-163L-S</td>
<td>NX lighting control panel, 120/347VAC input, 24 relay capacity, 16-30A /1P latching relays, 8 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP24-3-243L-S</td>
<td>NX lighting control panel, 120/347VAC input, 24 relay capacity, 24-30A /1P latching relays, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP16-3-163L-S</td>
<td>NX lighting control panel, 120/347VAC input, 16 relay capacity, 16-30A /1P latching relays, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP16-3-083L-S</td>
<td>NX lighting control panel, 120/347VAC input, 8 relay capacity, 8-30A /1P latching relays, 8 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP48-2-483L-S</td>
<td>NX lighting control panel, 120/277VAC input, 48 relay capacity, 48-30A /1P latching relays, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP32-2-323L-S</td>
<td>NX lighting control panel, 120/277VAC input, 32 relay capacity, 32-30A /1P latching relays, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP24-2-163L-S</td>
<td>NX lighting control panel, 120/277VAC input, 24 relay capacity, 16-30A /1P latching relays, 8 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP24-2-243L-S</td>
<td>NX lighting control panel, 120/277VAC input, 24 relay capacity, 24-30A /1P latching relays, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP16-2-083L-S</td>
<td>NX lighting control panel, 120/277VAC input, 8 relay capacity, 8-30A /1P latching relays, 4 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP16-2-163L-S</td>
<td>NX lighting control panel, 120/277VAC input, 16 relay capacity, 16-30A /1P latching relays, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP08-2-043L-S</td>
<td>NX lighting control panel, 120/277VAC input, 4 relay capacity, 4-30A /1P latching relays, 4 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP08-2-083L-S</td>
<td>NX lighting control panel, 120/277VAC input, 8 relay capacity, 8-30A /1P latching relays, surface mount</td>
<td>Gray</td>
</tr>
</tbody>
</table>

Lighting Control Panels

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Descriptor</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>NXPSC-UL924-UNV</td>
<td>NX Emergency Lighting Room Controller, one single pole relay, one 0-10 dimmer, one color control channel (120-347VAC)</td>
<td>Red</td>
</tr>
<tr>
<td>NXRC2-2RD</td>
<td>NX Room Controller, 2 Relay, 0-10V dimming, power monitoring, universal voltage (120-347VAC)</td>
<td>Blue</td>
</tr>
<tr>
<td>NXRC2-1RD</td>
<td>NX Room Controller, 1 relay, 0-10V dimming, power monitoring, universal voltage (120-347VAC)</td>
<td>Blue</td>
</tr>
<tr>
<td>NXRC-2R-UNV</td>
<td>NX Room Controller, 2 relay, universal voltage (120-347VAC)</td>
<td>Blue</td>
</tr>
<tr>
<td>NXRC-1R-UNV</td>
<td>NX Room Controller, 1 relay, universal voltage (120-347VAC)</td>
<td>Blue</td>
</tr>
</tbody>
</table>

