Crestron Green Light®
Commercial Lighting Design Guide

CRESTRON

CRESTRON Green Light®

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Introduction

This guide is designed to educate you on lighting system design using the wide range of products found in the Crestron Green Light® family. Crestron Green Light is built on 40 years of expertise, vision, and innovation. From the very first touch panel to the first Ethernet-based control system, Crestron® has defined "integration." Focused on bringing to market new and advanced solutions for making life easier and greener, Crestron is continuing to engineer the future of intelligent building technology.

Through our industry experience, we understand the value of scalability. We know that a solution fit for the needs (and budget) of today may be different tomorrow. Green Light solutions are uniquely designed to grow over time while constantly providing a reliable and consistent user experience. Solutions for the room can expand to fulfill the needs of the entire building; a building may grow into a worldwide enterprise. Regardless of magnitude, Crestron delivers solutions for venues of all sizes.

Product scalability is crucial, but hardware is only as good as the software that drives it. Crestron software tools are designed to integrate all areas of the system to do anything you want them to do. Lights in a boardroom designed to function locally yesterday can now hook into the room's AV system for an integrated solution (so when the source is switched to Blu-ray, the lights automatically dim). Similarly, electric shades that were only intended to lower during AV presentations can now be integrated to intelligently lower based on the angle of the sun and lumen level. This data is shared with Crestron RoomView® Server Edition software across the global enterprise for energy tracking, monitoring, control and maintenance.

With Crestron, everything can be integrated and intelligently managed.This is the power of Crestron: a solution that evolves with you. Welcome to Crestron—the only solution solving the challenges of today and tomorrow.

Specifying Crestron Lighting Systems

This lighting design guide will help you choose the proper Crestron products for your application. A typical lighting system has at least a lighting control module or cabinet, a processor, and a user interface. Follow these four basic steps when navigating through this guide:

1. Read the System Architecture and Product Families sections to determine the suitable lighting control modules or cabinets.
2. Choose a control processor from the Processors section. Room Solutions products can work without a processor, but support a limited number of connected devices without a central processor.
3. Choose one or more user interfaces from the User Interfaces section. For iLux® and wall box dimmers and switches, a separate user interface is not necessary, but recommended.
4. Add in options from the Sensors, Shades, and Accessories sections to make a more robust system.

Crestron's Green Light Designer program can help with the design process. Currently, it supports Architectural Dimming, Power Switching, and iLux systems. For more information see the Green Light Designer Software section.

System Architecture

Crestron Green Light systems are available in a variety of configurations. Factors such as construction type, client requirements, and architectural restrictions determine the best configuration. Lighting system architectures include centralized, distributed, and hybrid.

At the heart of each Green Light system is one or more control processors. This control system takes in user button presses or other external events and turns them into single commands or even sequences of commands; dimming lights and closing shades can occur with just one button press or occupancy sense. In addition to controlling lighting, fans, motors, HVAC, and security, the control system can connect to building systems via Ethernet, RS-232, BACnet, Lonworks, and others.

Centralized Architecture

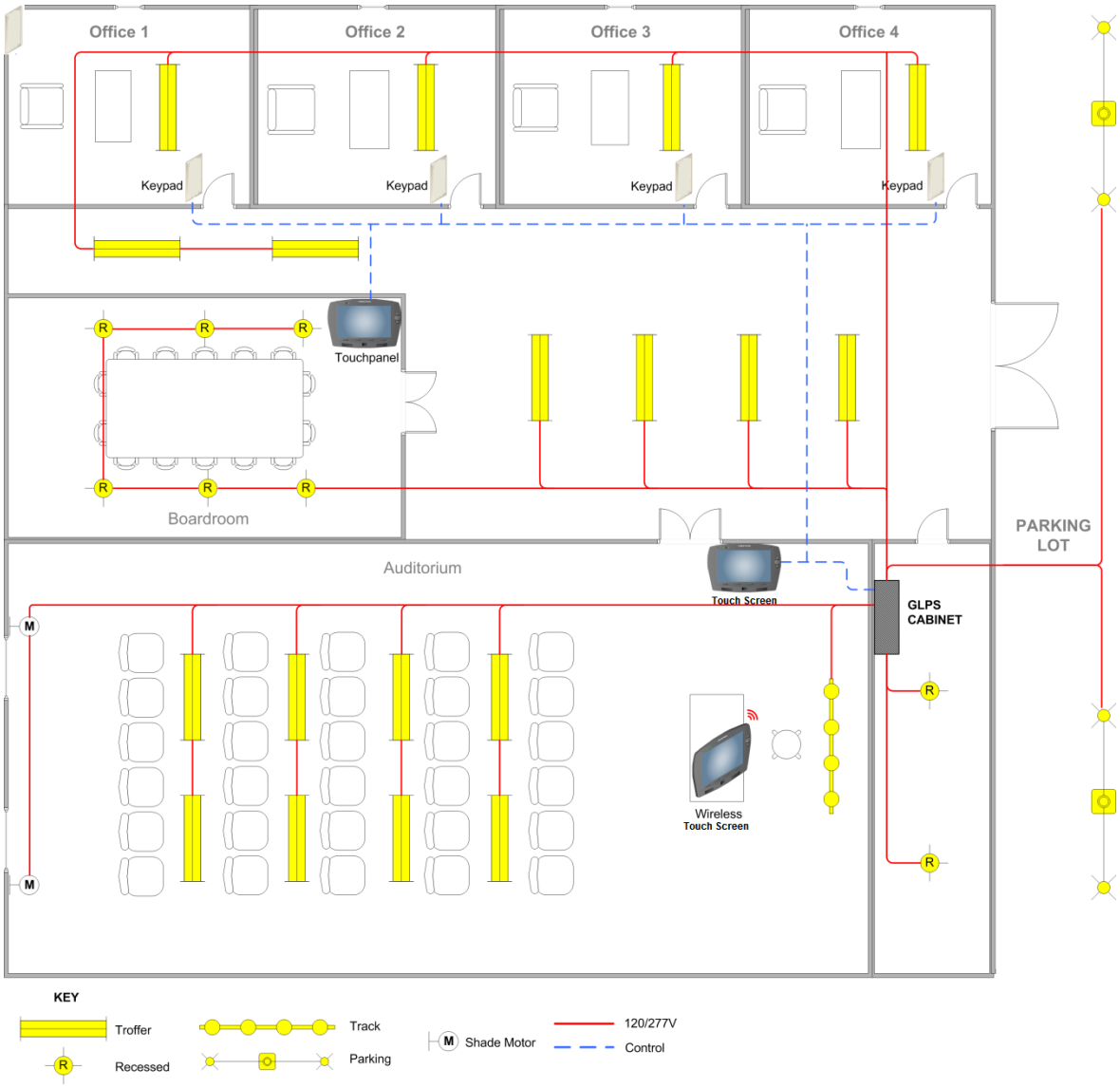
Product Families: Architectural Dimming, Power Switching, Green Light Express®

- High-voltage wiring home-runs from many rooms to a central Crestron panel
- Lights are controlled with keypads and touch screens located anywhere

In a centralized system all the high-voltage lighting, motor, fan, and switch circuits draw power directly from modules in a Crestron Green Light enclosure. Wired or wireless user interfaces can be placed throughout the building to control the various circuits. A centralized design simplifies the high-voltage wiring through a “home-run” infrastructure where each lighting circuit is connected directly to the module within the Crestron enclosure.

The major benefit of a centralized architecture is the ability to program the user interfaces to control any load connected to the system. This differs from traditional distributed infrastructure whereby each circuit is controlled locally via the in-wall dimmer or switch. Enabling load control through programming allows for multi-point control as well as the ability to change how the system functions through future updates. In addition to reducing wall clutter, multiple circuits can be controlled via a single button press, simply recalling presets for different room configurations, events or atmospheres.

Centralized systems are appropriate for applications such as lobbies, hallways, parking garages, stadiums, and auditoriums.


Office 1
Office 2
Office 3
Office 4
Keypad
Keypad
Keypad
Keypad
Touchpanel
Boardroom
Auditorium
Touch Screen
PARKING LOT
GLPS CABINET
Wireless Touch Screen
KEY
Troffer
Recessed
Track
Parking
Shade Motor
120/277V
Control

Distributed Architecture

Product Families: Room Solutions

- Wired in traditional configuration
- Each load is controlled by a local Crestron device. In some cases, the local device has integrated on-board keypad
- Keypad and touch screen control are optional, allowing that load to be controlled from any location

In a distributed system the high-voltage lighting, motor, fan, and switch circuits are wired in the traditional configuration with local control. Controllable in-wall dimmers or switches replace the standard dimmers or switches and can be retrofitted into a project after customary high-voltage wiring is completed. Crestron in-wall dimmers communicate with a control processor through either a Cresnet (low-voltage control wire) or infiNET EX® (mesh RF) wireless connection. This design combines the familiarity of local control with the power and flexibility of automation. In the event of a control system interruption, the user can still operate the lighting locally.

In the commercial space, in-wall solutions are appropriate for offices, small boardrooms, and hospitality. Typically in-wall dimmers or switches support standard voltages (120/230 Vac) and load types (incandescent, magnetic low-voltage). In the case where higher voltages and loads are required, an expansion module can be added.

Hybrid Architecture

Product Families: Mix centralized and distributed products.

- Combines both centralized and distributed architectures
- Offers complete building/enterprise control through flexible combinations of products

A hybrid system is a mix of both the centralized and distributed design. This allows local control where needed alongside sophisticated central control for larger spaces. For example, a boardroom could have distributed local control while the lobby is on centralized control. Hybrid designs typically achieve a good balance, delivering the control necessary at a reasonable budget. In many commercial spaces, mechanical/electrical room space is limited (this is where the Green Light enclosures must be installed). By using a reasonable mix of centralized and distributed control, entire buildings can be connected to a control network which offers total control, monitoring and management.


Office 1
Office 2
Office 3
Office 4
Keypad
Keypad
Keypad
Keypad
Cameo Dimmer
Boardroom
Auditorium
iLux
Cameo Dimmer
PARKING LOT
GLPS CABINET
CAEN CABINET With PAC2
Wireless Touch screen
KEY
Troffer
Recessed
Track
Parking
Shade Motor
120/277V
Control

Product Families

Crestron has developed a number of Green Light products to suite the broad range of applications in the world of commercial lighting.

Architectural Dimming: Centralized dimming and switching, 16 amp per circuit, and support for a wide range of loads. Built-in, pre-wired circuit breakers are optional.

Power Switching: Centralized switching, 16A per circuit, and support for 0-10 volt dimming. All models include pre-wired circuit breakers.

Green Light Express: Centralized dimming and switching requiring a separate circuit breaker panel, up to 16 amp per circuit, and support for a wide range of loads. Since there are no breakers, the cabinet is more compact than panels with breakers.

DALI: Digitally addressable dimming and switching using the DALI open standard. DALI commissioning tool simplifies deployment. Ballasts are wired directly to circuit breakers, and digital control information is sent to ballasts. DALI mounts in a standard DIN Rail cabinet alongside other Crestron and third-party DIN Rail products.

Room Solutions: Distributed lighting and shade control designed for local installation. Used for a single room or small group of rooms. Some products come with infiNET EX for reliable wireless communication and easy retrofitting.

Common Applications

The table below represents the different Crestron product families. Common usage scenarios are listed at left. Dots show a typical solution for each scenario.

Key: ✓ - Acceptable Solution

	Centralized Architecture			Distributed Architecture	Addressable Lighting
	Arch. Dimming	Power Switching	Green Light Express	Room Solutions	DALI
Auditorium	✓	✓	✓	✓	
Cafeteria	✓	✓	✓		
Classroom		✓	✓	✓	✓
Office Space		✓	✓		✓
Parking Lot		✓	✓		
Restaurant	✓	✓	✓	✓	
Stadium		✓	✓		

Written Specifications

Comprehensive Section 26 specifications are available for download on the Crestron website. These specifications can be implemented within lighting project specifications to ensure bids meet the appropriate requirements as set by Crestron.

Specifications are located at www.crestron.com/greenlightspecs

Green Light Designer Software

Crestron Green Light Designer allows you to design and document a complete, energy-efficient commercial lighting solution that combines facility-wide lighting, shade/drape control with audio/video integration and network management - all without requiring extensive knowledge of Crestron products, or any other Crestron software.

Green Light Designer features a straightforward user interface, with all data entry confined to four easy-to-use tabs: load schedule, shades, control stations, and sensors. As you define your project, an equipment list of required Crestron products is generated automatically behind the scenes.

Once the project is designed and configured, Green Light Designer allows you to generate attractive and easy to read reports such as one-line diagrams, load schedules, shade schedules, equipment lists, and equipment lists by room. Reports can be generated in a variety of formats (e.g., PDF, Excel®, HTML, CSV, text) ready to be sent via email or imported into other applications.

Lighting Systems

Architectural Dimming

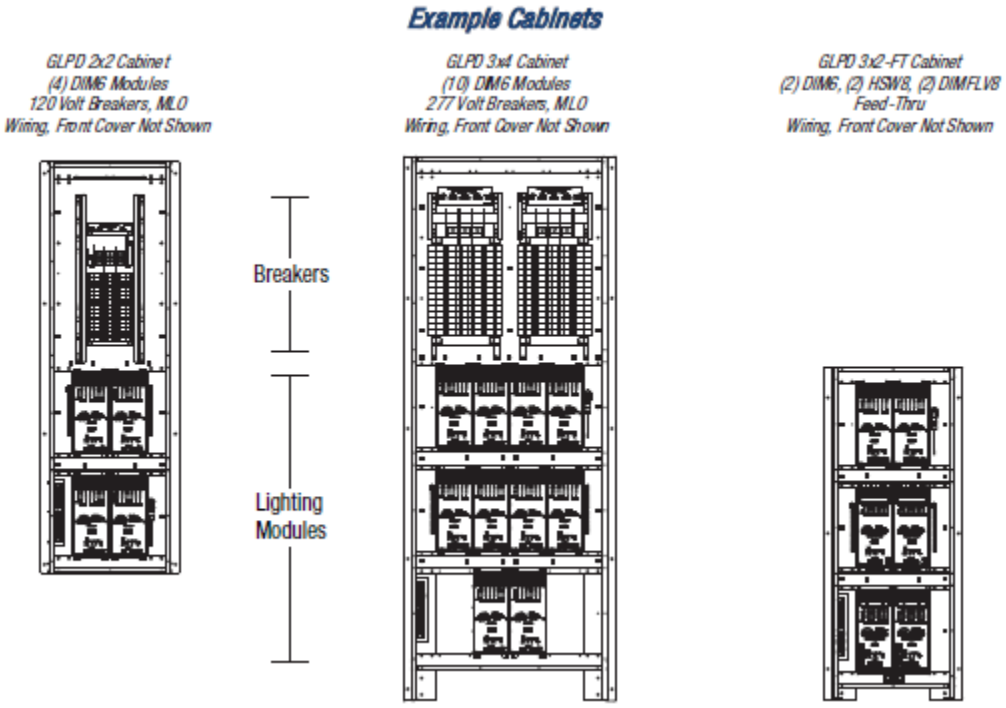
Crestron Green Light Architectural Dimming products are designed for control of lighting in theaters, restaurants, offices, and anywhere centralized dimming is desired. With a range of panel sizes and configurations available, every system is fully scalable to custom-fit each installation. An extensive selection of Crestron keypads, touch screens, occupancy sensors, photocells, shade controllers, and numerous other peripheral options afford astounding design flexibility with unparalleled capability for integration.

- Centralized dimming system
- Available with integrated main lug and branch breakers
- Keypads and touch screens offer flexible control anywhere
- Astronomical clock allows events to be scheduled around sunrise/sunset
- Sensor integration for occupancy sensing and daylight harvesting
- Emergency override assures reliable lighting in critical areas

GLPD panels are available with integrated circuit breakers. GLPD panels without integrated circuit breakers are known as “feed-thru” cabinets. Dimming in a feed-thru cabinet is also available with the GLPX panel from the Green Light Express product line. To learn more or configure a GLPX panel, see the Green Light Express section on page 28.

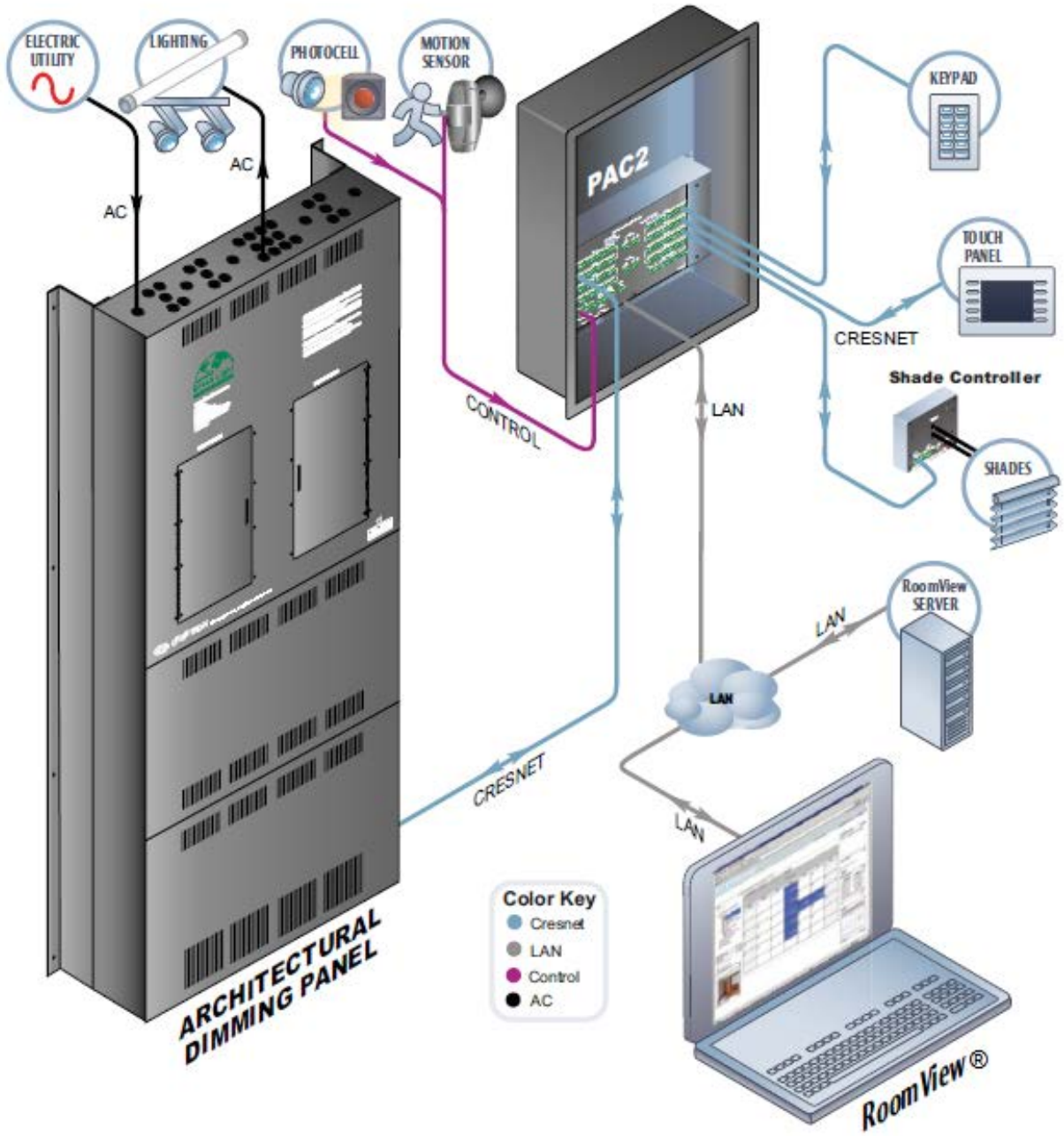
When to Specify Architectural Dimming

If you need to dim a large amount of lighting loads, Architectural Dimming panels are the tool for the job. When specifying, keep in mind that the panel requires all load wiring to home-run to a single location, preferably a utility room where the panel can be installed. A single panel can control up to 60 lighting loads. If necessary, multiple panels can be configured and connected through the control system. With Architectural Dimming panels, no job is too big.



Example Architectural Dimming Application

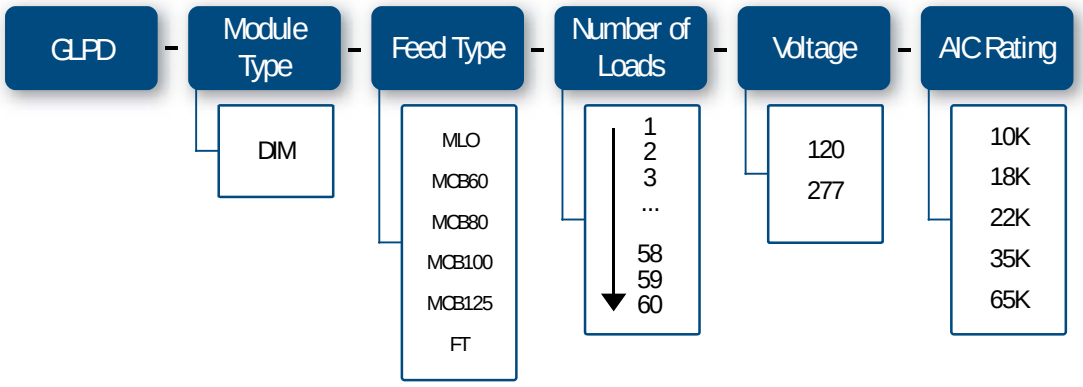
Below is an example Architectural Dimming panel application. Lighting is directly controlled through the AC wiring coming out of the panel. The panel connects to a PAC2 processor via Cresnet®. Also connected to the PAC2 are C2N shade contorollers, a photocell, a motion sensor, a keypad, and a touch screen. Everything can be controlled and monitored from the connected PC by using RoomView®.



