

# Touché

LIGHTING CONTROL

Simply Brilliant



# Agenda

- Introduction
- The Touché Difference
- Solution Architecture and Component Walkthrough
- High Profile Projects & More Information

# Touché Headquarters

Touché  
LIGHTING CONTROL

- Fort Wayne, Indiana
  - Headquarters
    - New location November 2019!
  - Production
  - Research & Development
  - Tech/Customer Support
  - Experience Center



  
MLAZGAR  
ASSOCIATES

## References – Who is Using Touché?

### Multiple Verticals & Project Sizes

- Sweetwater Sound & Studios
  - LEED Platinum Certified 2009
- NIKE Flagship Store – NYC
- AVON Corporate HQ - NYC
- General Motors – Detroit
- Georgia World Congress Center - Atlanta
- General Electric – Multiple Locations
- Mayo Civic Center - Rochester
- Detroit International Airport (DTW)
- Grand Hyatt – Washington DC
- Wyndham Resorts – Orlando
- University Texas Medical Branch – Houston
- Lone Star Flight Museum
- Multiple K-12
- Multiple Fine Dining



DETROIT METRO • WILLOW RUN  
WAYNE COUNTY AIRPORT AUTHORITY



# Introducing the ROOM MANAGER

**Touché**  
LIGHTING CONTROL



The simplest, yet most  
feature rich solution in  
lighting control history.

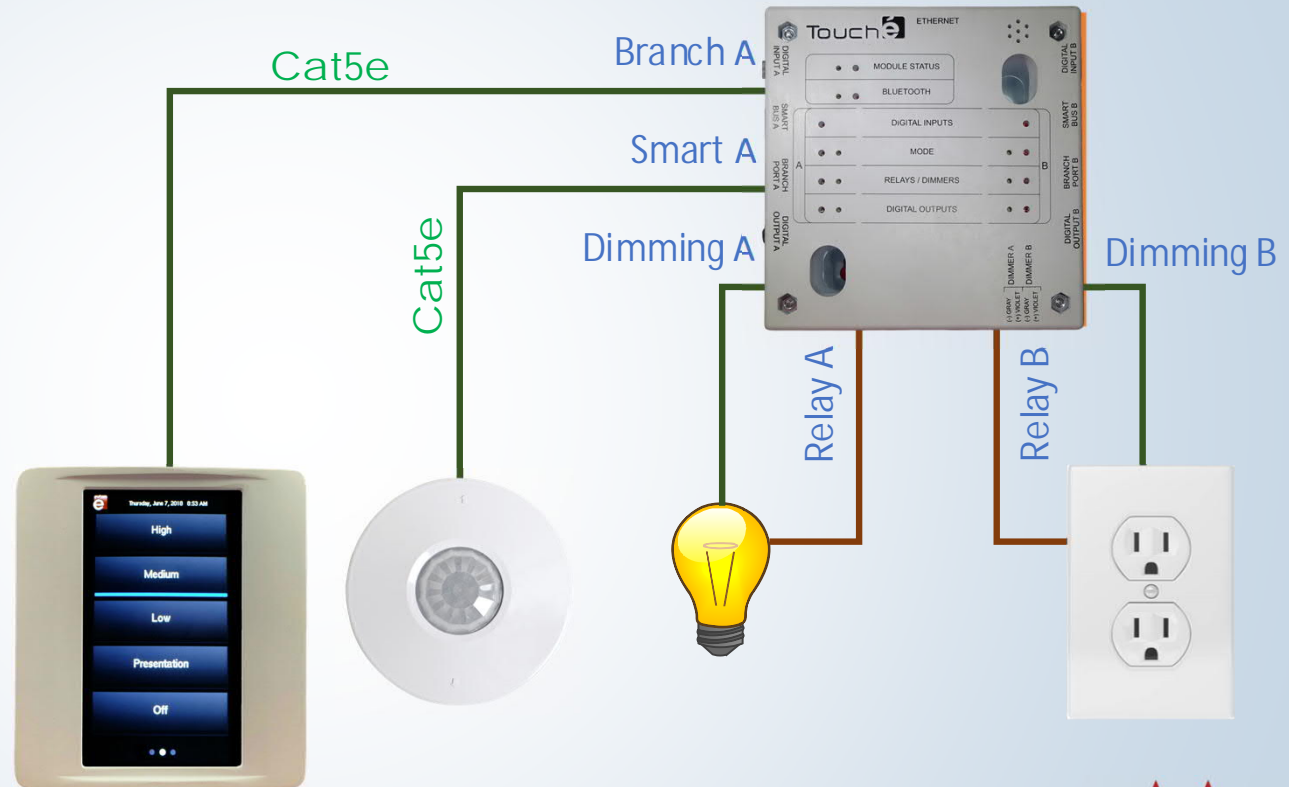
**MLAZGAR**  
ASSOCIATES



# Introducing the ROOM MANAGER

## 3 SKUs for Code Compliance

- Networked Relay or 0-10V Dimming
- Touchscreen Scene / Zone Control
- Occupancy or Vacancy Control
- Daylight Harvesting
- Contact Closure Interfacing
- Plug-Load Listed
- OUT OF BOX FUNCTIONALITY:
  - High/Med/Off preset control
  - Raise/Lower dimming
  - Sensor - Vacancy with 20 min timeout



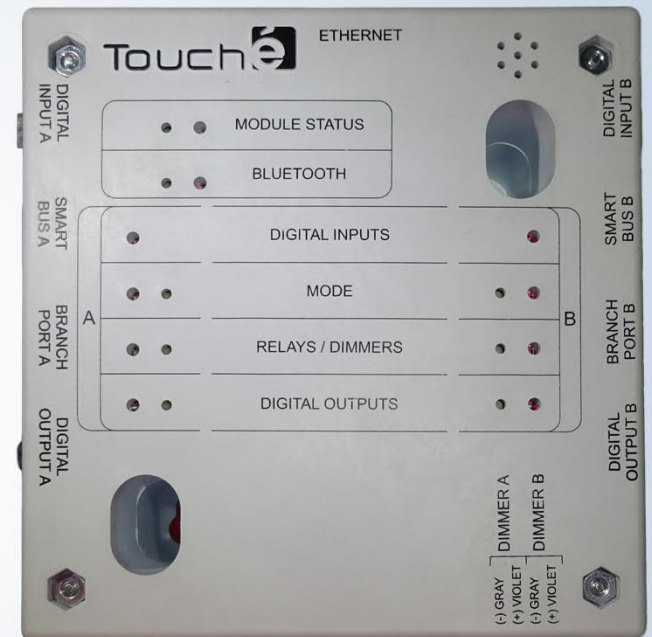
**Touché**  
LIGHTING CONTROL

**MLAZGAR**  
ASSOCIATES

# Room Manager (RM)

- Connectivity
  - Modular – stand-alone control
  - Network ready
- Configurable via IOS or Android App/ Bluetooth Wireless
- One RM can control one or two separate rooms
  - (2) 120/277V relays
  - (2) integral 0-10V dimmable
  - (2) digital inputs
  - (2) digital outputs
  - CAT5 connections
  - Expandable up to (16) zones of control
- Plug-load listed
- Plenum listed – UL2043

Touché  
LIGHTING CONTROL



MLAZGAR  
ASSOCIATES

## Wall Controls – Color Touchscreen Wall Stations (WS-TS-C)

Touch<sup>e</sup>  
LIGHTING CONTROL

- 4.3" color display.
- Capacitive multi-touch interface
- Dimmable
- Display company logos
- Pin code lockout feature
- Single gang
- Field configurable via APP
  - Available in white and black housings
- Adjust preset settings at the wall station.



