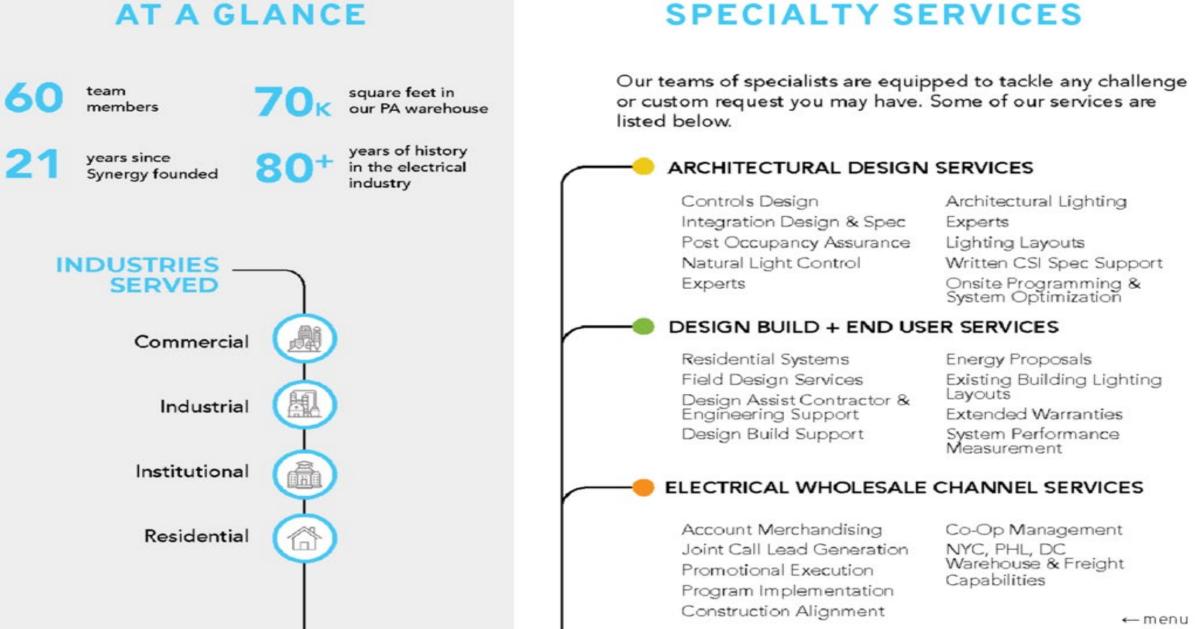


#### SOLUTIONS | SERVICE | EXPERTISE Redefining the Rep Model

synergyelectricalsales.com







#### Lutron's History (Est. 1961)

#### Many "Firsts"

- 1959 Rotary Dimmer Invented
- 1971 Nova Linear Slide Dimmer
- 1972 First Elec. Solid State Dim Ballast
- 1989 RanaX Infrared Dimmer
- 1990 NeTwork Home System
- 1992 Maestro micro processor based dimmer
- 1993 Serena Low Volt Shade System
- 1993 Grafik Eye Custom Dimming System
- 1997 RadioRa two-way radio frequency system
- 2006 Quantum with Ecosystem Whole Building
- 2008 Clear Connect RF
- 2011 Energi Tri Pak
- 2016 Vive







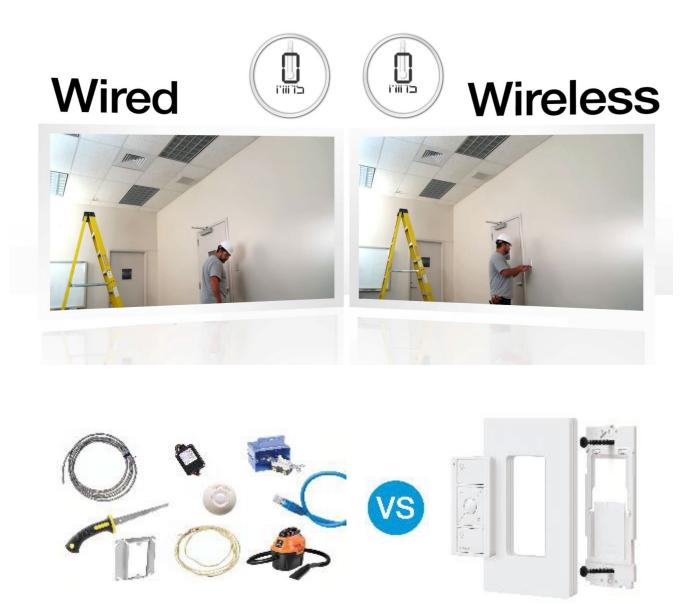






## Product & Specification Training

## **Vive Wireless** Installs Faster han Wired Systems





## Vive is perfect for...

- 1. Energy code compliance
- 2. Basic energy savings
- 3. Retrofits

**UTRON** 

4. Tight budgets

Vive wireless controls work for every commercial building, new and existing.



**25**+

Years Manufacturing Wireless Devices Wireless Device Patents

Wireless Systems Deployed in the Field

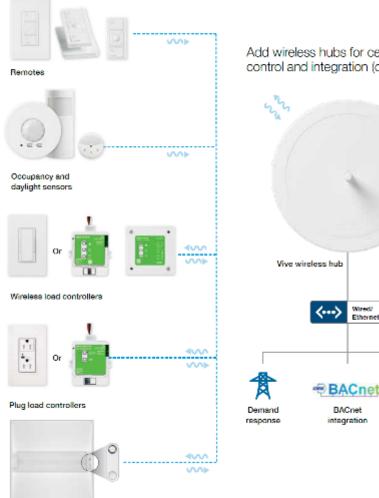
10M+

It just works Not all wireless is created equal

- Lutron developed the first wireless control systems in 1996
- Designed to be as reliable as any wired system
- Vive was developed in 2016, based on several key Lutron technologies that ensure reliability and performance

### Vive – System Architecture

Flexible, wireless controls and sensors for simple, code-compliant design

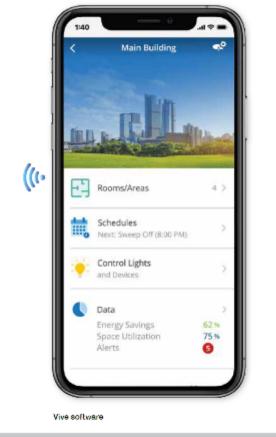


Add wireless hubs for centralized control and integration (optional) •)) (Wi Fi) Const Wired/