GLPD Panels

Crestron GLPD Architectural Dimming panels can dim a wide range of lighting types. There are many configurations available for any budget or need. This text describes how to design your suitable panel configuration and how to name it for ordering.

GLPD Panel Naming System



When ordering an architectural dimming panel, construct a model name as shown above. Possible choices are listed underneath each blue box. The numbered steps below describe each part of the name in detail.

Examples: GLPD-DIM-MCB80-24-120-10K and GLPD-DIM-FT-36

1. Module Type

GLPD-DIM-___-___-___-___

GLPD panels are only available with DIM modules. If you want to mix dimming, switching and 0-10V lighting control into a single cabinet, see the GLPD-C product on page 12. The GLPD-C panel is a custom panel with three possible module types.

Key: ○ - Switchable
● - Dimmable

	Module
	DIM
Load Types: 2 and 3-wire fluorescent	●
Load Types: MLV/ELV	●
Load Types: Incandescent	●
Load Types: Neon/cold cathode	●
Load Types: Standard LED	●
Load Types: 0-10V LED	○
Load Types: 0-10V fluorescent	○
Load Types: HID and Motor	○
Voltage	100 to 277 Volts
Additional Module Info	Page 15

2. Feed Type

GLPD-DIM-___-___-___-___

MLO	Main Lug Only with 20A branch breakers
MCB60	60A back-fed main circuit breaker with 20A branch breakers
MCB80	80A back-fed main circuit breaker with 20A branch breakers
MCB100	100A back-fed main circuit breaker with 20A branch breakers
MCB125	125A back-fed main circuit breaker with 20A branch breakers
FT	Feed-thru with no integrated branch breakers

3. Number of Loads

GLPD-DIM-___-___-___-___

Find the row in the table that matches your choices in steps 1 and 2. The numbers in blue represent the maximum number of loads for each cabinet size. You can choose any number up to the maximums listed below. See page 18 for more information on the cabinet sizes.

		Cabinet Sizes					
		2x2	3x2	2x4	3x4	2x2-FT	3x2-FT
Maximum # of Loads	DIM-MLO	24	36	48	60	-	-
	DIM-MCB	24	36	48	57*	-	-
	DIM-FT	-	-	-	-	24	36

Note: For feed-thru cabinets only (-FT), the model name is complete after step three. Skip steps four and five.

*If using 120/208V and 125A MCB, reduce the maximum number of loads shown by three.

4. Voltage

GLPD-DIM-___-___-___-___

To specify the circuit breaker voltage, enter "120" for 120/208V or "277" for 277/480V.

5. AIC Rating

GLPD-DIM-___-___-___-___

Choose one of the following values from the appropriate column to specify the Ampere Interrupting Capacity of the circuit breakers.

120 Volt	277 Volt
10K	18K
22K	35K
65K	65K

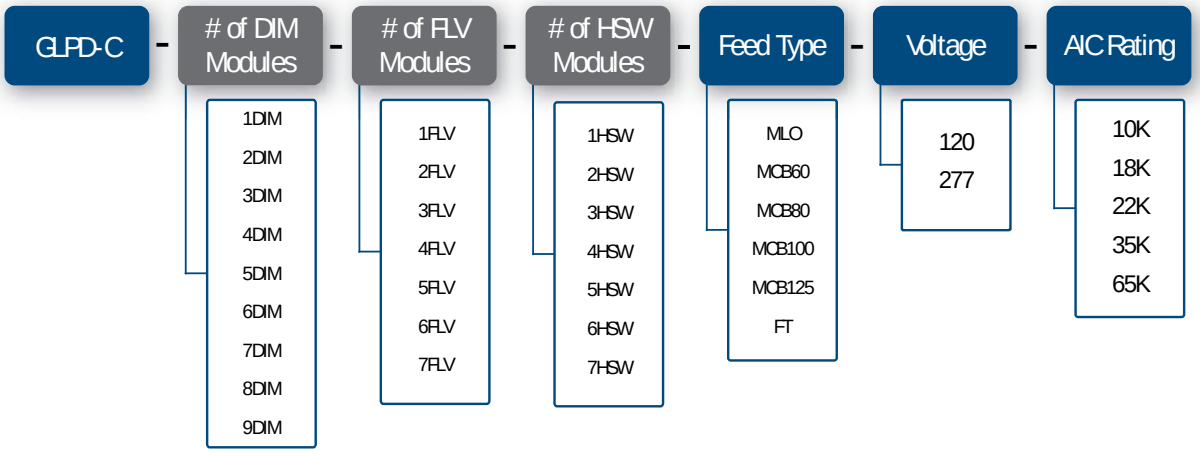
What is AIC?

When a short circuit occurs, a large amount of current flows into the circuit breaker and it trips. The Ampere Interrupt Capacity rating is the maximum current the breaker can safely interrupt. If the short circuit current exceeds the AIC rating of the breaker, the circuit breaker may fail. For safe operation, the AIC rating must exceed the available fault current at the panel.

GLPD-C Panels

For architectural dimming panels with mixed module types, a “C” is attached to the model name (denoting custom). The number of each module type is specified within the product name.

GLPD-C Panel Naming System



When ordering an architectural dimming panel, construct a model name as shown above. Possible choices are listed underneath each blue or gray box. The gray boxes represent the modules and may be eliminated from the model name if not used. The numbered steps below describe each part of the model name in detail.

Examples: GLPD-C-2DIM-2FLV-FT
GLPD-C-2FLV-4HSW-MCB100-120-65k

1. Feed Type **GLPD-C-___-___-___-___-___-___**

MLO	Main Lug Only with 20A branch breakers
MCB60	60A back-fed main circuit breaker with 20A branch breakers
MCB80	80A back-fed main circuit breaker with 20A branch breakers
MCB100	100A back-fed main circuit breaker with 20A branch breakers
MCB125	125A back-fed main circuit breaker with 20A branch breakers
FT	Feed-thru with no integrated branch breakers

2. Number of DIM, FLV, and HSW **GLPD-C-___-___-___-___-___-___**

In the table below are the possible module choices. To design the cabinet, select quantities of these three modules. A DIM module wires 6 loads, an FLV module wires 8 loads, and an HSW module wires 8 loads. Therefore the total number of loads will be:

(# of DIM modules × 6) + (# of FLV modules × 8) + (# of HSW modules × 8)

Key: ○ - Switchable ● - Dimmable		Modules		
		DIM	FLV	HSW
Load Types	2 and 3-wire fluorescent	●	☐	☐
	MLV/ELV	●	☐	☐
	Incandescent	●	☐	☐
	Neon/cold cathode	●	☐	☐
	Standard LED	●	☐	☐
	0-10V LED	○	☐	☐
	0-10V fluorescent	○	☐	☐
	HID and Motor	○	☐I☐	
Voltage		100 to 277 Volts	100 to 277 Volts	100 to 277 Volts
Additional Module Info		Page 15	Page 16	Page 17

Find the row in the table below that matches your choice in step 1. In that row is the maximum number of loads for each cabinet size. Choose a cabinet size, and do not exceed the maximums when designing the panel. See page 18 for more information on the cabinet sizes.

		Cabinet Size					
		2x2	3x2	2x4	3x4	2x2-FT	3x2-FT
Max # of Modules		4	6	8	12	4	6
Max # of Loads	MLO	30	42	60	60	-	-
	MCB	27*	39*	57*	57*	-	-
	FT	-	-	-	-	32	48

* If using 120/208V and MCB125, reduce the maximum number of loads shown by three.

Now choose quantities of DIM, FLV, and HSW modules, but do not exceed the maximum number of modules and maximum number of loads determined from the table above.

As an example, say you have 4 DIM loads, 20 FLV loads, and 15 HSW loads. This would require **1** DIM module, **3** FLV modules, and **2** HSW modules = **6 modules**. Using the formula on the previous page, these six modules wire a total of 46 loads.

(1 × 6) + (3 × 8) + (2 × 8) = 46 loads

The cabinet size will be 2x4 because it is the smallest cabinet that can accommodate 6 modules and 46 circuits.

Note: It is possible to wire in fractions of modules when there are not enough breakers available for the modules you want. In this circumstance please call Crestron Sales Support Services.

3. Voltage **GLPD-C-___-___-___-___-___-___-___**

To specify the circuit breaker voltage, enter “120” for 120/208V or “277” for 277/480V.

Note: For feed-thru cabinets only (-FT), the model name is complete after step two. Skip steps three and four.

4. AIC Rating **GLPD-C-___-___-___-___-___-___-___**

Choose one of the following values from the appropriate column to specify the Ampere Interrupting Capacity of the circuit breakers.

120 Volt	277 Volt
10K	18K
22K	35K
65K	65K

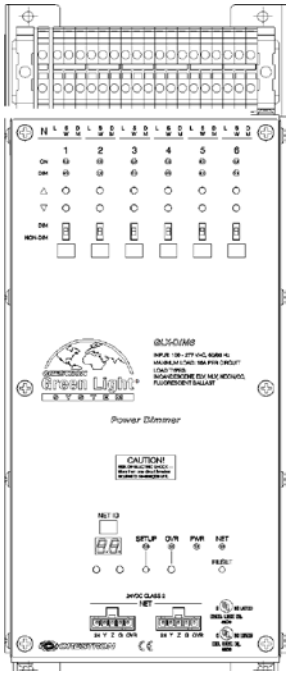
What is AIC?

When a short circuit occurs, a large amount of current flows into the circuit breaker and it trips. The Ampere Interrupt Capacity rating is the maximum current the breaker can safely interrupt. If the short circuit current exceeds the AIC rating of the breaker, the circuit breaker may fail. For safe operation, the AIC rating must exceed the available fault current at the panel.

Module Specifications
GLX-DIM6

The GLX-DIM6 is a Crestron Green Light architectural dimming module which features 6 channels of incandescent, magnetic low-voltage, and 2- and 3-wire fluorescent dimming. The module is part of a complete Crestron engineered GLPD Green Light architectural dimming panel.

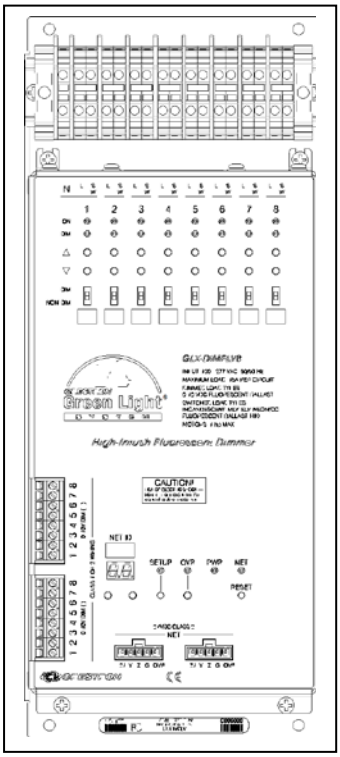
- 6 channels of incandescent, MLV, 2- & 3-wire fluorescent dimming
- Phase-Synchronous detection eliminates lamp flicker
- Selectable non-dim mode
- Supports 100 to 277 Volt applications
- 16 amp load rating per channel
- Short circuit and overload protection
- Positive air gap at each output
- Phase-independent channels
- Cresnet communications
- Redundant power capability—module powered via line or Cresnet
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory



Load Ratings	
Switch Channels	6
Per Channel	16 amps at 100-277 Vac, 50/60 Hz
Dim Load Types	Incandescent, Magnetic Low-Voltage, Neon/Cold Cathode, 2- wire Fluorescent Ballast, or 3-wire Fluorescent Ballast
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge
Power Requirements	
Primary	100-277 Vac, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	9 watts at 24 Vdc, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	550 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
Module SCCR Rating - 65kA	
CE	

GLX-DIMFLV8

The GLX-DIMFLV8 is a Crestron Green Light architectural dimming module which features 8 channels of 4-wire, 0-10 Volt fluorescent dimming. The module is part of a complete Crestron engineered GLPD Green Light dimming panel.



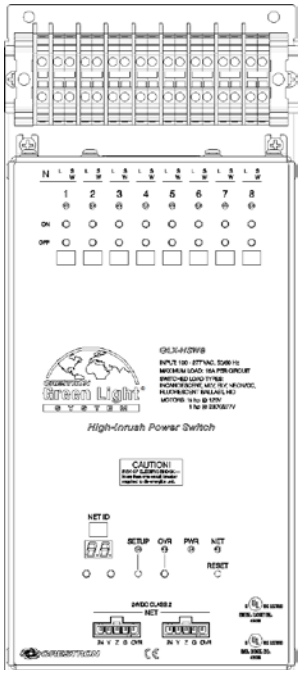
- 8 channels of 4-wire 0-10 Volt fluorescent dimming
- Compatible with lighting and motor loads
- Supports 100 to 277 Volt applications
- 16 amp load rating per channel
- Arc-less switching
- Positive air gap at each output
- Phase-independent channels
- Cresnet communications
- Redundant power capability—module powered via line or Cresnet
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory

Load Ratings	
Dimmer Channels	8
Per Channel	16 amps at 100-277 Vac, 50/60 Hz 0.5 HP @ 120 Volts, 1 HP @ 230 Volts, 1 HP @ 277 Volts
Dim Load Types	0-10 Volt fluorescent ballast (4-wire); 60 mA max current sink
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motor
Relay Lifetime	1,000,000 on/off operations at full electronic ballast load
Power Requirements	
Primary	100-277 Vac, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	5 watts at 24 Vdc, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	116 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
Module SCCR Rating - 65kA	
CE	

GLX-HSW8

The GLX-HSW8 is a Crestron Green Light architectural dimming module which features 8 channels of high inrush switching. The module is part of a complete Crestron engineered GLPD Green Light dimming panel.

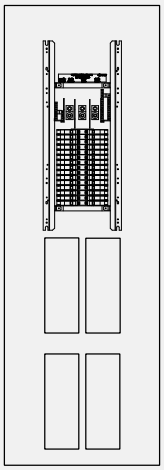
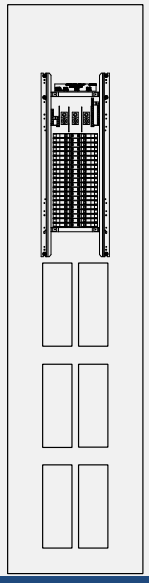
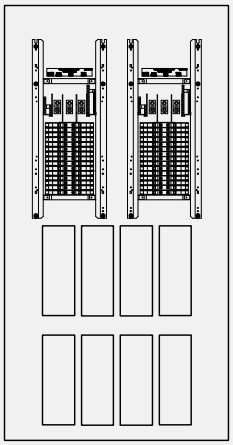
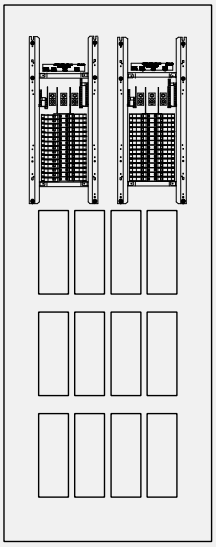
- 8 channels of high inrush switching
- Compatible with lighting and motor loads
- Supports 100 to 277 Volt applications
- 16 amp load rating per channel
- Arc-less switching
- Positive air gap at each output
- Phase-independent channels
- Cresnet communications
- Redundant power capability—module powered via line or Cresnet
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory

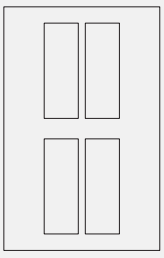
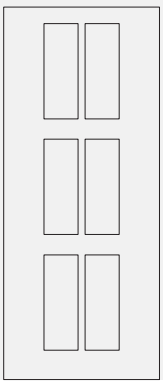


Load Ratings	
Dimmer Channels	8
Per Channel	16 amps at 100-277 Vac, 50/60 Hz 0.5 HP @ 120 volts, 1 HP @ 230 volts, 1 HP @ 277 volts
Dim Load Types	0-10 Volt fluorescent ballast (4-wire); 60 mA max current sink
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motor
Relay Lifetime	1,000,000 on/off operations at full electronic ballast load
Power Requirements	
Primary	100-277 Vac, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	5 watts at 24 Vdc, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	112 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
Module SCCR Rating - 65kA	
CE	

Cabinets

Regular cabinets have built-in circuit breakers. The cabinets are shipped with wiring from the breakers to the modules completed for easy installation. Feed-thru cabinets require a separate breaker panel next to the GLPD panel.

Cabinet Sizes	2x2	3x2	2x4	3x4
Height	67.8 in (172.3 cm)	96.0 in (243.8 cm)	67.8 in (172.3 cm)	89.9 in (228.1 cm)
Width	22.8 in (58.1 cm)	22.8 in (58.1 cm)	35.1 in (89.1 cm)	35.1 in (89.1 cm)
Depth	10.6 in (27 cm)	10.6 in (27 cm)	10.6 in (27 cm)	10.6 in (27 cm)
Module Layout				

Cabinet Sizes	2x2-FT	3x2-FT
Height	35.9 in (91.1 cm)	54.75 in (139.1 cm)
Width	22.8 in (58.2 cm)	22.8 in (58.2 cm)
Depth	10.2 in (25.9 cm)	10.2 in (25.9 cm)
Layout		

Power Switching

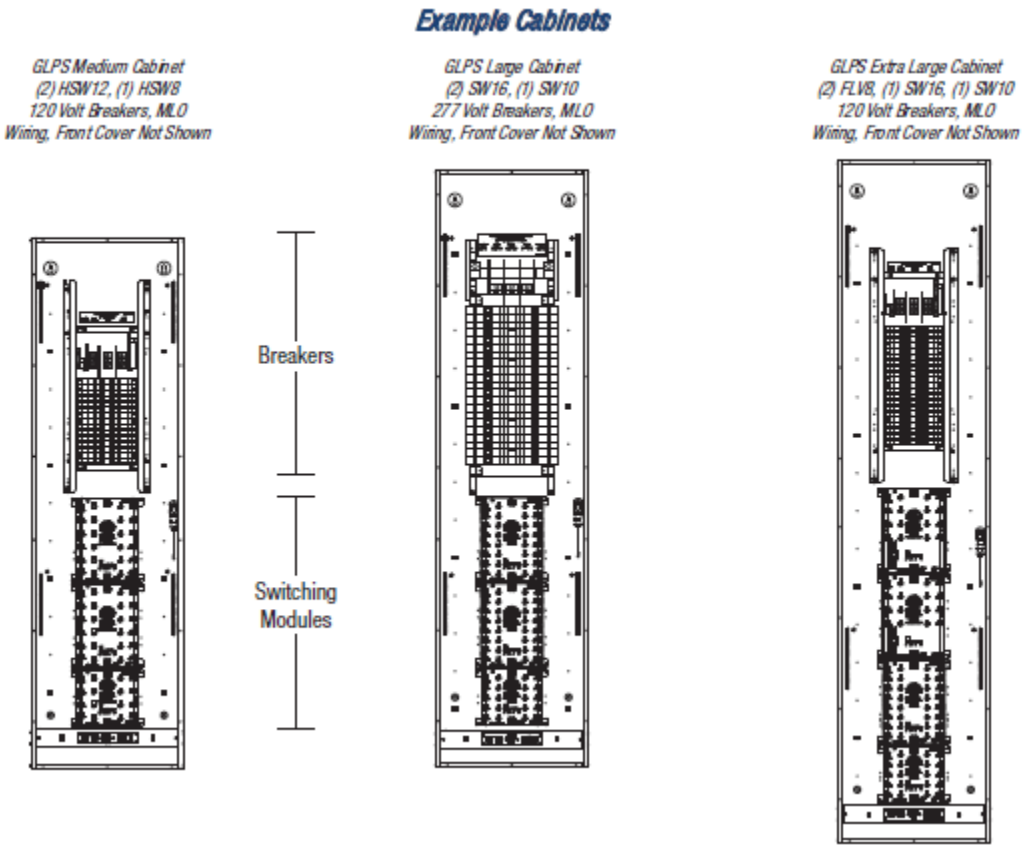
Crestron Green Light Power Switching products are designed for control of lighting in office buildings, warehouses, parking garages, sports facilities, public spaces, and anywhere centralized switching is required. With a range of panel sizes and configurations available, every system is fully scalable to custom-fit each installation. An extensive selection of Crestron keypads, touch screens, occupancy sensors, photocells, shade controllers, and numerous other peripheral options afford astounding design flexibility with unparalleled capability for integration.

- Centralized switching system with integrated main lug and branch breakers
- Keypads and touch screens offer flexible control anywhere
- Astronomical clock allows events to be scheduled around sunrise/sunset
- Sensor integration for occupancy sensing and daylight harvesting
- Emergency override assures reliable lighting in critical areas

GLPS panels come with integrated circuit breakers. Power switching without integrated circuit breakers is available in the GLPX panel from the Green Light Express product line. To learn more or configure a GLPX panel, see the Green Light Express section on page 28.