Room Controllers

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Descriptor</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>NXR3L</td>
<td>NX relay, single pole relay, single pole relay, normally open, closed, 120/277/347V, 30A - 50/60 Hz</td>
<td>N/A</td>
</tr>
<tr>
<td>NXOS-LODTR</td>
<td>Wall mount, PIR and ultrasonic, 1600 sq ft, form C relay</td>
<td>White</td>
</tr>
<tr>
<td>NXOS-OMUS2R</td>
<td>Ceiling mount, ultrasonic, 360º, 2000 sq ft</td>
<td>White</td>
</tr>
<tr>
<td>NXOS-OMDT5</td>
<td>Ceiling mount, PIR and ultrasonic, 180º, 500 sq ft, form C relay</td>
<td>White</td>
</tr>
<tr>
<td>NXOS-OMDT1R</td>
<td>Ceiling mount, PIR and ultrasonic, 180º, 1000 sq ft, form C relay</td>
<td>White</td>
</tr>
<tr>
<td>NXOS-OMDT2R</td>
<td>Ceiling mount, PIR and ultrasonic, 360º, 2000 sq ft, form C relay</td>
<td>White</td>
</tr>
<tr>
<td>NXOS-OMDT2</td>
<td>Ceiling mount, PIR and ultrasonic, 2000 sq ft</td>
<td>White</td>
</tr>
<tr>
<td>NXOS-OMDT1</td>
<td>Ceiling mount, PIR and ultrasonic, 180º, 500 sq ft</td>
<td>White</td>
</tr>
<tr>
<td>NXDSP</td>
<td>NX fixture dual SmartPORT adapter</td>
<td>White</td>
</tr>
<tr>
<td>NXP48-2-00SP-S</td>
<td>NX lighting control panel, 120/277VAC input, 48 relay capacity, 48 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP48-4-PWM</td>
<td>NX 48 relay panel door, flush mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP1624-FCVR</td>
<td>NX 16/24 relay panel door, flush mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP32-3-243L-S</td>
<td>NX 32 relay panel door, flush mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP48-4-PWM</td>
<td>NX 48 relay panel door, flush mount</td>
<td>Gray</td>
</tr>
<tr>
<td>NXP08-2-00SP-S</td>
<td>NX lighting control panel, 120/277VAC input, 8 relay capacity, 8 relay spaces, surface mount</td>
<td>Gray</td>
</tr>
</tbody>
</table>

Network Bridges

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Descriptor</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>NXR-3LEM</td>
<td>NX emergency UL924 relay, single pole relay, normally open, closed, 120/277/347V, 30A - 50/60 Hz</td>
<td>N/A</td>
</tr>
<tr>
<td>NXR-TC</td>
<td>NX relay, two pole, electrically held, normally open, closed, 240/208/480V, 20A - 50/60 Hz</td>
<td>N/A</td>
</tr>
<tr>
<td>NXR-IL</td>
<td>NX relay, two pole, electrically held, normally closed, 240/208/480V, 20A - 50/60 Hz</td>
<td>N/A</td>
</tr>
<tr>
<td>NXR-3L</td>
<td>NX relay, single pole, latching, normally open, closed, 120/277/347V, 30A - 50/60 Hz</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Relays

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Descriptor</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>NXR-3L</td>
<td>NX emergency UL924 relay, single pole, latching, normally open, closed, 120/277/347V, 30A - 50/60 Hz</td>
<td>N/A</td>
</tr>
<tr>
<td>NXR-TC</td>
<td>NX relay, two pole, electrically held, normally open, closed, 240/208/480V, 20A - 50/60 Hz</td>
<td>N/A</td>
</tr>
<tr>
<td>NXR-IL</td>
<td>NX relay, two pole, electrically held, normally closed, 240/208/480V, 20A - 50/60 Hz</td>
<td>N/A</td>
</tr>
<tr>
<td>NXR-3L</td>
<td>NX emergency UL924 relay, single pole, latching, normally open, closed, 120/277/347V, 30A - 50/60 Hz</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Relay Modules

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Descriptor</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>NXR-3L</td>
<td>NX emergency UL924 relay, single pole, latching, normally open, closed, 120/277/347V, 30A - 50/60 Hz</td>
<td>N/A</td>
</tr>
</tbody>
</table>

For additional resources view our NX In-Fixture Selection Guide

For part numbers, please visit our website.
<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Descriptor</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>NXS1</td>
<td>NX legacy daylight sensor</td>
<td>White</td>
</tr>
<tr>
<td>NXSD1</td>
<td>NX legacy daylight sensor, outdoor</td>
<td>White</td>
</tr>
</tbody>
</table>

