

HDL SMART SOLUTIONS

Since 1985, Your Reliable Partner

HDL Automation Co.,Ltd.

HDL SMART SOLUTIONS

2025 / 09

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CATALOG

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Who we are?

HDL Automation, established in 1985, is a leading international technology company specializing in smart home, smart building, smart hotel and total energy solutions. With a strong commitment to the market, we strive to deliver comprehensive automation control systems and integrated solutions for homes and buildings.

At HDL Automation, our core product portfolio encompasses a wide range of cutting-edge technologies. From smart lighting and smart shading to climate control, energy management, security monitoring, and audio-video entertainment, our solutions are designed to enhance comfort, convenience, and security.

With an extensive track record, our automation solutions have been successfully deployed in over 500,000 prestigious projects worldwide. We have large number of iconic project references, such as Dubai International Airport, NATO Headquarters Building, Australia Banc Apartment, Macau Morpheus Hotel, and the Czech State Opera.

By leveraging our expertise and innovative technologies, HDL Automation continues to lead the industry, providing seamless automation experiences that transform living and working spaces.

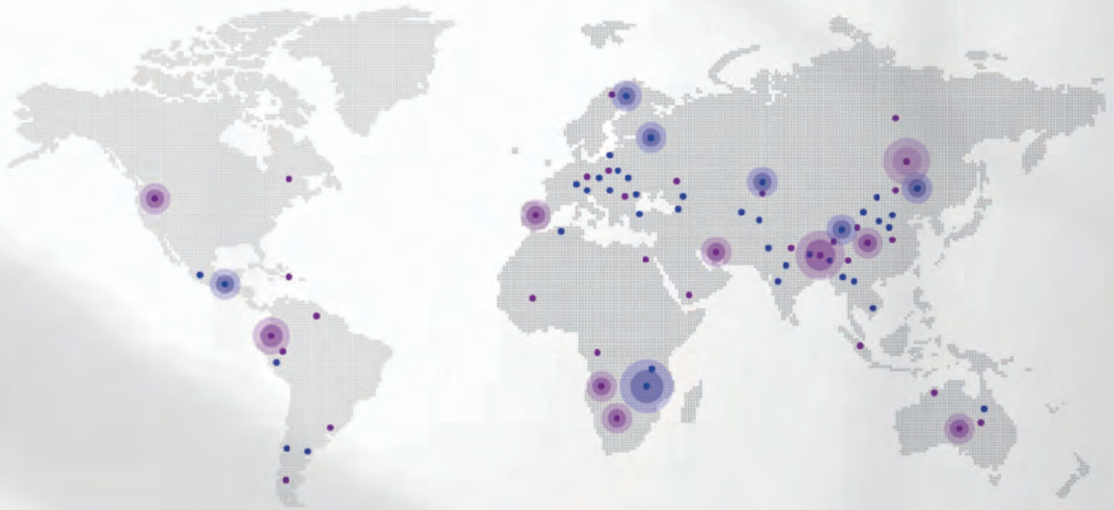


40 -Year
History

106 +
Countries

500,000 +
Completed Projects

Brand History



1985

HDL was established, committing itself to R&D and application of lighting control products.

1995

HDL introduced China's first semi-digital dimmer cabinet--the Hedong Xiongfeng Dimmer Cabinet--which was successfully applied in the Great Hall of the People in Beijing.

2004

HDL was the first to introduce a range of smart home products, known as the Shiqi series.

2007

HDL took its first step in global expansion, marking the beginning of its globalization with entry into the Dubai and Israel markets.

2015

HDL was among the earliest enterprises to introduce a set of wireless smart home products in the domestic market. It was also the first enterprise to apply both wire and wireless distributed system into the projects.

2017

HDL test center was authorized by the KNX organization as the 16th certified KNX test center in the world. It is also one of only two test centers in mainland China.