API

API

integration



Simple-to-use software

#### Communication protocols







Communicate via wired Ethernet to Vive hub

 $\langle \cdots \rangle$ 



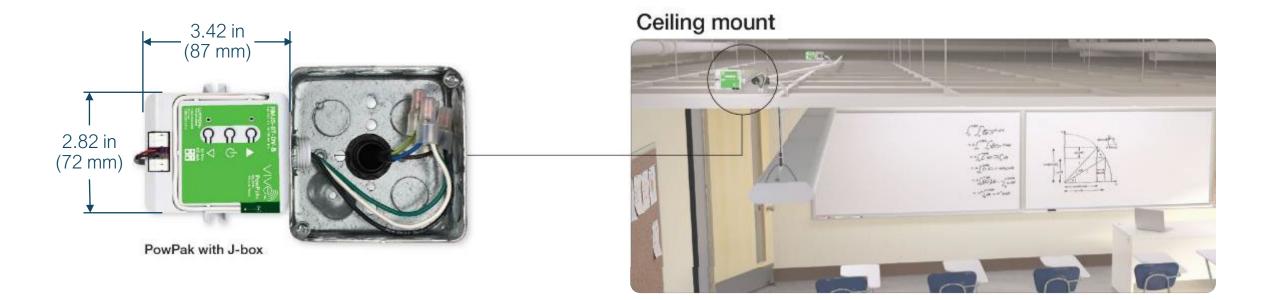
# Vive Components

100



## PowPak – Ceiling/J-Box mount remote load controllers

Installs to a standard junction box to eliminate wiring in the walls.



#### **LUTRON**

## Ceiling controls





## Reliable wireless communication





## PowPak Modules

Line Voltage Switched DC Analog Dimming





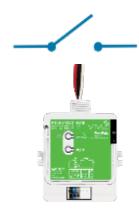
- 5R
- 16R
- 20R



Live Voltage

Phase Dimming

Contact Closure Output CCO



- 0-10V flying leads
- 0-10V term block

- PRO LED+ technology
- 24V CCO
- 16R + CCO
- 20R + CCO



## Emergency PowPak Modules

Line Voltage Switched





• 16R PowPak

DC Analog Dimming



- 0-10V flying leads
- 0-10V term block

Phase Dimming





 Phase Select PowPak Module 450W 120V/277V 4x4 mount

#### **UTRON**

## Ceiling/4x4 Box Remote Load Controllers

- Install in standard 4x4 junction boxes
- Can mount horizontally or vertically

**②LUTRON** 

Can be mounted in plenum space





## Ceiling/4x4 Box Remote Load Controllers

- Install in standard 4x4 junction boxes
- Can mount horizontally or vertically

**②LUTRON** 

Can be mounted in plenum space





# Maestro wall control

Maestro dimmers/switches mount in a wallbox and replace an existing switch without running new wires



#### Wireless switch/dimmer

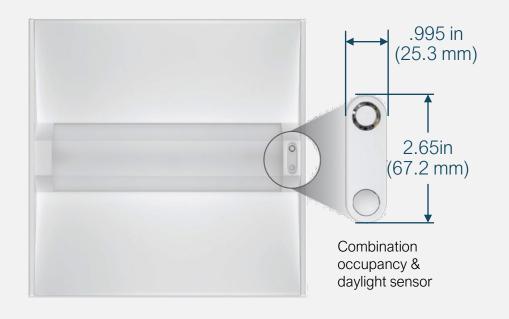


## Individual Fixture Control Options

PowPak wireless fixture control



#### Integral fixture control



Step 1: Put Green PowPaks and in-wall sensors on Normal









Step 2: Put EM PowPaks on EM (Generator or Inverter; doesn't mater)







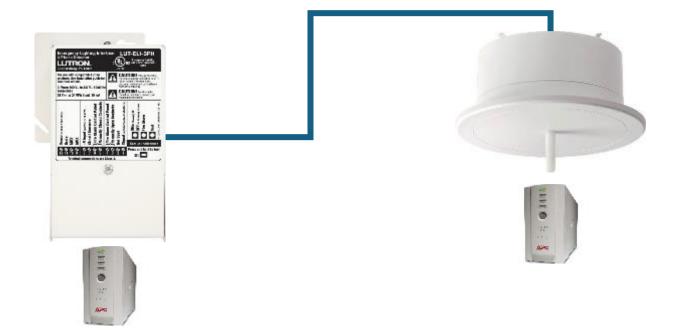
Step 3: Put Vive Hub on EM inverter





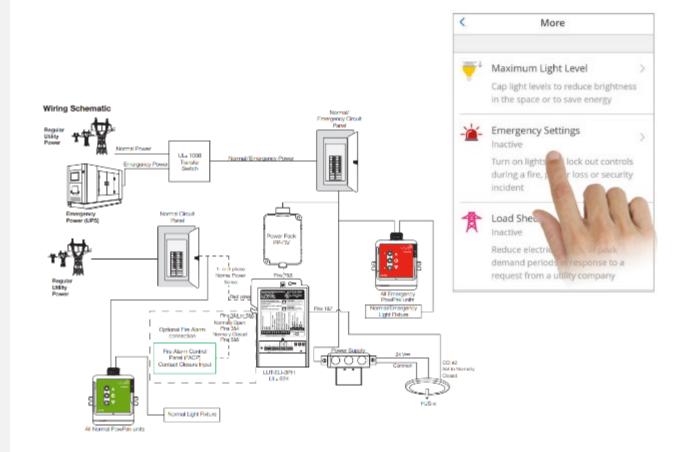


Step 4: Connect the LUT-ELI to the Hub, powered by inverter and monitor Normal power.



#### SLUTRON

Step 5: Start-up the project and enjoy your space!





