

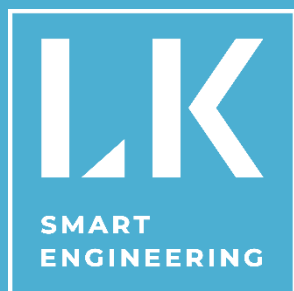
SMART OFFICE

SMART LIGHTING
PORTFOLIO

+84 888.688.040

<https://lke-tech.com/>

24, Street 68, Thanh My Loi Ward, Thu
Duc City, Ho Chi Minh City, Vietnam



GIẢI PHÁP

chiếu sáng văn phòng

01

COMFORTABLE, SIMPLIFY OPERATING PROCESS

The system detects human presence and automatically controls suitable luminous intensity in real time.

02

UP TO 50% SAVING FOR ENERGY IN REAL TIME

Analyze energy usage data from devices automatically, providing an overview to support more effective energy control.

03

EASY UPGRADING, SIMPLIFY INNOVATION

LK provides suitable solutions based on each project's requirements, increasing efficiency and lowering investment costs.

04

UNLIMITED CONNECTION

A smart ecosystem is created by a network of devices that are tightly connected.

05

BMS INTEGRATION

(BUILDING MANAGEMENT SYSTEM)

- Turn on/off devices at each location remotely as desired.
- Real-time control of light intensity and color.

BẠN CÓ BIẾT!?

Tắt các thiết bị điện vào ban đêm và ngày cuối tuần sẽ giúp tiết kiệm năng lượng lên đến

75%

lumos
CONTROLS
A wisulca BRAND

2 | LK SMART
ENGINEERING

WHAT WE CAN DO?

OFFICE SMART LIGHTING
SOLUTION

AUTOMATIC CONTROL

Automate lighting

lumos
controls
wpaica

Occupancy
Sensing

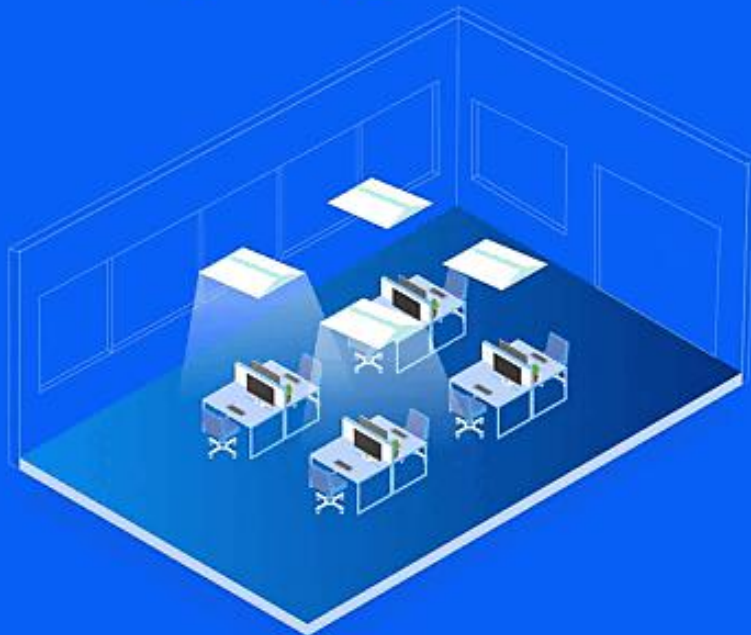


Automate lighting

lumos
controls
wpaica



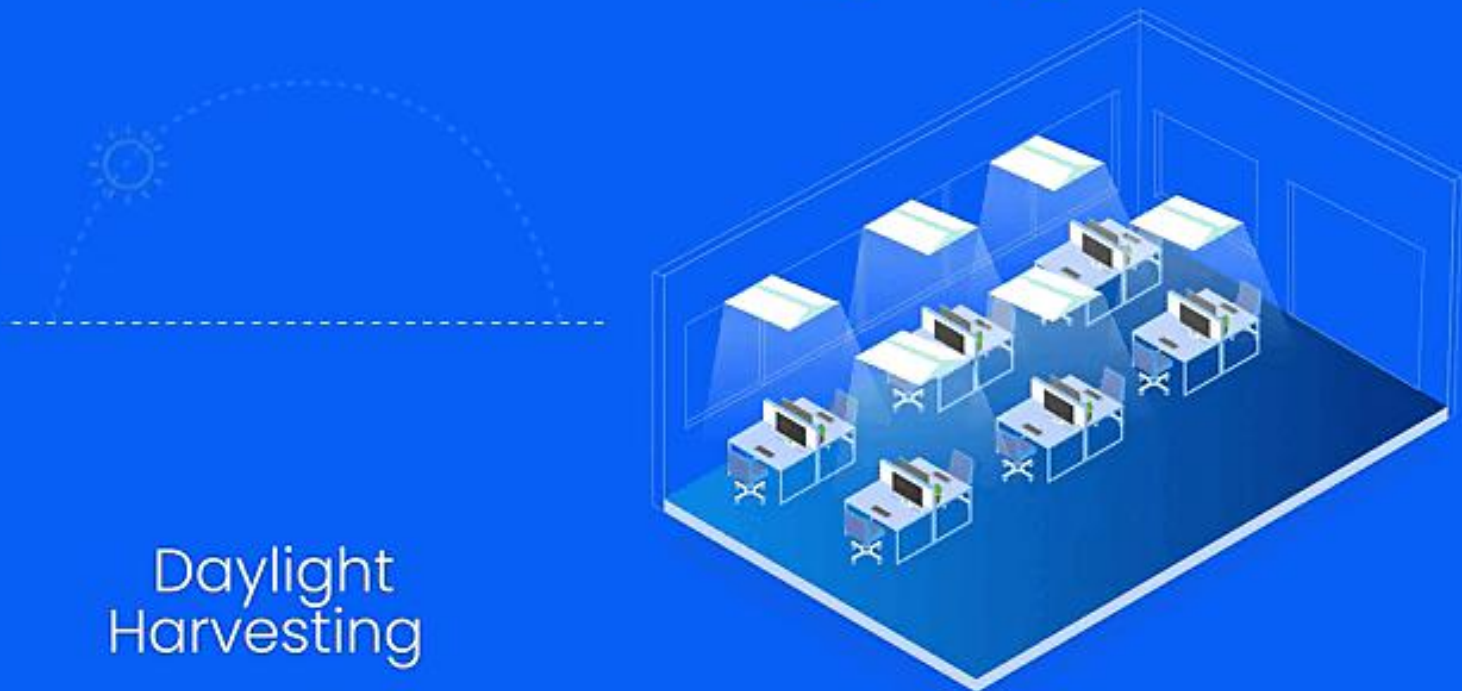
Scheduling



Automate lighting

lumos
controls
wpaica

Daylight
Harvesting



OFFICE SMART LIGHTING
SOLUTION

Go wireless



Wireless
Controls

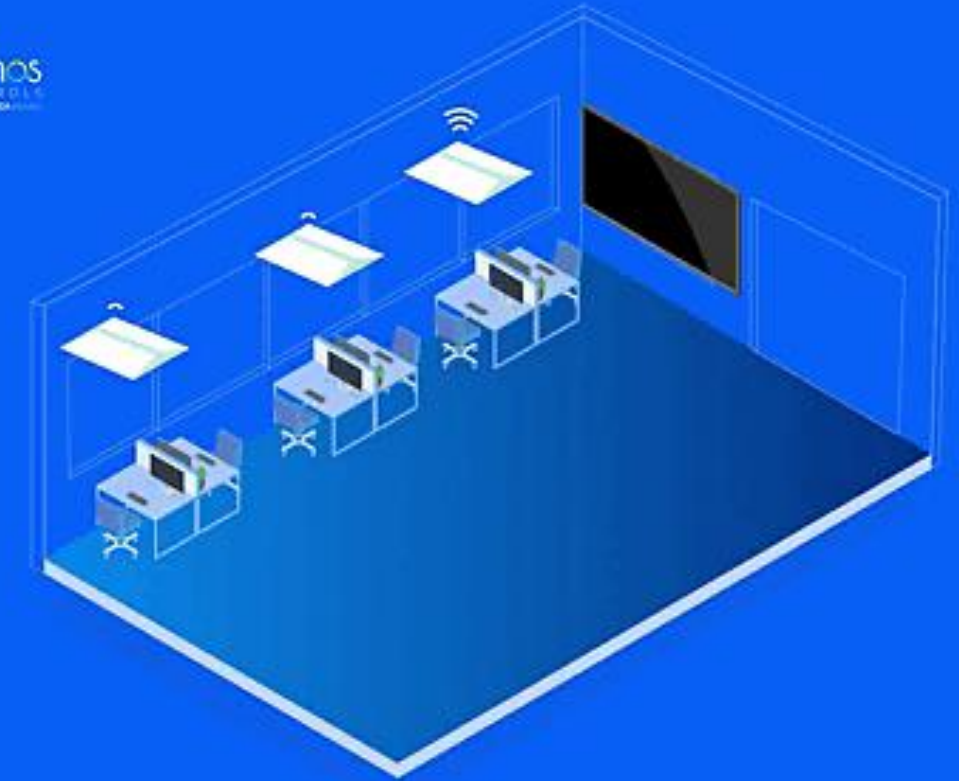


Analyze data



- Space Management
- Energy Management
- Device Usage
- Emergency Monitoring
- Health Monitoring