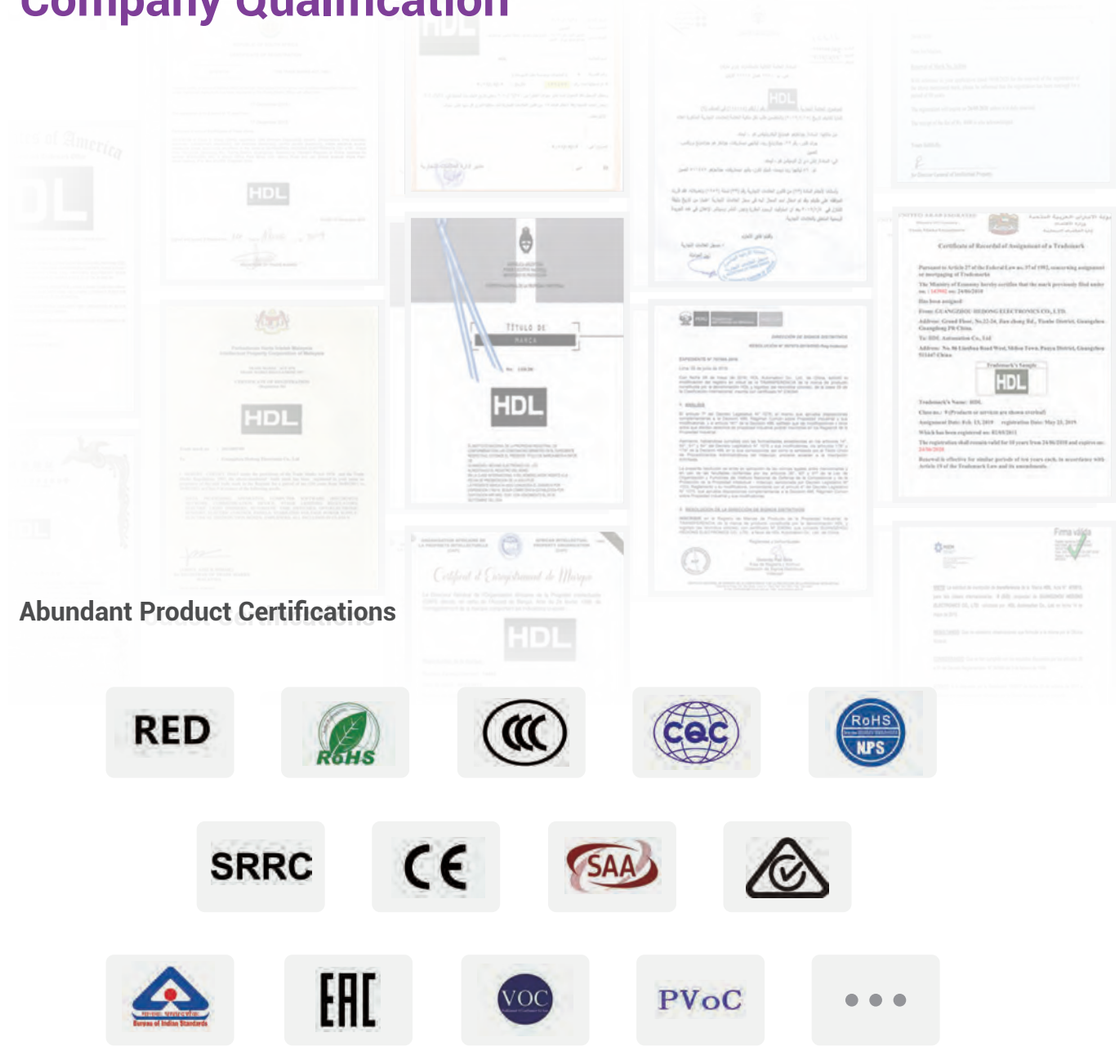
2021

HDL built a comprehensive partnership ecosystem and launched the HDL LINK protocol, thereby realizing the interconnection of the three HDL systems (Buspro, Buspro Wireless and KNX).

2024

HDL was honored as the "No.1 Wired Smart Home Brand in China", "Manufacturing Champion Enterprise" and "Guangzhou Innovative Company", showcasing our widespread recognition from the market.

Company Qualification



Abundant Product Certifications

Multiple System Certifications

ISO10012
2003
general requirements for measurement management systems

ISO14001
2015
environmental management systems

ISO9001
2015
quality management systems

ISO17025
2017
testing and calibration laboratory capabilities

ISO45001
2018
occupational health and safety management systems.

Manufacturing Advantages

100,000

- Class 100,000 clean room
- 60% of suppliers cooperate for more than 10 years

100%

- 100% of workers are trained and certified
- All manufacturing sections are set up with full inspection position, and all semi-finished and finished products are subject to functional testing through production testing software

500w

- Annual Production Capacity(PC)
  2.5 million in SMT line, 5 million in DIP line, 2.5 million in semi-finished product inspection







SMART HOME SOLUTIONS

Complete And Integrated Smart Home Experience

HDL connects your lights, curtains, HVAC and other devices into the system, and allows you to control them through a mobile phone, tablet, wall panel or smart speaker. For example, you can turn off the lights with a phone on the way to work. We offer you smart home solutions that are able to integrate various functions and cover every area of your home.

Lighting

Shading

Climate Control

Audio and Video

Safety and Security

Access Control



Smart Lighting

Brightness

Apart from turning ON/OFF the lights, you can adjust the brightness as well with HDL system. The interface on our wall panel or mobile app shows you the brightness in percentage. Drag the slider on the interface and you will get the exact light for your ongoing activity.



Colors

HDL offers you full control of light colors. Whether you are having a romantic dinner or a cheerful party, you can always easily set the wonderful lighting effect with colors.



Color Temperatures

From cold to warm, different color temperatures of light may give us a different mood. HDL smart lighting system enables 2700K-6500k color temperature adjustment so that you can feel free to adjust it to make yourself more relaxed and comfortable.



Smart Shading

Make Use Of Natural Light

HDL smart shading can help control the curtains or blinds automatically throughout the day simply by opening and closing at pre-programmed times or based on sun light so as to help maximize the amount of daylight in your home to cut down on electricity usage.

Accurate Position Control

Your curtains can run the full way to close and open with one button while can be stopped at any position with a Stop button, which is simple and just takes a few minutes. Or you can select a percentage to let them stop at any position to let in perfect amount of light.



Super Quiet Operation

The sound made by the curtain motor is lower than 35dB. It won't disturb your sleeping baby.



Climate Control

Comfortable ambience

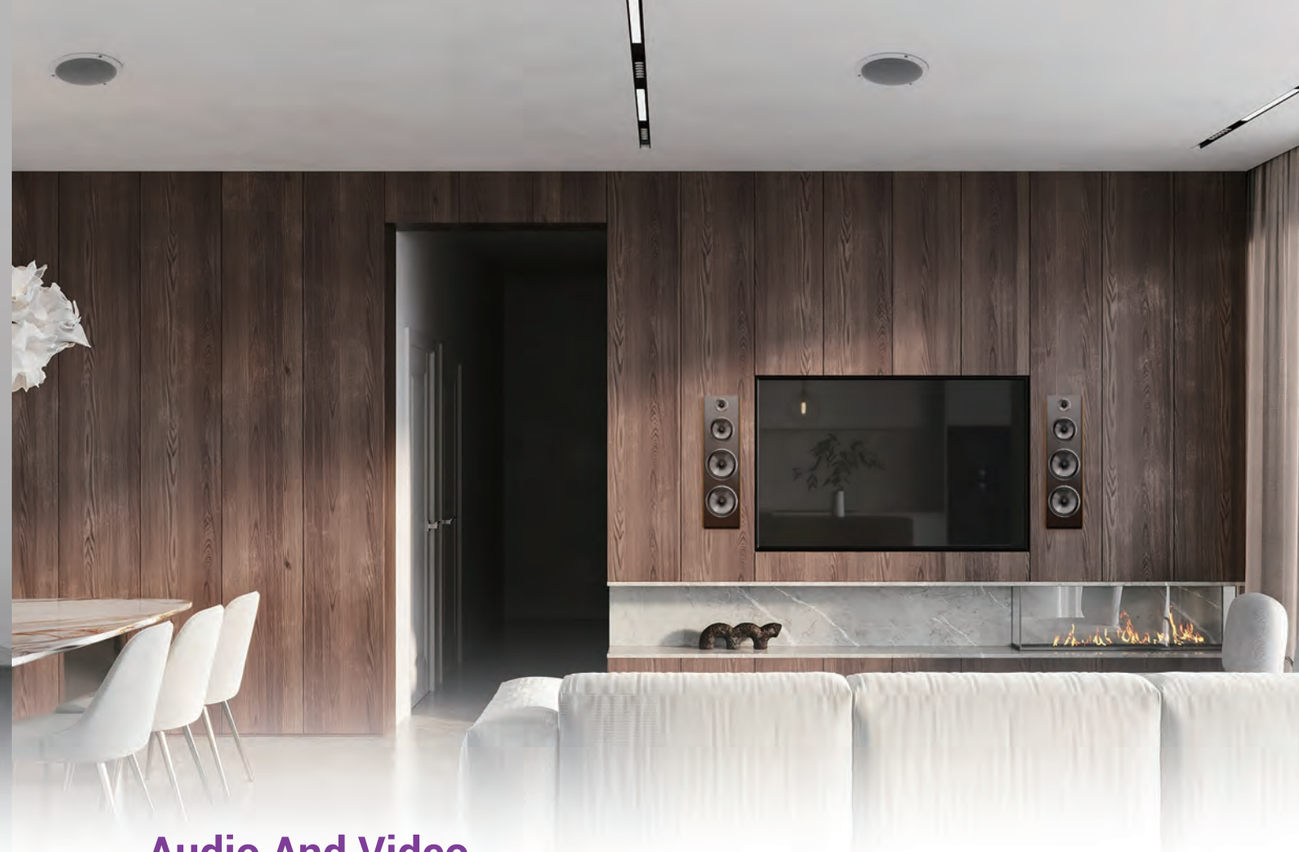
HDL smart home can automatically run the air-conditioning, heating and ventilation system to keep the temperature healthy and comfortable for your family.