MLAZGAR  
ASSOCIATES



## Wall Controls – Touchscreen Wall Stations (SW-TS-M)

**Touché**  
LIGHTING CONTROL

App configurable backlit touch screen switch

- On/Off/Scene control
- Raise/Lower dimming
- Toggle buttons
- Pin code lockout feature
- Standard Decora<sup>®</sup> size



**MLAZGAR**  
ASSOCIATES

## Wall Controls – Single Function Switch (SW-SF)

Touché  
LIGHTING CONTROL

- Low voltage momentary contact switch
- Connects directly to distributed modules via 2-wire cable
- APP configurable
  - Toggle
  - Dual level, or (3 to 5) multi step configurations
  - Preset dimming
- Can be paralleled to provide 3-way and 4-way switching
- Decora® size



  
MLAZGAR  
ASSOCIATES

## Sensors – Smart Ambient/Occupancy Sensor (SMAOS)

Touché  
LIGHTING CONTROL

### Specifications

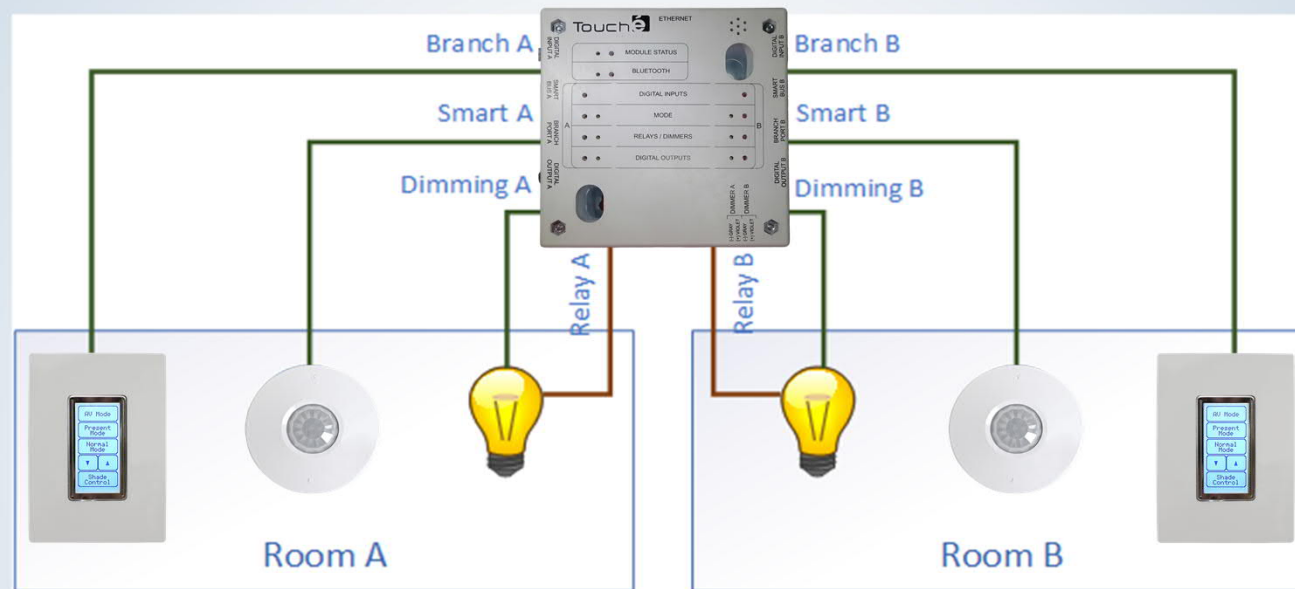
- Two Functions – One Sensor
  - Occupancy and daylight harvesting
  - Occupancy available as dual tech (passive acoustic)
  - Calibration is automatic, no dip switches or dials
  - Configuration via app
- Surface or Flush mount
- Function can change based on schedule



MLAZGAR  
ASSOCIATES

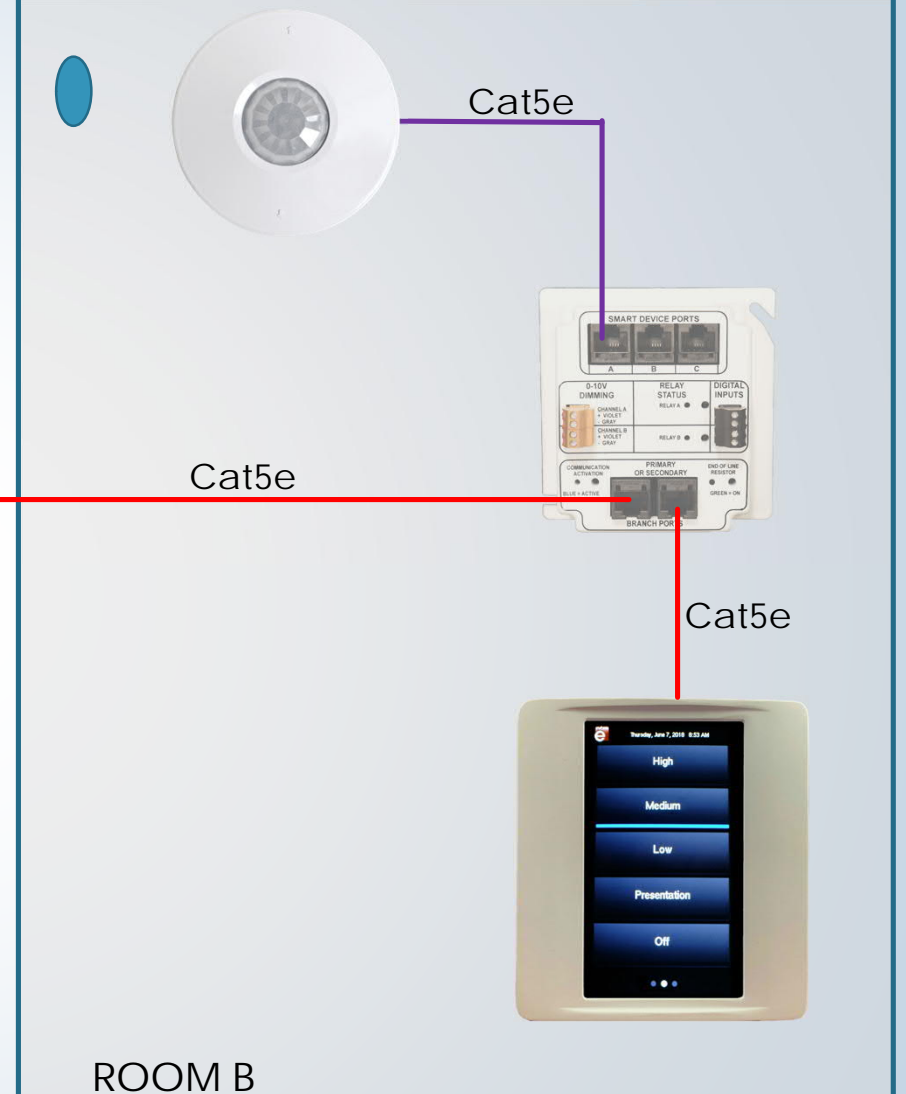
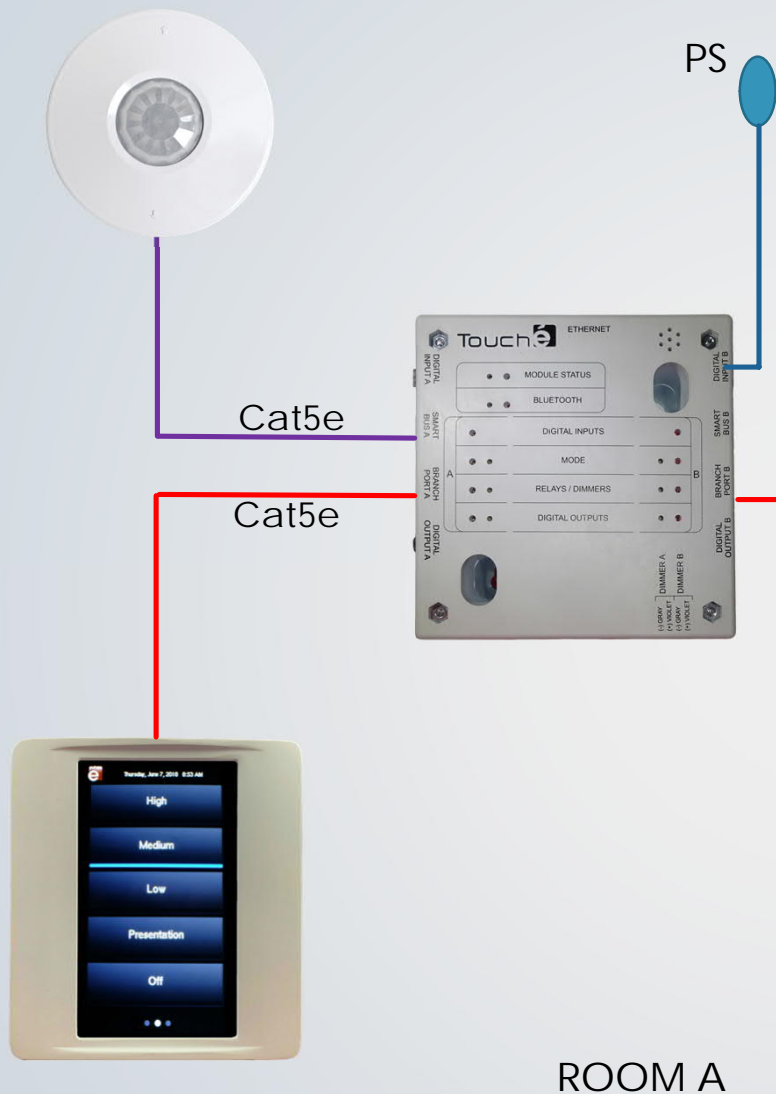
# Flexible Expansion