lumos
controls



lumos
controls

OFFICE SMART LIGHTING
SOLUTION

5|LK SMART
ENGINEERING

SMART WORKSPACE MANAGEMENT

Expand beyond controls




Light as
Intelligent
Transport



Expand beyond controls




Light as Tracking
Infrastructure

Asset & people
tracking



Expand beyond controls




Smart
Workspace
Management



OFFICE SMART LIGHTING
SOLUTION

Be carbon zero

lumos
CONTROLS
wieliczka



Building Management
System Integration



Automated
Demand Response










Environment
Sensors

OFFICE SMART LIGHTING
SOLUTION

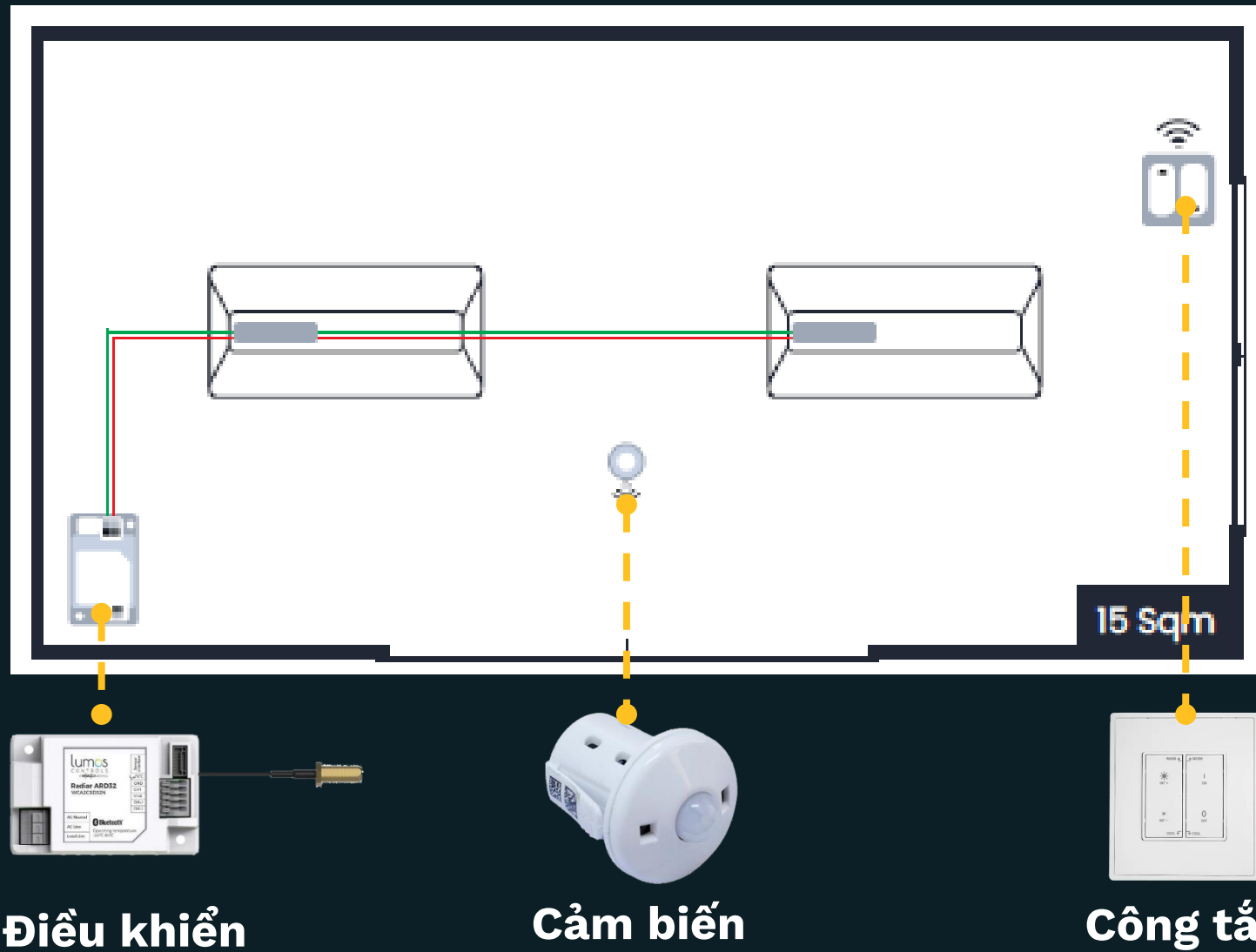
7| LK SMART
ENGINEERING



LEED STANDARD

Hạng Mục	Điểm	Diễn Giải	Cần Thiết Cho Chiếu Sáng	Sản Phẩm Thích Hợp
Đèn nội thất	2	Promote occupants' productivity, comfort, and well-being by providing high-quality lighting. <i>Tăng năng suất người lao động, tạo cảm giác thoải mái và nâng cao sức khỏe bởi nguồn sáng chất lượng cao.</i>	1. Glare Control <i>Kiểm soát độ chói</i> 2. Color Rendering (CRI) > 80 <i>Chỉ số hoàn màu</i> 3. Lighting Control <i>Điều khiển chiếu sáng</i>	 Led Panel - ZENITH 36W
Daylight	Lên đến 3 điểm	Connect building occupants with the outdoors, reinforce circadian rhythms, and reduce the use of electrical lighting by introducing daylight into the space. <i>Kết nối con người trong tòa nhà với môi trường bên ngoài, củng cố nhịp sinh học và giảm việc sử dụng ánh sáng nhân tạo bằng cách ứng dụng ánh sáng tự nhiên vào không gian.</i>	Provide manual or automatic (with manual override) glare-control devices for all regularly occupied spaces. <i>Cung cấp các thiết bị kiểm soát độ chói thủ công hoặc tự động cho tất cả các không gian có người sử dụng thường xuyên.</i>	 RADIAR - ARD32  Dimming motion & light sensor CYRUS C  Gateway With Ethernet & RTC ENOR E
Tối ưu hiệu suất năng lượng	Lên đến 4 điểm	Achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic harms associated with excessive energy use that disproportionately impact frontline communities. <i>Tăng hiệu quả sử dụng năng lượng và giảm thiểu các tác hại về môi trường và kinh tế.</i>	1. Lighting power reduction <i>Giảm công suất vận hành đèn</i> 2. Daylight controls <i>Điều khiển daylight</i>	 RADIAR - ARD32  Dimming motion & light sensor CYRUS C  Gateway With Ethernet & RTC ENOR E

CABINS/ENCLOSED OFFICE SPACES



WE SUGGEST

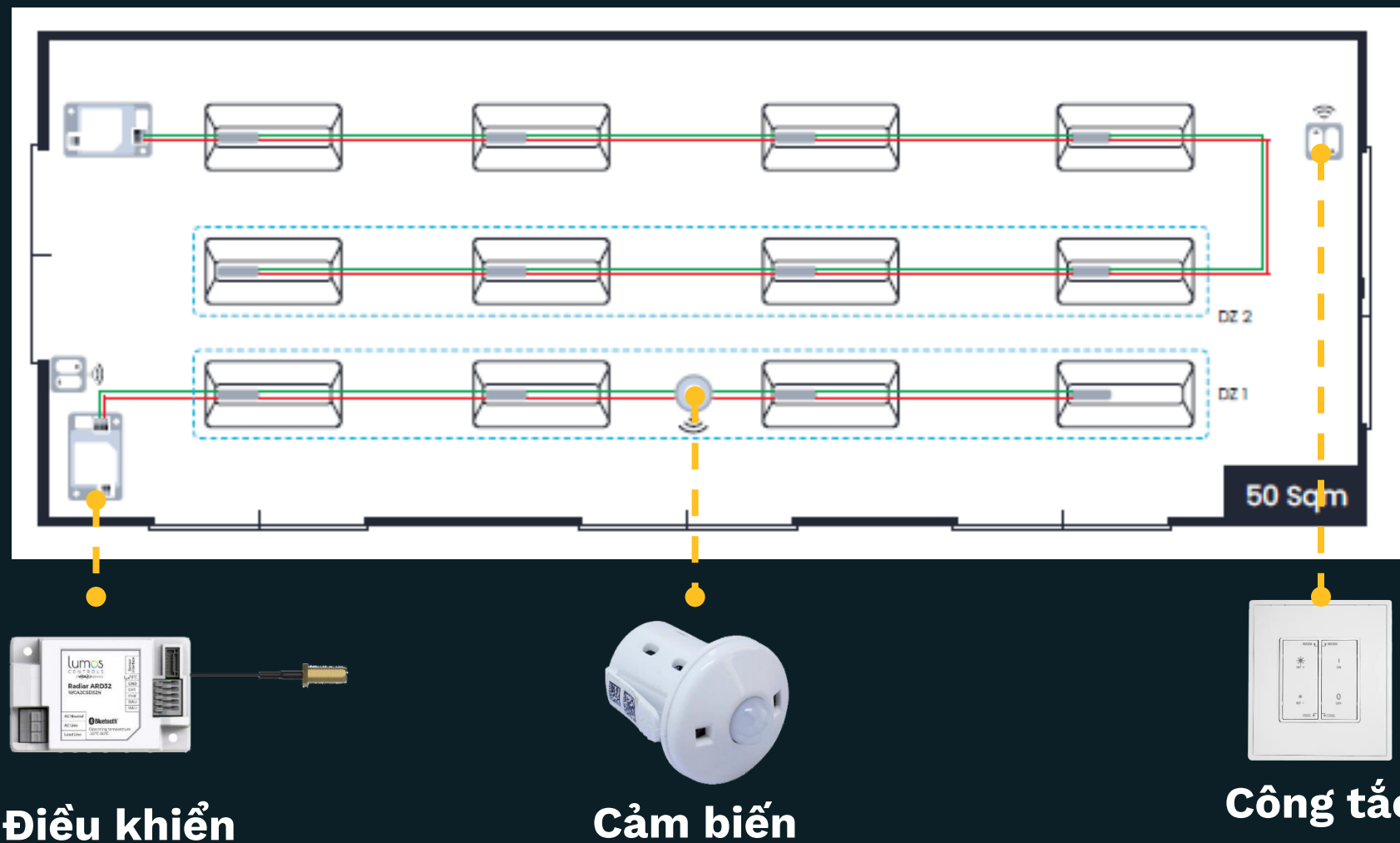
- Task tuning to enhance visual comfort
- Vacancy sensing for maximizing energy savings
- Daylight harvesting to boost productivity and enhanced energy savings

CABINS/ENCLOSED OFFICE SPACES

Enclosed office spaces might have only a working table or chair. People won't enter and leave the room frequently. Appropriate lighting is required on work desk to keep the occupant active and alert. Also, lighting above the seating should reduce screen glares.



OPEN-PLAN OFFICES



WE SUGGEST

- Task tuning for alertness, and visual comfort
- Occupancy/vacancy sensing for safety and energy savings
- Daylight sensing to improve concentration, productivity and enhanced energy savings