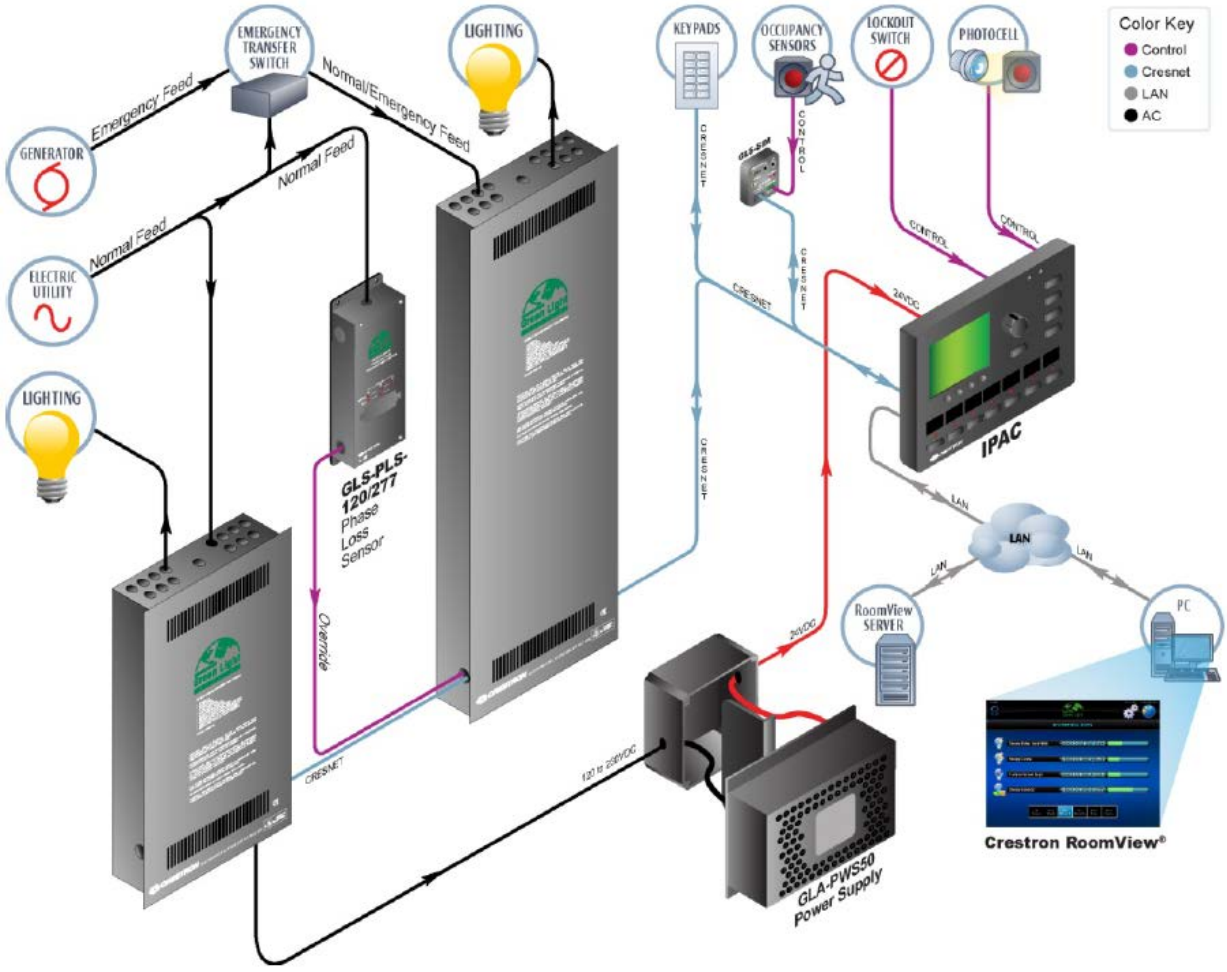
When to Specify Power Switching

If you need load switching and have a large amount of lighting circuits, Power Switching panels are the tool for the job. When specifying, keep in mind that the panel requires all lighting wiring to run to a single location, preferably a utility room where the panel can be installed. A single panel can control up to 42 lighting circuits. If necessary, configure multiple panels and easily connect them using Crestron's control system. With Power Switching panels, no job is too big.



Example Power Switching Application

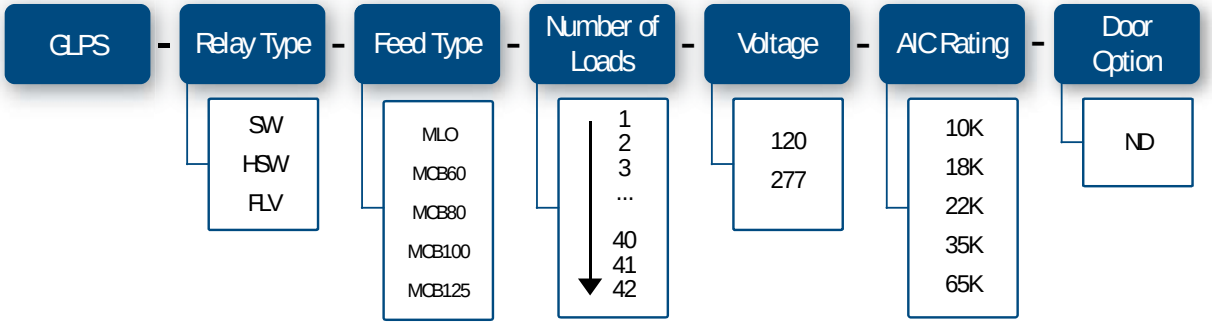
Below is an example power switching application with backup power operation using a GLS-PLS phase loss sensor (see accessories section for more details). The power switching panels connect to an IPAC-GL1 processor via Cresnet. Connected to the processor are various sensors, a keypad, and a photocell. It is possible to add up to two touch screens to the IPAC-GL1 as well. Connected via a LAN is a PC running RoomView. A GLA-PWS50 provides power to the processor.



GLPS Panels

Crestron GLPS Series power switching panels feature field-replaceable switching modules with a choice of relay technologies to address a wide range of applications and budgets. In addition to switching, some Green Light Power Switching panels also allow the option to add dimming control for 0-10V fluorescent ballasts and 0-10V LEDs. Switching relays are available in arcless or standard form. Arcless relays provide increased durability for a higher rated lifetime over standard relays.

GLPS Panel Naming System



When ordering a power switching panel, construct a model name as shown above. Possible choices are listed underneath each blue box. The numbered steps below describe each choice in detail.

Example: GLPS-HSW-MLO-30-120-10

1. Relay Type **GLPS-___-___-___-___-___-___**

Determine the type of switching relay required. Use the following table to determine the appropriate relay. If you wish to mix relay types within a panel, see the GLPD-C panel on page 23.

	Relays		
	SW	HSW	FLV
Switching Relay Types	High-inrush	Arcless high-inrush	Arcless high-inrush
Voltages	120/230/277	120/230/277	120/230/277
Lighting Output Capacity	16A	16A	16A
Motor Output Capacity (120/230/277 V)	1/2/2 hp	0.5/1/1 hp	0.5/1/1 hp
Rated Relay Lifetime	10,000	1,000,000	1,000,000
0-10V Dimming	No	No	Yes
Additional Relay Info	Page 25	Page 26	Page 27

2. Feed Type **GLPS-___-___-___-___-___-___**

MLO Main Lug Only with 20A branch breakers
MCB60 60A back-fed main circuit breaker with 20A branch breakers
MCB80 80A back-fed main circuit breaker with 20A branch breakers
MCB100 100A back-fed main circuit breaker with 20A branch breakers
MCB125 125A back-fed main circuit breaker with 20A branch breakers

3. Number of Loads

GLPS-___-___-___-___-___-___

Find the row in the table that matches your choices in steps 1 and 2. The numbers in blue represent the maximum number of loads for each cabinet size. Choose a cabinet size, and do not exceed the maximums when designing the panel. See page 28 for more information on the cabinet sizes.

		Cabinet Size		
		Medium	Large	Extra Large
Maximum # of Loads	HSW-MLO	30	32	42
	HSW-MCB	27*	32	39*
	SW-MLO	30	42	-
	SW-MCB	27*	39*	-

*If using 120/208V and 125A MCB, reduce the maximum number of loads shown by three.

4. Voltage

GLPS-___-___-___-___-___-___

To specify the circuit breaker voltage, enter “120” for 120/208 volt or “277” for 277/480 volt.

5. AIC Rating

GLPS-___-___-___-___-___-___

Choose one of the following values from the appropriate column to specify the Ampere Interrupting Capacity of the circuit breakers.

120 Volt	277 Volt
10K	18K
22K	35K
65K	65K

What is AIC?

When a short circuit occurs, a large amount of current flows into the circuit breaker and it trips. The Ampere Interrupt Capacity rating is the maximum current the breaker can safely interrupt. If the short circuit current exceeds the AIC rating of the breaker, the circuit breaker may fail. For safe operation, the AIC rating must exceed the available fault current at the panel.

6. Door Option

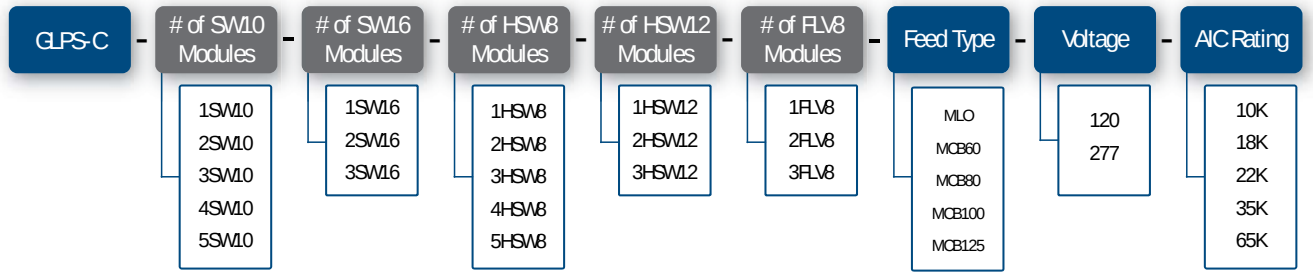
GLPS-___-___-___-___-___-___

Enter “ND” to omit the local control access door. Otherwise truncate this from the model name.

GLPS-C Panels

For power switching panels with mixed module types, a “C” is attached to the model name (denoting custom). The quantity of each module type is specified within the product name.

GLPS-C Panel Naming System



When ordering a GLPS-C panel, construct a model name as shown above. Possible choices are listed underneath each blue or gray box. The gray boxes represent the modules and may be eliminated from the model name if not used. The numbered steps below describe each choice in detail.

Example: GLPS-C-3HSW8-1FLV8-MCB100-120-65k

1. Feed Type **GLPS-C-___-___-___-___-___-___-___-___**

MLO	Main Lug Only with 20A branch breakers
MCB60	60A back-fed main circuit breaker with 20A branch breakers
MCB80	80A back-fed main circuit breaker with 20A branch breakers
MCB100	100A back-fed main circuit breaker with 20A branch breakers
MCB125	125A back-fed main circuit breaker with 20A branch breakers

2. Quantity of Each Module **GLPS-C-___-___-___-___-___-___-___-___**

In the table below are the possible module choices. When designing the cabinet, select quantities of these five modules. A SW module wires 10 or 16 loads, an HSW module wires 8 or 12 loads, and an FLV module wires 8 loads.

	Modules				
	SW10	SW16	HSW8	HSW12	FLV8
Size	2	3	2	3	3
# of Loads	10	16	8	12	8
Switching Relay Types	High-inrush	High-inrush	Arcless high-inrush	Arcless high-inrush	Arcless high-inrush
Voltages	120/230/277	120/230/277	120/230/277	120/230/277	120/230/277
Lighting Output Capacity	16A	16A	16A	16A	16A
Motor Output Capacity (120/230/277 V)	1/2/2 hp	1/2/2 hp	0.5/1/1 hp	0.5/1/1 hp	0.5/1/1 hp
Rated Relay Lifetime	10,000	10,000	1,000,000	1,000,000	1,000,000
Additional Module Info	Page 25	Page 25	Page 26	Page 26	Page 27

Find the row in the table that matches your choice in step 1. In that row is the maximum number of loads for each cabinet size. Choose a cabinet size, and do not exceed the maximums when designing the panel. See page 28 for more information on the cabinet sizes.

		Cabinets		
		Medium	Large	Extra Large
Max Combined Size		8	8	11
Maximum # of Loads	MLO	30	42	42
	MCB	27*	39*	39*

*If using 120/208V and 125A MCB, reduce the maximum number of loads shown by three.

Now choose quantities of SW10, SW16, HSW8, HSW12, and FLV8 modules, but do not exceed the maximum combined size and maximum number of loads just determined. Example:

1SW10, **1**SW16, **2**FLV8

Combined Size = (**1** × 2) + (**1** × 3) + (**2** × 3) = 11

# of loads = (**1** × 10) + (**1** × 16) + (**2** × 8) = 42

The cabinet will need to be Extra Large because it fits 11 spaces and 42 loads. This will only work with the MLO feed type.

Note: It is possible to wire in fractions of modules when there are not enough breakers available for the modules you want. In this circumstance please call Crestron Sales Support Services.

3. Voltage

GLPS-C-___-___-___-___-___-___-___-___-___

To specify the circuit breaker voltage, enter "120" for 120/208V or "277" for 277/480V.

4. AIC Rating

GLPS-C-___-___-___-___-___-___-___-___-___

Choose one of the following values from the appropriate column to specify the Ampere Interrupting Capacity of the circuit breakers.

120 Volt	277 Volt
10K	18K
22K	35K
65K	65K

What is AIC?

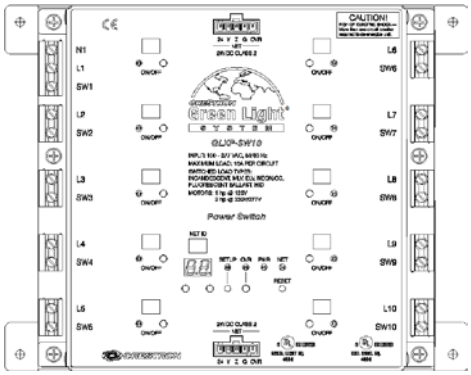
When a short circuit occurs, a large amount of current flows into the circuit breaker and it trips. The Ampere Interrupt Capacity rating is the maximum current the breaker can safely interrupt. If the short circuit current exceeds the AIC rating of the breaker, the circuit breaker may fail. For safe operation, the AIC rating must exceed the available fault current at the panel.

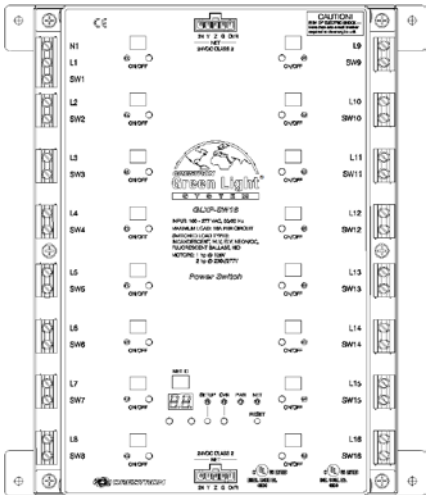
Module Specifications

GLXP-SW10 and GLXP-SW16

The GLXP-SW10 and GLXP-SW16 are Crestron Green Light switching modules which feature 10 or 16 channels of power switching with rugged, high-current latching relays. The modules are part of a complete Crestron engineered GLPS Green Light switching panel.

- 10 or 16 channels of power switching
- Mechanically-latching relays
- Supports 100 to 277 Volt applications
- 16 amp, 1 HP load rating per channel
- Positive air gap at each output
- Phase-independent channels
- Cresnet communications
- Redundant power capability—module powered via line or Cresnet
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory



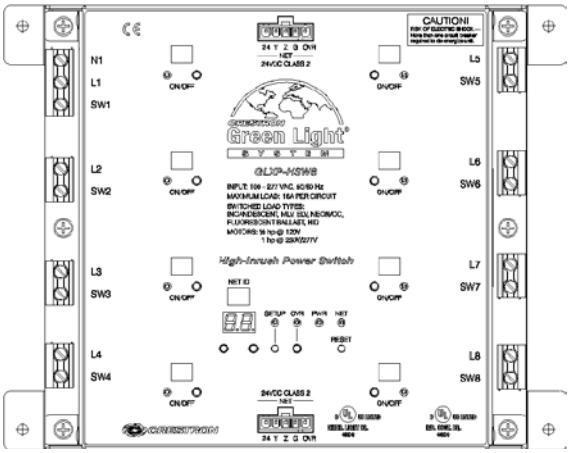


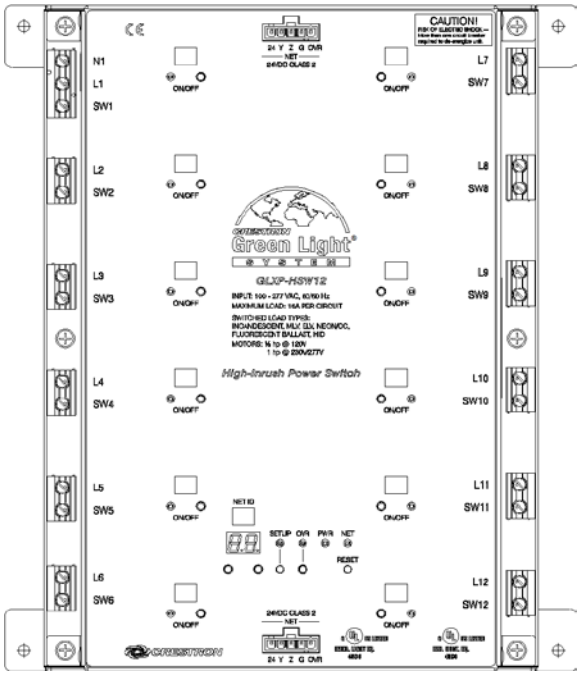
Load Ratings	
Switch Channels	10 or 16
Per Channel	16 amps at 100-277 Vac, 50/60 Hz 0.5 HP @ 120 volts, 1 HP @ 230 volts, 1 HP @ 277 volts
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motor
Relay Lifetime	10,000 on/off operations at full load
Power Requirements	
Primary	100-277 Vac, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	5 watts at 24 Vdc, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	136 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
Module SCCR Rating - 18kA	
CE	

GLXP-HSW8 and GLXP-HSW12

The GLXP-HSW8 and GLXP-HSW12 are Crestron Green Light switching modules which features 8 or 12 channels of high-inrush power switching with rugged, high-current latching relays. The modules are part of a complete Crestron engineered GLPS Green Light switching panel.

- 8 or 12 channels of high-inrush power switching
- Rugged, high-current latching relays
- Supports 100 to 277 volt applications
- 16 Amp, 1 HP load rating per channel
- Arc-less switching
- Positive air gap at each output
- Phase-independent channels Cresnet communications
- Redundant power capability—module powered via line or Cresnet
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory



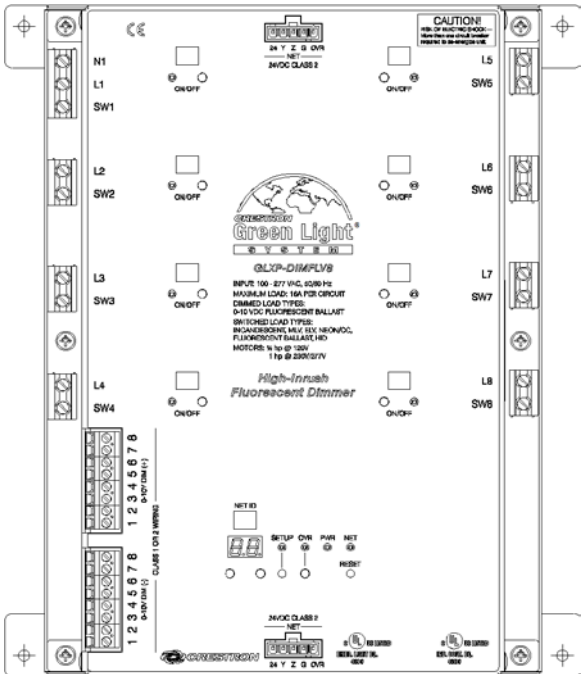


Load Ratings	
Switch Channels	8 or 12
Per Channel	16 amps at 100-277 Vac, 50/60 Hz 0.5 HP @ 120 volts, 1 HP @ 230 volts, 1 HP @ 277 volts
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motor
Relay Lifetime	1,000,000 on/off operations at full electronic ballast load
Power Requirements	
Primary	100-277 Vac, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	5 watts at 24 Vdc, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	HSW8: 112 BTU/Hr HSW12: 160 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
Module SCCR Rating - 18kA	
CE	

GLXP-DIMFLV8

The GLXP-DIMFLV8 is a Crestron Green Light switching module which features 8 channels of 4-wire, 0-10 Volt fluorescent dimming. The module is part of a complete Crestron engineered GLPS Green Light switching panel.