Touché  
LIGHTING CONTROL



## Room Manager can expand/adapt to control 2 room environments

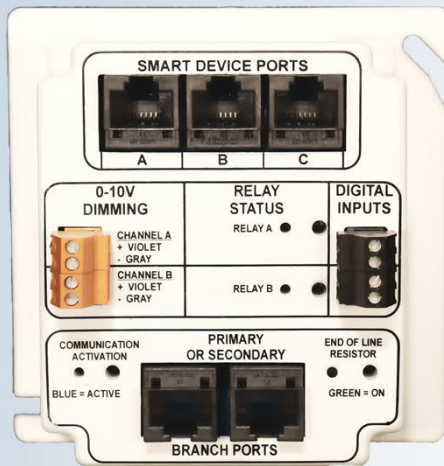
- Each Room Manager has 2 isolated independent relays
  - Each relay can be designated to control a different area in APP
  - Wall stations and sensors in each room will act independently





# Load Control – Local Relay Module (LRM)

Touché  
LIGHTING CONTROL



- Connects via Cat5e
- Mounts on standard 4" J-Box
- (2) Isolated independent relays
  - Zero-cross / arc-less switching technology (rated for 1M cycles)
- Plug load listed
- Plenum listed – UL 2043
- White color



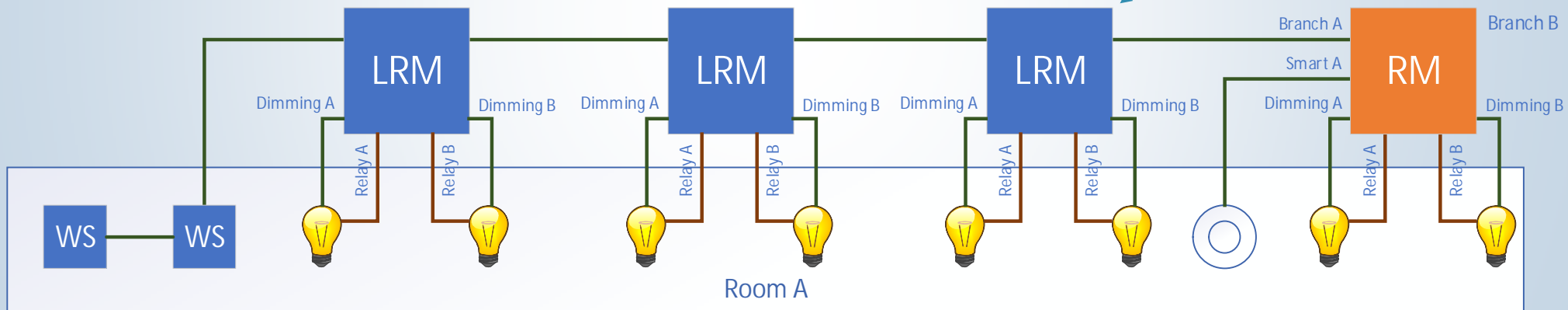
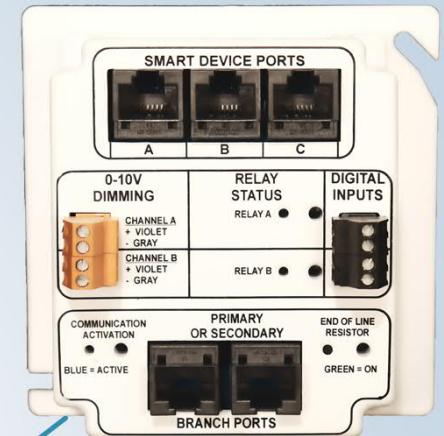
Side View



Back View

# Flexible Expansion

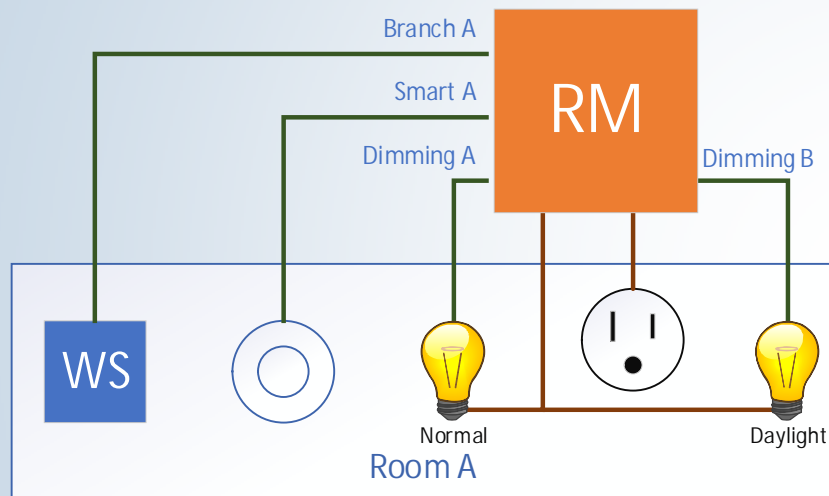
- Expand up to 16 zones of control per Room Manager by adding Local Relay Modules
- Use a single CAT5
- No additional infrastructure devices required



Energy Codes...

# TOUCHÉ ADAPTS TO ALL ENERGY CODES

**Touché**  
LIGHTING CONTROL



IECC

TITLE 24

ASHRAE

LEED



## Configuration Through... BLUETOOTH WIRELESS

### System configuration and customer control via app

- Bluetooth
- System configuration no longer requires a hardwired laptop connection or a proprietary remote control.
- Free app for your phone or tablet
- iOS and Android compatible

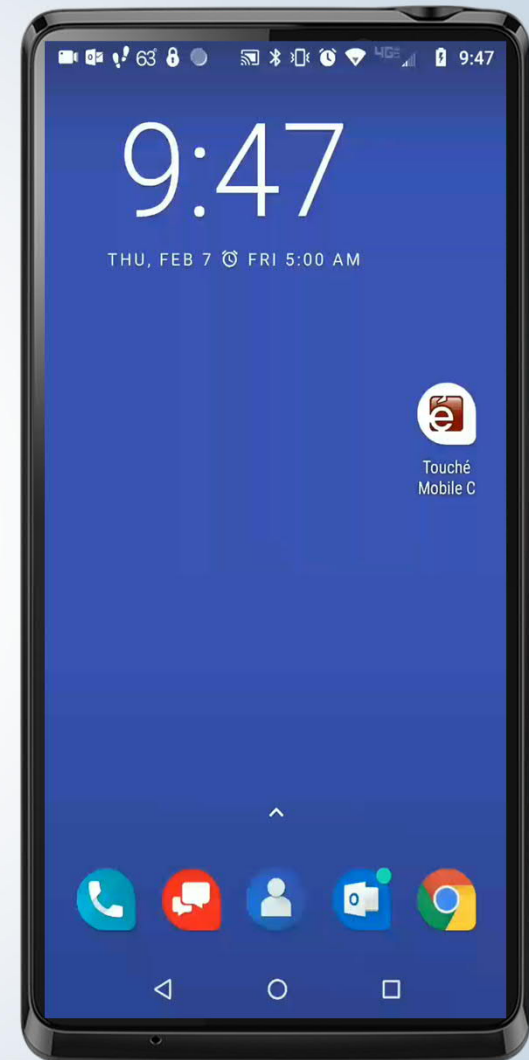


Touché  
LIGHTING CONTROL

MLAZGAR  
ASSOCIATES

# Bluetooth Connectivity

- Menu driven start up.
- Easily program or change button configurations
- Set up or adjust occupancy/vacancy sensitivity and timeouts
- Program daylight harvesting zones
- Set dim levels and preset scene controls
- Option to establish pin code lockouts on button stations