## Pico wireless remotes

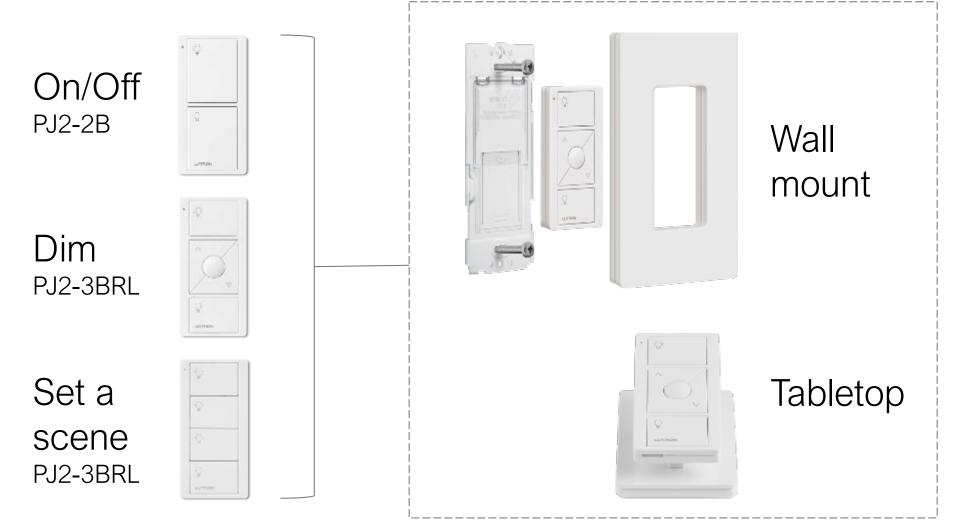
- Pico wireless remotes
   let you put controls
   where you need them –
   even without a wallbox
  - Multiple engraving, color, and button configuration options available







## Set the level you need

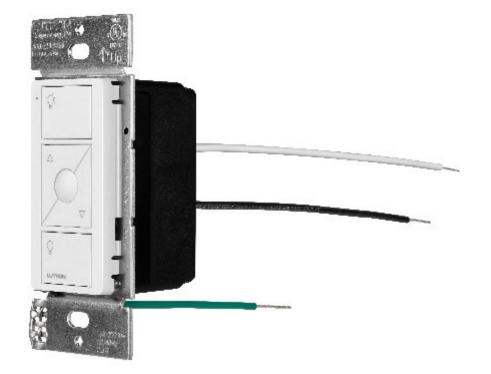




## New! Line-Powered Pico wireless control

Provides a battery-free keypad solution for Vive customers

- 120-277V~ (neutral required)
- 2B, 2BRL, & 3BRL button configurations
- North America (434 MHz only) USA, Canada, Mexico
- Available in (gloss) white, black, ivory, light almond





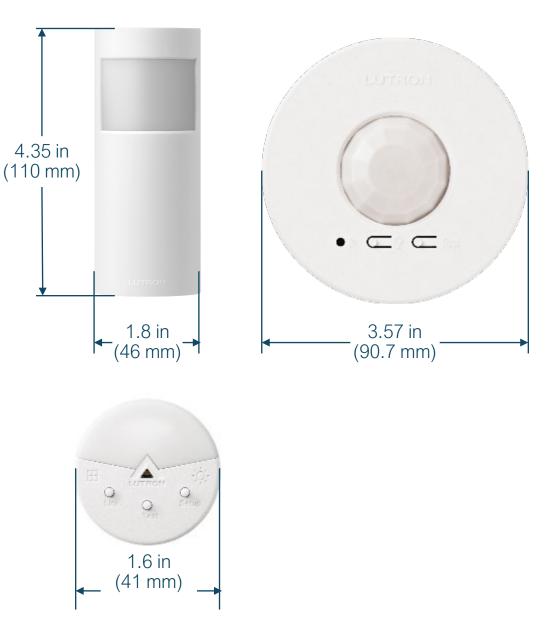


## Wireless sensors

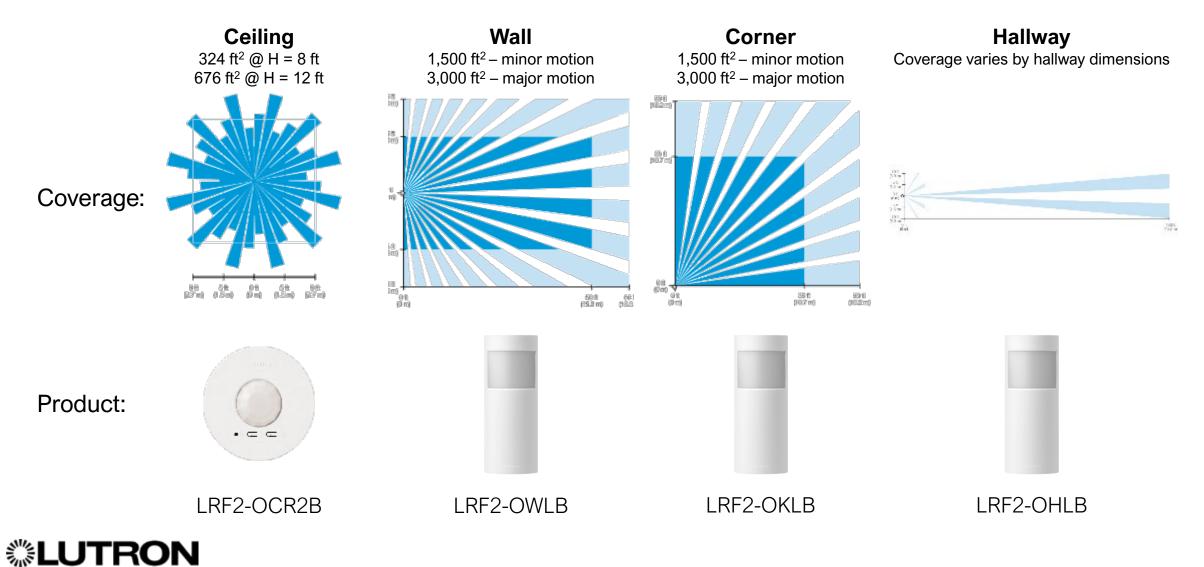
Wireless sensors are available in many configurations to fit your application:

- Ceiling Mount Occupancy/Vacancy
- Corner Mount Occupancy/Vacancy
- Hallway Occupancy/Vacancy
- Wireless Daylight Sensor