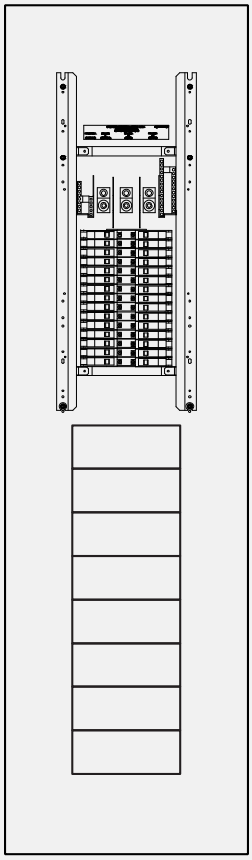
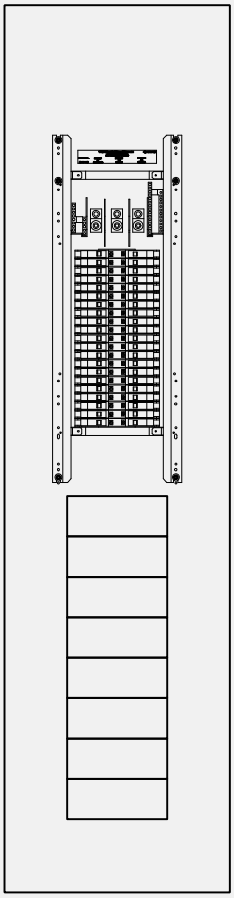
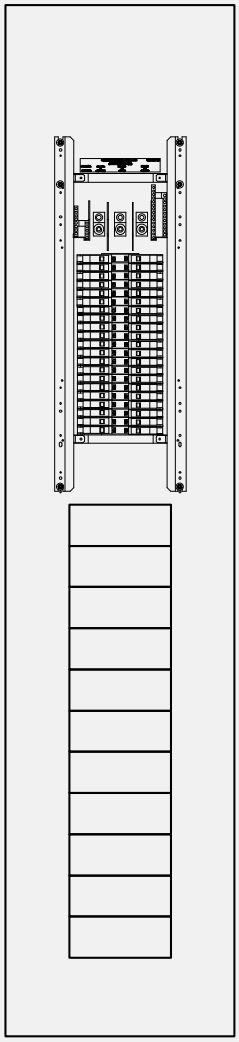
- 8 channels of 4-wire 0-10 volt fluorescent dimming
- Compatible with lighting and motor loads
- Supports 100 to 277 volt applications
- 16 amp, 1 HP load rating per channel
- Arc-less switching
- Positive air gap at each output
- Phase-independent channels
- Cresnet communications redundant power capability module powered via line or Cresnet
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory



Load Ratings	
Dimmer Channels	8
Per Channel	16 amps at 100-277 Vac, 50/60 Hz 0.5 HP @ 120 volts, 1 HP @ 230 volts, 1 HP @ 277 volts
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motor
Relay Lifetime	1,000,000 on/off operations at full electronic ballast load
Power Requirements	
Primary	100-277 Vac, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	5 watts at 24 Vdc, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	116 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
Module SCCR Rating - 65kA	
CE	

Cabinets

The spaces for the modules are shown by rectangles below. Remember, each module takes up either two or three “spaces”. The cabinets are depicted with 120 volt breakers.

Cabinet Sizes	Medium	Large	Extra Large
Max Number of Circuits	30	42	42
Max Combined Module Size	8	8	11
Height	70 in (177.8 cm)	78 15/16 in (200.5 cm)	90 in (228.6 cm)
Width	20 1/4 in (51.4 cm)	20 1/4 in (51.4 cm)	20 1/4 in (51.4 cm)
Depth	6 5/8 in (16.8 cm)	6 5/8 in (16.8 cm)	6 5/8 in (16.8 cm)
Module Layout			

Green Light Express

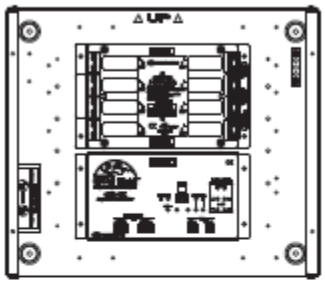
For installations using a separate branch-circuit breaker panel, Crestron offers the Green Light Express series of "feed-thru" panels. Like their "main-lug" panel counterparts, the GLPX panels feature zero-cross arcless switching and standard switching. Green Light Express also offers one more relay option with the GLPX-HDSW, utilizing heavy duty modular relays for an extra level of flexibility, enabling switching of 120/208, 277/480, 230/400 volt, 3-phase loads.

In addition to switching, Green Light Express panels also offer dimming control for a wide range of load types, including 2- and 3-wire fluorescent, MLV, Neon/Cold Cathode and 0-10 volt (4-wire).

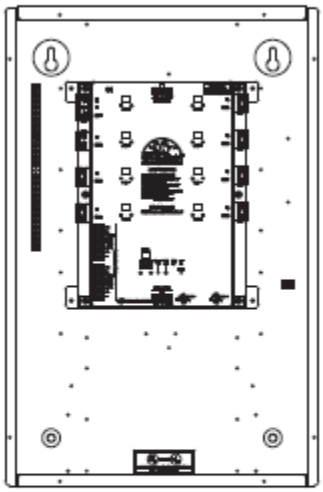
- Centralized dimming and switching system
- Keypads and touch screens offer flexible control anywhere
- Astronomical clock allows events to be scheduled around sunrise/sunset
- Sensor integration for occupancy sensing and daylight harvesting
- Emergency override assures reliable lighting in critical areas

Example Cabinets

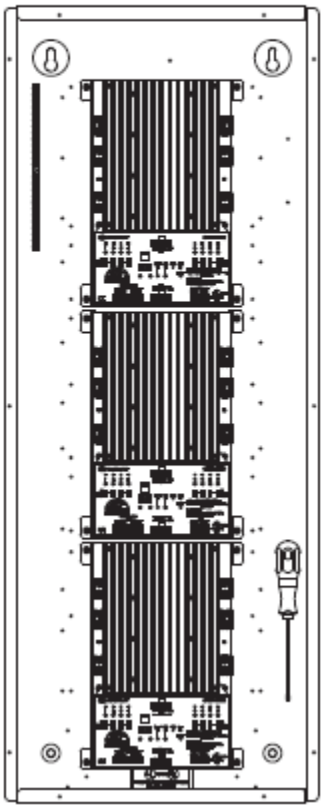
GLPX Small Cabinet
(1) SW8 Module with (1) GLXX-CTRL
Wiring, Front Cover Not Shown



GLPX Medium Cabinet
(1) FLV Module
Wiring, Front Cover Not Shown



GLPX Large Cabinet
(3) 2DIM8 Modules
Wiring, Front Cover Not Shown



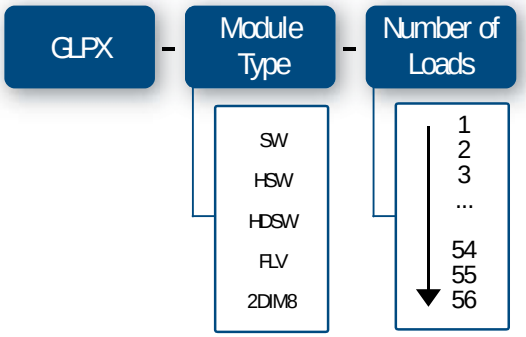
GLPX Panels

Crestron GLPX panels are configurable for dimming or switching and come equipped with Green Light Express modules.

When specifying and ordering a GLPX panel, construct a model name as shown to the right. Possible choices are listed underneath each blue box. The numbered steps below describe each choice in detail.

Examples: GLPX-HSW-16
GLPX-HDSW-56

GLPX Model Naming System



1. Module Type
GLPX-___-___

Use the table to determine the type of dimming or switching module required.

	Modules				
	SW	HSW	HDSW	FLV	2DIM8
Module Types	High-inrush Switching	Arcless High-inrush Switching	Heavy Duty Switching	0-10V Dimming	Dimming
Voltages	120/230/277	120/230/277	120/230/277	120/230/277	120/230/277
Lighting Output Capacity	16A	16A	20A	16A	16A
Motor Output Capacity (120/230/277 V)	1/2/2 hp	0.5/1/1 hp	0.5/1.5/1.5 hp	0.5/1.5/1.5	0.5/1/1 hp
Rated Relay Lifetime	10,000	1,000,000	30,000	1,000,000	1,000,000
Additional Info	Page 31	Page 32	Page 33	Page 34	Page 35

2. Number of Loads
GLPX-___-___

Find the row in the table that matches your choice in step 1. In that row is the maximum number of loads for each cabinet size.

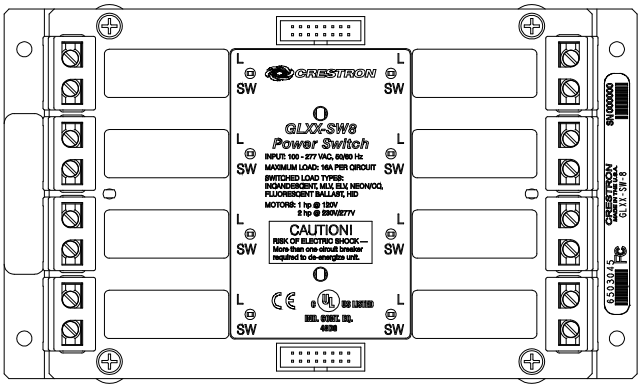
		Cabinet Size		
		Small	Medium	Large
Maximum # of Loads	SW	8	24	56
	HSW	-	16	32
	HDSW	8	24	56
	FLV	-	16	32
	2DIM8	-	16	32
Height		12 5/16 in (31.24 cm)	24 1/4 in (61.60 cm)	39 21/32 in (100.71 cm)
Width		14 1/8 in (35.89 cm)	16 1/8 in (40.89 cm)	16 1/8 in (40.89 cm)
Depth		4 3/8 in (11.08 cm)	4 7/16 in (11.23 cm)	4 7/16 in (11.23 cm)

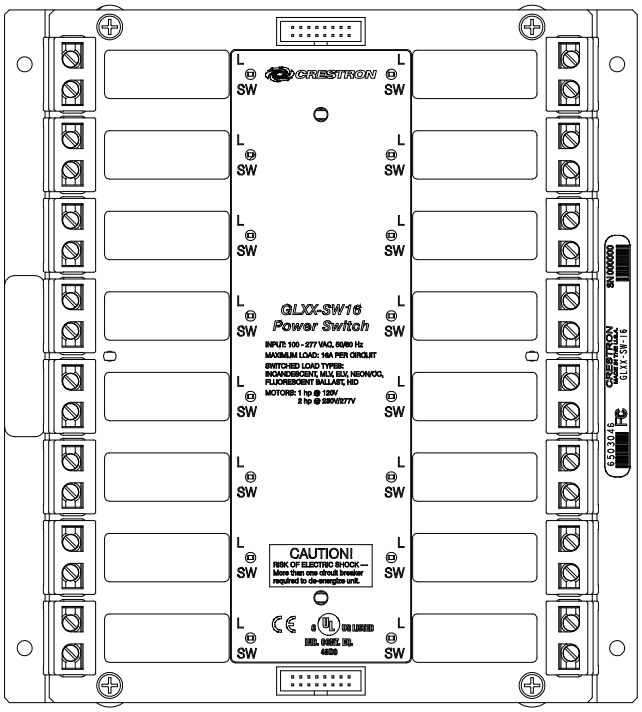
Note: If using 3-wire fluorescent dimming with the 2DIM8, the actual number of loads will be half the specified amount. For example, a panel specified for 16 2DIM8 loads can control up to eight 3-wire ballasts.

Module Specifications for GLXX-SW8 and GLXX-SW16

The GLXX-SW8 and GLXX-SW16 are Crestron Green Light Express switching modules which feature 8 or 16 channels of power switching with rugged, high-current latching relays. The modules are part of a complete Crestron engineered GLPX Green Light Express panel.

- 8 or 16 channels of power switching
- Mechanically-latching relays
- Supports 100 to 277 volt applications
- 16 amp, 1 HP load rating per channel
- Positive air gap at each output
- Phase-independent channels
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory



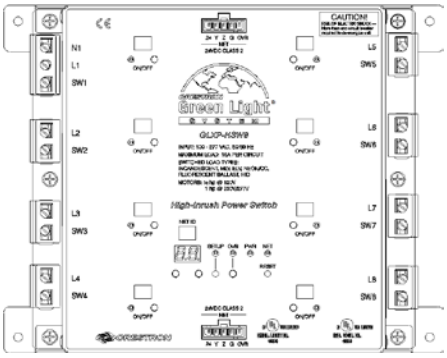


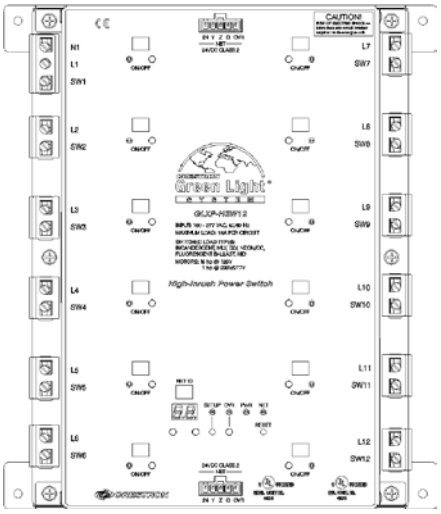
Load Ratings	
Switch Channels	8 or 16
Per Channel	16 amps at 100-277 Vac, 50/60 Hz 0.5 HP @ 120 volts, 1 HP @ 230 volts, 1 HP @ 277 volts
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motor
Relay Lifetime	10,000 on/off operations at full load
Power Requirements	
Primary	100-277 Vac, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	5 watts at 24 Vdc, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	SW8: 64 BTU/Hr SW16: 128 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
SCCR Rating - 65kA	
CE	

GLXP-HSW8-LP and GLXP-HSW12-LP

The GLXP-HSW8-LP and GLXP-HSW12-LP are Crestron Green Light switching modules which feature 8 or 12 channels of high-inrush power switching with rugged, high-current latching relays. The modules are part of a complete Crestron engineered GLPS Green Light switching panel.

- 8 or 12 channels of high-inrush power switching
- Rugged, high-current latching relays
- Supports 100 to 277 volt applications
- 16 amp, 1 HP load rating per channel
- Arc-less switching
- Positive air gap at each output
- Phase-independent channels
- Cresnet communications
- Redundant power capability—module powered via line or Cresnet
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory





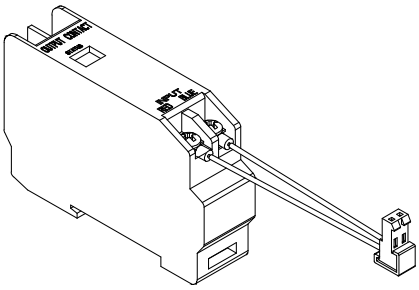
Load Ratings	
Switch Channels	8 or 12
Per Channel	16 amps at 100-277 Vac, 50/60 Hz 0.5 HP @ 120 volts, 1 HP @ 230 volts, 1 HP @ 277 volts
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motor
Relay Lifetime	1,000,000 on/off operations at full electronic ballast load
Power Requirements	
Primary	100-277 Vac, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	5 watts at 24 Vdc, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	HSW8: 112 BTU/Hr HSW12: 160 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
SCCR Rating - 18kA	
CE	

GLXX-HDSW8 and GLXX-HDSW16

The HDSW8 and HDSW16 are Crestron Green Light Express modules that hold GLR-HD-1P and GLR-HD-2P relays. The HDSW8 holds up to (8) GLR-HD-1P or (4) GLR-HD-2P relays. The HDSW16 holds up to (16) GLR-HD-1P or (8) GLR-HD-2P relays.

GLR-HD-1P

Load Ratings	
Switch Channels	Single-pole single-throw latching relay
General Use	20 amps, 347 Vac
Tungsten	2400 watts, 120 Vac
Electric Discharge Lamp	20 amps, 347 Vac
Motor Loads	0.5 HP at 110-125 Vac; 1.5 HP at 220-277 Vac
Load Types	Incandescent, Magnetic Low-voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motors, Electronic Ballast
Relay Lifetime	30,000 or more on/off operations at full load

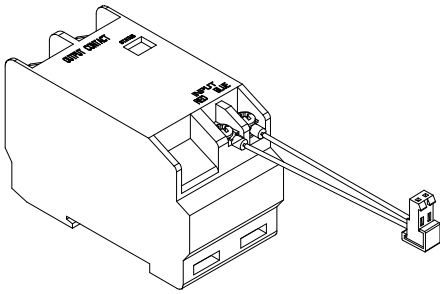


Environmental	
Temperature	-22° to 122°F (-30° to 50°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	1.5 BTU/Hr

Electrical Regulatory Certifications
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)
SCCR Rating - 14kA
CE

GLR-HD-2P

Load Ratings	
Switch Channels	Double-pole single-throw latching relay
General Use	20 amps, 480 Vac
Tungsten	2400 watts, 120 Vac
Electric Discharge Lamp	20 amps, 480 Vac
Motor Loads	0.5 HP at 110-125 Vac; 1.5 HP at 220-277 Vac
Load Types	Incandescent, Magnetic Low-voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motors, Electronic Ballast
Relay Lifetime	30,000 or more on/off operations at full load



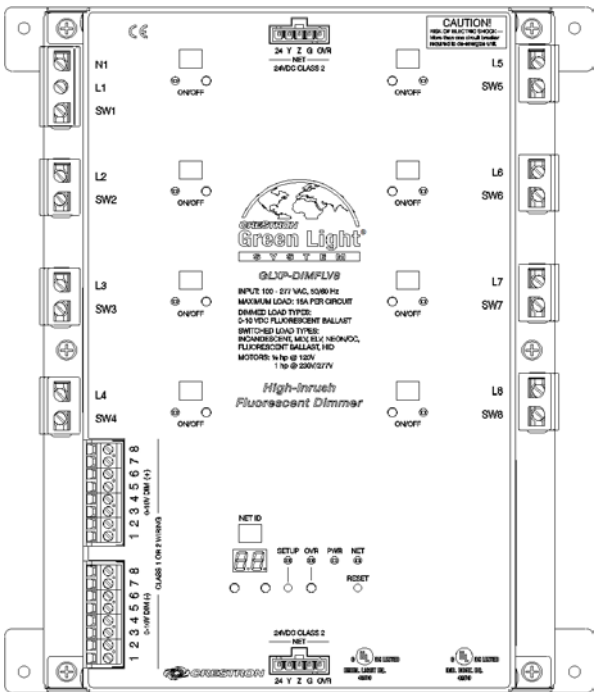
Environmental	
Temperature	-22° to 122°F (-30° to 50°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	3 BTU/Hr

Electrical Regulatory Certifications
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)
SCCR Rating - 5kA
CE

GLXP-DIMFLV8-LP

The GLXP-DIMFLV8-LP is a Crestron Green Light architectural dimming module which features 8 channels of 4-wire, 0-10 Volt fluorescent dimming. The module is part of a complete Crestron engineered GLPD Green Light dimming panel.

- 8 channels of 4-wire 0-10 volt fluorescent dimming
- Compatible with lighting and motor loads
- Supports 100 to 277 volt applications
- 16 amp load rating per channel
- Arc-less switching
- Positive air gap at each output
- Phase-independent channels
- Cresnet communications
- Redundant power capability—module powered via line or Cresnet
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory

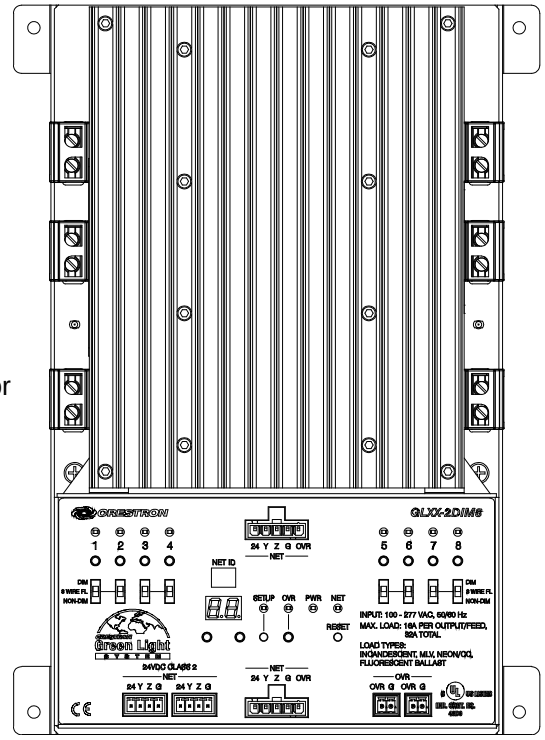


Load Ratings	
Dimmer Channels	8
Per Channel	16 amps at 100-277 Vac 50/60 Hz 0.5 HP @ 120 volts, 1 HP @ 230 volts, 1 HP @ 277 volts
Dim Load Types	0-10 volt fluorescent ballast (4-wire); 60 mA max current sink
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge, Motor
Relay Lifetime	1,000,000 on/off operations at full electronic ballast load
Power Requirements	
Primary	100-277 Volts AC, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	5 watts at 24 Volts DC, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	116 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
SCCR Rating - 65kA	
CE	

GLXX-2DIM8

The GLXX-2DIM8 is a Crestron Green Light Express dimming module which features 8 channels of incandescent, magnetic low-voltage, and 2- and 3-wire fluorescent dimming. The module is part of a complete Crestron engineered GLPX Green Light Express dimming or switching panel.