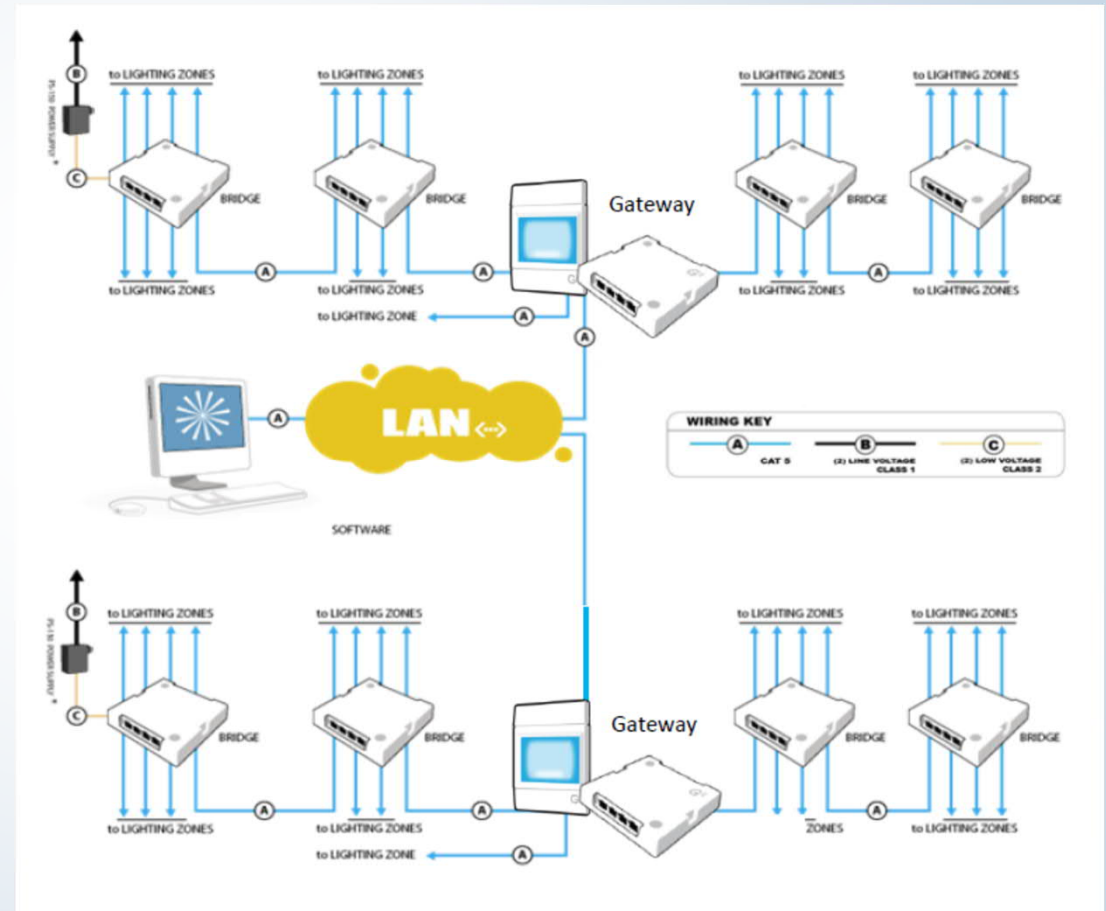




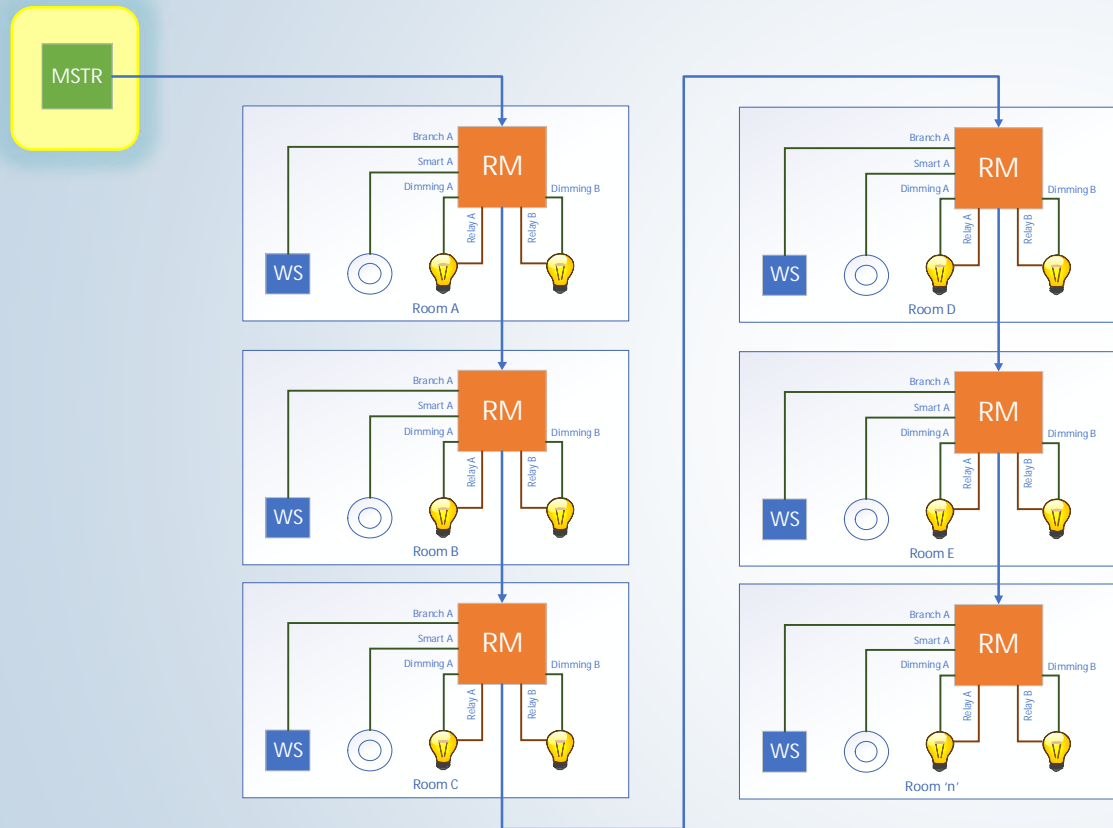
# Networking Challenges

Industry issue: excessive device infrastructure is required

- Multiple bridges, gateways, and hubs are necessary
  - Increased wire terminations and accounting for power supplies further inflate cost.



# Networking – Made Easy



- CAT5 daisy chain wire typology.

No additional and costly infrastructure required to network.