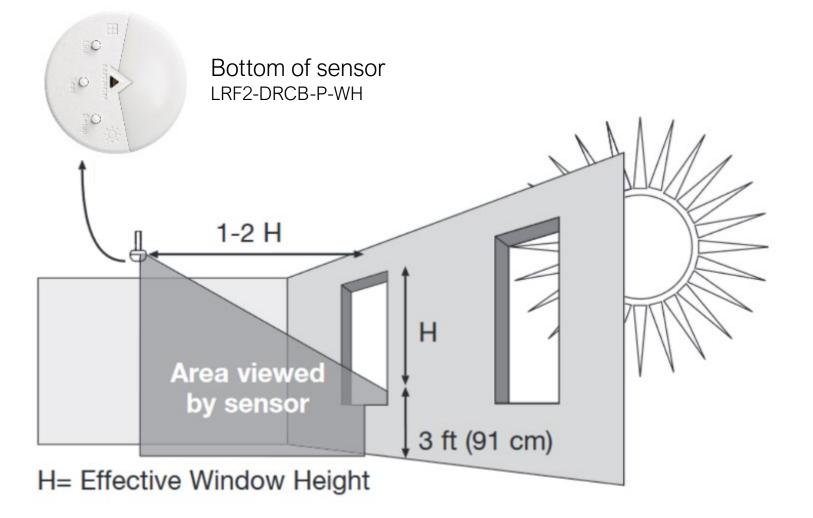
SLUTRON



## Wireless sensors



## Automatic daylighting





## In-wall RF dimmer sensor

- Combines occupancy sensing, manual control, and system connectivity in one piece of hardware
- Easily add additional wall controls and sensors without running new wire
- Easy to install; directly replace an existing wallbox control
- Communicate to other wireless devices using Lutron Clear Connect RF technology
- Two Versions
  - 0-10V Dimming (MRF2S-8SD010-XX)
  - Switching (MRF2S-8SS-XX)





## Integrated wireless receptacle control

- Wireless control built right into the receptacle for direct communication to wireless sensors, Pico remotes, and the Vive wireless hub
- Install the wireless receptacle and integrate with occupancy sensors and the Vive system – with no other parts and pieces





## Wireless hubs

#### Basic

• Timeclock, Demand Response, Energy Reporting

#### Advanced

- Timeclock, Demand Response, Energy Reporting
- BACnet





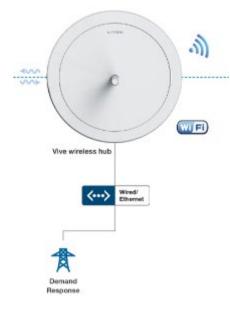
## Wireless hubs

HJS-0



75 Devices

HJS-1



700 Devices



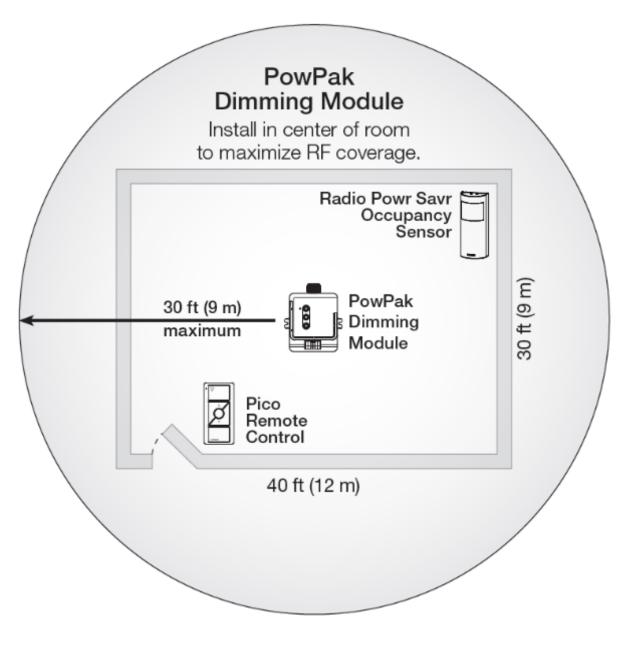


700 Devices

#### SLUTRON

## Vive PowPak RF Rules

Wireless sensors and controls \*must be located within 60 ft (18 m) line of sight, or 30 ft (9 m), through walls, of the associated control module. The 60 ft (18 m) range is not reduced by a ceiling tile obstruction.



#### **②LUTRON**

## Seamlessly integrate with building systems

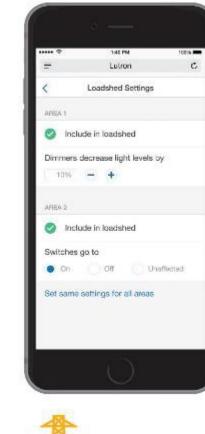
Vive wireless hub available with native BACnet – no additional interfaces or parts are needed.





## Web-based software with multiple functions





Load shed



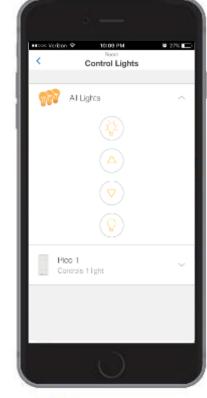
Energy reporting







Schedules





Manual control

## Setup via any device

All you need is WiFi and a browser to get started.