OPEN-PLAN OFFICES

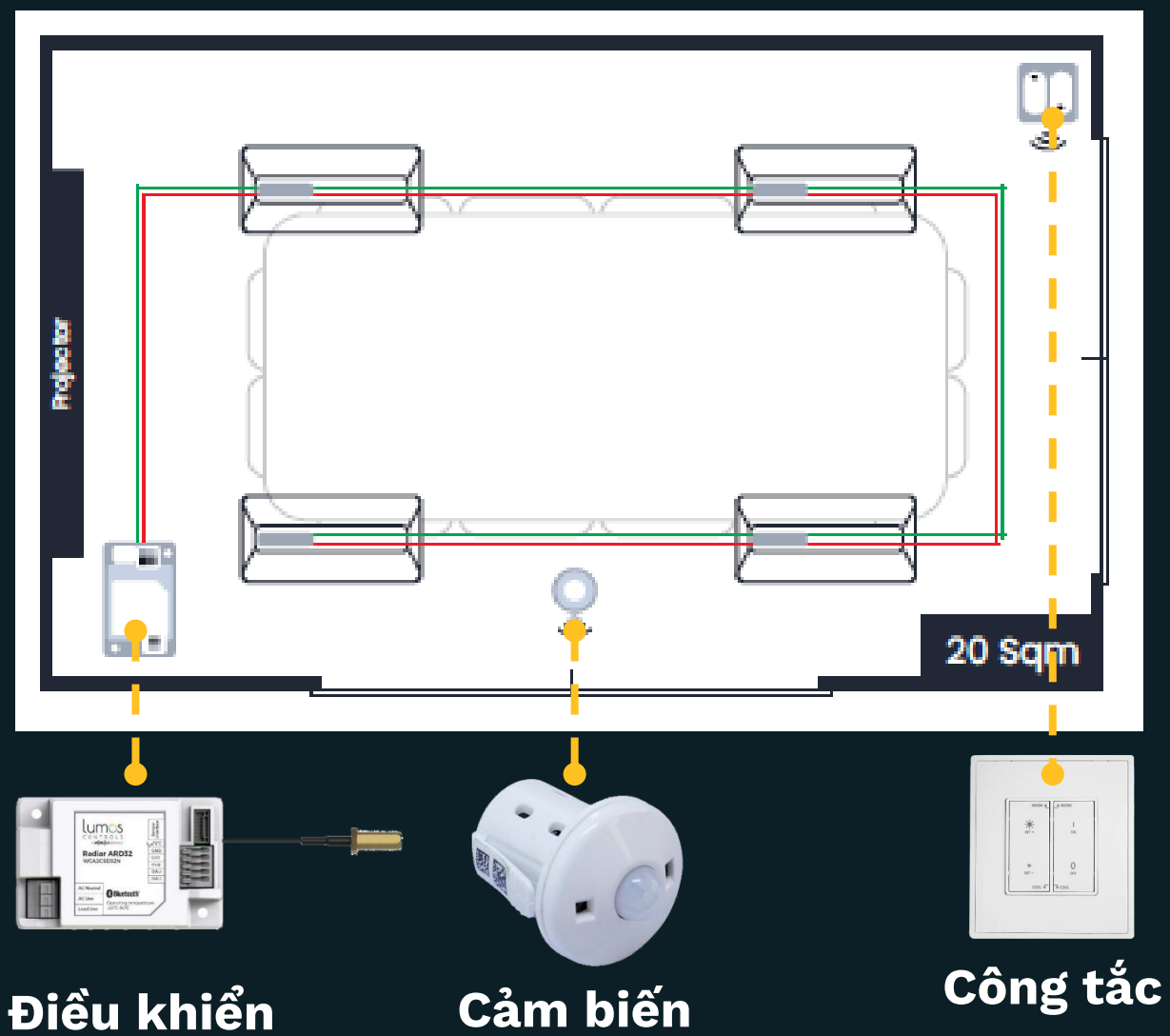
An open-plan office will have long rows of desks with little or nothing dividing them. It will have circulation areas, lounges with couches or open kitchen areas with plenty of seating.

Long rows of desks need cool lighting to keep employees active, and the circulation or relaxing spaces

need warm lighting. Also, automated lighting controls are required for safety and energy savings.



CONFERENCE ROOMS



WE SUGGEST

- Task tuning for alertness, and visual comfort
- Vacancy sensing for energy savings
- Daylight sensing to improve concentration and enhanced energy savings

CONFERENCE ROOMS

Conference rooms hold a significant place in your workspace. It is where ideas and information are shared and decision-making happens. The space will be equipped with some audio-visual equipment, whiteboarding and seating.

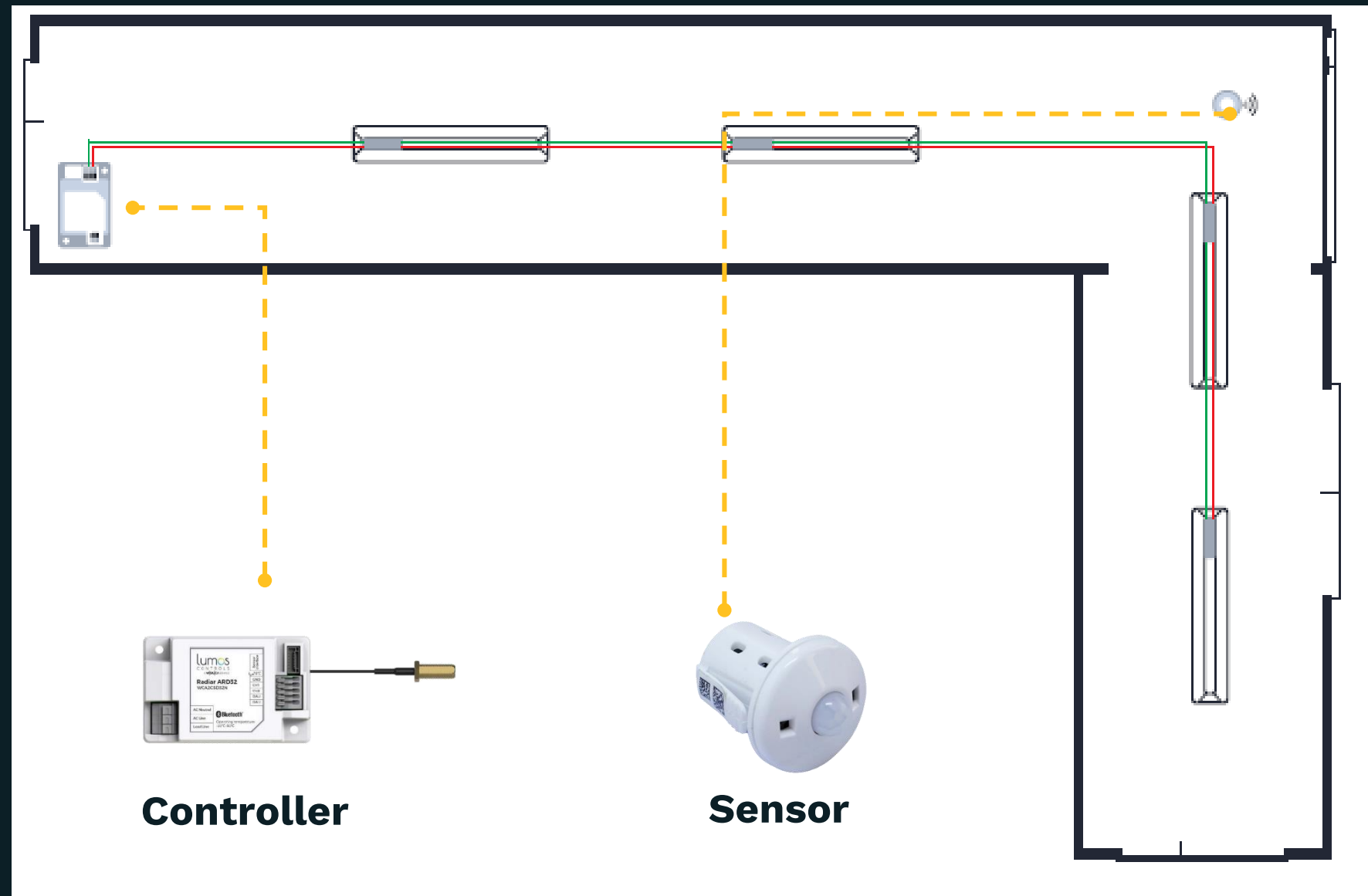
The lighting should create a professional, pleasant, and private ambiance. The seating and screen or white board requires different lighting level.



CORRIDORS

CORRIDORS

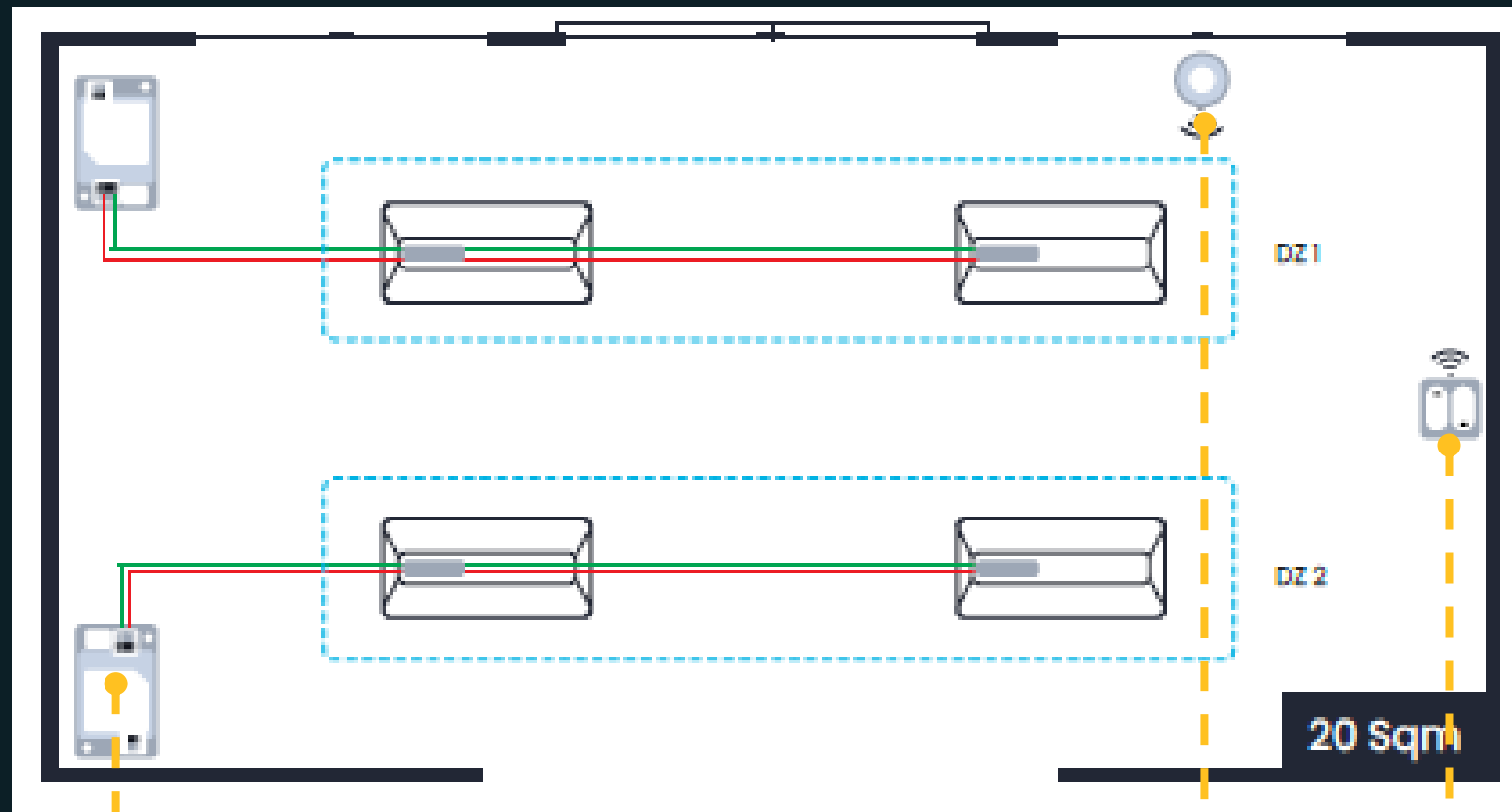
Corridors have an uncertain occupancy pattern and do not require continuous lighting. However, when someone pass through the space, they should feel safe and secured.