Air quality detection

If the system detects poor air quality, for example, high levels of carbon dioxide, the exhaust fan will be automatically turned on to ensure fresh air, and thus provide you with a safe living space.

Save energy

If your windows are left open for a certain period, say 60 seconds, your HDL smart home can automatically shut down the air-conditioning or heating systems to avoid wasting energy. In the meantime, you will be notified on your phone.



Audio And Video

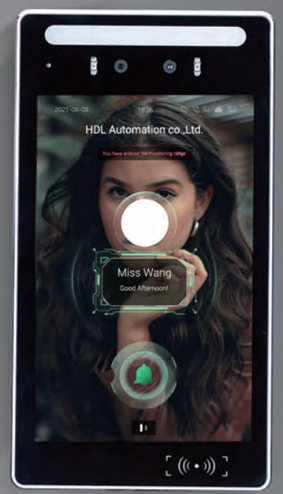
Enjoy perfect home cinema

The audio-video centralized control system enables convenient operation of various cinema devices (smart projector, audio system, amplifier, Blu-ray player, KTV system, game host, etc.). At the same time the smart lighting system and shading system are activated simultaneously to create a perfect mood for the happy time.

Music is everywhere

HDL offers background music control in smart home solutions. Each area of your home is equipped with speakers that are controlled by the background music system, allowing users to select music, play music and adjust volume by areas, so that you can move from room to room or even outside while enjoying the music' s perfect quality and volume no matter where you go. And your background music can also link with Scenes. For example, Dinner Mode can go with a piece soft music while controlling the lights over dining room.







Outdoor Safety

Safety protection is a top priority

Outdoor intercom

The outdoor video intercom includes the doorbell, video camera, two-way communication and monitoring, making it convenient for visitors and couriers to talk to the homeowner.

Outdoor monitoring

Install panoramic cameras in the courtyard, garage and entrance to monitor your home from all sides. Wherever you are, you can always learn about the situation of your home by viewing video images on your phone.

Improve security

When you go out or go to bed at night, don't worry there will be a burglary. You can enable the "Armed" mode to protect your home from intruders. When your doors or windows are opened without permission, your HDL smart home will scare away the intruder by alarms, turning on lights or other devices. You will also be notified via your phone.

Indoor Safety

More ways to better protect your family

Water leak alarm

The system safeguards the entire home by detecting and stopping any abnormal levels of water flow. And it will also immediately inform you by sending an alert to your smartphone so that you can take any actions needed to prevent water damage.

Gas Leak Alarm

Once the sensor detects any combustible gas, it will sound an alaram with above 70 decibels. And the system will also send a notification to the users or property management personnel to deal with the problem.

Smoke Detection

Worry if there is a fire when you go out? HDL smoke sensor can quickly detect the smoke in the early stage. Once an abnormality is detected, the system will trigger alarms in the house and the users or property management personnel will recieve an alert.

Access Control

HDL systems are fully integrated with the Dahua intercom. Users can benefit from the intercom solutions while enjoying the convenience and comfort brought by HDL smart home systems.

Multiple ways to unlock the door

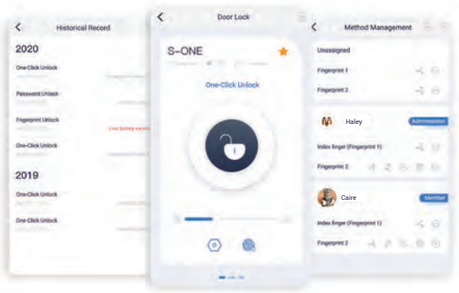
Multiple options are available for users to unlock the doors. You don't have to wait for your family outside even if you forget your keys.



Support unlock remotely

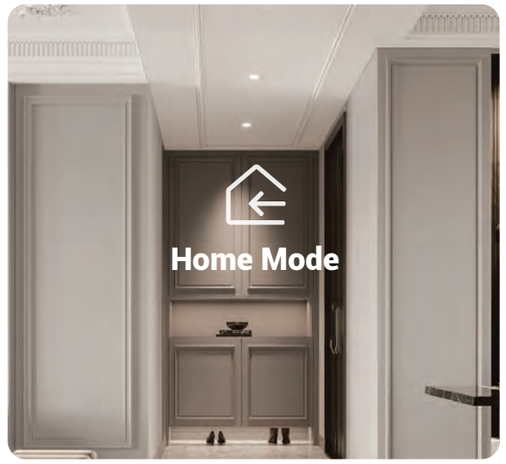
When you are not able to answer the call on the indoor monitor, the video call can be transferred to the mobile app. ON Pro App enables the owners to unlock the door or answer the call on the mobile phone anytime and anywhere.

