Guest Room Control System

Overview:

The Hotel Room Control System includes Innovative Lighting, Sensors, Smart Door Sign, and HVAC thermostat etc. It raises the bar on guest service levels by detecting guests, adjusting lighting scene, setting comfortable room temperature and featuring many other functionalities. Combining with hotel management system or PMS, it also provides energy saving, efficient maintenance. Future upgrade with advanced feature is also available with easy installation and configuration.

Feature Summary and Options:

- Most of the features are optional in the Guest Room Control System.
- The system can be tailed to fit actual customer's need.
- With its open architectural design, the system allow many third party products to be integrated with minimal effort.

Devices	Features and Options			Optional
Lighting Control	Dimming	On/Off	Scene	One of These Three
Receptacle Control				Optional
Motion/Occupancy Sensor	PIR	Microwave	Dual Tech	Optional
Thermostat	Color Touch Panel	Legacy LCD		One of These Two
DND Panel Door Sign	Stand-alone	Wired with PMS		Optional
Door Locker	Stand-alone	Wired with PMS		Optional
Bathroom Exhaust Fan	Stand-alone	Wired with RCU		One of These Two
Window Curtain	Stand-alone	Wired with RCU		Optional
Room Control Unit (RCU)	Local Stand-alone	Wireless with PMS		One of These Two

Technical Summary

- Distributed low voltage power system (DLVP). It mainly provides electrical power to lights. It has high reliability, low maintenance and low initial installation cost
- Unified Data Bus Integration solution with HVAC, DND, vent, curtain, lights, etc.
- Wireless Network connects devices in rooms and hallway. Easy upgrade and expansion.
- Open architecture for hybrid Hotel Management , Property Management systems

Device list for a typical guest room:

Device Name	Functions	unit #
Dimming Controller	Provides Dimming Function and Scene Control to the lights.	3
Lighting Scene switch	preset 3 or 4 scenes one touch activation, (n-way multiply location installation)	3
RCU Room Control Unit	Central Unit to coordinate lights,hvac etc.	1
Smart Door Sign with bell button	show multi signs including room #, do not disturb, Clean, vacancy etc.	1
Door Bell	Low voltage door bell	1
HVAC thermostat	Working with HVAC	1
Controlled Receptacle	Receptacle for power delivery	5+
DLVP Power Source	Provides Lighting power	1

1. Dimming Controller

The commercial grade controller provides Dimming Function and Scene Control to various lights. This controller was designed for retrofit installation with minimum cost on labor and material. The enclosure is a solid metal case and it can serve as a junction box.

2. Lighting Scene Switch

Digital Lighting Scene Switch provides one touch instant scene change. It works with Dimming Controller and RCU. Easy to setup and operate. 3-scene button switch is perfect for the bed side and 4+scene button switch is available too. N-way controlling can be installed to provide more flexible feature (switching the lights from an arbitrary number of locations such as bedside, main entry, reading desk etc.)

3. Room Control Unit (RCU)

Central Control Unit to coordinate lights, HVAC thermostat etc. Its build-in wireless module allows joining the local network to communicate with central server (management system).
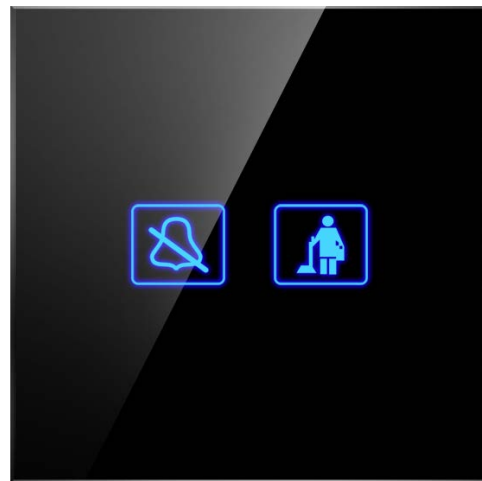
4. Electrical Door Sign with bell button and DND (Do Not Disturb) Display

The electrical Door Sign is typically placed outside of the guest room next to the door frame. It comes with a transparent tempered glass with customized logo, Numbers, Letters printed on the backside. In addition, the doorbell touch button is also embedded on the glass panel. With the backside LED lamination, the light color can be changed according to the Door Sign controller inside the guest room.

5. **In-room door sign control panel**

The control panel surface is tempered glass with logo/icon printed on back side. It is touch screen with buttons behind to control the door sign display.   It is low voltage wired and it is easy to install and easy to clean.