WE SUGGEST

- Occupancy/vacancy sensing automate device functioning based on human presence or absence
- Daylight sensing for enhanced energy savings

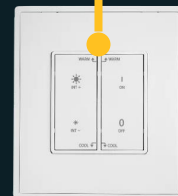
LOBBY



Điều khiển



Cảm biến



Công tắc

WE SUGGEST

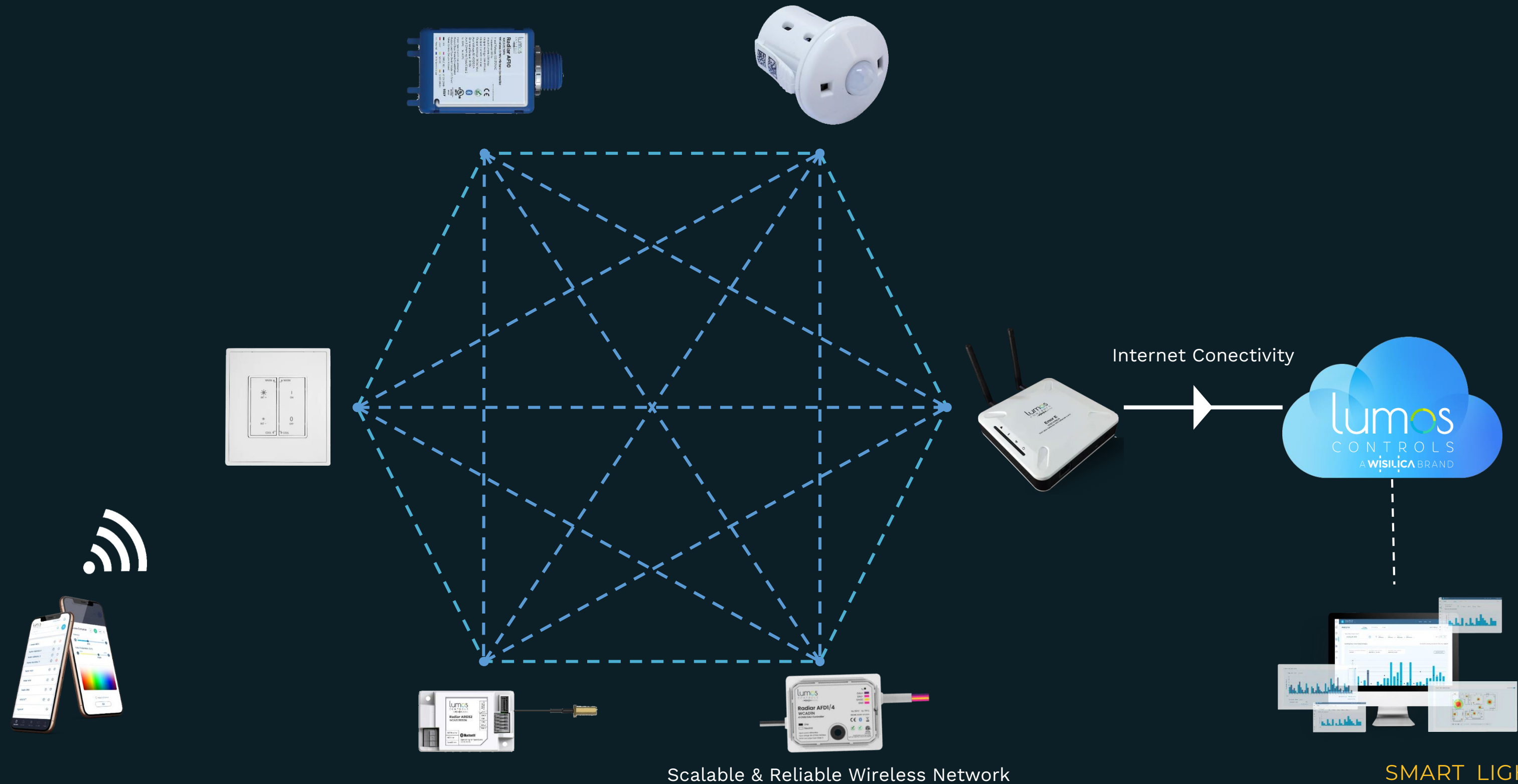
- Task tuning to create appropriate, glare-free lighting
- Scheduled scenes will keep the space lively and relaxed
- Vacancy sensors ensure safety and energy savings
- Daylight harvesting ensures safety, increased alertness and enhanced energy savings

LOBBY

A lobby consist of entrance, reception, and lounge area. Lobby is the welcoming area where people meet the front-office and transit to differnt office spaces. This area has to be lively and cozy.



HOW EVERYTHING WORKS



SMART LIGHTING

SUGGESTION



Radiar
ARD4/ARD32
DALI Controller

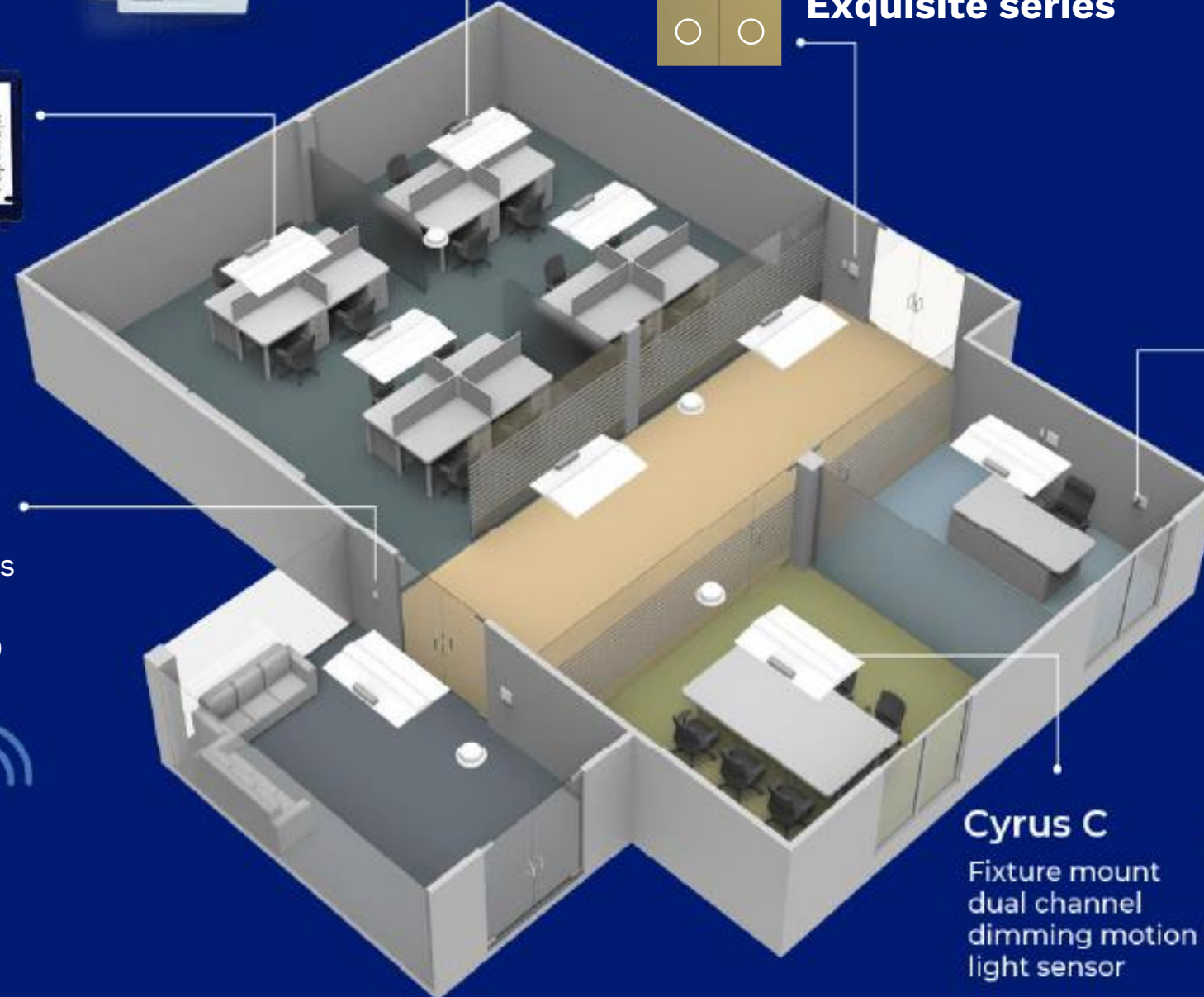
Radiar AF10
0-10V AC Controller



Power Panel – Zhiya Series
Elegance series
2 keys – 4 positions (vertical)



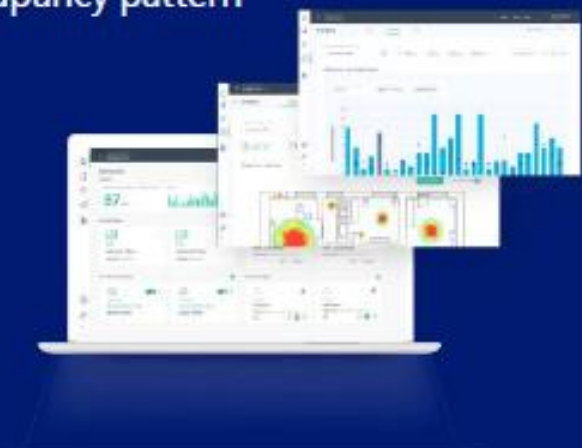
Power Panel – Zhiya Series
Exquisite series