- 8 channels of incandescent, MLV, 2-wire fluorescent dimming
- 4 channels of 3-wire fluorescent dimming
- Phase-Synchronous detection eliminates lamp flicker
- Selectable non-dim mode
- Supports 100 to 277 volt applications
- 16 Amp load rating per channel
- Short circuit and overload protection
- Positive air gap at each output
- Phase-independent channels
- Cresnet communications
- Redundant power capability—module powered via line or Cresnet
- Local controls for testing and verification
- Local and remote override capability
- Non-volatile power failure memory



Load Ratings	
Switch Channels	8
Per Channel	16 amps at 100-277 Vac, 50/60 Hz
Dim Load Types	Incandescent, Magnetic Low-Voltage, Neon/Cold Cathode, 2- wire Fluorescent Ballast, or 3-wire Fluorescent Ballast (uses adjacent channel for 3rd wire, i.e. channels 1 & 2 are to be used for one 3-wire load)
Switch Load Types	Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, Fluorescent Ballast, High-Intensity Discharge
Power Requirements	
Primary	100-277 Volts AC, 50/60Hz, supplied via channel 1 (L1, N1)
Secondary (optional)	5 watts at 24 Vdc, supplied via Cresnet
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	154 BTU/Hr
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
UL924, Emergency Power Equipment	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
SCCR Rating - 65kA	
CE	

DALI

The Digital Addressable Lighting Interface (DALI) is a protocol used for the direct control of lighting ballasts. A DALI controller communicates bi-directionally with up to 64 individual DALI ballasts over a low-voltage 2-wire bus, providing fixture-level control. Because each fixture can be controlled individually, DALI systems afford the ability to easily configure and reconfigure spaces. Control wires are daisy chained between each ballast (up to 64 of them), making wiring much simpler than in 0-10V dimming systems. Besides being extremely flexible, the DALI data is resistant to noise, allowing it to run alongside high-voltage power lines.
DALI uses bi-directional communication, meaning the system can set dimming levels and query the status of each individual ballast. DALI systems can report lighting failure, allowing for easier maintenance. Controllers can even query the energy usage for each light, allowing for tracking of energy costs.

Crestron DALI commissioning software simplifies and expedites system installation. The setup wizard provides step-by-step configuration of ballast properties, groups, and scenes. Simply set the ballast address, check the connectivity status, edit the minimum and maximum levels, edit the fade time, and change the ballast grouping and scenes as needed. This powerful tool uses automatic identification of new hardware IDs for simple ballast replacement. Settings from old ballasts are transferred to replacements with just a few mouse clicks, saving time and eliminating guesswork.

- Addressable ballasts provide very granular control
- Simple yet robust control wiring
- Bi-directional communication with ballasts
- Easy setup with Crestron DALI commissioning software

When to Specify DALI Systems

DALI systems should be used where ballast-level control is required. DALI is ideal for open-space commercial environments. When cubicle and workspace layouts change, the lighting can be adjusted accordingly. Other typical applications include lecture halls and conference rooms. DALI provides tremendous flexibility for both retrofit and new installations.

Products

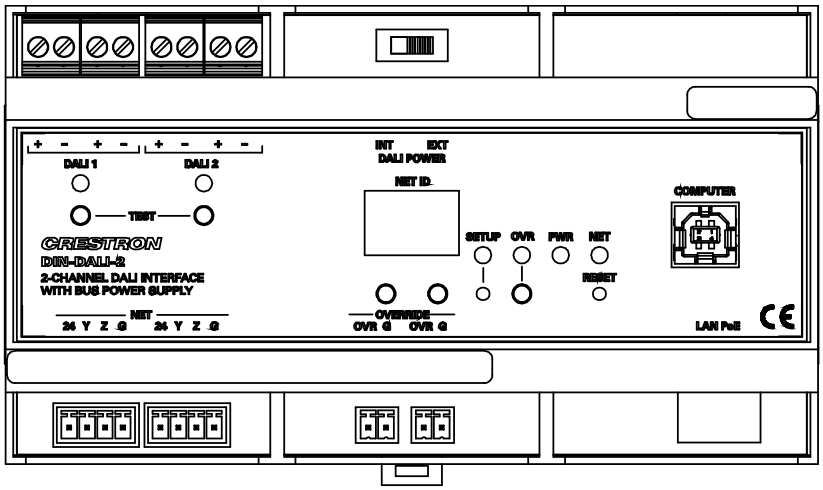
The following products are part of a DALI system. In addition to the DIN-DALI-2, other Crestron DIN Rail products are listed. These products install in the same cabinet as the DIN-DALI-2. The DIN-AP2 processor connects with any of these products via Cresnet or Ethernet.

DALI and DIN Rail Products			
DIN-DALI-2	DALI Interface Module	DIN-2MC2	2 Channel Bidirectional Motor Control
DIN-AP2	2-Series Control Processor	DIN-HUB	Cresnet Distribution Hub
DIN-AO8	8 Output 0-10V Analog Module	DIN-BLOCK	12 Port Cresnet Distribution Block
DIN-IO8	8 Versiport I/O Module	DIN-PWS50	50 Watt Cresnet Power Supply

DIN-DALI-2

The DIN-DALI-2 is a DALI interface for Crestron systems providing control of up to two individual DALI loops. Housed in a DIN-rail enclosure, the DIN-DALI-2 is a great low-profile Cresnet or Ethernet companion to the DIN-AP2 processor, or any 2-Series control system. In addition to controlling the DALI data bus, it includes an integrated DALI power supply. The single-wire connectivity simplifies both new and retrofit installations, and Power-over-Ethernet (PoE) versatility assists in situations with existing CAT5 infrastructure.

- Interfaces with two individual DALI loops
- Controls up to 128 DALI ballasts
- Cresnet or PoE communication for single wire installation
- Integrated DALI power supply
- Crestron DALI commissioning tool for easy setup
- Override input for emergency mode
- 9M wide DIN rail mounting



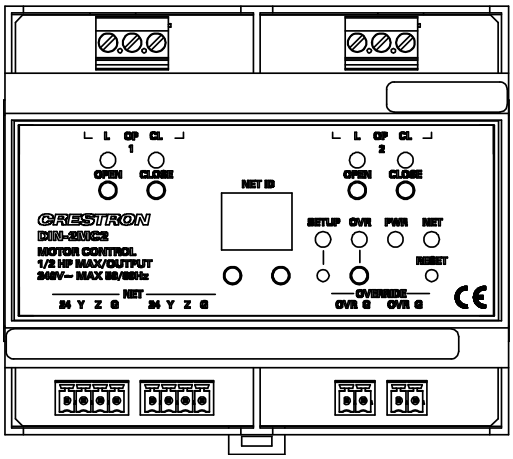
Power Requirements	
PoE Requirements	13 watts (0.270 amps @ 48 Vdc), regardless of DALI POWER setting
Cresnet Power Usage	9 watts (0.375 amps @ 24 Vdc), DALI POWER switch set to “INT” 2 watts (0.08 amps @ 24 Vdc), DALI POWER switch set to “EXT” **Note**: May be powered by PoE or Cresnet network power. Unit will default to Cresnet power if both are present.
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	44 BTU/Hr

DIN-AP2

See Processors section for more information

DIN-2MC2

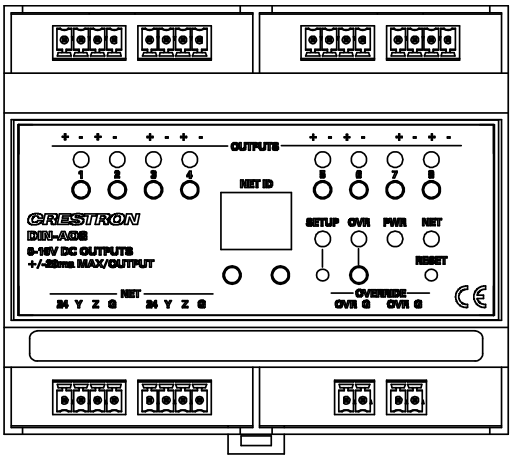
The DIN-2MC2 is a 2-channel motor control module designed to provide control of bidirectional motors for drapes, shades, projection screens, lifts, skylights, and gates. Each channel supports up/down or open/close control of a conventional 3-wire bidirectional type motor up to ½ HP. Built-in timing and interlock logic make it easy to program the DIN-2MC2 for failsafe operation.



- Dual-channel bidirectional motor control
- Supports 120 to 240 volt 50/60 Hz
- Setup via front panel or software
- Programmable functionality via DIN-AP2

DIN-AO8

The DIN-AO8 is an automation control module that provides eight analog output ports for interfacing with third-party lighting and heating/cooling systems.



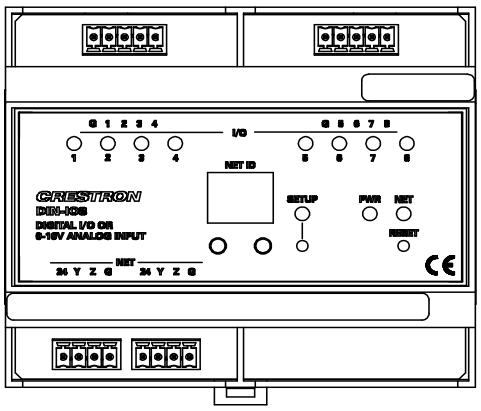
- Eight 0-10 V analog output control ports (Maximum sink current 20mA per channel)
- Interface for 3rd-party lighting and heating/cooling
- Programmable functionality via DIN-AP2
- Setup via front panel or software

Analog Outputs

Each analog output port provides a 0 to 10 volt DC control signal ideally suited for controlling 0-10 V lighting dimmers and heating/cooling valves. 10-bit resolution ensures precise recall of lighting and climate control settings and smooth ramping between levels.

DIN-IO8

The DIN-IO8 is an automation control module that provides eight Versiport I/O ports for interfacing with a wide range of third-party devices and systems. Each Versiport can be configured via software to function as a digital or analog sensing input or as a digital trigger output.

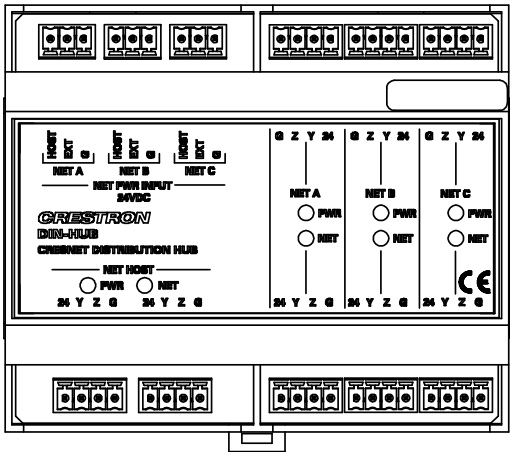


- 8 Versiport I/O ports
- Interface for 3rd-party sensors, detectors, contact closures, and alarms
- Fully programmable functionality via DIN-AP2

Versiport

Configured as a digital input, the Versiport senses a contact closure or logic level signal from devices such as motion detectors, partition sensors, alarm panels, 12V triggers, and all types of switches and relays. As an analog input, the Versiport can sense changes in a resistance or DC voltage level, working with everything from temperature and light sensors to water level meters to volume control potentiometers. As a digital output, the Versiport provides a logic level closure signal to trigger control and alarm inputs on a variety of external devices.

DIN-HUB



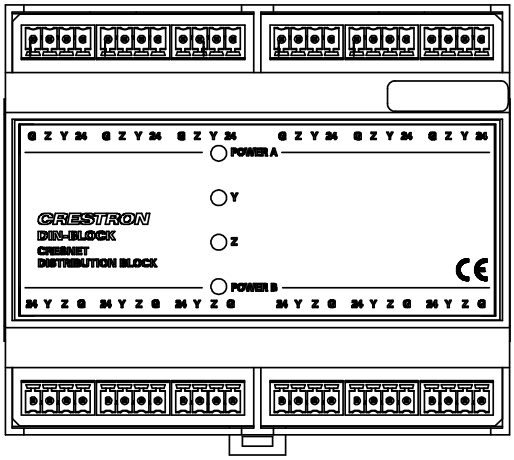
The DIN-HUB is a Cresnet hub designed to facilitate the configuration of large Cresnet networks. DIN Rail mounting enables modular installation alongside Crestron DIN Rail lighting and automation control modules and other third-party DIN Rail mountable devices.

- 3-segment Cresnet hub
- 20 additional Cresnet devices per segment

3-Segment Cresnet Hub

Cresnet is the communications backbone for Crestron lighting modules, wall box dimmers, shade controllers, thermostats, keypads, touch screens, and many other devices. Cresnet normally supports up to 20 Cresnet devices without requiring a hub. Adding a DIN-HUB allows more devices. The DIN-HUB features three isolated Cresnet segments, each supporting an additional 20 devices, allowing for systems of approximately 80 devices total (including the "host" segment). More hubs may be added to allow up to a maximum potential of 252 devices.

DIN-BLOCK



The DIN-BLOCK is a DIN Rail-mounted Cresnet distribution block designed to facilitate the termination of Cresnet wiring at a head end or distribution point. DIN Rail mounting enables modular installation alongside Crestron DIN Rail lighting and automation control modules and other third-party DIN Rail mountable devices.

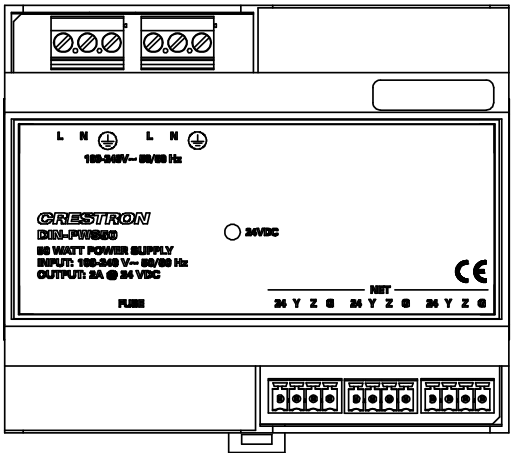
- 12-port Cresnet distribution block
- Detachable screw terminal blocks for easy termination and troubleshooting
- Split power bus for flexible 24V power distribution
- Diagnostic LEDs for network power and data
- Passive device — no programming required

Cresnet Distribution

Cresnet is the communications backbone for Crestron lighting modules, wall box dimmers, shade controllers, thermostats, keypads, touch screens, and many other devices. Cresnet allows for combinations of homerun and daisy chain wiring, and the DIN-BLOCK provides a simple means for connecting up to 12 separate Cresnet cables as part of any sized network.

DIN-PWS50

The DIN-PWS50 is a 50 watt Cresnet power supply module designed to snap onto a standard DIN Rail installation. DIN Rail mounting enables modular installation alongside Crestron DIN Rail lighting and automation control modules and other third-party DIN Rail mountable devices. All wiring connections are made using screw terminals positioned along the top and bottom, clearly accessible from the front for easy installation and servicing. Three Cresnet power ports are provided.



- 50 watt Cresnet power supply module
- Powers the DIN-AP2 Automation Processor and other Cresnet devices
- Includes 3 Cresnet power ports
- Cresnet data passes through unaffected
- Dual line power input terminals for easy daisy chaining

Room Solutions

Room Solutions are used to control lighting, motors, and other loads in a room or small group of rooms. The lighting controllers are integrated with “internal intelligence” resulting in a complete package that can be wall mounted or hidden out of sight. Dimming is available for a wide variety of lighting types. With Room Solutions, standard wall dimmers and switches are replaced with powerful local control.

Crestron Green Light occupancy and photocell sensors deliver a powerful and cost-effective solution for reducing energy costs and enhancing the functionality of lighting and environmental systems. Combined with shade controller modules, Room Solutions lighting and environmental products help designers meet ASHRAE and LEED standards.

When to Specify Room Solution

Room Solutions are ideal for creating small, independent lighting zones while maintaining automation. Retrofitting conventional lighting is easy, especially with Crestron infiNET EX wireless technology. Room Solutions can also be used alongside centralized products to fill in areas wherever appropriate.

Products

GLPAC-DIMFLV4(-PM) and GLPAC-DIMFLV8(-PM)

The GLPAC-DIMFLV family is a Crestron Green Light integrated lighting system, designed for use as a standalone lighting controller in classrooms, conference rooms, and even across multiple offices. While able to control 4 or 8 channels of dimmable fluorescent loads, each GLPAC also provides a link to a centralized Crestron lighting control system for control and monitoring. Add optional real-time power monitoring and Crestron RoomView Enterprise management software to help track and minimize energy usage facility-wide. The GLPAC-DIMFLV has a LAN port for fast communication with other control processors or directly with RoomView. Its two Cresnet ports allow one remote connection to a centralized processor or another GLPAC and a local connection to keypads and touch screens.

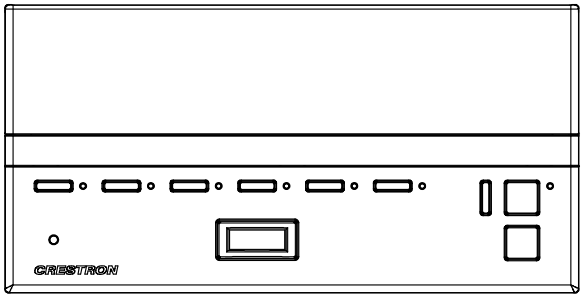
- Four or eight channels of 0-10 volt fluorescent dimming
- Supports 100 to 277 volt applications
- 16 Amp load rating per channel
- Built-in Control System with Cresnet port
- Preloaded program for quick setup
- Optional real time power monitoring
- Control up to four rooms with a single GLPAC
- Positive air gap at each output
- Phase-independent channels
- Local controls for setup, testing and verification
- Local and remote override capability
- Non-volatile power failure memory
- Four low-voltage 1A rated relays (-PM models only)
- Eight digital input ports
- Four occupancy sensor inputs and four photocell inputs
- Local Cresnet supports keypads, touch screens, etc.

Load Ratings	
Dimmer Channels	GLPAC-DIMFLV4(-PM): 4 GLPAC-DIMFLV8(-PM): 8
Per Channel	16 amps at 100-277 Vac, 50/60 Hz
Dim Load Types	0-10 volt fluorescent ballast (4-wire); 0-10V LED drivers; 60 mA max current sink
Switch Load Types	Fluorescent Ballast, Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Neon/Cold Cathode, High-Intensity Discharge, Motor
Relay Lifetime	10,000 on/off operations at full electronic ballast load
Power Requirements	
Primary	100-277 Vac, 50/60Hz, supplied via channel 1 (L1, N1)
Available Cresnet Power	10 watts at 24 Vdc, shared with occupancy and photocell sensor ports
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	
Electrical Regulatory Certifications	
UL508, Section 41 (Endurance Test) and Section 61C (Electronic Ballasts)	
IEC60669-2-1, Section 19.102 (Contact mechanisms incorporated in electronic switches, intended for fluorescent lamp circuits or other capacitive loads)	
CE	

iLux

iLux is a complete, integrated lighting system designed for wall mount installation in boardrooms, auditoriums, theaters, or anywhere versatile and cost-effective control of lighting and shades is required. iLux CLS-C6 is available with different options, including infiNET EX wireless communications and motion detection.

iLux Room Controller (CLS-C6M)



6 Channel Dimming

Six channels of dimming are available for incandescent, magnetic low-voltage, neon/cold cathode, and 2-wire dimmable fluorescent loads. On/off switching of many non-dimmable lighting loads is also possible. Each channel will handle up to 800 watts individually, with a total rating of 1920 watts for the complete unit. Larger loads and additional load types can also be supported using Crestron CLS-EXP Series expansion modules.

6 Group Shade Control

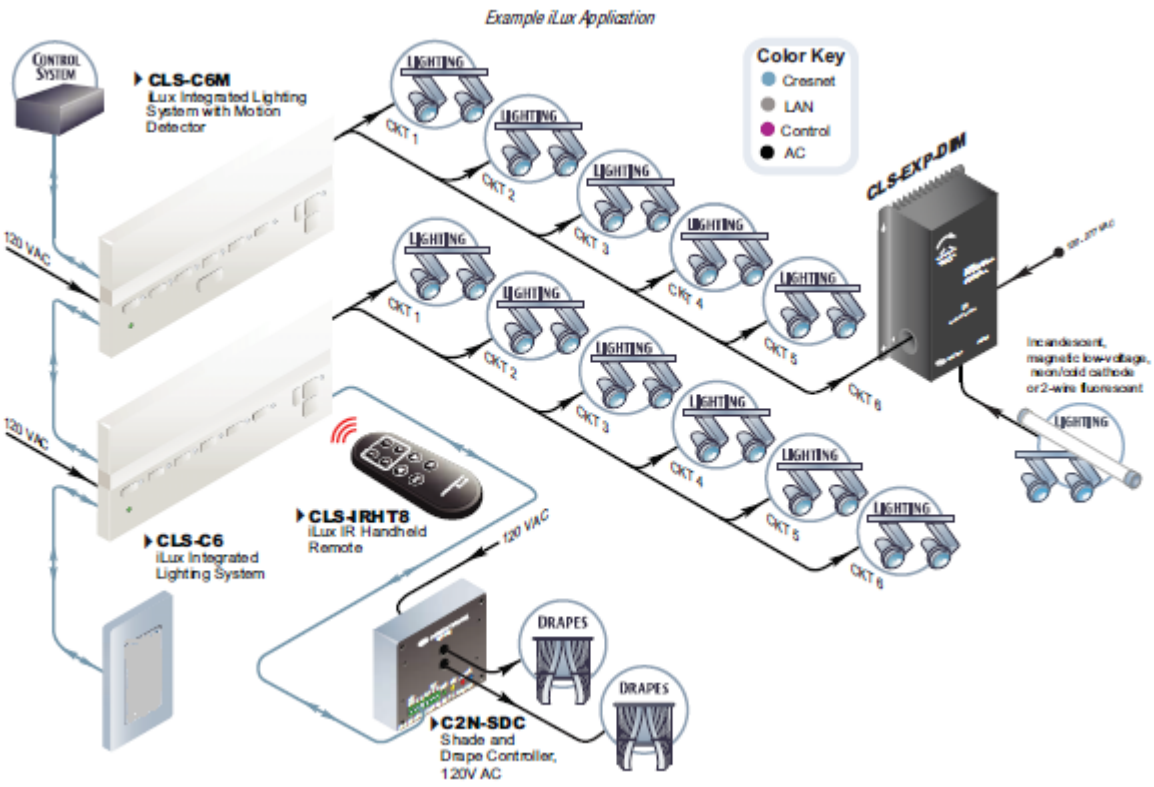
Using Crestron networked shade and drape controllers, iLux enables versatile control of a roomful of motorized window treatments, screens or lifts in up to six groups. Simply add a shade and drape controller from the Shades section.