Laptop

Intuitive software works on any device – smartphone, tablet, or PC

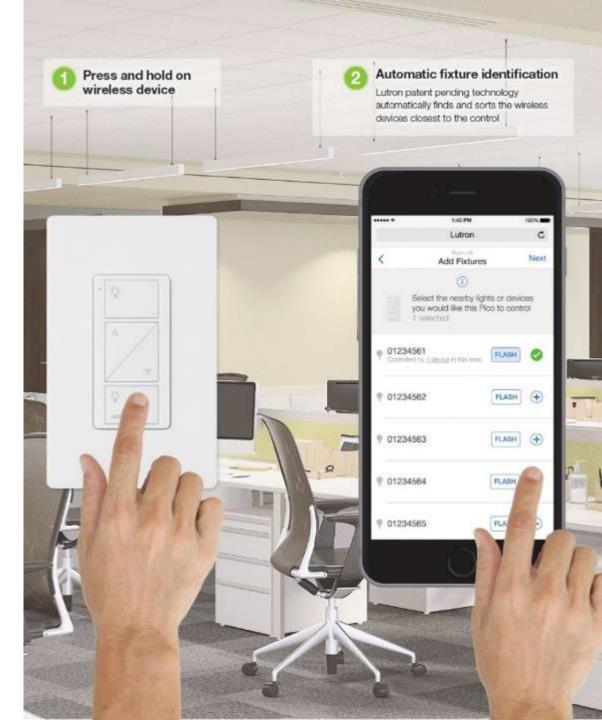




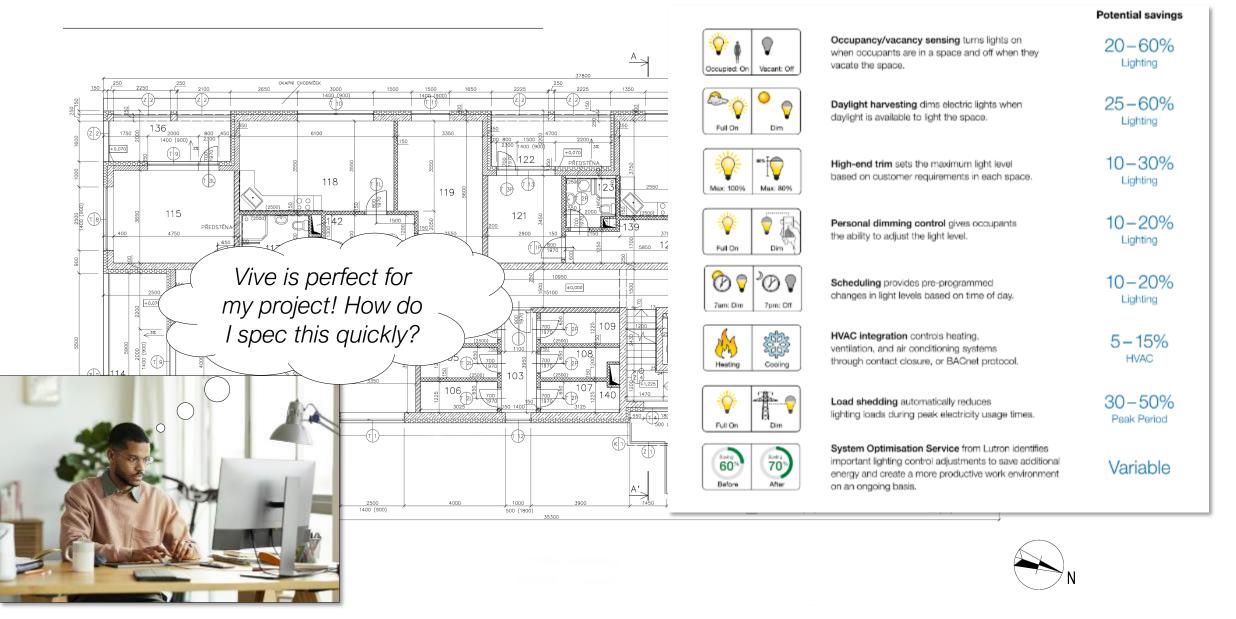
# Easy association

**念LUTRON** 

- Finds nearby devices based on RF signal strength to make job setup faster
- Intuitive graphic design walks through the steps and shows how the devices are programmed to communicate together visually



# Vive Meets Project Requirements



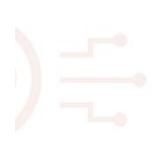




 LARGE COMMERCIAL OFFICE SPACES

- HIGHER EDUCATION FACILITIES
- HEALTH CARE

- SCHOOL



KEEP YOUR EXISTING FIXTURES, CONTROL SYSTEM, ZONES & SENSORS

SOLD & COMMISSIONED BY LUTRON CONTROL EXPERTS LOWER YOUR OPERATING & MAINTENANCE COSTS OR ACHIEVE CODE COMPLIANCE

(> 50% REDUCTION IN YOUR LIGHTING LOAD)

## Retro Fit/C-Flex Demand is Huge, Never Better

- Lutron Ballast End of Life 12/31/2023, no Distribution Inventory
  - All Installed Lutron Customers are planning their strategy life after Ballasts
- 70% of all Commercial Lighting is FL + Switched
  - 12 States outlaw FL after '24, Canada Outlaw Ballast end of '23
- Multi Year Commercial New Construction Demand Drops,
  - High Vacancy Rates Chicago near 30%, Work From Home Continues
  - Class A Office Renovate to Maintain/Attract Tenants
  - Lutron Sales Team Pivot on Installed Base/Retrofits
- Code Driven Funded by Rebates Be the Expert on Rebate/Code
  - Major City Require OCC and Watts per Sq Ft for Renovation
  - Utility Rebate shifts to Networked Fixtures vs. Load Reduction

## Where C-Flex is Successful

#### **Direct/Indirect Suspended**





#### **Direct/Recessed Pendants**





Downlights





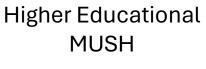
## Door Kits with or without Wireless







Healthcare Commercial Hospitality

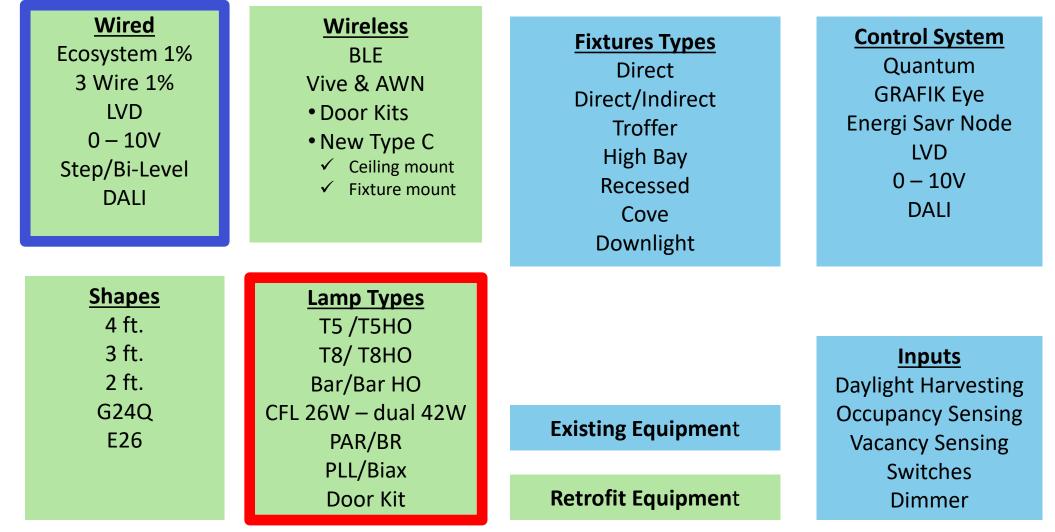






Industrial Facilities

## C-Flex – Retrofit Fluorescent on Lutron Ballasts





## **Helpful Ballast Information**

Ballast Brand	Control Type(s)
FDB	3-wire
ECO	3-wire
EC5	EcoSystem/3-wire (sensor connections)
H3D	EcoSystem/3-wire
EC3D	EcoSystem/3-wire
EHD	EcoSystem