Enor E
Gateway with
Ethernet & RTC



Energy Report
Device Usage
Occupancy pattern



Cyrus C
Fixture mount
dual channel
dimming motion &
light sensor



SMART LIGHTING

SUGGESTION INSTALLATION

Driver ●
LED Fixture ●

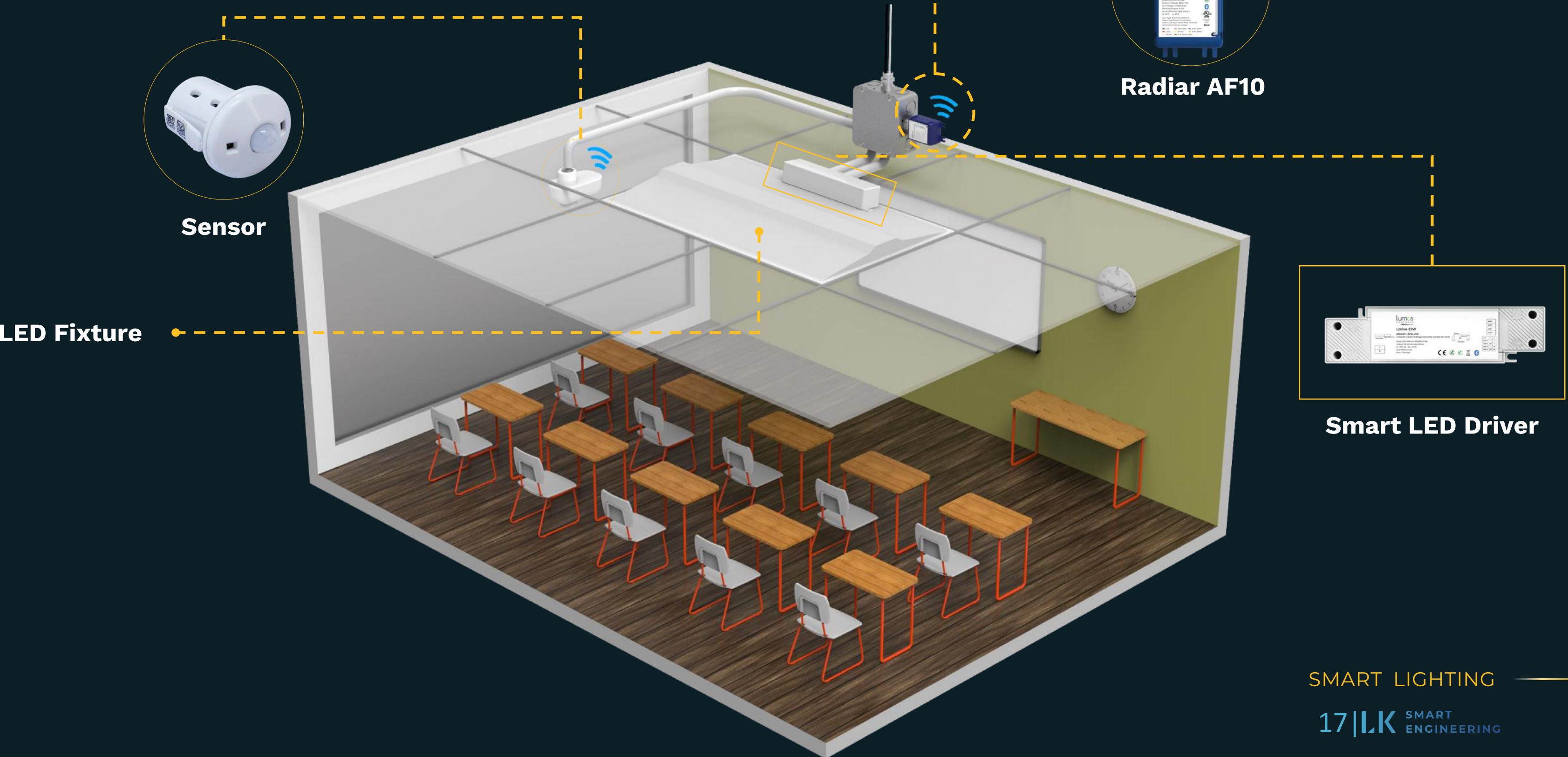
Wireless Switch



Smart Control

SMART LIGHTING

SUGGESTION INSTALLATION



SMART LIGHTING

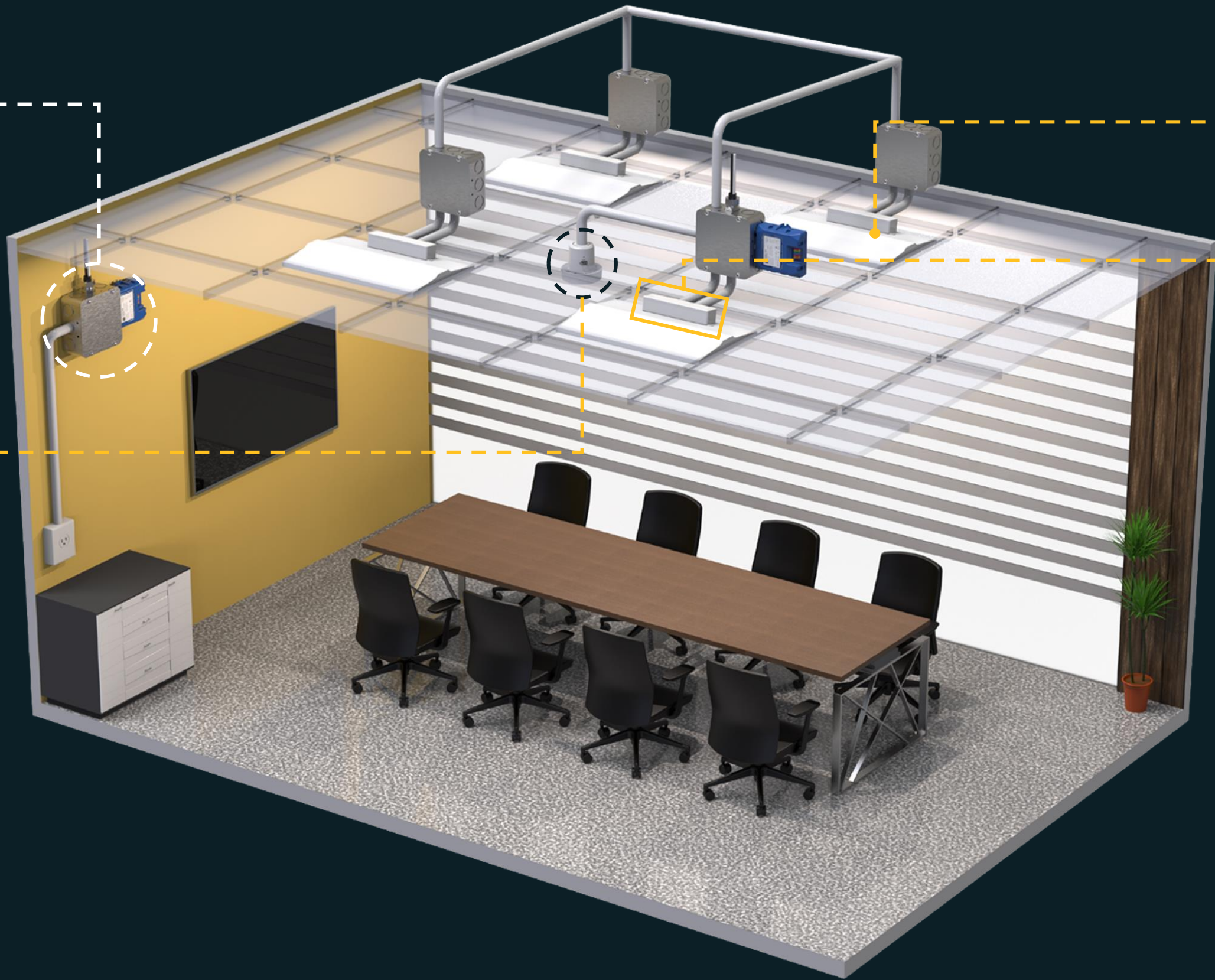
SUGGESTION INSTALLATION



Radiar AR10



Sensor



LED Fixture



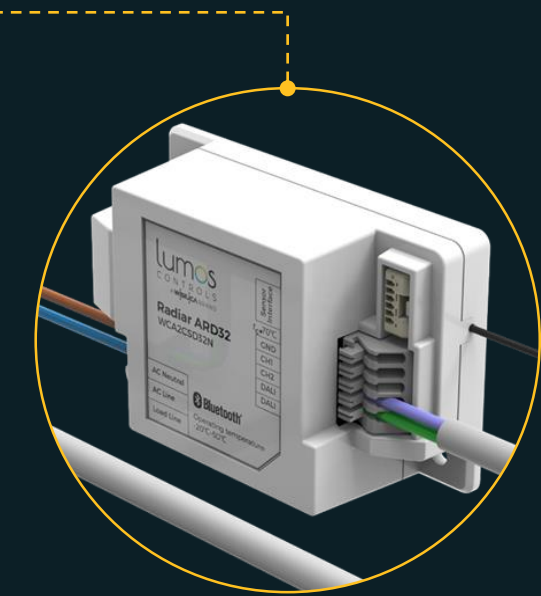
Smart LED Driver

SMART LIGHTING

SUGGESTION INSTALLATION

LED Fixture •

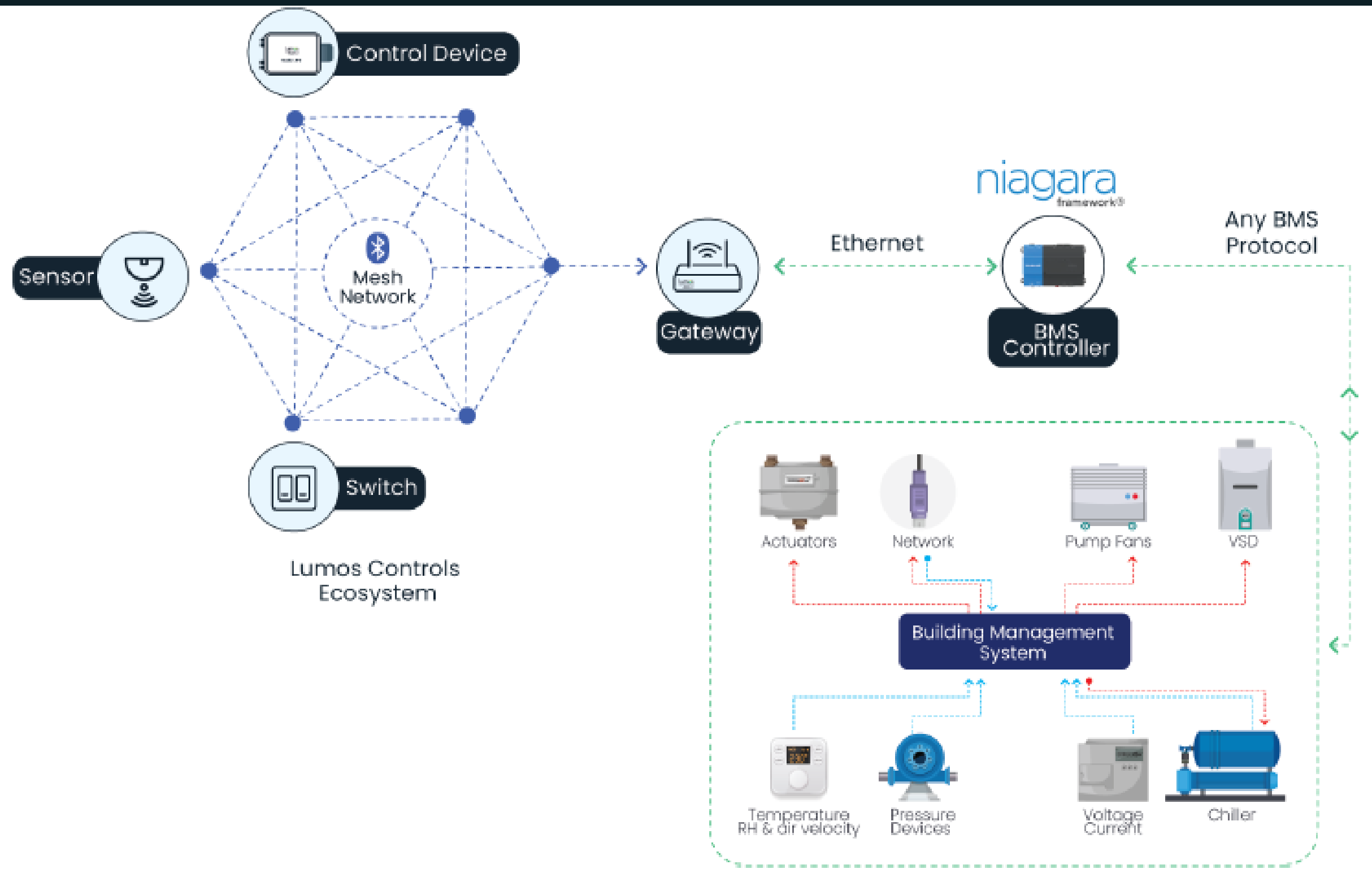
Driver •



Radiar RD32

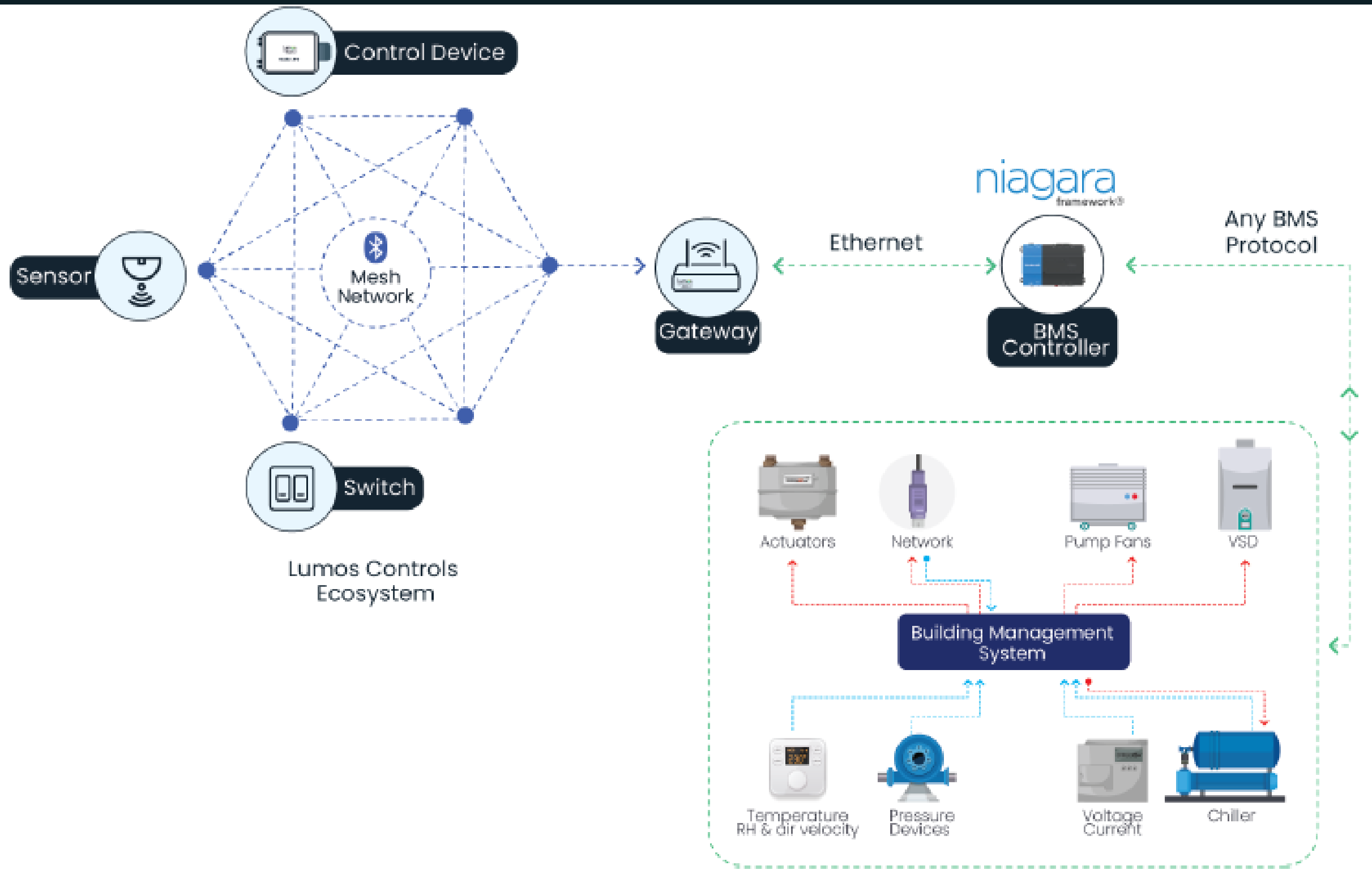
SMART LIGHTING

BMS INTERGRATION



SMART LIGHTING

HOW DOES BMS INTEGRATION WORK?



SMART LIGHTING

STRATEGIC PARTNERSHIP

PRODUCTS



OSRAM

PLATFORM



SMART LIGHTING
PORTFOLIO



Led Panel ZENITH 36W



1 point (UGR <19)

GENERAL SPECIFICATION

- Type : LED Panel
- Model : ZENITH 36W
- Wattage: 36W
- Nominal Flux of LED source: 4,3200lm
- Nominal Efficacy of LED source: 120lm/W
- Light Source: LED @ 50,000hrs
- Colour Temperature (CCT): 4000K