# Building Integration

Touché  
LIGHTING CONTROL

## OPTIONAL Master Interface (MSTR)

Powerful, Expandable, Inexpensive

- Provides coordinated control for all network connected devices
- Gateway to customer's ethernet network (optional)
- Astronomical timeclock
- Unlimited Scheduling
- Tracks and logs all events for ease of troubleshooting
- BACnet over IP stacks native on processor
  - No Field Server required



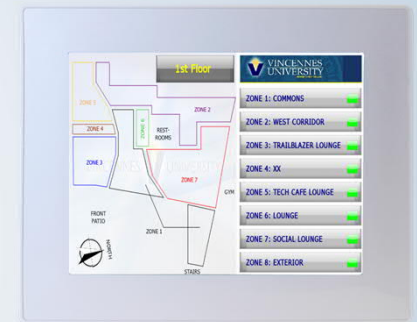
MLAZGAR  
ASSOCIATES

# Touché Solution When Networked

- Lighting control panel option (centralized control) is available
- Larger touchscreens for custom building interfaces
- DIRECT CONNECT SUPPORT
  - 24/7/365 remote support included lifetime of system
  - Customer has direct access to tech support for system changes and troubleshooting at no charge

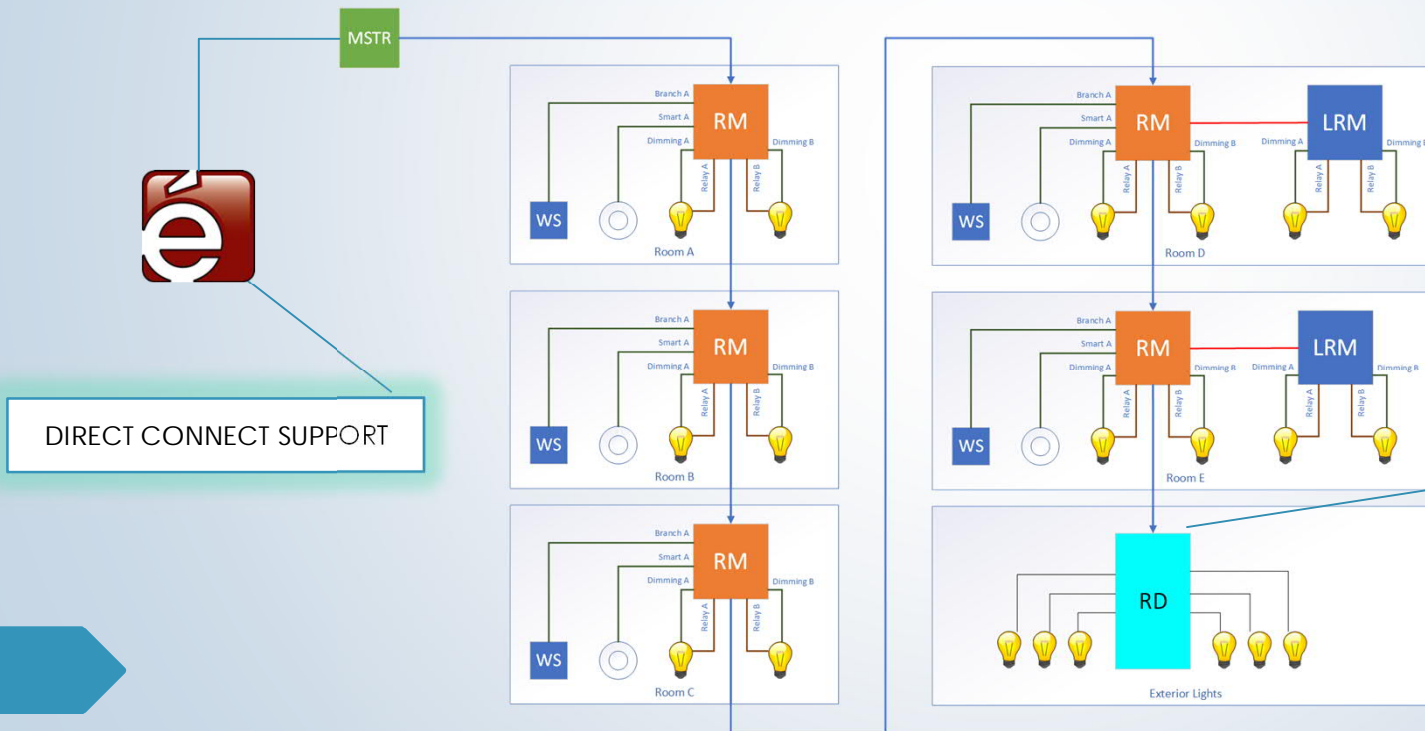
**Touché**  
LIGHTING CONTROL

CUSTOM BUILDING  
INTERFACING



CENTRALIZED CONTROL  
PANEL

**MLAZGAR**  
ASSOCIATES



DIRECT CONNECT SUPPORT

## MODULARITY + SCALABILITY

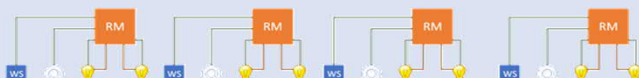
=

## SIMPLICITY

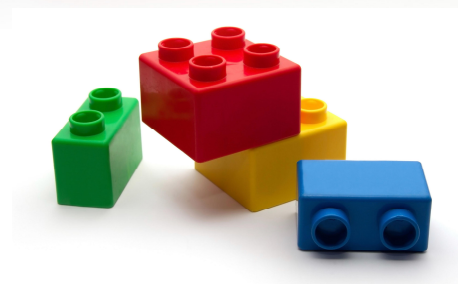
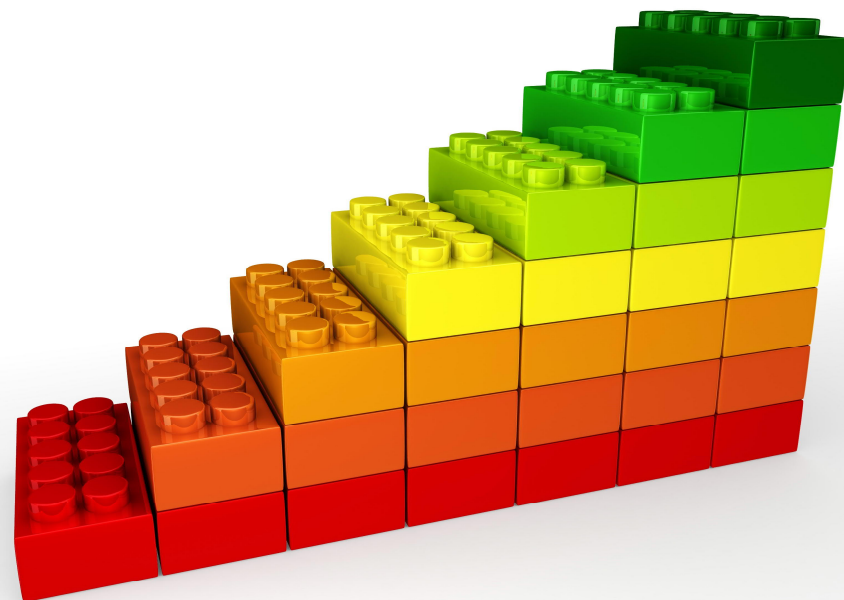
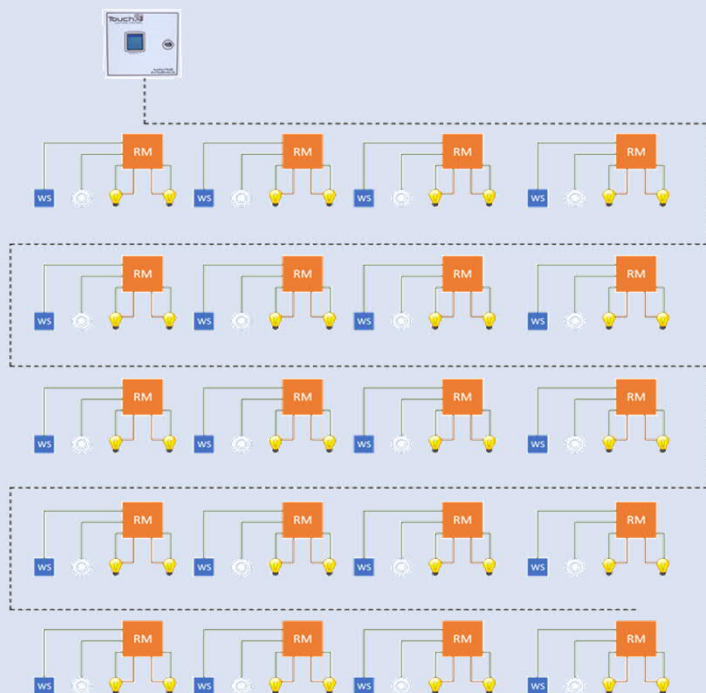
one  
room