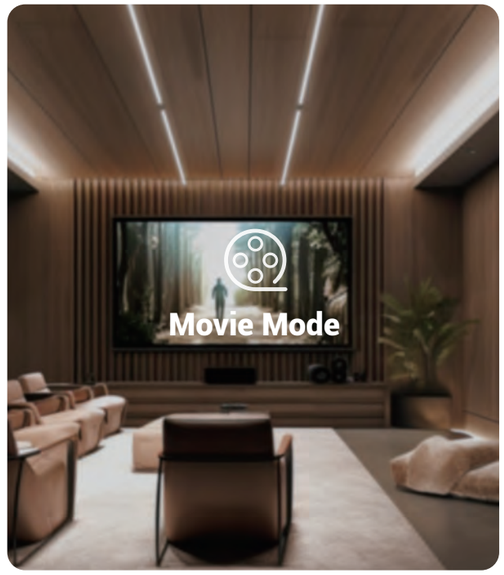


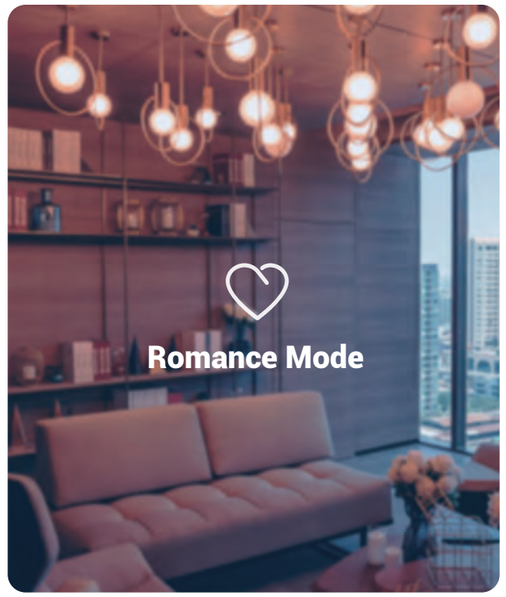


Set up push notification

Users can name their fingerprints and set up push notification about whether their family are home. The door lock can identify users by fingerprint and notify the owner.









Scene Control

Scene control provides great convenience to control multiple devices. Just one button away to set the perfect ambience for your activity. For example, we can create a “Romance” mode, which when you select it, the system will close curtains, turn on color lights and play soft music.

Multiple Ways To Control Your Home

HDL provides multiple ways to interact with your home and meet the needs of each family member.



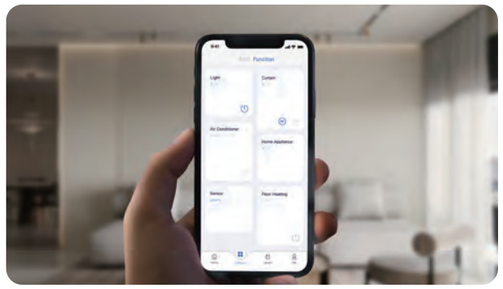
Voice control

You can control the devices like lights, curtains, TV and AC by speaking. For example, ask Google Home to turn off the lights and close curtains when you are ready to sleep.

Smart Panel Control

You are allowed to control all the connected devices on one all-round panel, there are touch control panel and push-button panel for you to choose from.For example, you can pick easy-to-use button panels for the elderly and little kids.



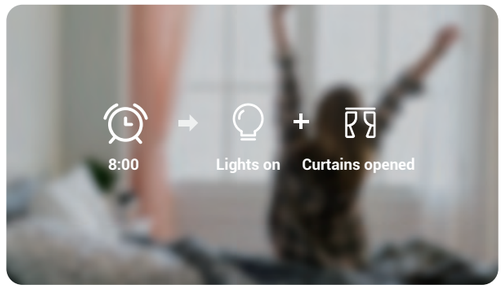


App Control

HDL systems enable users to control all devices through smartphones and tablets anywhere and anytime. Everything is under your control.

Automatic Control

With logic settings and sensors in the system, the target devices will run in a pre-programmed way once the condition is triggered. In many cases, the system makes the judgement and run the tasks automatically so that user interference can be largely reduced.



Personalized Smart Solutions



Smart Solutions for Apartment

- Smart lighting
- Air conditioning
- Smart door lock
- Smart socket
- Shading control
- Security system
- Home Appliance
- Voice control

Personalized Smart Solutions



Smart Solutions for Big Bungalow

- Smart lighting
- Air conditioning
- Smart door lock
- Smart socket
- Shading control
- Security system
- Home Appliance
- Ventilation system
- Multi-media system
- Voice control
- Scene control
- Gas leakage detection



Smart Solutions for Villa

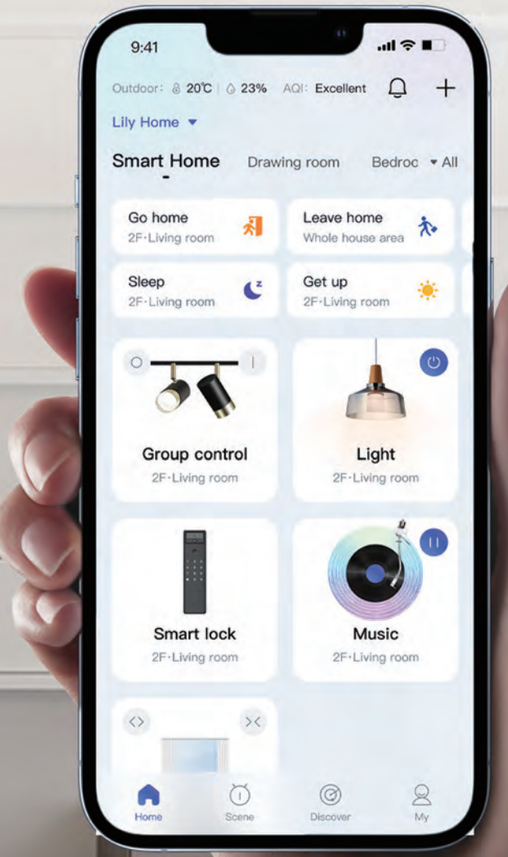
- Smart lighting
- Air conditioning
- Smart door lock
- Multi-media system
- Water leakage detection
- Shading control
- Security system
- Home Appliance
- Ventilation system
- Gas leakage detection
- Smart socket
- Floor heating
- Voice control
- Smoke detection
- Scene control

HDL Home

HDL Home is a powerful app designed for smart home living. It brings together device control, scene customization, and sharing in one easy-to-use platform. With HDL Home, you can manage all the devices connected to your smart system—whether it's lighting, curtains, air conditioning, or door locks—right at your fingertips.