- Colour Rendering Index (CRI): >80
- UGR: ≤19
- Power Factor: >0.9
- Ingress Protection (IP): IP20
- Driver Type (Optional): 0-10V Dimming/ON-OFF
- Dimension: 595(L)x595(W)x30(H) (mm)Country of

PRODUCT DESCRIPTION

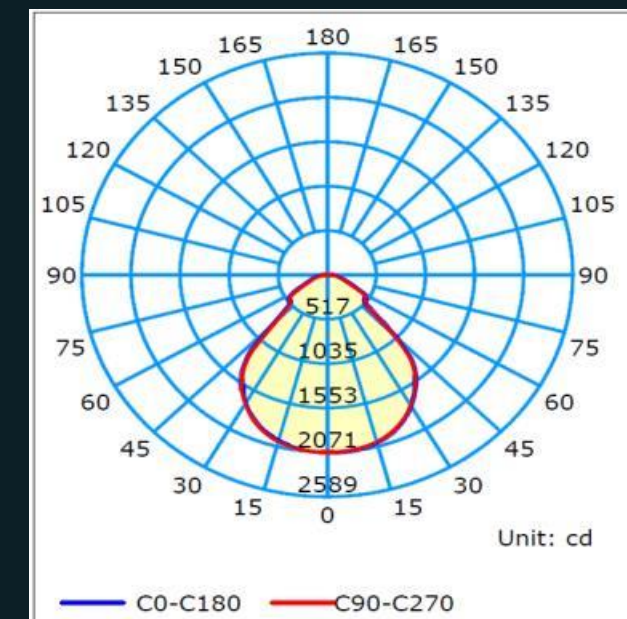
Easy recess installation. High quality & Anti glare frosted diffuser. Good uniformity. Ideal for commercial usage with minimum maintenance. Sensor Compatible.

IDEAL FOR SPACE

Office, Building, Hospital,
Retail, Museum

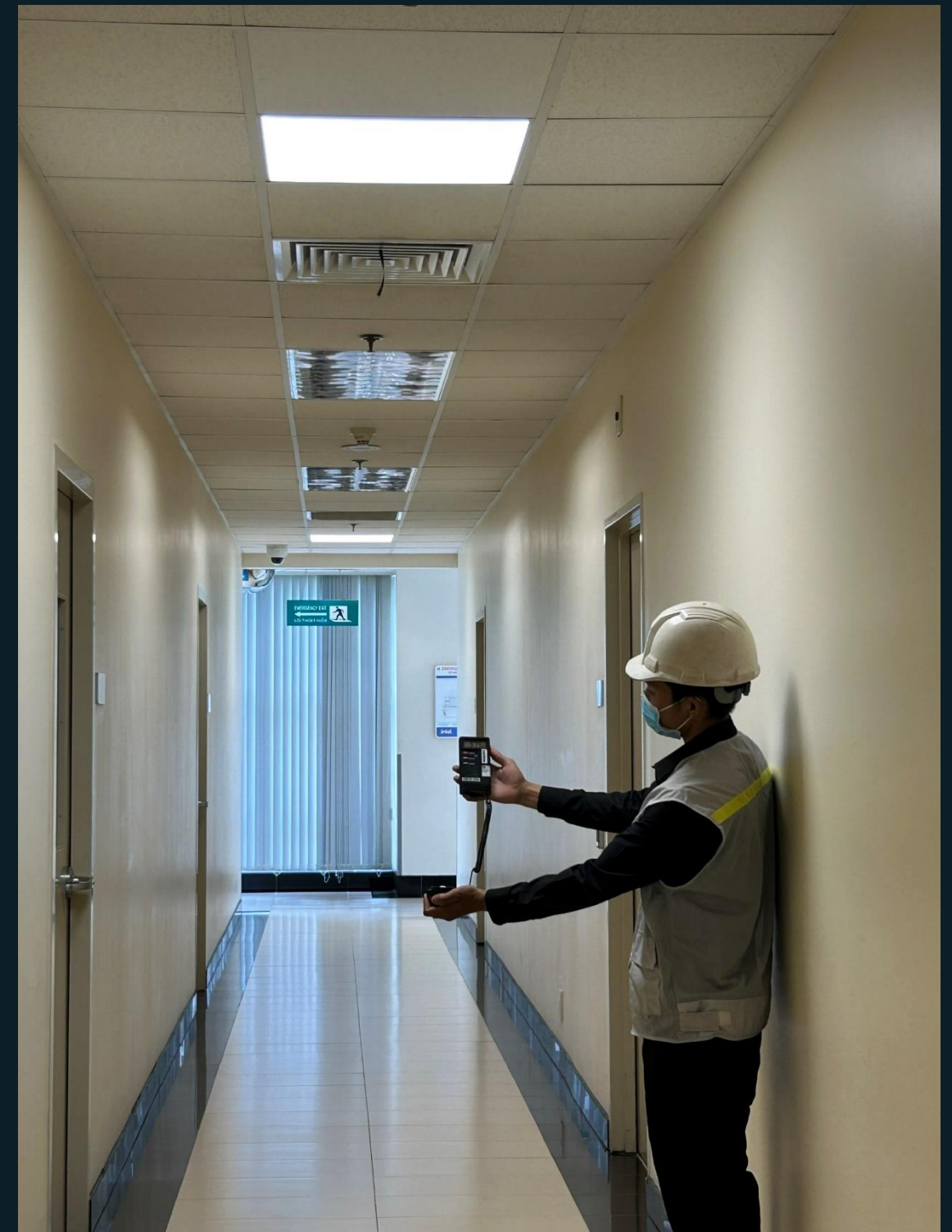


PHOTOMETRY





Led Panel **ZENITH 36W**





Weatherproof Fitting **AQUA LED-7 30W**

GENERAL SPECIFICATION

- Type : Weatherproof Fitting
- Model : AQUA LED-7 30W
- Wattage: 30W
- Nominal Flux of LED source: 3,600lm
- Nominal Efficacy of LED source: 120lm/W
- LED Lifetime (Hours): LED Modules @ 50,000 Hrs
- Colour Temperature (CCT): 4000K
- Colour Rendering Index (CRI): >80
- Operation Temperature: -25°C to 40°C
- Power Factor: >0.8
- Driver Type (Optional): 0-10V Dimming
- Ingress Protection (IP): IP66
- Impact Protection (IK): IK08
- Dimension: 1200(L)x79(W)x68(H) (mm)