Energy Management

With the addition of Green Light integration modules and light sensors, the iLux line of Integrated lighting systems allow for the management of room occupancy sensing, daylight harvesting and demand response for maximum energy efficiency and cost savings (ASHRAE 90.1and CEC Title 24 compliant). See the Sensors section for more details.

Interface Support

The CLS line of room controllers can support up 2 touch panels and up to 16 keypads without a centralized processor. Individual buttons can be programmed to work through the master unit or can target specific slave units for maximum control and room management.



iLux Room Controllers			
CLS-C6	iLux	CLSI-C6	iLux – International (230 V)
CLS-C6M	iLux w/ Motion Detector	CLSI-C6M	iLux w/ Motion Detector – International (230 V)
CLS-C6EX	iLux w/ infiNET EX	CLSI-C6EX	iLux w/ infiNET EX – International (230 V)
CLS-C6MEX	iLux w/ Motion Detector andinfiNET EX	CLSI-C6MEX	iLux w/ Motion Detector & infiNET EX – International (230 V)

Control System Integration via infiNET EX

iLux Room Controllers with Crestron's infiNET EX technology can wirelessly link to a 2-series control system. This two-way communication link allows the iLux functions to be controlled from touch screens, RF wireless remotes, and even computers. The control system interface also enables flexibility for integration with other systems such as security, HVAC and energy management, plus remote monitoring via Crestron RoomView applications.

Note: infiNET EX dimmers and switches are not able to communicate with the iLux directly, since both are "slave" modules.

Built-in Motion Detector

iLux Room Controllers with the built-in infrared motion detector can automate control based on room occupancy. iLux can turn on lights and open shades automatically when someone enters the room or turn off and close them when the room is left empty.

Multi-Unit Expansion

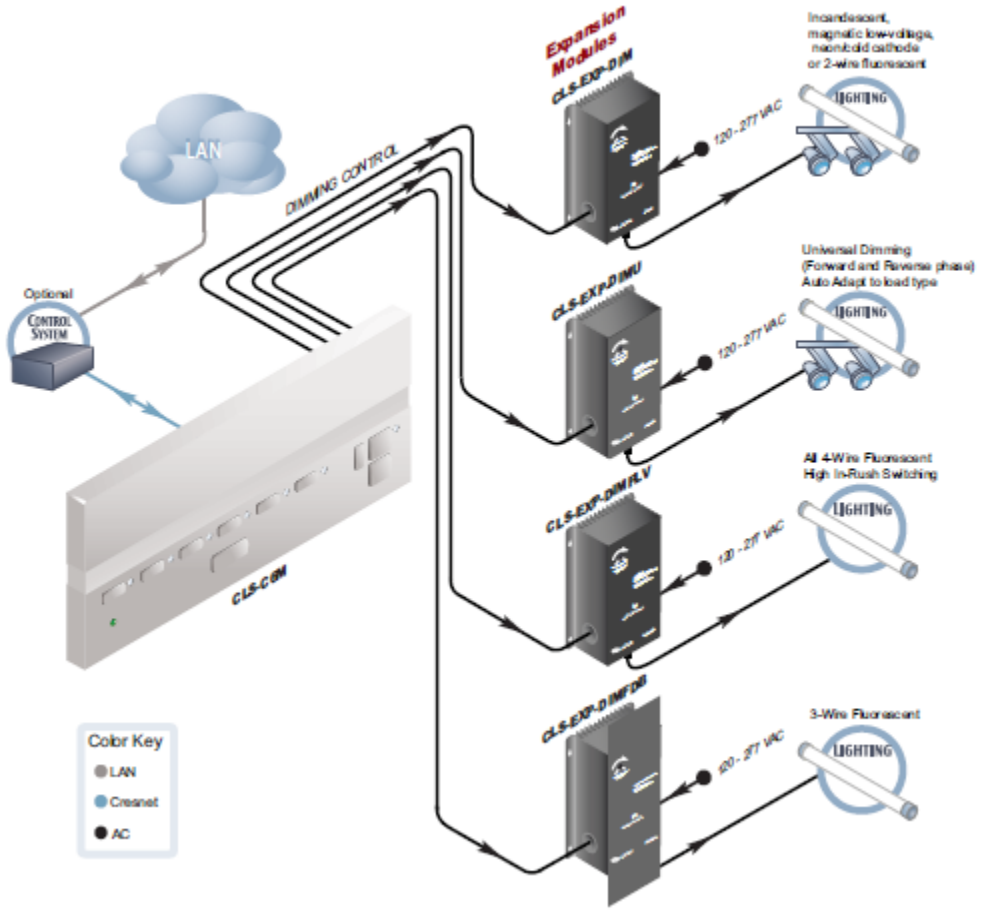
One CLS-C6 type master will support up to eight additional CLS-C6 type units, allowing up to 54 lighting zones and 54 shade groups. Commands for typical functions like scene recall, scene off, master dimming, and occupancy status are shared between the CLS-C6 units. Each unit can still support a complete assortment of local devices including keypads, shade controllers, and motion detectors.

Expansion Modules

Expansion modules increase the amount of lighting loads controllable by a single CLS-C6 type unit. See the example above.

Model	Load	Function
CLS-EXP-DIM	Supports incandescent, magnetic low voltage, neon/cold cathode, and 2-wire and 3-wire dimmable fluorescent loads (16A per load) 120V, 230V, and 277V compatibility	Forward Phase Dimming
CLS-EXP-DIMU	Supports incandescent, magnetic low voltage, Electronic low voltage, and 2-wire and 3-wire dimmable fluorescent loads (16A per load) 120V, 230V, and 277V compatibility	Forward and Reverse-Phase Dimming Auto Load Type Detection
CLS-EXP-DIMFLV	Supports 4-wire Fluorescent, Incandescent, MLV and ELV loads (16A per load) 120V, 230V, and 277V compatibility	0-10V Fluorescent Dimming plus High Inrush Switching
CLS-EXP-DIMFDB	Supports 3-wire Fluorescent	Fluorescent Dimming

Expansion Module Example

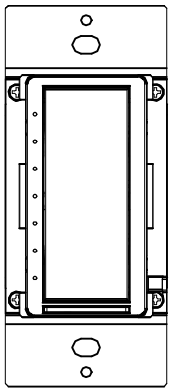


Cameo Dimmers and Switches

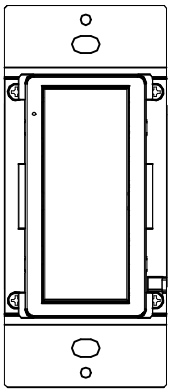
Cameo® dimmers and switches are designed to replace any standard in-wall dimmer or switch. Although the following devices are functional as a standalone dimmer or switch, they deliver greatly enhanced functionality as part of a complete Crestron control solution. When connected to a Crestron PAC2 or PAC2M automation control system (or any other 2-Series control system), extensive automation and control capability is enabled.

In addition to replacing standard dimmers and switches, Cameo remote "slave" units replace traditional 3- or 4-way lighting dimmers and switches. The remote units connect to the main dimmer or switch through the 120 volt traveler wire. Up to 10 remote units can be connected to a single Cameo dimmer or switch.

Cameo Dimmer with 2-way rocker



Cameo Switch with 2-way rocker



Cameo Dimmers and Switches

Model	Mode	Connection	Maximum Loads	Buttons
CLW-DIMCN-P Wired Dimmer	Master	Cresnet	Incandescent: 750 Watts MLV: 750 VA/Watts	Up to four configurable buttons or one 2-way rocker
CLW-DIMEX-P Wireless Dimmer	Master	infiNET EX		
CLW-SWCN-P Wired Switch	Master	Cresnet	Incandescent, Magnetic Ballasts: 1000 VA/Watts Electronic Ballasts, CFL: 600 VA Motor: ½ HP	
CLW-SWEX-P Wireless Switch	Master	infiNET EX		
CLW-DIMSWCN-P Wired Dimmer/Switch	Master	Cresnet	Incandescent: 500 VA/Watts Dimmable, 1 A Switchable MLV, Dimmable CFL: 500 VA/Watts Dimmable Motor: 1 A Switchable	
CLW-DIMSWEX-P Wireless Dimmer/Switch	Master	infiNET EX		
CLW-SLV-P Remote Dimmer/Switch	Slave	N/A	N/A	2 buttons or one 2-way rocker

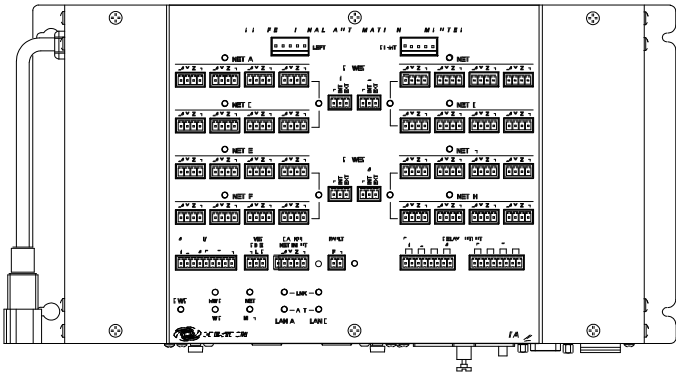
Cameo Express Dimmers and Switches

Model	Mode	Connection	Maximum Loads	Buttons
CLW-DIMEX-E Wireless Dimmer	Standalone	infiNET EX	Incandescent: 750 Watts MLV: 750 VA/Watts	Up to four configurable buttons or one 2-way rocker
CLW-SWEX-E Wireless Switch	Standalone	infiNET EX	Incandescent, Magnetic Ballasts: 1000 VA/Watts Electronic Ballasts, CFL: 600 VA Motor: ½ HP	
CLW-DIMSWEX-E Wireless Dimmer/Switch	Standalone	infiNET EX	Incandescent: 500 VA/Watts Dimmable, 1 A Switchable MLV, Dimmable CFL: 500 VA/Watts Dimmable Motor: 1 A Switchable	

Processors

PAC2

The PAC2 is a professional dual bus control system designed to serve as the central processor for Crestron Green Light systems. Fast performance, rigorous construction, and extreme flexibility provide a truly powerful automation solution for today's most demanding commercial environments.



The PAC2 is extensively programmable using the Crestron suite of development software. It works seamlessly with Crestron's entire line of dimmers, shade controllers, keypads, touch screens, thermostats, wireless gateways, control cards, and expansion modules.

Design Recommendations

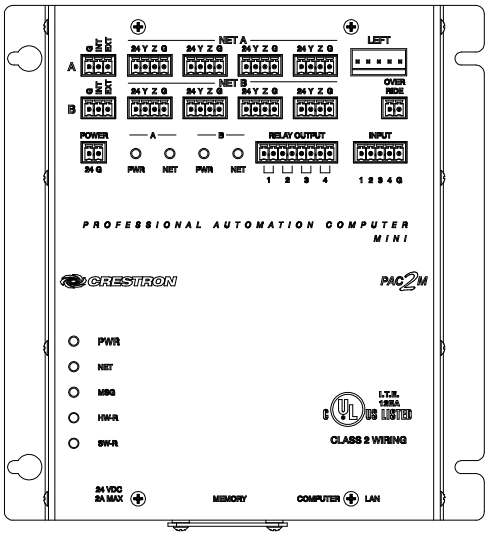
The PAC2 is limited by how many Cresnet addresses are available. There are initially 252 available Cresnet addresses (NET IDs 03 to FE). Each keypad, touch screen, shade controller, and lighting module uses a Cresnet address. The total number of these devices must not exceed 252.

Memory	
SDRAM	64 MB
NVRAM	256 KB
Flash	4 MB
Compact Flash	Expandable up to 4 GB (not included)
Operating System	
Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports and SIMPL+®	
Ethernet	
With C2ENENT-1	10/100Base-T, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in web server and e-mail client; supports Crestron e-Control2 XPanel and RoomView applications
With C2ENET-2	All above features plus built-in firewall, router, and network address translator (NAT)
Power Requirements	
Main Power Consumption	2.4 amps, 100-250 Vac, 50/60 Hz
Available Cresnet Power	50 watts (shared with control card expansion slots)
Environmental	
Temperature	41° to 113°F (5° to 45°C)
Humidity	10% to 90% RH (non-condensing)
Weight	
8.0 lb (3.62 kg) – with line cord	

PAC2M

The PAC2M is a compact, low-cost alternative to the PAC2 designed for small lighting and automation applications. At half the size of a PAC2, the PAC2M is perfect for individual meeting rooms and lecture halls.

The PAC2M is extensively programmable using Crestron's suite of development software. It works seamlessly with Crestron's entire line of dimmers, shade controllers, keypads, touch screens, thermostats, wireless gateways, control cards, and expansion modules.



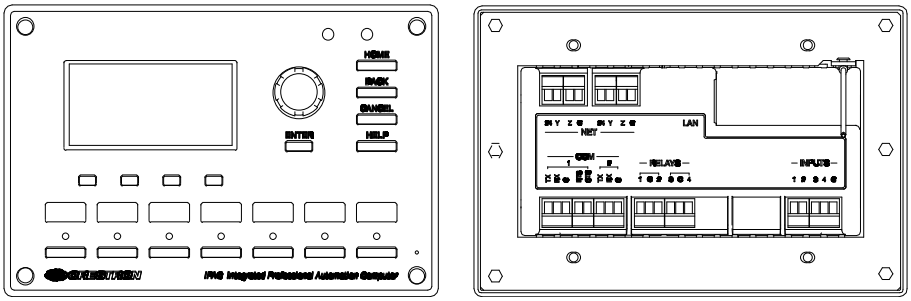
Design Recommendations

The PAC2M is limited by how many Cresnet connections are available. There are two isolated network segments, each supporting up to 25 Cresnet devices. Therefore, the PAC2M can control up to 50 total keypads, touch screens, shade controllers, and lighting modules.

Memory	
SDRAM	32 MB
NVRAM	256 KB
Flash	8 MB
Removable Flash	Expandable up to 1 GB using MMC compatible card (not included)
Operating System	
Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL+	
Ethernet	
10/100Base-T, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in web server and e-mail client; supports Crestron e-Control2 XPanel and RoomView Applications	
Power Requirements	
Main Power Consumption	5 watts (0.21 amps) @ 24 Vdc; (Power supply sold separately)
Available Cresnet Power	45 watts using PW-2420RU or larger (sold separately)
Environmental	
Temperature	41° to 113°F (5° to 45°C)
Humidity	10% to 90% RH (non-condensing)
Weight	
2.14 lbs (0.97 kg)	

IPAC-GL1

The Crestron IPAC is a 2-Series control processor designed for wall mount installation. Its front panel controls and LCD display deliver a user-friendly interface for out-of-the-box system setup. Built-in Ethernet, Cresnet, RS-232, relay, and sensor inputs provide direct connectivity for interfacing with all kinds of devices, controls, and networks. The onboard e-Control® Web server allows for complete integration as part of a facility-wide managed control network.



Design Recommendations

The below numbers should not exceed 60 Cresnet devices in total. Dimmed and Switched Load Amounts up to 210 switched loads

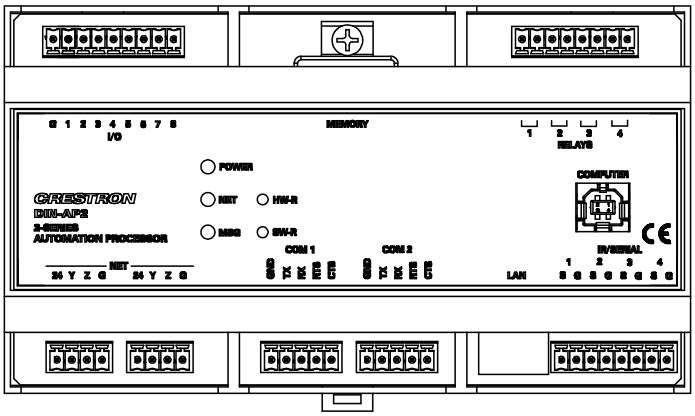
Keypad Amounts*:* 16
Touch Screen Amounts*:* 2

Other*:* 500 time clock events, up to 30 occupancy sensors and photosensors

Memory	
SDRAM	32 MB
NVRAM	1 MB
Flash	8 MB
Power Failure Memory	10 years
Operating System	
Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; includes default program for Green Light Power Switching systems	
Ethernet	
10/100Base-T, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in web server and e-mail client; supports Crestron e-Control2 XPanel and RoomView Applications	
LCD Display	
Green LCD dot matrix, 128 x 64 resolution, adjustable LED backlight	
Power Requirements	
Main Power Consumption	10 Watts (0.42 amps) @ 24 Vdc; (Power supply sold separately)
Available Cresnet Power	40 Watts using GLA-PWS50 power supply (sold separately)
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	20 BTU/Hr
Testing & Compliance	
UL listed, FCC Part 15, CEC Title 24	

DIN-AP2

The DIN-AP2 is a 2-Series control processor designed for small to medium-sized lighting and automation applications. DIN rail mounting enables modular installation alongside Crestron DIN Rail lighting and automation control modules and other third-party DIN rail mountable devices.



Memory	
SDRAM	32 MB
NVRAM	256 KB
Flash	8 MB
Removable Flash	Expandable up to 2 GB using MMC compatible card (not included)
Operating System	
Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL Windows and SIMPL+	
Ethernet	
10/100Base-T, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in web server and e-mail client; supports Crestron e-Control2 XPanel and RoomView Applications	
Power Requirements	
Cresnet Power Usage	8 watts (0.33 amps @ 24 Vdc)
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	26 BTU/Hr
Weight	
9.8 oz (277 g)	

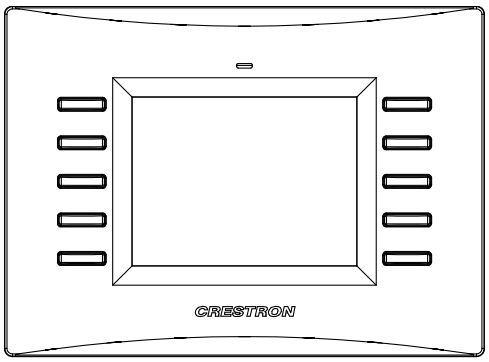
User Interfaces

Crestron has an unparalleled selection of user interfaces, from touch screens to keypads to PCs. Listed here are select products that work well in commercial lighting installations. Other user interfaces are available and can be found at www.crestron.com.

Keypads are a simple and cost effective interface for classrooms and small offices. Touch screens are powerful, user friendly tools that work well in hotel rooms, lecture halls, and conference rooms. Use both keypads and touch screens together for ultimate control.