The app features a clean, intuitive design with a clear layout that makes navigation simple. It combines great aesthetics with an engaging user experience. With HDL Home, controlling your smart home is fun and effortless, bringing a sense of technology, convenience, and comfort to your living space.

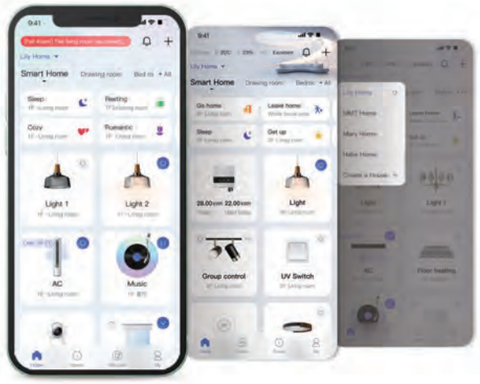
Curtains Lights Door Lock AC More



Scan to download HDL Home

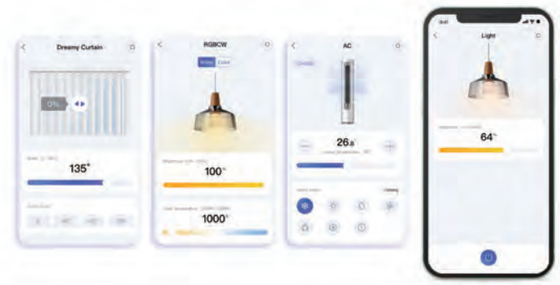
Fast Access to Scenes and Devices

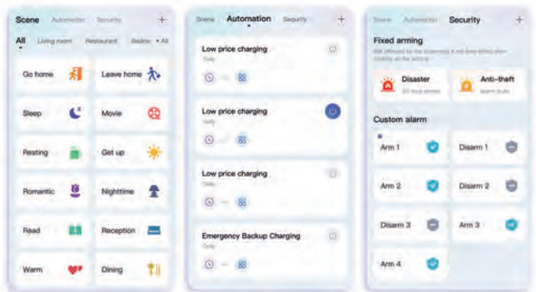
It supports quickly adding commonly used scenes and devices, switching rooms, managing families, and completing core operations in one place for convenient and efficient smart home control.



Intuitive user interface

The interface is both visually engaging and intuitive. Users can easily control elements like light brightness, curtain position, and AC temperature by simply sliding the icons, making interactions straightforward and fun.





Comprehensive Management

Effortlessly manage your smart home scenes, automation rules, and security settings. Add, edit, or delete scenes and automation tasks to create a personalized and secure living environment.



Customizable Notification Alerts

Different message types come with unique notification settings. Users can easily customize which messages they want to receive, turning alerts on or off based on personal preferences.

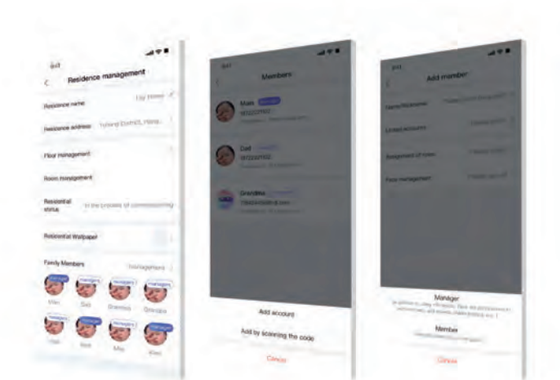
Share Tips and Connect with Users

The Discovery Channel is an interactive content hub where users can share practical tips and ideas for smart living—such as lighting adjustments or energy-saving strategies—making smart home management even smarter.



Flexible Account Permissions

The system offers two roles: Admin and Member. Following the idea of equality within the family, homeowners can grant admin privileges to family members, giving them full access to manage the home.



SMART HOTEL SOLUTIONS

What is HDL Smart Hotel Solution?

To make the day to day running of a hotel simple, efficient and effective, HDL brings hotel operators a powerful control system which can increase energy efficiency, enable services to be delivered faster, improve a building's security, and increase guest comfort and convenience.

Corridor and Elevator Control

Energy Consumption Management

Room Control

Equipment Management



One Hotel Management Software To Realize Efficient Management

HDL Intelligent Hotel Management System (IHMS) works with HDL's smart hotel system. It enables the hotel to manage its guest rooms, room cards, and services on a desktop computer to greatly improves work efficiency while fulfill customer needs in time.

Equipment control

Energy consumption management

Hotel services

Staff management





buspro

shiji GreenCloud CSHotel Luopan XR Oracle Cenium

Cleaning

Check out

Laundry

Vehicle Reservation

Wake up call

Room Service

Integration with PMS

One of the best things about HDL smart hotel solution is that it's fully compatible with 3rd party PMS system, our automation solutions have been successfully integrated with GreenCloud, CSHotel, Luopan, Oracle Cenium, XR, etc.

HDL IHMS

Designed for every type of hotel, HDL hotel solution supports both card and cardless power activation for greater energy efficiency and comfort. Whether through the IHMS Cloud, enabling management directly from a website without servers, or the IHMS Edge, delivering secure, customizable on-site control — HDL empowers hotels with smarter operations and enhanced guest experience.

Key Features

Improve Operation Efficiency

Centralized management enables operators to adjust room set-tings, track device status, and respond to guest needs instantly.

Energy consumption monitoring

The system delivers clear, visualized energy data that helps hotel managers optimize operations, reduce waste, and control costs.