PRODUCT DESCRIPTION

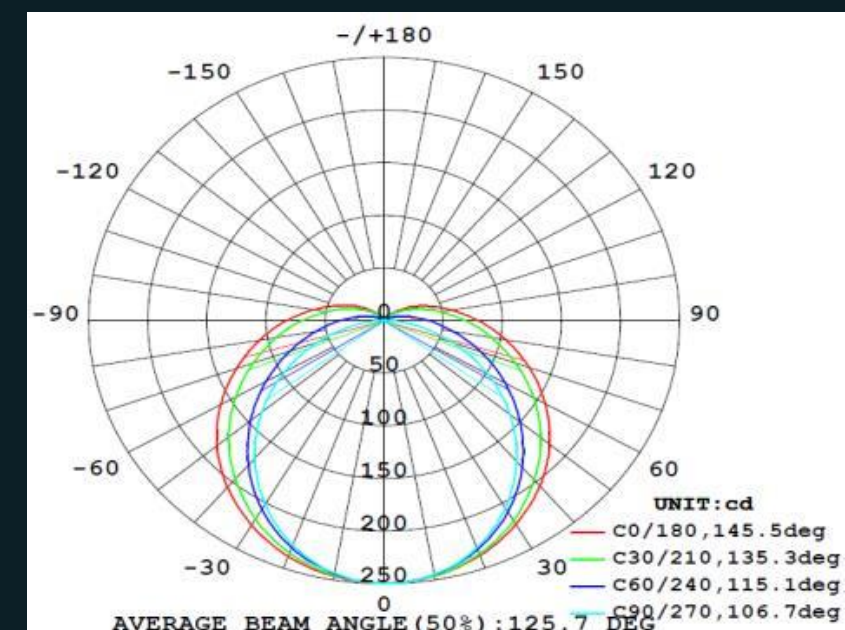
Durable and lightweight. Injection mould polycarbonate body and diffuser. Easy locking stainless steel clips. Pleasant appearance and reduce direct glare. Excellent light distribution.



IDEAL FOR SPACE

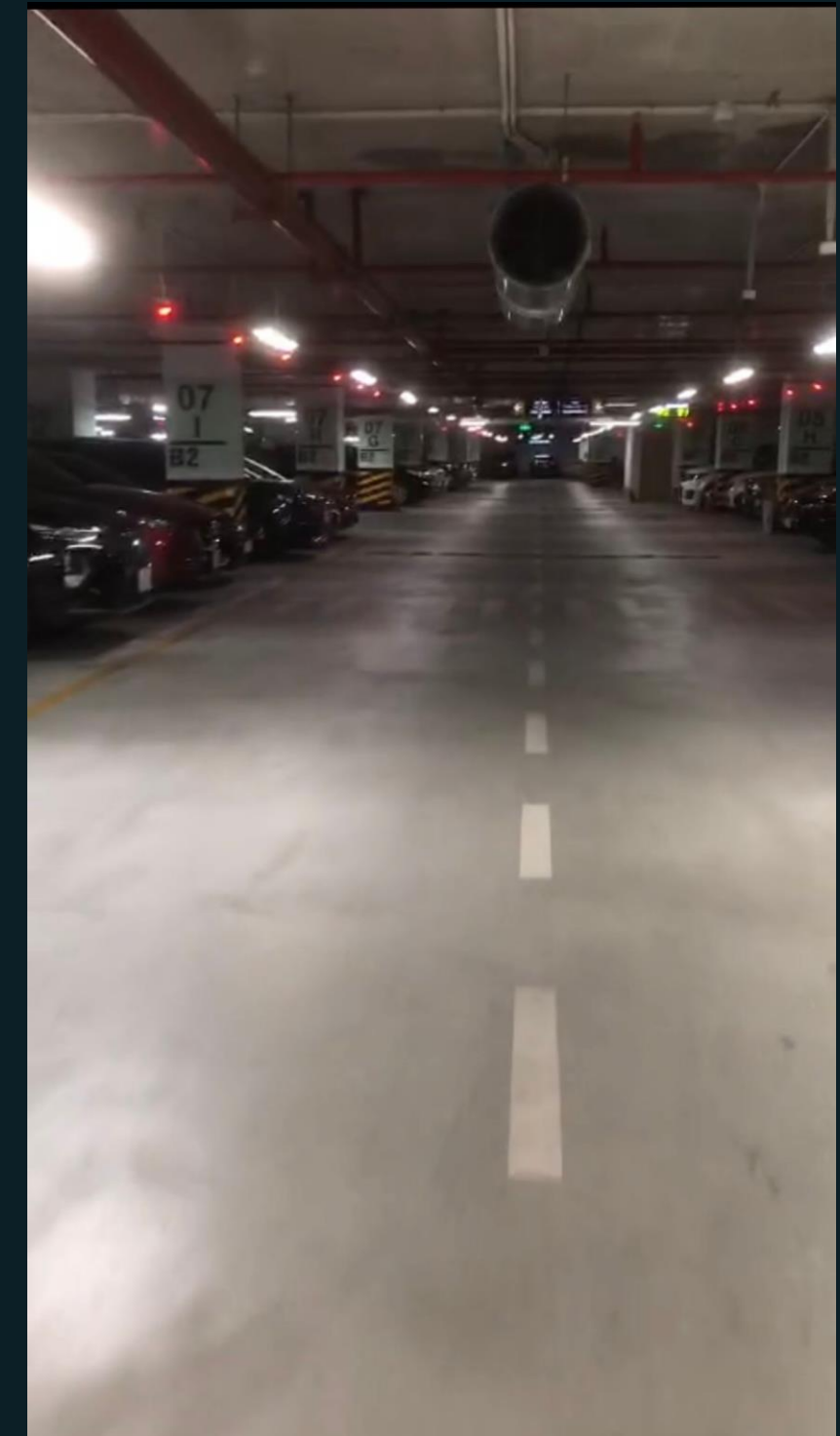
Parking Area, Canopy, Loading Bays, Industrial, Production Area, Integrated Transit, Factories and Foundries

PHOTOMETRY





Weatherproof Fitting **AQUA LED-7 30W**



SOLUTIONS

lummos
CONTROLS
A WISILICA BRAND

SMART LIGHTING
PORTFOLIO

DALI Controller **RADIAR - ARD32**

GENERAL SPECIFICATION

ELECTRICAL

- Input voltage: 100 – 277VAC
- Input current: 10-30mA
- Frequency: 50/60Hz
- External relay input: 0.8A@230VAC
- Inrush current: 20A
- Leakage: 0.5mA
- Surge protection: 3kV

DALI OUTPUT

- Voltage range: 10-20VDC
- Current: 160mA max
- Supported protocols: 101/103/207/209
- Dimming range: 0-100%
- Dimming curve: Linear/logarithmic (default)

PRODUCT DESCRIPTION

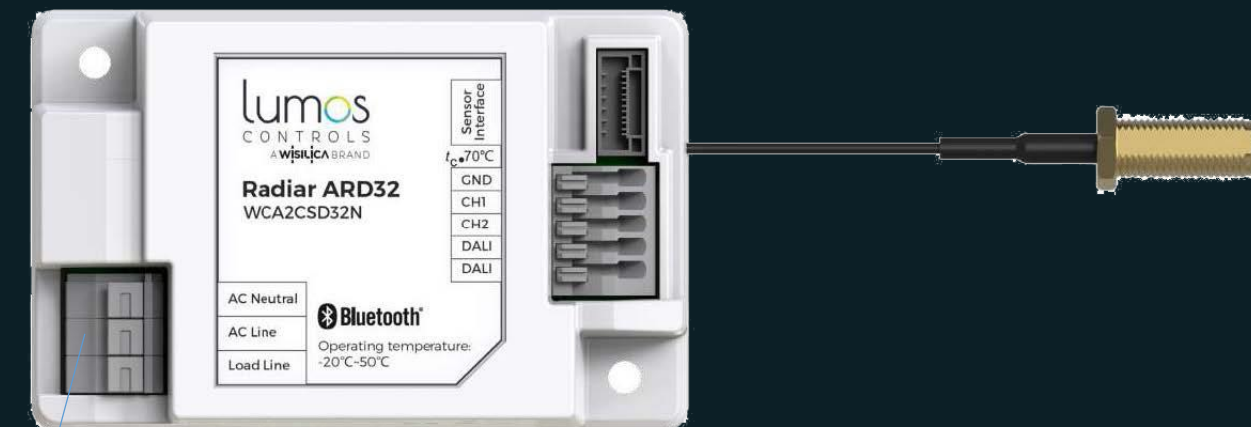
Radiar ARD32 is a highly flexible and cost-effective DALI room controller. It is a part of the Lumos Controls ecosystem, including controllers, sensors, switches, modules, drivers, gateways, and analytical dashboards. It can be connected to the Lumos Controls cloud for data analytics and configuration management. The lighting network's configuration, commissioning, and controlling can be super-quick from any mobile device.

The device can be connected to a maximum of 32 DALI LED drivers and can be controlled as DALI or 0-10V. It operates on a 100-277 VAC input voltage range and can also be configured in 0-10V mode to control one or two 0-10V controllable LED drivers, or a tunable white LED driver with two 0-10V control interfaces. This device comes with a 3.3VDC input channel that can be used to communicate with an external sensor. It has a customizable communication interface for control and status and has an Input for an external AC relay.

The ecosystem is listed by the Design Lights Consortium (DLC), qualifying it for energy conservation incentive programs and rebates utility companies in North America.

IDEAL FOR SPACE

School, Hospitality, Retail,
Office



2 channel AC powered 0-10V fixture controller with inbuilt relay

RADIAR – AF10

IDEAL FOR SPACE

School, Museum, Retail, Office

GENERAL SPECIFICATION

ELECTRICAL

- Input voltage: 120 – 277VAC
- Input current: 3.10A
- Frequency: 60Hz
- Load voltage: 120-277VAC
- Load current: 3A
- Max output wattage: 360W
- Inrush current: 20A
- Surge protection: 1kV

SENSOR INPUT

- Voltage range: 0-3vdc
- Current: 1mA

0-10V OUTPUT

- Number of channels: 2
- Voltage range: 0-10VDC
- Current: 10mA
- Dimming range: 0-100%
- Dimming curve: linear (default)/logarithmic

AUXILIARY OUTPUT

- Voltage: 12VDC
- Current: 200mA

BLUETOOTH

- Frequency range: 2402-2408MHz
- Max output power: 8dBm
- Receive sensitivity: ~92dBm
- Connection distance (device to device): 45m (147.6ft)



PRODUCT DESCRIPTION

Radiar AF10, the dual-channel dimming/ tunable AC fixture Features controller is a part of the Lumos Controls ecosystem.

The device is easy to mount in an electrical junction box or compatible fixtures. The device has dual channel 0-10V independent output to control intensity and correlated color temperature(CCT) and it has a 0-3 VDC input channel and 12VDC aux output to integrate with third-party sensors.