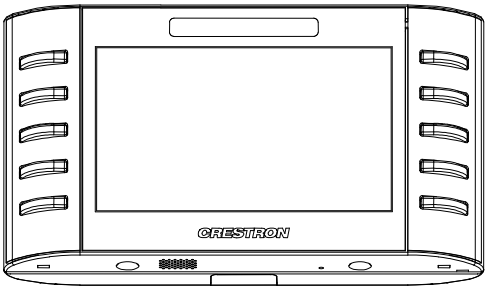
Wired Touch Screens

TPS-4L



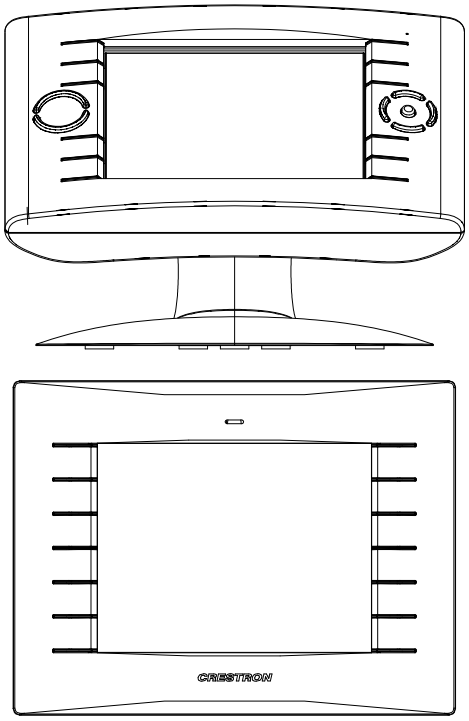
- 3.6" active matrix color touchscreen display
- 16-bit Isys graphics
- 320 x 240 resolution
- Synapse Image Rendering Algorithm
- 10 white backlit pushbuttons and engravable faceplate
- WAV file audio feedback
- Ethernet and Cresnet communications
- Stylish flush wall mount design
- 10 designer colors

TPMC-4SM



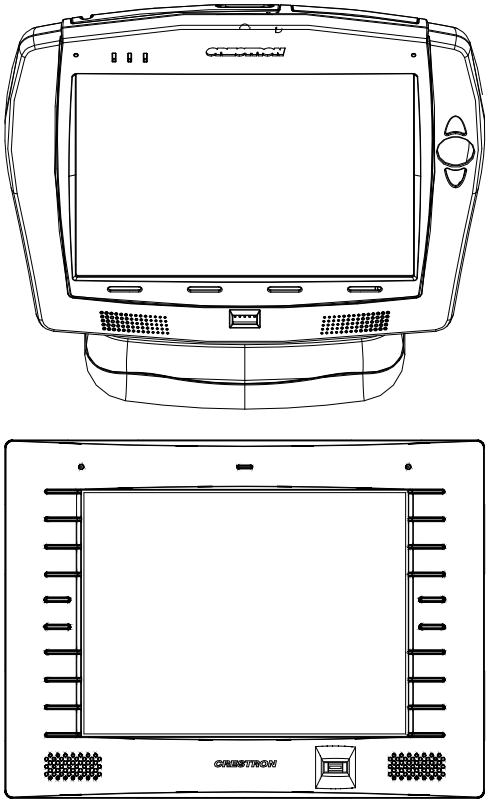
- Modern, contoured appearance
- Thin profile and small footprint
- Affordable and easy to install
- 4.3" widescreen color touchscreen
- 16-bit Isys i/O graphics
- 800 x 480 resolution
- DNav dynamic menu objects
- Streaming video
- Crestron IP intercom
- WAV file audio feedback
- Built-in microphone and speaker
- Built-in proximity sensor
- 10 optional "hard key" pushbuttons
- Dual-color button backlighting and feedback
- Engravable button text
- RoomView® room scheduling mode
- Room occupancy sensor option
- Single-wire Ethernet connectivity
- PoE network powered
- Available in gloss black or white
- Fits in a horizontal 1-gang or Euro back box
- Available tabletop and multi-surface mount kits

TPS-6 and TPS-6L



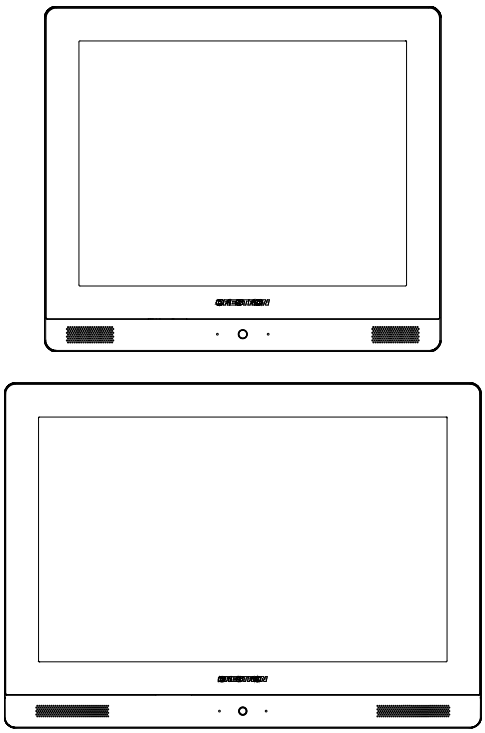
- TPS-6: 45 degree tilt mount for tabletop use
- TPS-6L: flush mount for in a wall, lectern, or similar flat surface
- 5.7" active matrix color touchscreen display
- 16-bit Isys graphics
- 640 x 480 resolution
- DNav dynamic menu objects
- Synapse Image Rendering Algorithm
- Single full-motion, fully-scalable video
- High-speed Ethernet and Cresnet communications
- Button engraving available as solid or backlit text
- Crestron Home® CAT5 AV video connectivity
- Low-profile single-wire connection
- WAV file audio feedback
- Built-in light sensor

TPMC-8T and TPMC-8L



- TPMC-8T: for fixed tabletop use
- TPMC-8L: flush mount for in a wall, lectern, or similar flat surface
- 8.4" active matrix touchscreen display
- 16-bit Isys i/O graphics
- 800 x 600 resolution
- Synapse image rendering algorithm
- Windows SideShow-Enabled
- DNav dynamic menu objects
- Windows XP Embedded operating system
- Onboard PC applications for Web browsing, streaming media, conferencing, VoIP, and remote computer access
- Streaming video from network cameras and servers
- Direct panel-to-panel intercom over IP
- Built-in microphone and stereo speakers
- 5-way thumbpad and 4 "hard key" buttons
- Includes stylus with onboard storage slot
- Built-in biometric fingerprint scanner
- Wired 10/100 Ethernet and 802.11a/b/g Wi-Fi communications

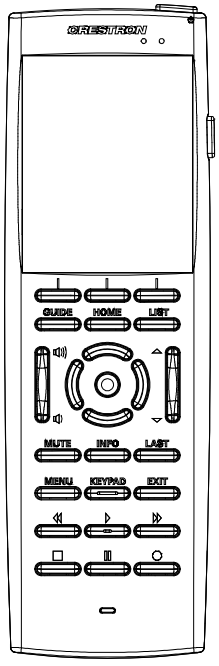
V12 and V15



- Available in tabletop or flush mount
- V12: 12" touchscreen display, 800 x 600 SVGA resolution
- V15: 15” touchscreen display, 1280 x 768 WXGA resolution
- Sleek, beautiful, versatile
- High-performance graphics and video
- Industry's only HDCP-ready touch screen controller
- VESA-compatible mounting affords endless install options
- Tabletop tilt model features clean, modern design
- Wall mount model installs flush in shallow spaces
- Contemporary appearance blends in anywhere
- Significantly reduced wiring via DigitalMedia™ technology
- Digital Graphics Engine (DGE) installs up to 200 ft away
- Also works with the DVPHD Digital Video Processor
- Built-in microphone and speakers
- USB keyboard/mouse port
- Cool, quiet fanless design
- Available in white or black

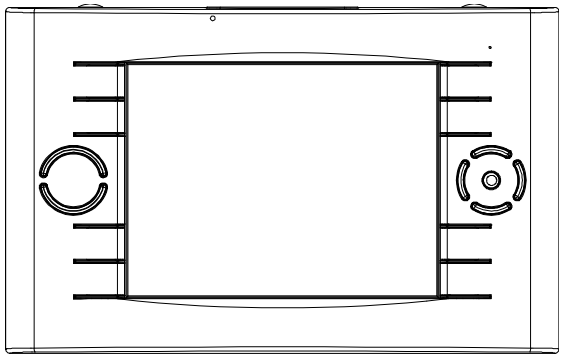
Handheld Wireless Touch Screens

TPMC-3X



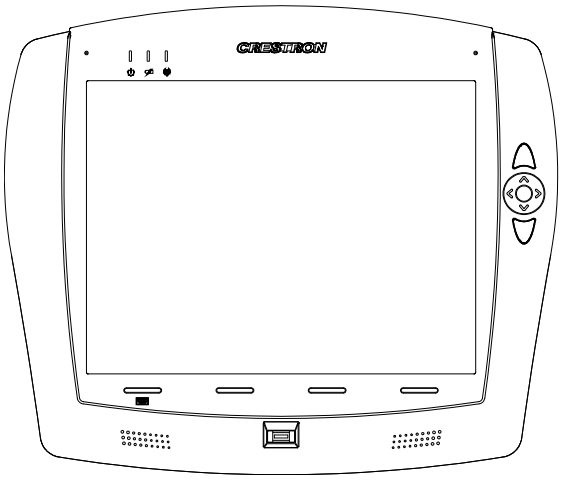
- Sleek and ergonomic handheld design
- Elegant gloss black finish
- Instant-Waking® behavior with tilt sensor
- Works like an IR remote — with all the benefits of 2-way RF!
- High-performance 802.11a/b/g Wi-Fi wireless communications
- 50 feet omnidirectional RF range indoors
- Roaming between multiple Wi-Fi access points
- Wireless video from network cameras and servers
- Built-in speaker and microphone
- Crestron wireless IP Intercom capability
- WAV file customizable audio feedback
- Widely-spaced tactile pushbuttons
- White EL backlit button text
- 2.8" active matrix color touchscreen display
- Wide 150 degrees viewing angle
- 16-bit Isys i/O® graphics
- 240 x 320 resolution
- DNav Dynamic Menu Objects
- Synapse™ Image Rendering Algorithm
- Programmable via SystemBuilder™ and Adagio® Composer software
- Long-lasting LiPo rechargeable battery pack
- Stylish tabletop docking station included
- Wall mount docking station also available

TPS-6X



- Lightweight contoured design for wireless handheld use
- Also affords full-featured tabletop tilt touch screen operation
- Elegant high gloss black or white, or matte black finishes
- Non-slip rubber grips on rear
- Illuminated buttons and engravable backlit text
- 5.7" active matrix color touchscreen display
- 16-bit Isys® graphics
- 640 x 480 resolution
- Dynamic graphics & text capability
- DNav dynamic menu objects
- Synapse Image Rendering Algorithm
- Displays full-motion video while docked
- High-power, high-speed 2.4 GHz RF wireless technology
- Up to 200 feet RF range indoors
- Supports roaming for extended RF coverage
- 1-way IR wireless capability also built in
- Includes tabletop tilt docking station, interface module, and NiMH rechargeable battery pack
- Wired Ethernet, Cresnet, and Crestron Home CAT5 video connectivity
- No-button front bezel option included

TPMC-8X



- Stylish and compact ergonomic design
- 8.4" active matrix touchscreen display
- 16-bit Isys i/O graphics | 800 x 600 resolution
- Synapse image rendering algorithm
- Windows SideShow-Enabled
- DNav dynamic menu objects
- 802.11a/b/g Wi-Fi 2-way wireless communications
- Windows XP Embedded operating system
- Onboard PC applications for Web browsing, streaming media, conferencing, VoIP, and remote computer access
- Wireless video from network cameras and servers
- Direct panel-to-panel intercom over IP
- Built-in microphone and stereo speakers
- 5-way thumbpad and 4 "hard key" buttons
- Includes stylus with onboard storage slot
- Built-in biometric fingerprint scanner
- Internal Li-Ion battery pack included
- External "booster" battery pack available
- Optional desktop and wall mount docking stations

Keypads

Cameo

Crestron Cameo presents a fresh, innovative concept in keypad design featuring an incredibly small footprint and slim profile with versatile button configurations. Use Cameo keypads as a simple interface for controlling lights, shades, motors, or even an A/V system connected to the control system.

INET-CBDEX-E
Cameo Express Wireless Keypad w/infiNET EX

Cost-effective wall mount keypads featuring customizable buttons, enhanced LED feedback, and infiNET EX wireless communication. The INET-CBDEX-E models are designed for installation using standard electrical gang boxes and decorator-style faceplates.

Customizable Buttons
Exquisitely simple yet highly customizable, a single Cameo keypad can be configured easily by the installer to provide from two to six buttons. There are three button sizes: small (1/6 keypad height), medium (1/3 keypad height), and large (1/2 keypad height).

Auto-dimming Backlight
Cameo's high-quality backlit laser engraving provides customizable button text that's easy to read under any lighting condition. A built-in light sensor controls the backlight intensity automatically to achieve a crisp, legible appearance in both darkened and fully lit rooms.

Enhanced LED Feedback
Six pinhead-sized bright white LED light pipes provide elegant and versatile button feedback. Ten different blink patterns are built-in, enabling blinking LED feedback while simplifying programming and minimizing traffic on the Cresnet network. Built-in bar graph logic allows the feedback LEDs to function as a 6-segment bar graph display to provide a visible level indication when adjusting lighting and audio settings. The overall LED intensity is auto-dimmable, adjusting automatically for optimal visibility under varying lighting conditions.

Contact Closure Inputs
Two sensing inputs are included on the rear of the keypad to provide a simple and convenient interface for low voltage contact-closure devices such as occupancy sensors, door switches, and motion detectors.

Note: Contact closure inputs not available on the wireless infiNET EX model.

Ambient Light Sensor
In addition to controlling Cameo's backlight and LED intensity, the built-in light sensor can also be utilized by the control system to support daylight harvesting and other programmatic functions.

Decorator

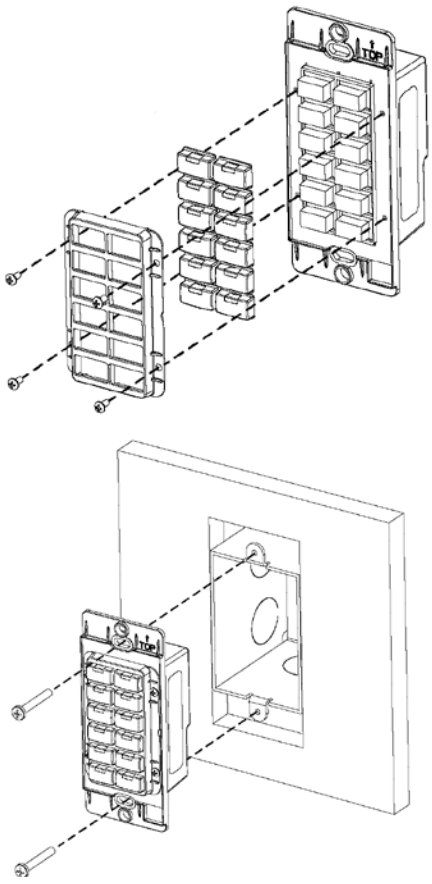
Crestron C2N-DB Decorator Series keypads deliver versatile keypad control with contemporary styling to support a broad range of applications from lighting to AV distribution.

Decorator keypads are available in several configurations. Decorator keypads are designed to allow installation in perfect harmony with non-Crestron devices using readily available decorator style faceplates (not included). Mountable in a standard electrical gang box, multiple keypads can easily be ganged side-by-side along with other wall mount devices. All button caps are engravable and include integral red LED light pipe feedback indicators.

Features

- Fits standard electrical gang boxes and decorator faceplates
- Available in several different button configurations
- Replaceable, custom-engravable button caps
- Programmable feedback LEDs
- Available in black, gloss white, and gloss almond
- Easy Cresnet wiring

C2N-DB Mounting



Designer

The CNX-B Designer series wall mount keypads are available in configurations of 2, 4, 8, or 12 buttons. Buttons are large for optimal ergonomics. Each model mounts in a standard electrical gang box and includes a matching 1-gang faceplate. Optional 2 and 3-gang faceplates are available to allow up to three keypads to be installed side-by-side. Optional Designer and Architectural faceplates are offered in a variety of elegant finishes. Button caps are engravable and include LED feedback indicators. Standard models are available in White, Black or Almond. Backlit button caps are also available (black only).

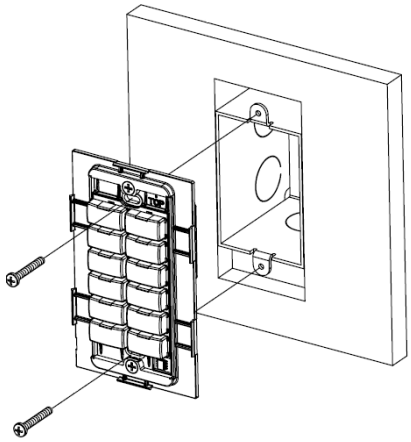
CNX-B series keypads include built-in WAV sound file capability to enable customized audible feedback. An onboard temperature sensor is also included for general monitoring of room temperature. The product name corresponds to the number of keypad buttons. The CNX-B series keypads have a uniquely stylish shape, and faceplates are available for single, double, or three gang plate arrangements.

Features

- Available with 2, 4, 8, or 12 buttons
- Colors include matte white, matte almond, or black
- Metal faceplate options:
  - Black Chrome - Brushed Gold
  - Polished Black - Polished Gold
  - Polished Brass - Stainless Steel
- Primed faceplate available
- All keypads can be custom engraved

All keypad buttons are backlit capable and have a variable intensity, independently addressable and programmable LED that serves as a user feedback indicator
Crestron keypads can be ganged in one, two or three gang configurations and are mounted in standard electrical junction boxes. Custom multi-gang plates are required.

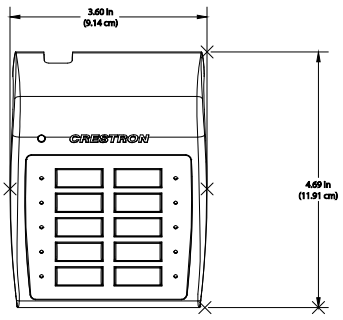
CNX-B Mounting



HTT-B10EX

The HTT-B10EX is a stylish compact wireless pushbutton controller with 10 multi-function buttons, custom backlit engraving, white LED feedback, and infiNET EX wireless technology. Perfect for desktops, podiums, or anywhere else a simple, unobtrusive controller is needed without running any wires.

- 10 engravable backlit buttons
- Configurable for up to 3 functions per button
- White LED lightpipe feedback indicators
- True-feedback and dual-bargraph capability
- infiNET EX 2-way wireless communications
- Powered by batteries or external power pack
- Wakes instantly when touched or picked up
- Auto-dimmable backlight and LED intensity
- Available in black or white



Sensors

Adding sensors makes a smart system even smarter. Sensors save on energy costs while enhancing functionality and reliability.

The Sensor Advantage

- Reduced energy usage
- More consistent lighting levels
- Completely automatic

Automated Actions

A system with sensors will automatically control lights based on occupancy. When no one is in a room, lights shut off and energy is conserved. Sensors also help with light harvesting by monitoring ambient light. A system with sensors can ramp the artificial lighting up or down depending on the amount of natural light entering a room. This allows consistent lighting conditions while maximizing energy savings. Since everything is automatic, human error is eliminated.

Occupancy Products

GLS-ODT and GLS-OIR

Crestron Green Light sensors deliver a powerful solution for reducing energy costs and enhancing the functionality of lighting and environmental systems. Crestron offers ceiling and wall mount occupancy sensors for areas up to 2500 square feet.

Advanced self-adaptive motion sensing using a combination of ultrasonic and passive infrared technologies affords extreme reliability for control of lighting, climate control and other devices in the room. A built-in photocell can be set to override the occupancy sensor if the ambient light level is above a set threshold, preventing lights from turning on when there is sufficient daylight in the room.

Sensors are easily connected to the lighting control processor via the Cresnet control network using a GLS-SIM Sensor Integration Module. Alternately, they may be connected directly via a digital input port.

Model	Sensor Type	Mount Type	Coverage Area	Coverage Pattern
GLS-ODT-C-500	Ultrasonic and infrared	Ceiling	500 sq ft	180 degrees
GLS-ODT-C-1000	Ultrasonic and infrared	Ceiling	1000 sq ft	360 degrees
GLS-ODT-C-2000	Ultrasonic and infrared	Ceiling	2000 sq ft	360 degrees
GLS-ODT-W-1200	Ultrasonic and infrared	Wall	1200 sq ft	110 degrees
GLS-OIR-C-450	Infrared	Ceiling	450 sq ft	360 degrees
GLS-OIR-C-1500	Infrared	Ceiling	1500 sq ft	360 degrees
GLS-OIR-W-2500	Infrared	Wall	2500 sq ft	110 degrees

GLS-LOL and GLS-LCL

GLS-LCL

LS-LOL

Crestron Photocell Light Sensors are designed for daylight harvesting applications to control the balance of natural and artificial lighting in an indoor space. By harnessing natural daylight from windows and skylights, electrical lighting can be turned off or dimmed, reducing energy usage while maintaining a consistent light level for a more efficient and comfortable work space. Outdoor lighting may also be turn off and on automatically using a photocell light sensor.

The GLS-LCL is used to monitor and adjust based on the reflected light levels at a certain location, such as a desk. The GLS-LOL is used to look at a window and monitor how much light is entering from outside.

Model	Type	Location	Field of View	Light Sensitivity
GLS-LCL	Closed-Loop	On Ceiling Above Work Area	60 degree cone, aimed straight down	0 to 70 ft candles
GLS-LOL	Open-Loop	On Ceiling Near Window	60 degree cone, aimed 45 degrees down	3 to 6000 ft candles

Partition Products

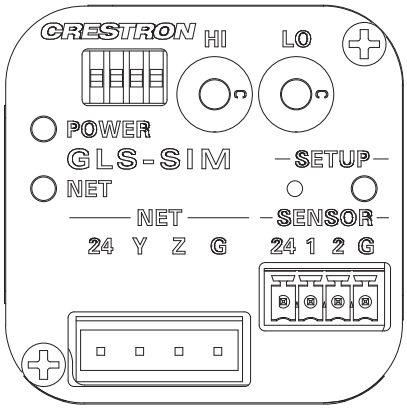
GLA-PART

Surface mount partition sensor easily connects to Crestron GLS-SIM or control processor to manage divisible room environments.

Sensor Interfaces

GLS-SIM

The GLS-SIM is a compact interface device designed to allow Crestron Green Light sensors to connect directly to a Cresnet control network. The GLS-SIM installs easily at the sensor location, mounting conveniently inside the electrical box or exposed above the ceiling. Wiring connections to the network and sensor are facilitated using miniature screw terminals.