Effortless Room Control—No App Required

Guests simply scan a QR code to control lighting, temperature, curtains, request services—no downloads, no delays.

Customization Support

Flexible interface design tailored to hotel's needs—supporting custom login URLs, background images, and logos for a consistent brand experience.

Guestroom Management	Device Management	Energy Management
Service Expansion	Efficient Operation	Scene Control
Message Center	Account Center	PMS Integration



Benefit From HDL Smart Hotel Solutions

Better Guest Experience

People always expect “a home beyond five-star” from premium hotels. To meet such an expectation, hotels can also invest in hardware apart from providing sincere, thoughtful and friendly services. With such upgraded services, the guest can enjoy home-like comfort and 100% considerate services. What could be better than such a stay?

Higher Energy Efficiency

HDL provides a reliable and efficient system to replace traditional manual operations. By using sensors, logic modules and controlling devices on the central control system, automatic control remarkably reduce the energy waste of manual features, while the users can also get energy usage report from the system to optimize resource allocation and improve energy efficiency.

Lower Management Cost

Various scenes can be programmed using timing and logic features. Hotel staff is enabled to effortlessly control lighting and other appliances and also the multiple scenes on the PC software, iPad or wall-mounted panel to increase management efficiency. On the other hand, staff can quickly and accurately respond to guest's demands.



A TYPICAL STAY AT A SMART HOTEL

From check-in to check-out, a hotel guest must only ever experience the very highest levels of comfort and convenience. To make this a reality, HDL has developed a range of automation solutions designed specifically for hotels. With an automated hotel, the working efficiency can also be improved so that resources can be redistributed towards a hotel' s primary focus,that is guest satisfaction.

Check In

When the guest checks in, the receptionist can select the “Check-in” Mode with HDL Intelligent Hotel Management System. The air conditioner has been turned on in advance, So the temperature and air in the room will be in a comfortable range when the guest arrives.

Impressive Welcome Mode

Impress your guest with a Welcome Mode？ HDL system can integrate with the smart door lock and the specific scene will be triggered when the guest opens the door. He/she can walk in the room with a welcome voice message and warm lights, and the curtains are automatically opened so that the guest can enjoy the beautiful scenery. Besides, different welcome modes can be set and triggered based on day and night.





Friendly Guest Experience

Lighting

HDL makes lighting control simpler and more interesting. Guest can realize the control of lighting via panels, and mobile devices and achieve multiple scenes with lighting. The system will also automatically adjust the lighting in the room with HDL lux sensors, therefore to create a pleasant atmosphere while saving energy for the hotel.

Shading

It would be annoying to get out of bed to close the curtains when getting ready for bed. With HDL guest room solutions, the guest can effortlessly control the curtains on a wall panel or mobile phone.

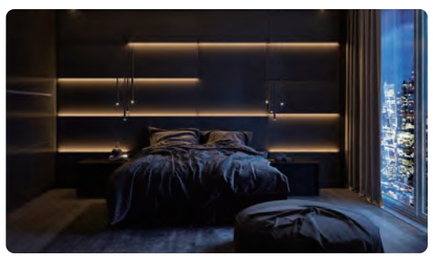
Air Conditioning

The system will automatically turn on the air conditioner and keep a comfortable temperature before the guest gets into the room. And the AC will enter into “Stand-by” Mode after the guest leaves the room to save energy.



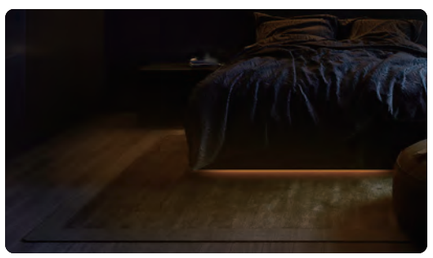
Scene Control

A hotel room can preset the specific scenes for guests to bring thoughtful experience, for example, a romantic mode for the newlyweds, working mode for business people and so on. Guests can just push one button for different modes.



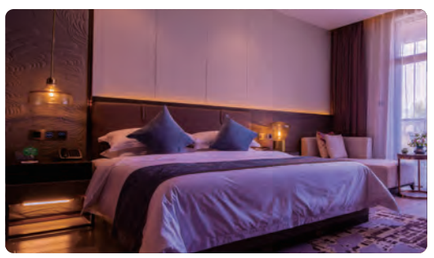
Warm Mode

Just with one button/touch, downlights and lamps with high illumination are turned off, and only light strips and wall lamps are kept to create a warm and comfortable environment.



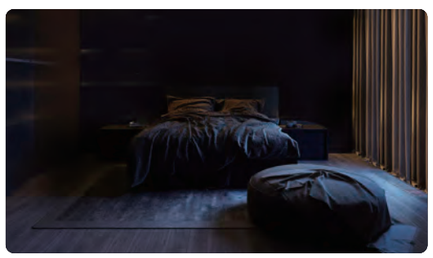
Midnight Mode

When the guest gets up during the night to go to the bathroom but cannot find the panel, press a switch at will to turn on just the soft, comfortable night light. This mode can prevent the guest from pressing the wrong switch that turns on the bright light, which will affect sleep.



Romance Mode

Romance mode is meant to be thoughtful for guests looking for a warm environment. Warm and cozy lighting with romantic music altogether creates a comfortable ambiance.



Sleep Mode

One “Sleep Mode” button saves the trouble of turning off lights at different areas. All lights and air conditioner in the room will be turned off and curtains be closed in Sleep mode.

Easy Service Requests And Response



Room service should be as simple as picking what guests want from a menu. The hotel can preset various scenes on the panels, such as some common scenes like DND, MUR, Away, etc., all it takes is pressing a button. With intelligent hotel management software, the staff can quickly receive the request of the guests and take the corresponding actions.

Three Ways To Refresh Your Stay

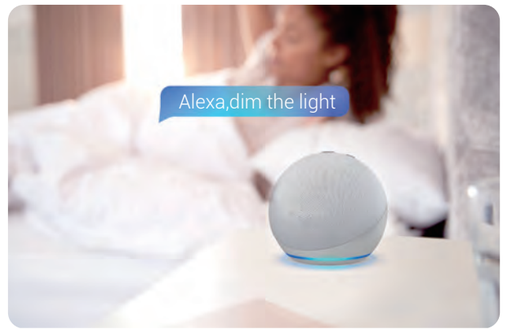


Control With Smart Wall Panels

HDL allows guests to easily control the devices with touch screen panels and button panels, which can enrich the guests' operating experience.