one  
floor



one  
building



**Touché**  
LIGHTING CONTROL

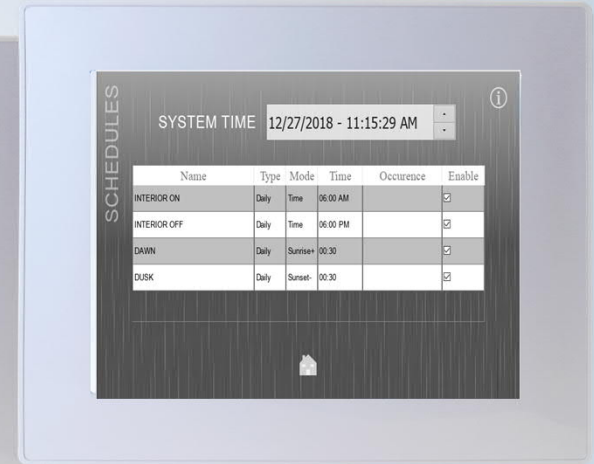
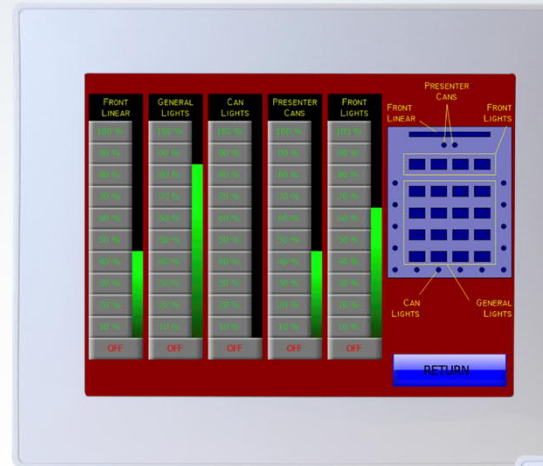


# System Interface

## Touchscreen Computer (TSUI)

Flexible, Powerful & Intuitive to Use

- Two sizes available – 7" or 10" color
- Connect via Cat5
- Shatter resistant sealed glass bezel
- Standard graphic packages are included, custom graphics available



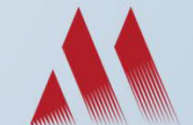
**Touché**  
LIGHTING CONTROL

## Load Control – Relay/Dimmer Panels (RD)

- Available in Two Sizes: 32 or 48 zones
- Local LCD touch screen override
- Panels still operate locally even if network is disconnected.
- Standard size NEMA enclosures
- Modules mount like standard breakers. Field swappable, no special tools are required.



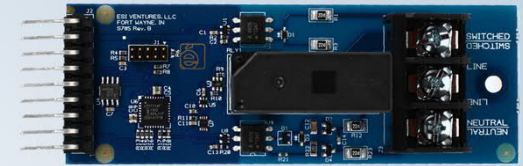
**Touché**  
LIGHTING CONTROL



**MLAZGAR**  
ASSOCIATES

## Load Control – Centralized Relay/Dimming Modules

- Relay Modules:
  - Single-pole relay module
  - Double pole (208V, 240V, 480V) relay module
- Dimming Modules:
  - Line voltage (2-wire / 3-wire) dimming module (1KW)
  - 0-10V (4-Wire) dimming module
- Zero cross switching relays
- All relay modules are interchangeable



Single Pole Relay Module



Double Pole Relay Module



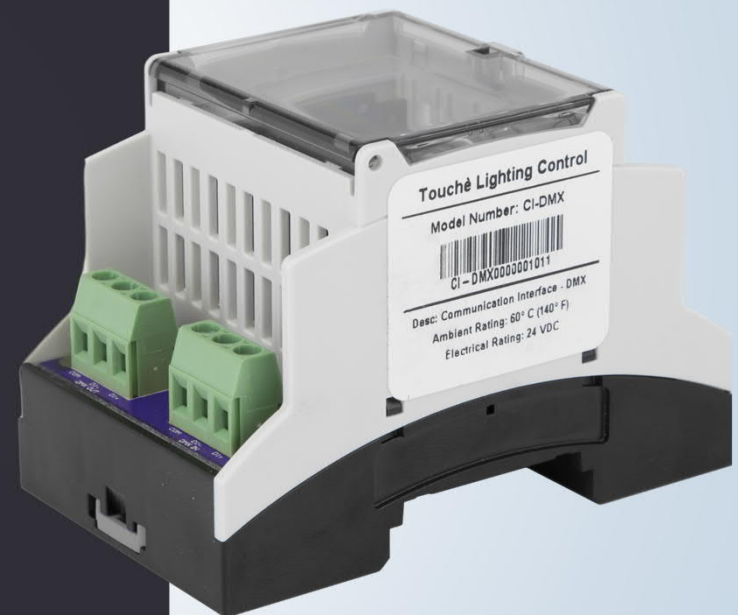
2 Channel – 0-10V Dimmer



Line Voltage Dimmer (1KW)

## Integration: CI-DMX

- Great Solution for:
  - RGB Controlled Lighting
  - Tunable White Lighting
  - Circadian Rhythm – Diurnal Scheduling
- Din Rail Module
  - Pass-Through Commands from DMX Console/Theatrical System
  - Triggering of Unlimited Stored Scenes / Sequences



## Integration: CI-RS232

- Integration:
  - Audio-Video (AV)
  - Fire Alarm / Security System
  - Motorized Blinds/Shades
  - Din Rail Module - Flexible Location
- Bi-Directional Communication
- String Commands





# Integration: BACnet/IP

- ▶ Native BACnet on Processor
- ▶ Full BAS/BMS Integration
- ▶ Selectable Point Exposure - All Points Available
- ▶ Status and Command Communication
- ▶ Permits:
  - ▶ HVAC Setbacks
  - ▶ BAS/BMS Scheduling



Touché  
LIGHTING CONTROL



UL924

# Emergency Shunt Control



**Touché**  
LIGHTING CONTROL

Designed to Work in Conjunction with LRM modules and RD panel modules.

When "Normal Power is Lost" Module Automatically Shunts (Turns On) Load from an Emergency Source

If Load is Dimmable, then Load is Forced to 100%.

Easily Mounts on a Standard 4"x4" J-Box

LED Indicator Provides Status Indication

Includes Local Test Button

Plenum Rated

Can Integrate with Overrides Switch or Fire Alarm Control Panel (Standard)

Auto-Sensing 120VAC / 277VAC

# Stand-Alone Wall Sensor Switches

1P - PIR Occ Switch  
(SW-O-P-S2)



1P - DT Occ Switch  
(SW-O-D-S2)



Dimming PIR Occ Sw.  
(SW-O-P-DIM-S2)



Timer Switch  
(SW-TIM-S2)



2P - PIR Occ Switch  
(SW-O-P-2-S2)

- 120V/277V auto sensing
- Passive IR and Dual Tech options
- Integral manual override
- Time delays adjustable
- Self Adaptive feature auto adjusts time delay based on occupant behavior patterns
- Standard Decora<sup>®</sup> size

# CONTROL STRATEGIES MADE EASY

## Private Office Strategy

- Vacancy control – manual on / auto off
- Occupancy control - local override – auto on / auto off



ON/OFF



OR

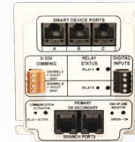


DIMMING



## Open Office Strategy

- Timeclock controlled – scene station override - blink warning
- After hours utilize occupancy control with extended timeout delays. As an option, local scene stations can be setup to provide 1, 2 and 4 hour “force on” control.