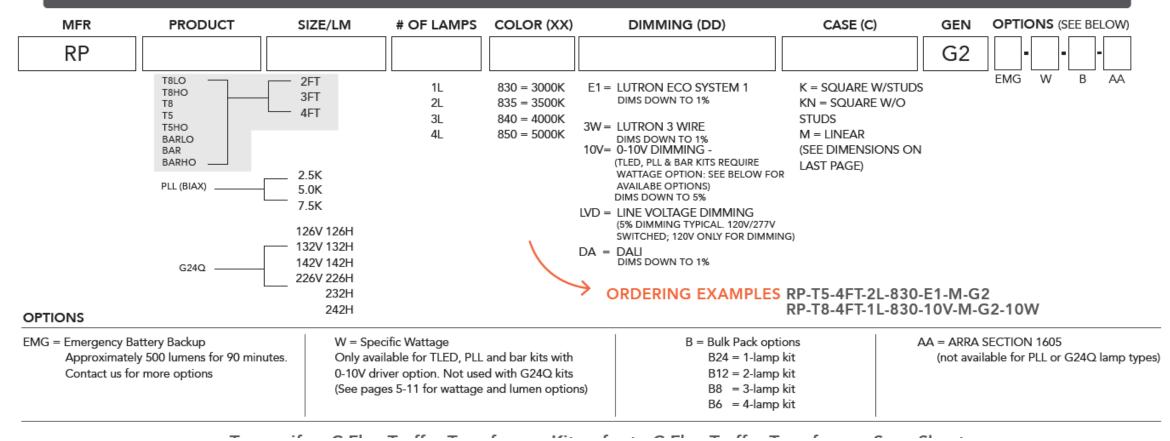
Lamp Types	
Т8	8/8" diameter (thickness) = 1 inch
T5	5/8" diameter (thickness)
T4	Compact Fluorescent
Biax	Twintube

Wattages to length for full power linear lamps								
	2FT	3FT	4FT					
Т8	T817	T825	T832					
T5HE	T514	T521	T528					
Т5НО	T524	T539	T554					

Don't forget about lamp Color Temperature!

# C-FIeX LUTRON, 0 - 10V, LVD RETROFIT KITS

#### PART NUMBER BUILDER



# C-Flex G24Q Base Retrofit Replace single 26W → dual 42W CFL in 6" and 8" downlights

- Ideal for Drywall Ceilings or Plenum Restrictions
- Dimmable down to 1%

	REPL	ACES CFL	S CFL VERTICAL					HORIZONTAL				
	LAMP	LAMP WATTAGE	SYSTEM	LUMENS	LED LAMP	LAMP QTY	KIT PART #	SYSTEM	LUMENS	LED LAMP IMAGE	LAMP	KIT PART #
	1	26	12	900	A	1	RP-G24Q-126V-1L-8XX-DD-C-G2	13	1000	В	1	RP-G24Q-126H-1L-8XX-DD-C-G2
40	2	26	24	1800	А	2	RP-G24Q-226V-2L-8XX-DD-C-G2	26	2000	В	2	RP-G24Q-226H-2L-8XX-DD-C-G2
G2	1	32	14	1200	C*	1	RP-G24Q-132V-1L-8XX-DD-C-G2	14	1200	D**	1	RP-G24Q-132H-1L-8XX-DD-C-G2
/PL	2	32	N/A	N/A	N/A	N/A	N/A	24	2400	F**	1	RP-G24Q-232H-1L-8XX-DD-C-G2
CFL	1	42	28	2700	E*	1	RP-G24Q-142V-1L-8XX-DD-C-G2	21	2000	F**	1	RP-G24Q-142H-1L-8XX-DD-C-G2
	2	42	N/A	N/A	N/A	N/A	N/A	28	2700	F**	1	RP-G24Q-242H-1L-8XX-DD-C-G2

\*Depending on luminaire design, vertical downlights may benefit from having the lamp mounted lower in the luminaire. In those cases, a vertical socket extender is available; order item number: LED-7319 \*\*Shipped with horizontal-to-vertical adapter LED-7317-ARM. May not fit in all 6" cans; test-for-fit.

C А B D E F LED-7319 Replaces Replaces Replaces Replaces Replaces Replaces Vertical Extender up to 26W up to 26W up to 32W up to 42W up to 32W up to 42W For Vertical G24q Base G24q Base G24q Base G24g Base G24g Base G24q Base SAUTFR 32W & 42W (Vertical) (Horizontal) (Vertical) (Horizontal) (Vertical) applications (Horizontal)

## New Demo Case – Now Available!

#### Lamp Demo

T8 T5HO PLL/Biax Bar Kit G24Q base E26 base

EcoSystem driver Vive PowPack Pico Dimmer



#### <u>TLED</u>

Glass Tube Aluminum end caps 320° light distribution

Excellent low-level dimming performance

#### <u>BAR & PLL/Biax</u> Plastic Tube 190° light distribution

Similar dimming performance to FL

# Want a New Look? Want to Add Controls?







RATED LIFE



**BI-LEVEL ENERGY** 

SAVING SENSOR

OPTIONAL



BATTERY BACKUP







1 piece design = easy install

PW



VOLUMETRIC (TTV)

FLAT PANEL (TTF)

3 sizes to choose from (2x2, 2x4, 1x4)

- ... to have the ability to be installed as a retrofit kit and as a new fixture
- ... is a door style retrofit kit with just one piece, creating a seamless, no air gap look
- ...you can choose from a volumetric or a flat panel design

https://www.youtube.com/watch?v=n9A2CEH2oxw

0-10V, EcoSystem or Lutron 3 Wire

#### Wireless Controls

- Vive RF only, RF + OCC
- BLE Bluetooth 2.4 Ghz
- **Tunable White** 
  - Athena RF only, RF + OCC
- Fixtures Options Volumetric, Flat
  - 2x2, 2x4, 1x4, Custom
  - **Emergency and Air Handling** options



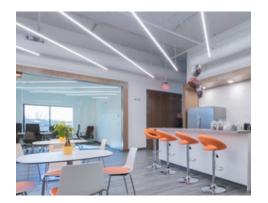


# Cove Lighting with Vive up to 160'











#### ACCESSORIES



#### SEAMLESS CONNECTOR\*

RP-LBI-SSC-DIM (sold separately) Links the OCC control signal to all bars. RP-LBI-SSC-NODIM (sold separately) Isolates each OCC control group within the continuous run.