Control With Smart Speakers

To gain more intuitive interaction with room devices. HDL hotel solutions can integrate with Amazon Alexa and Google Assistant. Guests can control all the connected room devices by speaking and sure it' s available to ask Google/Alexa to play beautiful music for you.



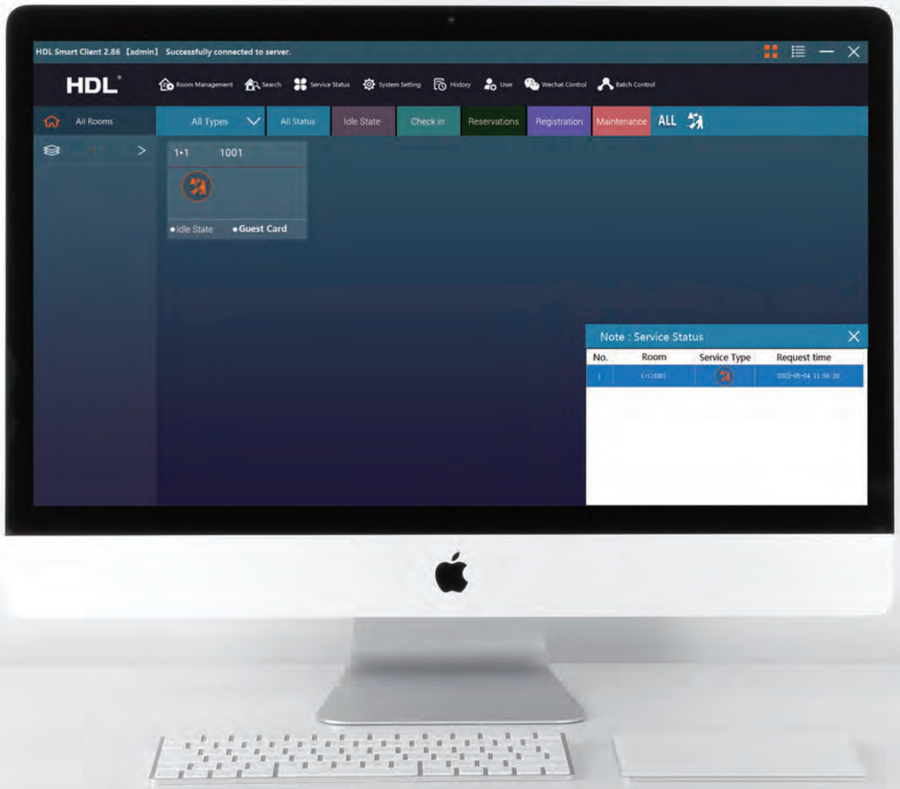


Automatic Control

The bathroom is equipped with an infrared sensor, which can be used to judge whether there is a person. And the system will turn on the basic lighting and exhaust fan once a person is detected, and will turn the lights and fan off after a few minutes when no one is detected. It's convenient and energy-efficient.

Instant Check Out

When the guest selects "Check out", the reception management software will inform the service personnel by voice and graphics to make check-out arrangement in advance to save the guest's time in endless queues at the reception desk, which will maximize the working efficiency and improve user experience greatly.



SOLUTIONS FOR PUBILC AREAS



Lobby

Guests always get the first impression of the hotel from its lobby, so a welcoming atmosphere is crucial. HDL system can automatically adjust the comfortable illuminance environment according to different times, which can make people feel cosy. And through carefully controlled lighting and HVAC, HDL is able to ensure that your hotel always makes a lasting first impression.

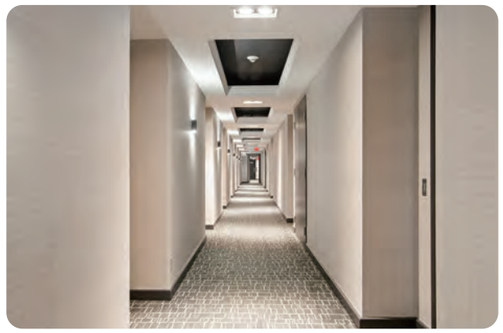


Banquet Hall

Not only can HDL system create an elegant lighting effect in the banquet hall, it also integrates with other stage equipment to meet different needs like wedding banquet. The HDL system allows hotel staff to control the chandeliers, strip lights, down-lights, wall lamps as well as stage lights to create special visual effect quickly and easily.

Corridor/Stairwell

Corridor and stairwells are essential to any hotel, and although only briefly occupied, can contribute significantly to a building' s overall energy expen-diture. With HDL' s extensive range of on-demand lighting solutions, lighting fixtures can be turned off or dimmed when a hallway is unoccupied, and return to their normal operational state when approached by a guest or a member of staff.



Conference Room

Different intelligent modes can be created by programming the blinds, projector, screen, lights, air-conditioner and other devices in the meeting room to be used on various occasions. One-touch on the panel can run multiple devices. For instance, when the user selects the Meeting Mode, the system will turn on all lights, projector and sceen and sound system, close the blinds and activate the air-conditioner.





Café / Restaurant

To create a pleasant dining environment for custom-ers, with HDL solutions, ambient lighting and music can be set to fit the different scenes at any time according to customer' s requirements, seasons or occasions. For example, Romantic Mode with lower brightness and more colors set for Valentine' s Day.



Spa

A spa would totally be a plus in a hotel, where a place gives guests relaxation physically and mentally. HDL can specially develop a SPA control system for the hotel. It mainly controls the ON/OFF of water, fountain and drain valve. At the same time, by installing an LED display beside the pool, it is convenient for guests to check the water temperature in real-time.