SMALL  
AREA

OR



LARGE  
AREA

OTHER CONSIDERATIONS

OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

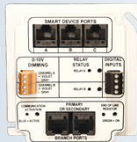
PLACES OF WORSHIP

CONTINUE

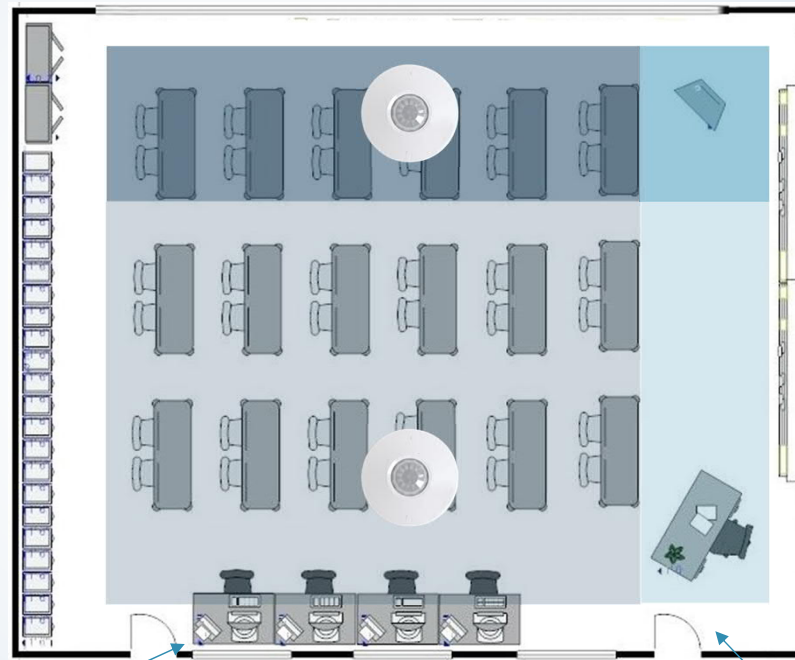
# CONTROL STRATEGIES MADE EASY

## Strategy

- Vacancy control with dimming presets – manual on/auto off
- Typical applications include two zones – one for front of room and the other for the students.
- If the room has daylighting then SMAOS sensors can be used for both daylighting and occupancy control.
- For classrooms with multiple entrances, use a touchscreen wall station at one entrance and a single function switch at the other.



4-ZONES OF CONTROL



## OTHER CONSIDERATIONS

OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

PLACES OF WORSHIP

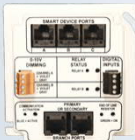
CONTINUE

OR

# CONTROL STRATEGIES MADE EASY

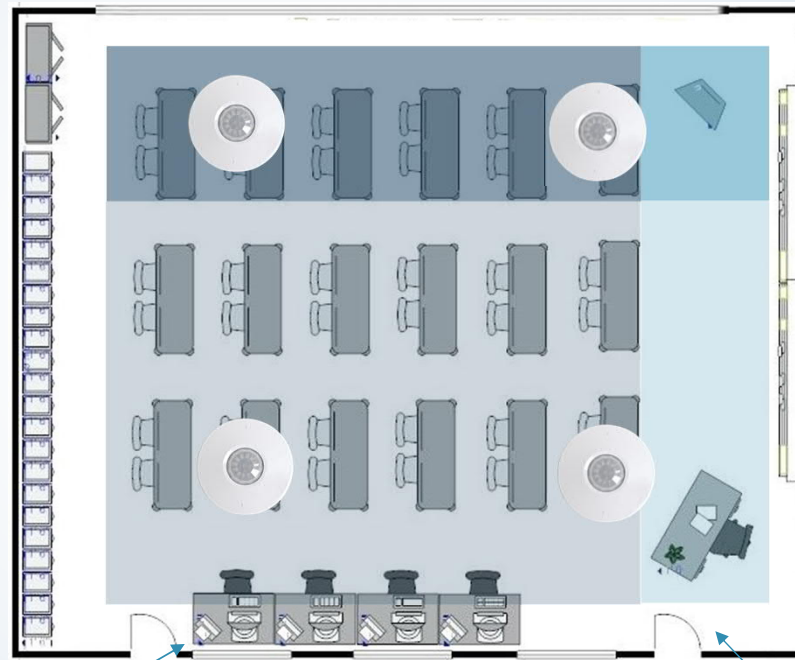
## Strategy

- Vacancy control with dimming presets – manual on/auto off
- Typical applications include two zones – one for front of room and the other for the students.
- If the room has daylighting then SMAOS sensors can be used for both daylighting and occupancy control.
- For classrooms with multiple entrances, use a touchscreen wall station at one entrance and a single function switch at the other.



4-ZONES OF CONTROL

## OTHER CONSIDERATIONS



OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

PLACES OF WORSHIP

CONTINUE



# CONTROL STRATEGIES MADE EASY

## Strategy

- BACnet/IP allows for BMS integration, simplifying schedule management for the facility manager.
- System override interfacing requirements include the use of TSUI's and configurable wall-stations.
- Being able to combine centralized and distributed control in one platform to accommodate the requirements of large and small areas throughout the facility.



OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

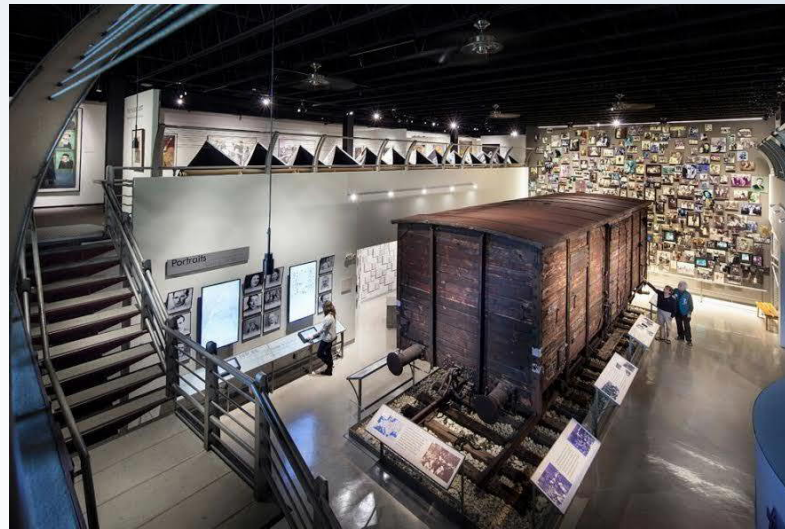
PLACES OF WORSHIP

CONTINUE

# CONTROL STRATEGIES MADE EASY

## Strategy

- Color tuning, RGB lighting and controllable fade rates are part of expanding requirements in modern museum designs. With the use of CI-DMX interfaces and simple to use touchscreen controls, these demands are not only possible but simple to use.



OTHER CONSIDERATIONS

OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

PLACES OF WORSHIP

CONTINUE

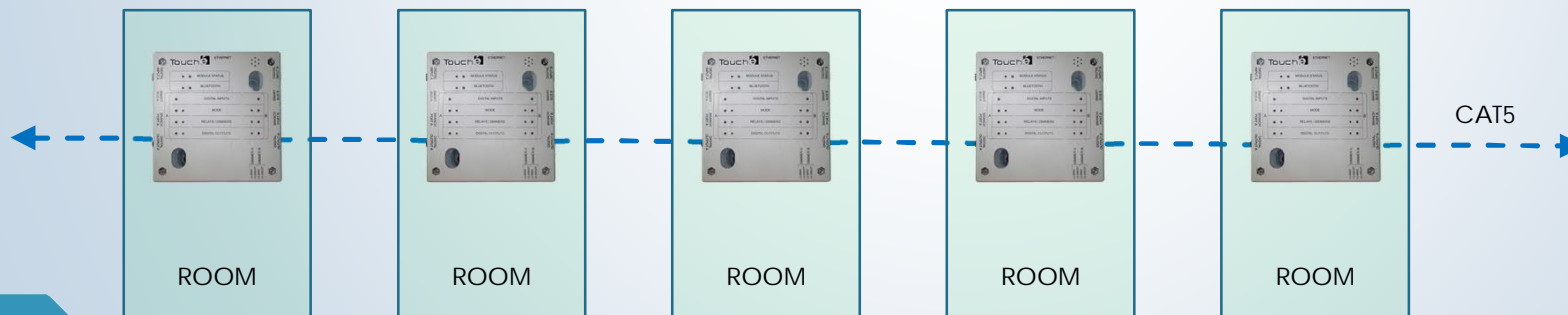
# CONTROL STRATEGIES MADE EASY



## OTHER CONSIDERATIONS

### Strategy

- BACnet/IP allows for BMS integration, simplifying schedule management for the facility manager.
- System reliability is strengthened through the use of Room Managers. Room Managers **allow** the room to operate on a network **without requiring** the network to function.



OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

PLACES OF WORSHIP

CONTINUE

# CONTROL STRATEGIES MADE EASY



## Strategy

- Large scale facility and site lighting control along with sophisticated interfaces for luxury suites.
- Facilities managers can use a facility map based software interface for system control.
- The building control interface can be served up on wireless tablet.