\*All continuous run installations require seamless connectors.



#### SURFACE MOUNT MAGNETIC CLIP RP-LBI-SMM (2x included with bar)

SUSPENDED IN-LINE BRACKET KIT RP-LBI-SIL (sold separately) Recommended qty = number of bars + 1

T-BAR CLIP RP-LBI-T1516 (sold separately) Recommended qty = 2x per bar

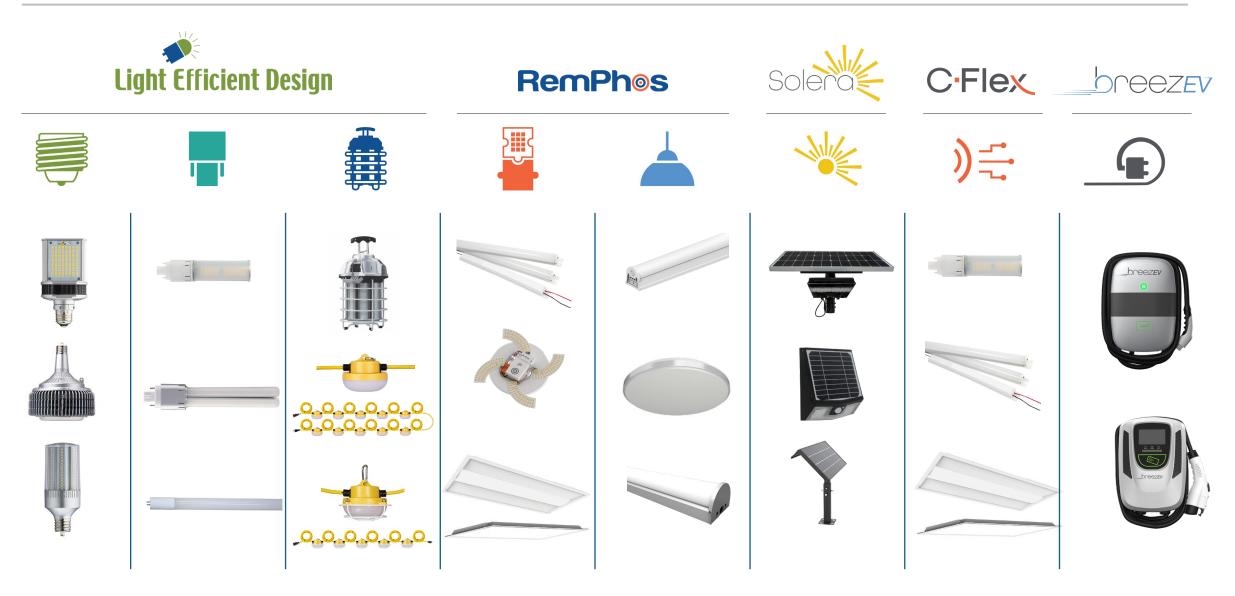
4.7in SPACER CONNECTOR RP-LBI-SRC-4.7IN (sold separately)



INCOMING POWER CABLES

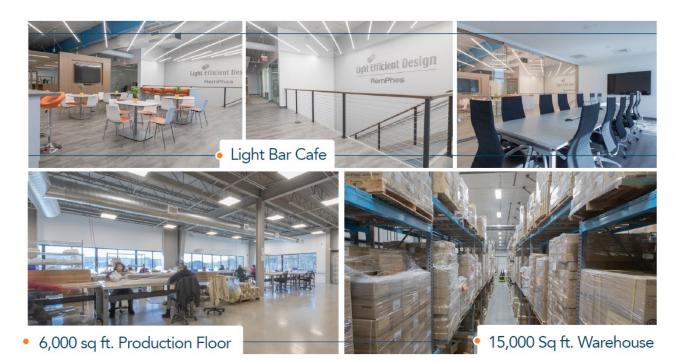
\*Connect up to 40 units on one incoming power cable

## **Light Efficient Design Brands - LED**



# Light Efficient Design

- Founded 2008, Private No PE or VC Investment
  - Engineering : Boston, Chicago (HQ), China
  - Manufacturing : Boston (BAA/TAA), China
  - Warehouses : 5 US, Canada, C-Flex Boston
- Company Strengths
  - Financially strong and stable
  - Distribution and Project Centric Channels
  - Lutron Compatible Retrofits C-Flex
  - EV Charging breezEV with ampUp software
  - Invented HID Retrofits, Innovative Door Kit
  - Solar Hybrid Fixtures, Off Grid
  - Sales: 6 Projects, 8 Regionals, Dedicated Project Team







# Email us at info@sydist.com for more information on today's topic.

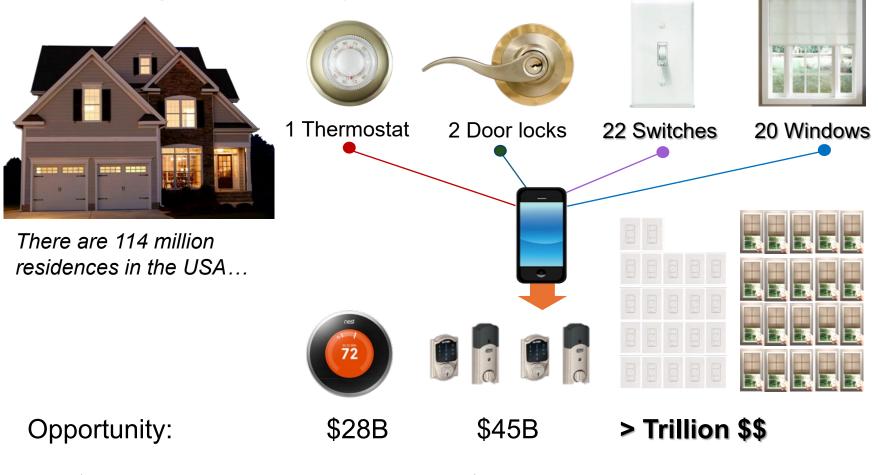






## **Opportunity Growth**

#### The "average" home today:



(\$62 Average Retail x 114M homes x 22 switches)