Card key switch

Upon entry, a hotel card key is inserted, room lighting circuits are activated.
Upon exit, removal of the card key, deactivates the lighting throughout the room
Allows 30-second egress time

6. Door Bell

The doorbell is a small low voltage operated device.
The sound tone and audio level can be customized to fit the hotel need.

7. HVAC Thermostat

The thermostat is designed for convenient comfort and energy management, with sensing and control for both temperature and humidity. It also serves as a control device for the Hotel room control platform, enabling integration with hotel management system or property management systems. As a smart device, it provides real-time data to system. It can track room status, energy use, equipment alarm reporting, and its connection to systems such as PMS and BMS all of which helps you proactively deliver a rewarding guest experience.

– Standalone HVAC control for both temperature and humidity.
– Standalone EMS. Optimizes in-room energy based on occupancy detection
– Networked EMS. Optimizes in-room energy by occupancy and room status.

8. Controlled Receptacle

Two sections of the duplex receptacle. The up-half is not controlled while the lower-half is controlled by RCU. It can deliver the power on schedule or based on some sensor data.
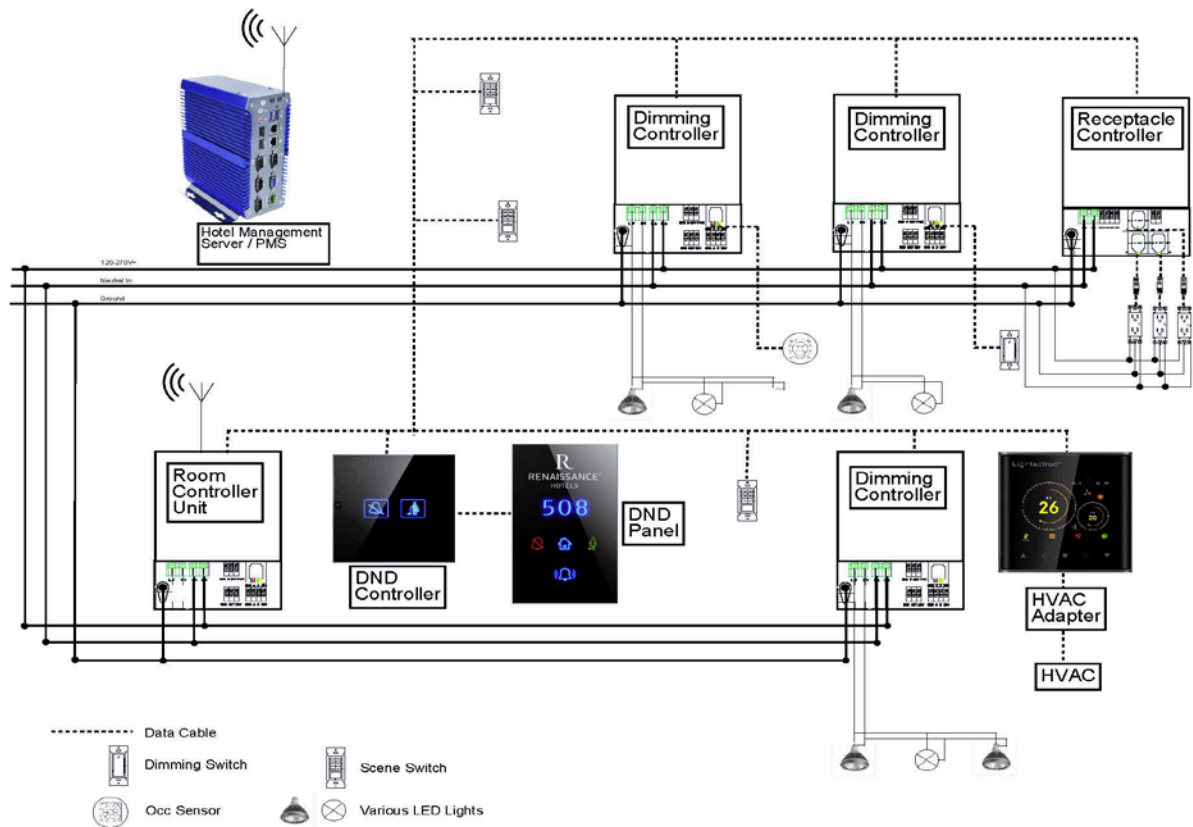
9. DLVP Power Source

High reliable electrical power source to deliver the low voltage power to lights, control units and sensor units in the room.

Guest Room Control System Diagram

Lightectron® Hotel Room Control System

Typical Guest Room Control System Installation