The GLS-SIM is compatible with Crestron GLS-series sensors, as well as with most 24 Volt-powered sensors from any manufacturer. Up to 1A at 24 Vdc power is available to support multiple sensors in parallel. The GLS-SIM actually includes two sensing inputs, each capable of sensing a contact closure, logic level, or 0-10V signal. When used with a Crestron IPAC or iLux system, setup is simplified using onboard DIP switches to select the sensor type (e.g., occupancy, photocell, partition, etc.) and operating mode (i.e., normally-open or normally-closed).

Shades

Shade and drape controllers are available to provide a convenient and cost-effective solution for harvesting natural light and controlling the effects of the sun within an environment. By integrating shade and drape control into a Crestron system, natural light can be used to help lower energy costs. In the colder months; shades can raise automatically to use sunlight as a supplemental heating source. During the warmer months, shades can be programmed to block sunlight thereby reducing the call for cool air. In many cases motorized shades offer simple convenience, such as reducing screen glare during multimedia presentations.

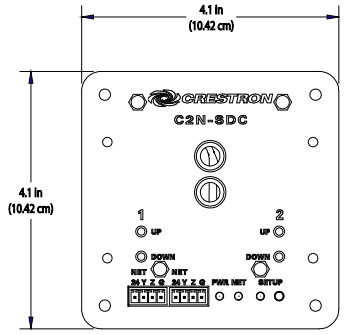
Controlling

Controllers are available as 24 Vac, 120 Vac, and 240 Vac for controlling different motor types. There is also a Somfy® shade controller that provides bidirectional serial control for up to two Somfy ILT Intelligent Shade Motors. The Somfy shade controller allows specific positioning of the shades and polling of the current shade position for ultimate control.

Integrating

Shade and drape controllers integrate through Cresnet. Each motor output is independently controllable. The controllers are small enough to hide in the wall, ceiling, or 2-gang electrical box. A DIN Rail controller is also available.

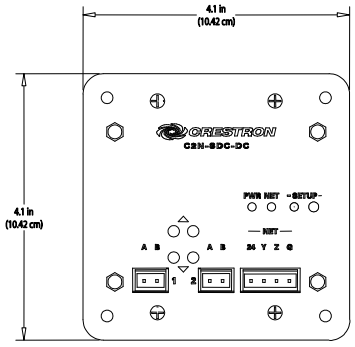
C2N-SDC



The C2N-SDC is a 2-channel shade and drape controller designed to provide a convenient and cost-effective solution for controlling a variety of motorized window treatments as well as motorized doors, sunroofs, lifts and projection screens.

The C2N-SDC is a Cresnet device with two independently controlled 120V AC outputs. Each output provides up/down or open/close control of a conventional 3-wire bidirectional type motor. Built-in timing and interlock logic make it easy to program the C2N-SDC for fail-safe operation.
The C2N-SDC mounts in the wall or ceiling using an off-the-shelf 4" square or 2-gang electrical box. Pushbuttons on the front of the unit allow for manual operation of the motors during installation and setup.

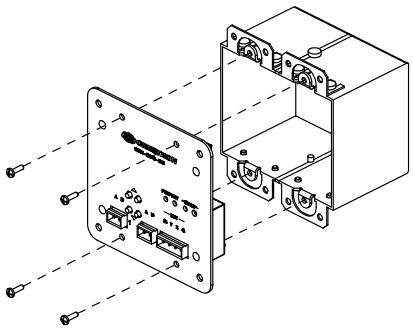
C2N-SDC-DC



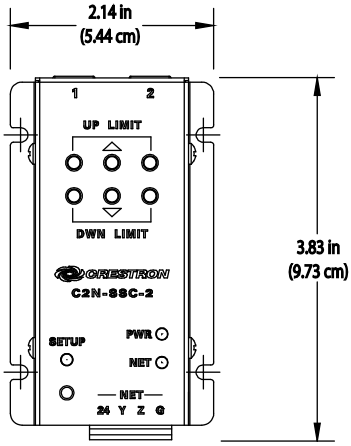
The C2N-SDC-DC is a 2-channel shade and drape controller designed to provide a convenient and cost-effective solution for controlling 24 Vdc motorized shades and drapes. The C2N-SDC-DC is a Cresnet device with two independently controlled 24 Vdc outputs, each designed to provide standard up/down or open/close control of a conventional two-wire bidirectional type motor.

The C2N-SDC-DC mounts in the wall or ceiling using an off-the-shelf 4 in square or 2-gang electrical box. Pushbuttons on the front of the unit allow for manual operation of the motors during installation and setup.

2-Gang Installation



C2N-SSC-2



The C2N-SSC-2 Somfy Shade Controller is a compact Cresnet device designed to provide a bidirectional serial interface for up to two Somfy ILT Intelligent Shade Motors (http://www.somfy.com/nam/index.cfm). Window treatments equipped with the Somfy ILT motor offer enhanced capability compared to typical 3-wire models.

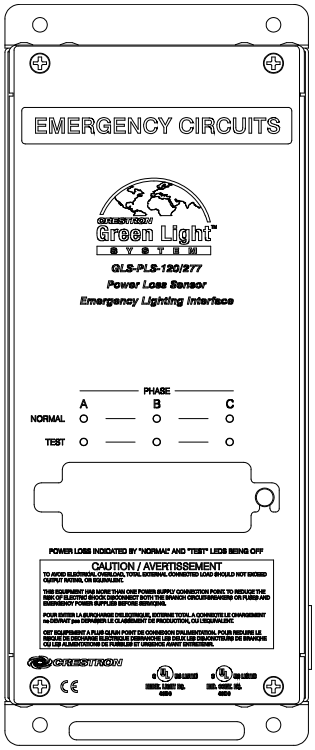
In addition to basic open/close commands, the C2N-SSC-2 allows for setting each shade to a specific position and polling for its current position with 16-bit precision. Feedback signals provide confirmation of each motor's activity to enable precise, predictable control, even from a remote location. Limit adjustments are set electronically using buttons provided on the face of the unit, and up to 20 presets for each output can be saved onboard the C2N-SSC-2 for easy recall through the control system. The C2N-SSC-2 mounts discreetly to any flat surface and requires a simple Cresnet connection to the control system.

DIN-2MC2

See DIN-Rail Product Section

Accessories

GLS-PLS



The GLS-PLS is a 3-phase power loss sensor designed for use with Crestron Green Light systems to activate Override mode during a power failure. In response to a signal from the GLS-PLS, the lighting system program can be temporarily overridden while designated emergency lighting circuits are changed to their override preset levels and unnecessary lighting and other devices are shut down to minimize the demand on emergency power equipment.

The GLS-PLS senses each leg of a 120 or 277 Volt 3-phase feed, providing LED indication of the status of each phase on its front panel. When power is lost on any phase, the corresponding status LED turns off and a contact closure is activated on each of two control outputs. Two isolated control outputs are provided to allow for interfacing with third-party equipment in addition to the Crestron lighting system. Each contact closure output is rated for 1A @ 24VDC.
Testing the GLS-PLS-120/277 is facilitated using three Test Switches located behind a small cover plate on the front of the unit. Setting any switch to the TEST position simulates a loss of power on the corresponding phase leg, providing a test of the unit's internal circuitry and any connected equipment.
The steel enclosure is designed for mounting to a vertical surface. Conduit knockouts are provided on the bottom, top, and both sides. All electrical connections are made via screw terminals accessed by removing the front panel.

UL924

Underwriters Laboratories specifies safety standards for emergency lighting and power equipment under UL924. The GLS-PLS power loss sensor will help satisfy UL-924 requirements.

Control Protocol Interfaces for 3rd Party Devices

GLA-BMS

The GLA-BMS is an Ethernet based "protocol translator" which allows a Crestron system to communicate directly with any number of building management protocols. Programmable like any other Crestron Ethernet device, the GLA-BMS makes it easy to interface with:

- BACnet/IP
- BACnet/MSTP (RS-485)
- Modbus TCP/IP
- Modbus RTU (RS-485)
- Lonworks
- Metasys N2 Open (Johnson Controls)

GLA-DMX512

GLA-DMX512 is a complete lighting playback and integration processor, featuring advanced DMX lighting control, sophisticated event scripting and robust I/O capabilities. Great for both architectural and entertainment lighting control projects.

GLA-DMX512 is entirely web-based, which means that no special software is needed to operate or program GLA-DMX512. Use a web browser on your computer or PDA to connect to GLA-DMX512 to begin working with it. After GLA-DMX512 is programmed, controller, leveraging its built-in real-time clock/calendar, astronomical time functions, contact closure inputs and wide variety of event triggers to interact with the outside world. Integrate GLA-DMX512 with other external devices via RS-232 serial, Ethernet connectivity and more for fully custom lighting solutions.

- Seamlessly handles static scenes, cross fading and real-time "streaming" DMX playback
- Web-based "live" operation and programming
- Powerful CueScript programming language Handles up to 4 independent timelines
- Locally program lighting scenes or snapshot from external DMX source
- Network multiple GLA-DMX512 units together to control a large number of channels or devices
- System integration via Ethernet, RS-232 and Digital I/O
- 512 DMX inputs
- 512 DMX outputs
- 2000 cues
- 100 macros
- 500 time code event triggers
- 256 DMX input triggers
- Large on-board memory and removable memory card slot
- Rugged anodized extruded aluminum housing
- Removable "slide-in" flanges for surface mounting

GLA-UPS

The GLA-UPS provides a complete protection solution for Green Light systems. In the event of a power failure, the GLA-UPS includes an auto-restart feature that eliminates the need to perform an on-site restart of the system. In addition, the GLA-UPS features a recycle/reset button with sequential outlet start-up for proper system rebooting.

RoomView Green Light

Integrated Energy Management Software

RoomView Green Light is a complete energy management program for an organization of any size. From a school to a whole enterprise, RoomView Green Light will keep track of your carbon footprint while informing you of trends, usage, and ways to save money.

RoomView Green Light will monitor every light, shade, and HVAC system independently. The program generates reports showing energy consumption throughout a day, week, month, or year. Information is displayed in easy to read charts and graphs. With RoomView Green Light, it is easy to keep everything in check.

Every room can be monitored and managed from any touch screen or web browser. View temperature, humidity, occupancy status, and even CO_2 levels for a room, and then trigger a light scene or manually adjust HVAC accordingly.

LiveView™

Up to the minute details with graphic-rich LiveView show the vital statistics of your organization. Easy to read pie charts and bar graphs pictorially describe the usage of all utilities (electric, gas, oil, water, etc.). Simply see where the energy is being consumed and take action to reduce costs and gain efficiency.

Custom Reports

The data that is seen in LiveView is saved into the custom report database, enabling the user to call upon an array of criteria to view historical consumption. Compare utility bills to the LiveView report. Project accurate monthly energy costs over the course of a year.

Scheduling

Built into RoomView Green Light is the ability to schedule events around the building or enterprise. From simply turning lights on and off to preventing water use during dry spells, RoomView Green Light provides the intelligence to help use resources wisely.

Emergency Alerts

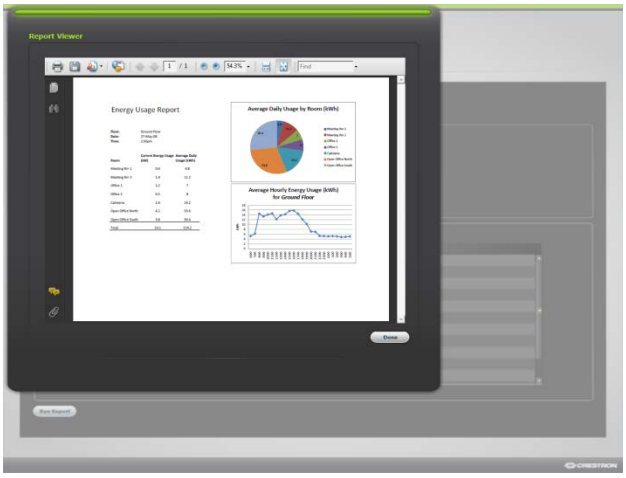
A watchful eye on your consumption, RoomView Green Light sends you alerts if it notices something out of the ordinary. From abnormal water or gas volume, to excessive electrical current, to high CO_2 levels in the air, RoomView Green Light can prevent disaster by shutting down a system or sending an alert.

Maintenance

RoomView Green Light can remember when lamps were last replaced and track the time of life for each lamp. As the end of life approaches a message is sent out advising that the lamp should be replaced.

Sample Screen Shots

Above is a LiveView window showing the total energy usage for a building over one day. The green portion of the graph represents energy produced by an on-site renewable energy source. The gray area is energy provided by the power grid, natural gas or other sources. Energy use is broken down by area, usage type, and energy source type in the pie charts.

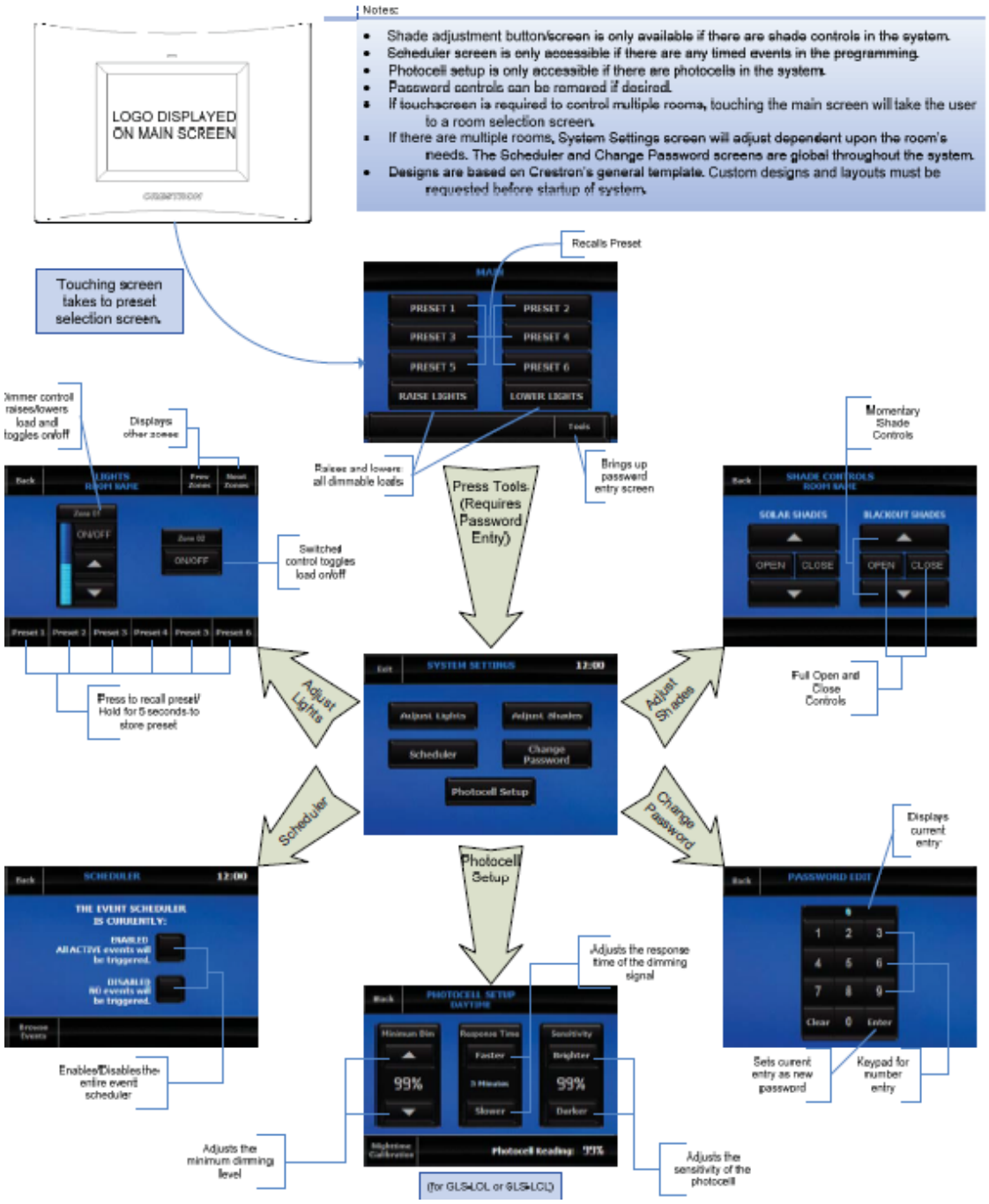


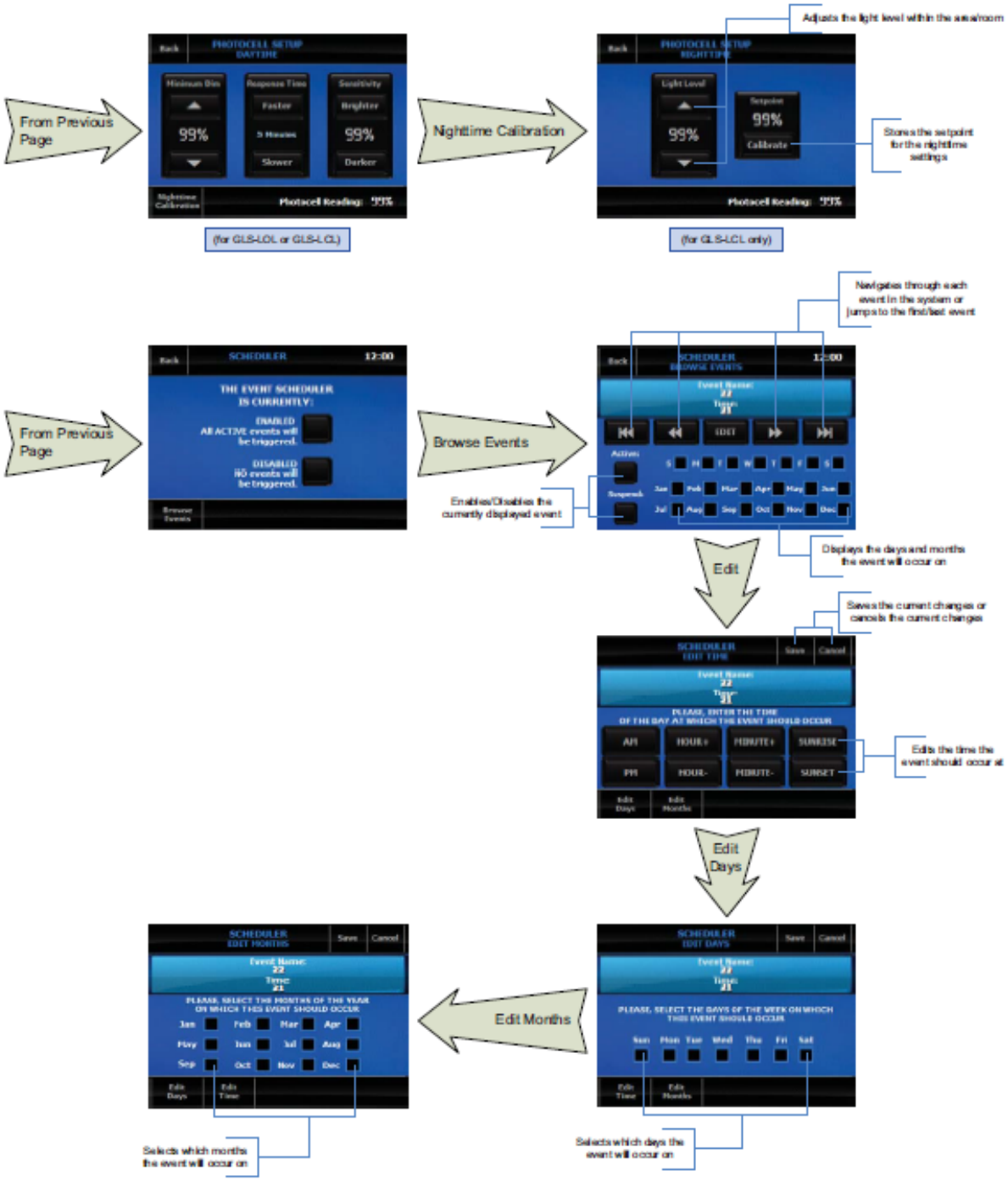
Above is an example report (in the PDF standard). This report shows the energy usage for the ground floor of the building. The current and average usage is listed for each room on the ground floor. This data is also depicted in the pie chart.

The monitor and control window allows a manager to access each room across an organization. In this example, the locations are divided by state, city, and building. After selecting a location, the manager can view a floor plan, monitor the status of a room, and make manual adjustments. Upcoming and past events are shown at the bottom.

The scheduler window allows a manager to schedule recurring events. This easy to use interface can set lights to turn on or off at a specified time, change the room temperature set point, and perform many other tasks automatically. It also can schedule temporary overrides for special events.

Touch Screen Graphics




From Previous Page
Nightime Calibration
Adjusts the light level within the area/room
Stores the setpoint for the nightime settings
(for GLS-LCL or GLS-LCL)
(for GLS-LCL only)
From Previous Page
Browse Events
Navigates through each event in the system or jumps to the first/last event
Enables/Disables the currently displayed event
Displays the days and months the event will occur on
Edit
Saves the current changes or cancels the current changes
Edits the time the event should occur at
Edit Days
Edit Months
Selects which months the event will occur on
Selects which days the event will occur on

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Refer to the listing of Crestron worldwide offices on the Crestron Web site (www.crestron.com/offices) for assistance within a particular geographic region.

Doc 4775B 07/13