**Switches**

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Descriptor</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCSREC</td>
<td>Controlled receptacle Black, brown, gray, green, ivory, light almond, white</td>
<td></td>
</tr>
<tr>
<td>NXPOE-7-24B</td>
<td>Seven port HubbNET™ POE switch Black</td>
<td></td>
</tr>
<tr>
<td>PHDIM1277</td>
<td>0-10V dimming to phase dimming module Grey</td>
<td></td>
</tr>
<tr>
<td>RJ45ADAPTER</td>
<td>Pigtail to CAT5 adapter Grey</td>
<td></td>
</tr>
<tr>
<td>NXRJSPLITTER</td>
<td>CAT5 splitter, non-plenum Black, brown, gray, light almond, white</td>
<td></td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Descriptor</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAT5-25F-OR-PLENUM</td>
<td>CAT5 cable for NX SmartPORT devices, plenum rated, 25ft, Orange</td>
<td>Orange</td>
</tr>
<tr>
<td>CAT5-100F-OR-PLENUM</td>
<td>CAT5 cable for NX SmartPORT devices, plenum rated, 100ft, Orange</td>
<td>Orange</td>
</tr>
</tbody>
</table>

**NX In-Fixture Options**

**NX Option**

**Description**

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NXSW</td>
<td>NX digital switch station, timed-on, pilot Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXSW-BTNAL-xx</td>
<td>NX large arrow button for switch stations, no pilot light, 25 count Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXSW-BTNOFFL-xx</td>
<td>NX large OFF button for switch stations, no pilot Light, 25 count Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXSW-BTNONL-xx</td>
<td>NX large ON button for switch stations, no pilot Light, 25 count Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXSW-MDL-xx</td>
<td>NX small arrow button for switch stations, pilot light, 25 count Black, gray, ivory, light almond, white</td>
</tr>
</tbody>
</table>

Notes:

1. Same as NXS but sensor has different form factor.
2. Same as NXES but sensor has smaller form factor.
3. Same as NXS but sensor has different style.
4. Same as NXES but sensor has different style.
5. Same as NXSW but sensor has different form factor.
6. Same as NXSW but sensor has different form factor.
7. Same as NXSW but sensor has different form factor.
8. Programming via NX Mobile App requires factory assistance.

**Outdoor Options**

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NXSPH</td>
<td>NX Wireless, PIR BT Occupancy/Daylight Sensor, High Mount Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXSPL</td>
<td>NX Wireless, PIR BT Occupancy/Daylight Sensor, Low Mount Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXS5</td>
<td>NX Wireless, Dual SmartPORT™ Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXS4</td>
<td>NX Wireless, Dual SmartPORT™ Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXS3</td>
<td>NX Wireless, Dual SmartPORT™ Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXS2</td>
<td>NX Wireless, Dual SmartPORT™ Black, gray, ivory, light almond, white</td>
</tr>
<tr>
<td>NXS1</td>
<td>NX Wireless, Dual SmartPORT™ Black, gray, ivory, light almond, white</td>
</tr>
</tbody>
</table>

Notes:

1. Same as NXS but sensor has smaller form factor.
2. Same as NXS but sensor has smaller form factor.
3. Same as NXS but sensor has smaller form factor.
4. Sensor (GX50) is not integrated into NXS. Use in ordered separately as an add-on.
5. Programming via NX Mobile App requires factory assistance.
Our Experience
Hubbell Control Solutions offers customers a wide variety of services, a wealth of field experience and the highest quality products. We are committed to the same level of quality when providing services including layouts, training and system start-ups to our customers.

Solutions
From the first contact through the final system adjustment, Hubbell Control Solutions 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 receive full corporate support throughout every phase of a sale. Our service organization offers the convenience of a variety of services: on-site troubleshooting, maintenance contracts for periodic system checks, on-site start up and check out to maximize system performance.

Service & Support capabilities:

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

Design Service
Our team of lighting control system design professionals are available to provide sensor layouts, networked system design services and 3rd 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.

Phone and Online 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 Hubbell Control Solutions 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, 3rd party integrators, certified field technicians and facilities personnel, to quickly resolve issues and provide additional support.

Technical Service Center:
(800) 888-8006

On-site Support
Hubbell Control Solutions offers on-site support service to ensure your project goes smoothly. While Hubbell Control Solutions products are designed with simplicity in mind, some projects may benefit from a Certified Field Technician (CFT) 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.