The device with a 3A relay for load control saves time designing an intelligent lighting network that is in tune with your circadian rhythm. It can be quickly commissioned, configured, and controlled from any mobile device and can be connected to Lumos Controls cloud for data analytics and configuration management.

The Lumos Controls ecosystem comprises controllers, sensors, switches, modules, drivers, gateways, and analytical dashboards. It is listed by the Design Lights Consortium (DLC), qualifying it for energy conservation incentive programs and rebates by utility companies.

Dimming Motion & Light Sensor **CYRUS C**

GENERAL SPECIFICATION

ELECTRICAL

- Input voltage 12-24VDC
- Input current 22*1 - 60*2

OUTPUT CHANNEL

- Number of channels: 2
- Voltage range: 0-10VDC
- Current: 15mA
- Dimming range: 0-100%
- Dimming curve: Linear (default) / logarithmic

BLUETOOTH

- Frequency range: 2402-2480MHz
- Max output power: 7dBm
- Receive sensitivity: ~92dBm
- Connection distance (device to device): 45m (147.6ft)

ENVIRONMENTAL

- Ambient temperature: -20 to 50°C (-4 to 122°F)
- Storage temperature: -20 to 70°C (-4 to 158°F)
- Case temperature: 47.6°C
- Relative humidity: 85%
- IP Rating: IP20



IDEAL FOR SPACE

School, Hospitality, Retail,
Office

PRODUCT DESCRIPTION

Cyrus C is a 12-24VDC powered multi-sensing device with low bay PIR motion detection and ambient light sensing. This industry's smallest form factor device has two 0-10V output channels for controlling intensity and Correlated Color Temperature (CCT). This easy to install fixture mount device also supports UART interface.

Cyrus C is a part of Lumos Controls ecosystem supported by controllers, sensors, switches, modules, drivers, gateways, and analytical dashboards. The ecosystem is listed by the Design Lights Consortium (DLC), qualifying it for energy conservation incentive programs and rebates by utility companies

Gateway With Ethernet & RTC **ENOR E**

GENERAL SPECIFICATION

ELECTRICAL

- Input voltage: 5V
- Input current: 2A

ETHERNET

- Number of ports: 1
- Data transmission rate: 10/100Mbps

BLUETOOTH

- Frequency range: 2402-2480MHz
- Max output power: 8dBm
- Receive sensitivity: ~95dBm
- Connection distance (device to device): 30m (98ft)

WIFI

- Frequency band: 2412-2462 MHz

RTC

- Input voltage: 3VDC
- Battery life: 10 years



IDEAL FOR SPACE

School, Hospitality, Retail,
Office

PRODUCT DESCRIPTION

ENOR E is an enterprise gateway providing cloud connectivity to your smart lighting network. The device comes with an Ethernet port that supports zero-downtime Over-the-Air (OTA) firmware updates for mesh devices. It has a built-in RTC (Real Time Clock) that keeps the network date and time up to date even after a power outage or without cloud connectivity, ensuring uninterrupted scheduling.

Enor E is a vital cog of Lumos Controls ecosystem that comprises controllers, sensors, switches, modules, drivers, gateways, and analytical dashboards.

The ecosystem has earned DLC (Design Lights Consortium) certification, meaning it is eligible for utility companies' energy conservation incentive programs and rebates.

LIGHTING CONTROL

Everything can be smart

SMART LIGHTING
PORTFOLIO

LIGHTING CONTROL

DALI Controller

Radiar AFD1



DALI 2.0 Fixture Controller

DALI Controller

Radiar ARD4



0-10V/DALI Room Controller

DALI Controller

Radiar ARD32



0-10V/DALI Room Controller

Phase Dimmer

OMNI TED



Trailing Edge Phase Dimmer

0-10V with Relay

Radiar AF10



2 Channel AC Powered 0-10V Fixture Controller with inbuilt Relay

0-10V Controller

Radiar D10



DC Powered Controller with 0-10v 2 channel Dimming Output

Luminaire level light Control (LLLC) to Zone Control

Function as a **Plug Load** or Room Controller

Covers all the **Major Control protocols**

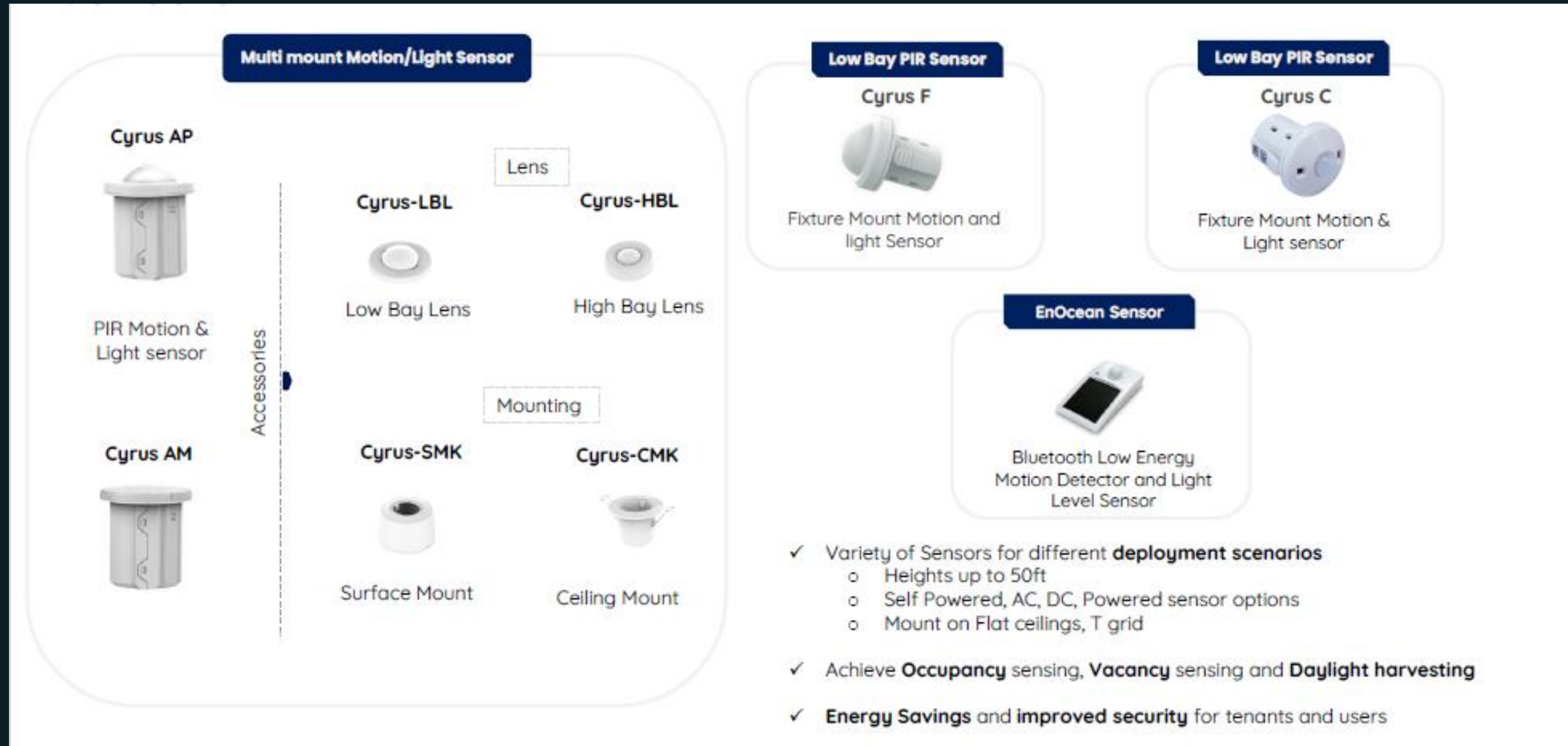
Compact **formfactor** for variety of Installation



SMART LIGHTING

33|LK SMART ENGINEERING

SENSORS



SWITCHES

Switches

Catron IV



Wireless self powered
4 Button switch

Catron V



Wireless 5
Button remote

- ✓ Allow **Flexible** placement of switches and remotes
- ✓ **Convenient** for occupants to control lighting, the way they want
- ✓ Control On/Off, Intensity, CCT of individual as well group of Fixtures
- ✓ Assign **Scenes** for changing appearance of a space

Switch Interface

Catron AI



AC powered switch interface
for Push Button, Toggle, and
Rotary switches

- ✓ Convert any Switch into a **Wireless smart switch**
- ✓ **Flexibly** Connect with Push button, Toggle or Rotary Switches
- ✓ Assign **Scenes** without any limitation

GATEWAY

Gateway

Enor E



Gateway with
Ethernet & RTC

- ✓ Allow your fixtures to be controlled from anywhere
- ✓ Maintain **Time schedules** without getting interrupted by power outage or internet Failures
- ✓ View and understand your **building reports** which show Energy Consumption, Space Utilization, Device Usage

Repeater

Senor E



Beacon & Range
Extender

- ✓ Extend **range of wireless Network**
- ✓ Configure as **beacons** to enable location-based services

SMART LED DRIVERS

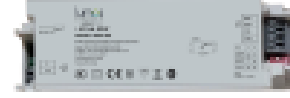
Drivers

Ldrive 32W



Constant current wattage
selectable Tunable LED
Driver [18-32 W]

Ldrive 42W



Constant current wattage
selectable Tunable LED
Driver [25-42 W]

Ldrive 36W



Dual channel constant
current wattage selectable
LED Driver

Ldrive 60W



Dual channel constant
current wattage selectable
LED Driver

Ldrive 50-51 IUC



50 W LED driver
with 5 channel

Sep'22

- ✓ **Economical and flexible** solution that meets all your indoor lighting needs
- ✓ A high performing driver with **universal input voltage range, high power factor and efficiency**
- ✓ For **smooth and flicker-free dimming**



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SMART LIGHTING

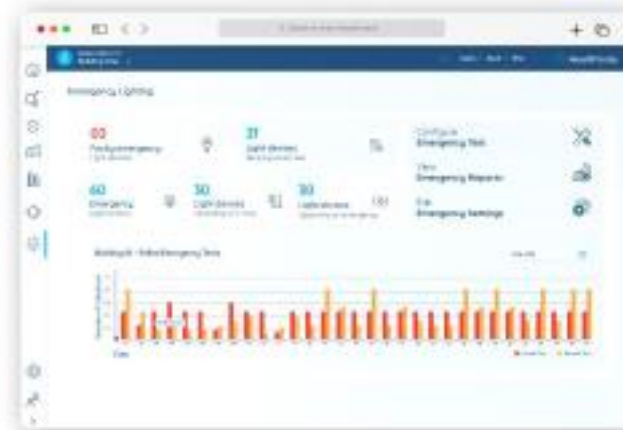
37|LK SMART
ENGINEERING

ANALYTICAL REPORT

Power
Consumption



Emergency
monitoring



Occupancy
Heatmap



Device
Usage



CONFIDENTIAL AND PROPRIETARY TO WISLICKA, INC. 2022

SMART LIGHTING

38|LK SMART
ENGINEERING

Thank you