(\$379 Average Retail x 114M homes x 20 windows)





## Meet Caséta by Lutron



## New Additions to the Caséta Family



# **Smart Home Controls**

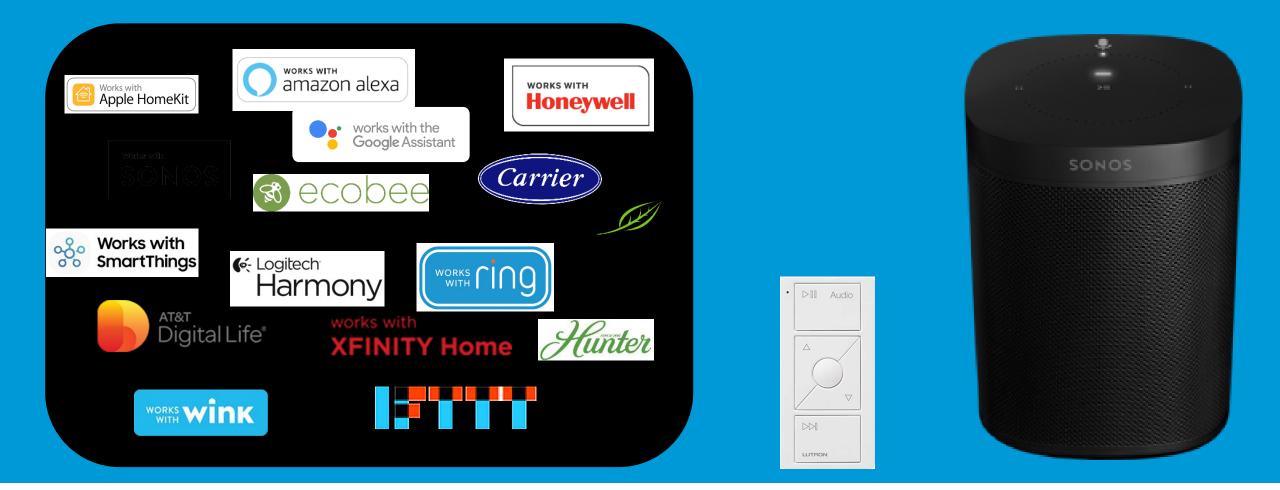






# Most Connected Smart Lighting Control

Works with the major tech platforms and smart home control devices



### Mass Market vs. Upper Mid-Market

Caséta Wireless



RadioRA2



Introduced 2014

Introduced 1997

## Mass Market vs. Upper Mid-Market





1414 - 1114 Carriery
-1 -2 -1.00 -1.000
Constant Product

Mid-Market Opportunity?



Lutron's Mid-Market Solutions





#### The Mid-Market Solution: RA2 Select





#### RA2 Select: What is it?



## Whole Home Lighting Control Made Simple

- Best of Caseta: Simple, Reliable, and Affordable
- Best of RadioRA 2: Fashion, PRO Channels only, and Larger Projects



## Designing the System: Three Simple Steps

**Step 1: Add the main repeater** 



#### **Step 2: Pick your devices**

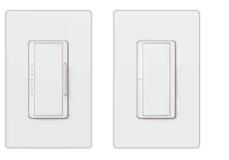


#### Step 3: Pick your Picos





## Pick your devices





Maestro dimmers and switches

Install in place of standard switches for dimming or switching control of the attached lighting, as well as system control from a Pico scene keypad.





## Plug-in appliance module

Plugs into a standard receptacle for control from a Pico scene keypad. Shuts off standby power to electronic appliances, such as computer monitors, when they're not in use.



## Lutron wireless thermostat

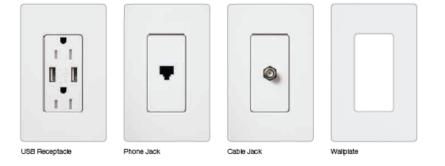
Adjust heating or cooling from anywhere using your smartphone or tablet.



Tabletop lamp dimmer Plugs into a lamp/standard receptacle for dimming control, as well as system control from a Pico scene keypad.



Plug-in dimming module Plugs into a lamp/standard receptacle for control from a Pico scene keypad (module is designed to be concealed behind furniture).



#### Accessories

Coordinating receptacles, phone jacks, cable jacks, wallplates, and more.



#### Works with Leading Smart Home Brands





**UTRON** 

Works with Leading Professional AV and Security Systems

**UTRON** 





## Wireless Shades

#### **Battery-powered shades**

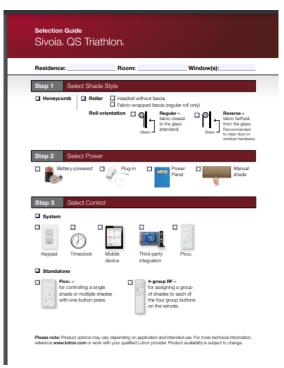
- Battery powered 100% wirefree and easy to install
- Average 3-5 year battery life
- Near-silent, precise movement
- Affordable starting at just under \$600

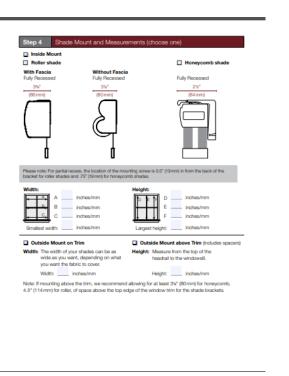


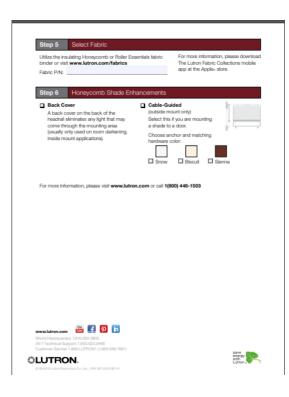


Battery-Power Honeycomb

Battery-Power Roller







Schaedler Shade Contact: Carol Menges <u>Cmenges@Sydist.com</u> (Lebanon Branch)

Fabric Samples: www.Lutronfabrics.com





**Questions?** 

## STOP BY AND SEE US AT BOOTH 210

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