OTHER CONSIDERATIONS



OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

PLACES OF WORSHIP

CONTINUE

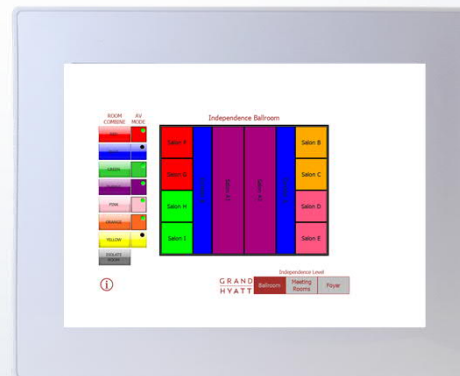


# CONTROL STRATEGIES MADE EASY



## Strategy

- Room partitioning can be accomplished via sensors or graphical interface as shown below.
- Adjustable fade rates, high and low level dimming cut-offs result in precise dimming control irrespective of the light fixture's dimmable driver quality.
- Special DMX interfaces allow the architectural and theatrical dimming systems to operate under one platform.



OTHER CONSIDERATIONS

OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

PLACES OF WORSHIP

CONTINUE

# CONTROL STRATEGIES MADE EASY

## Strategy

Supporting advanced Healthcare industry lighting concepts including:

- Diurnal Scheduling
- Color tuning
- Hospital bed controls integration via RS232 or Contact Closure
- Facility integration via BACnet/IP



OTHER CONSIDERATIONS

OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

PLACES OF WORSHIP

CONTINUE



# CONTROL STRATEGIES MADE EASY



OTHER CONSIDERATIONS

## Strategy

- Retail applications require the controls to be simple to interface with yet powerful enough to accentuate their sales floor.
- RD panels support every dimming protocol in one common enclosure.
- Simple press and hold preset dim level adjustments for client to fine tune lighting levels without factory assistance.



OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

PLACES OF WORSHIP

CONTINUE

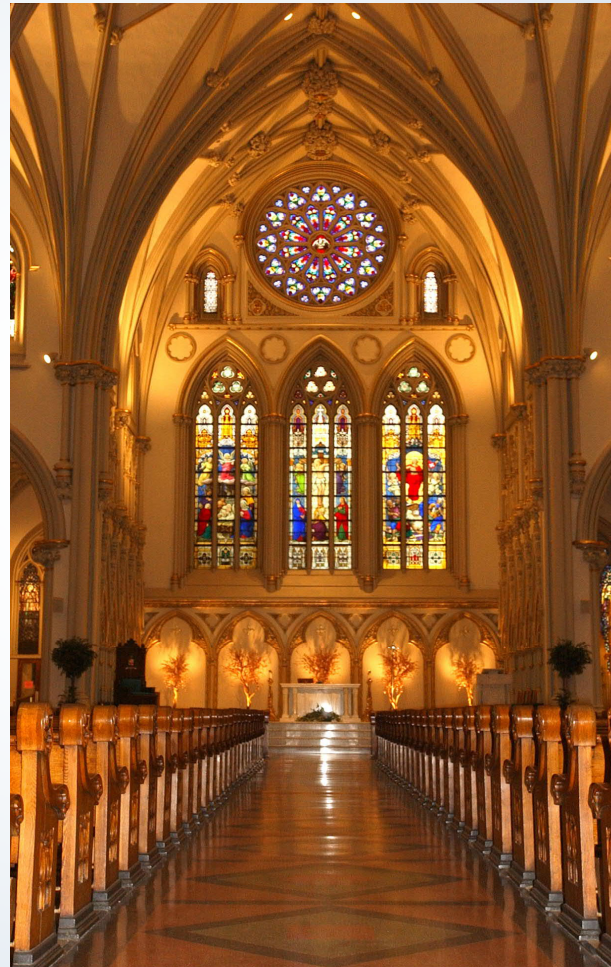
# CONTROL STRATEGIES MADE EASY

## Strategy

- Discreet zone and scene control for setting moods to conduct multiple types of events
- Flexible control approaches to support any dimmable load type for retrofitting or remodeling existing spaces.
- Intuitive control for nontechnical clients.
- Passcode protectable wall stations for public places of congregation.



## OTHER CONSIDERATIONS



OFFICE BUILDINGS

EDUCATION

CONVENTION CTRS

MUSEUMS

MUNICIPAL

ARENAS

HOSPITALITY

HEALTHCARE

RETAIL

PLACES OF WORSHIP

CONTINUE



#### Daylight Control

- Daylight sensors are integral to the occupancy sensors.
- Single zone or dual zone daylight control capable.



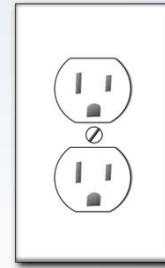
#### BMS Integration

- Integrating occupant status with HVAC control via BACnet/IP or contract closure.



#### AV & Motorized Blind Integration

- Integrate with AV system and/or motorized blind controller using RS232 interface (CI-RS232).



#### Plug-Load Control

- Plug-loads are turned off by the vacant event from the occupancy sensor after a selectable delay has expired.
- Plug-load control and lighting control can share a common module or use separate modules.



#### UL924 Emergency Shunt Override

- Use emergency shunt controls modules to force lights on (at 100% when dimmable) when normal source is lost.

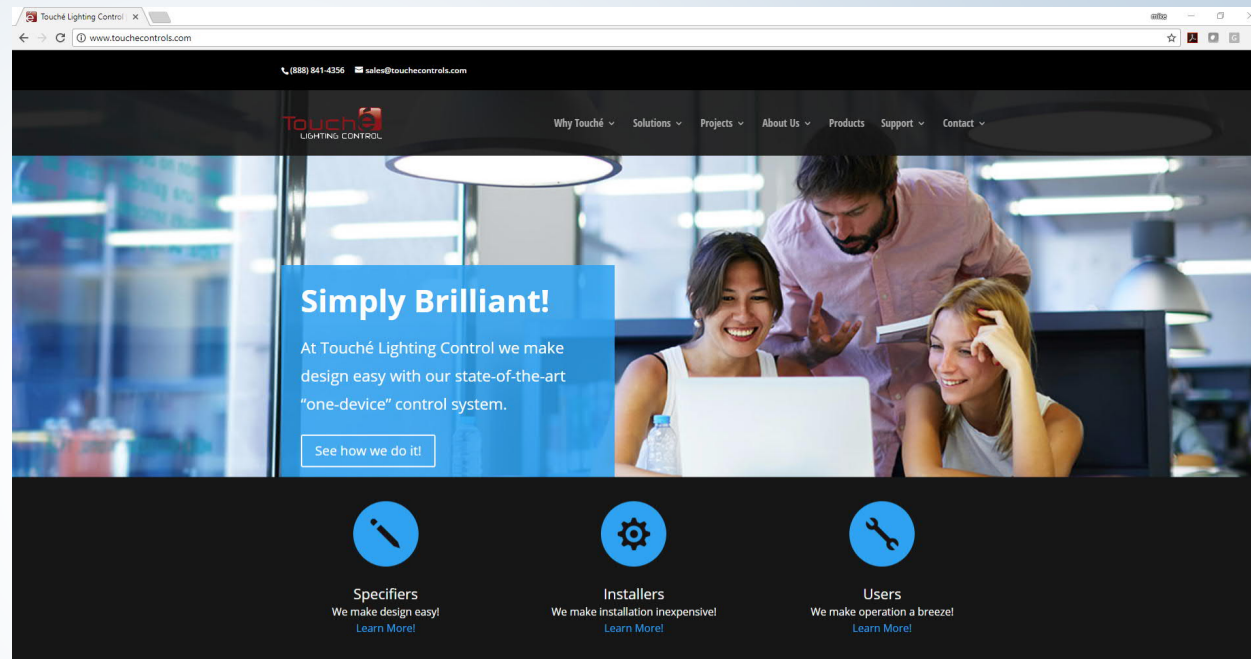
[RETURN](#)



Want to Learn More?

Visit our Website at:  
[www.ToucheControls.com](http://www.ToucheControls.com)

**Touché**  
LIGHTING CONTROL



  
**MLAZGAR**  
ASSOCIATES