HOTEL MODULES

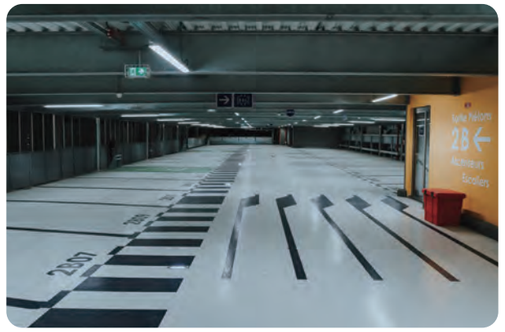


Gym

The lighting, temperature and music matter a lot in a gym. HDL hotel management system can automatically adjust the temperature according to sensors' detection as well as centrally control the lights and music. For example, keep the dynamic music on and dim the lights for some sports like spinning, while play some lively music and set the bright mode for the yoga area.

Garage

The lights for lanes are on while lights over parking spaces are off by default. If a car enters the parking garage, the system will turn on the lights over empty parking spaces to help the guest find the parking space with less time. Meanwhile, lighting management of the parking garage is improved, for the clerk in the garage are enabled to control all the lights on wall panels or mobile phones.





Landscape Lighting

A hotel with wonderful exterior lighting may surprises guests in the first impression. HDL system can automatically turn the façade lighting on according to the weather, season changes, etc. Different lighting effects can also be applied to the hotel' s garden, making it a beautiful place and stand out in the night. A wonderful landscape lighting can also grace the city by brightening the buildings at night.



RCU Room Control Unit 2.0

HDL-MHRCU-II.433

It is the core of a hotel system, supporting hotel host control, mix module control, 48-channel dry contacts and doorbell function. There are totally 23 Channel output: Relay CH1-10 are 5A, Relay 11-12 are16A, Relay 13-20 are 3A and Dimming CH21-23 are 1A.

- HDL Buspro, RJ45, INNER RJ45, UDP/IP Network Interface;
- With 2 RS485 interfaces to support expansion;
- 1CH Door Bell relay and built-in 2CH IR control;
- Supports 50 scenes, each scene can be configured with 32 targets;
- 48 general logics and 8 normally used fixed logics;
- Working current：260mA/24V DC.



RCU Room Control Unit

HDL-MHRCU.433

Up to 48 channels and 99 scenes. It supports hotel host control, mix module control, 24-channel dry contacts, doorbell status display and LED output.

- Light protection delay and mass turn-on delay for each channel；
- Activate corresponding scene according to card master after identification；
- Monitors and controls air conditioners, curtains, lightings, room status, etc；
- Bidirectional data exchange between HDL Buspro and Ethernet；
- The RCU Room Control Unit has a RJ45 port；Working current：300mA/24V DC.



4CH Universal Dimming Actuator

HDL-MHD04A.231

Enables the switch control between four channels of 0-10V dimming output and four channels of MOSFET dimming output.

- Isolated 0-10V output；
- Supports short circuit protection and overheat protection；
- Inner Bus communication is adopted；
- Supports hardware identificationand and adopts dial code control;
- Working voltage：15~30V DC；
- Working current：55mA/24V DC.



10CH Hotel Room Mix Control Module

HDL-MHMIX10.231

It supports 6CH 5A relay control output, 2CH 10A relay control output and MOSFET dimming output.

- 8 relay channels and 2 MOSFET dimming channels；
- Supports short circuit protection and overheat protection；
- Supports hardware identificationand and adopts dial code control;
- Inner Bus communication is adopted；
- Working voltage：15~30V DC；
- Working current：100mA/24V DC



8CH High Power Switch Actuator

HDL-MHR8.231

It supports control output of relay switch. Totally 8 relay channels: 2CH 10A and 6CH 5A, supports lights, FCU and curtain control.

- The relay channel can control the switch of connected channels；
- Inner Bus communication is adopted；
- ID address of the actuator can be config ured via dial code control；
- Working voltage：15~30V DC；
- Working current：100mA/24V DC.



RCU Lite

MHMIRCU-HT.13

It is an RCU module with thirteen integrated channels, including seven TV8 relays, three light strip control channels, one 25A relay, two MOSFET dimmer channels and one doorbell output. It is widely used in hotel smart home systems for controlling and managing doorbell panels, curtains, lamps, fans, air conditioners, floor heaters and other devices.

- Integrates with third-party device;
- Power on with/without a keycard;
- Supports up to eight groups of air conditioners, eight groups of curtain motors, four fans, three channels of heated floors;
- Sixteen channels of dry contact, supporting
- multiple modes and input/output settings; Customizable doorbell;
- Supports fifty scenes.



51CH Hotel Room Control Host 2.0

MH48IP-II-HT.231

It has 51 dry contacts, 2 RS485 expansion interfaces, 1 Buspro bus interface and 1 UDP network communication interface. The device can control doorbell panels, curtains, lights, fans, air conditioners, floor heating and other devices.

- Integrates with third-party device;
- Two modes are available: card-free power-taking and card-inserting power-taking;
- Supports up to 8 air conditioners, 8 curtain motors, 4 fans, and 3 floor heating devices;
- Personalized doorbell control methods are available;
- Supports 50 scenes, each scene can be configured with 32 targets;
- 48 general logics and 8 normally used fixed logics;
- Supports system time setting;
- Saves the last history record.



Hotel Room Control Host

HDL-MH48IP/D.231

Up to 48 channels and 50scenes, it has 51-channel dry contacts and supports hotel room host control and dry contact function.

- Light protection delay and mass turn-on delay
- for each channel；
  Activate corresponding scene according to
- card master after identification；
  Monitors and controls air conditioners,
- curtains, lightings, room status, etc.；
  Supports connecting to devices in RS485
- commu nication；
  The RCU Room Control Unit has a RJ45 port；
  Working current：600mA/24V DC.



IOU Mix Control Actuator

HDL-MHIOU-II.432

It supports functions of MOSFET dimming, relay, curtain control, dry contact, doorbell control and LED output.

- Channel 1 and 2 are trailing edge dimming outputs, up to totally 1.6A current output；
- Channel 3 to 12 are relay outputs, each channel is 5A；
- Channel 9 and 10, 11 and 12 can be used for curtain control；
- 14-channel dry contact input；
- Working voltage: 15~30V DC；
- Working current: 185mA/24V DC.



22CH Hotel Room Mix Control Module

HDL-MHMIX22.232

It supports 16CH 5A relay control output, 4CH 10A relay control output and MOSFET dimming output.

- 20 relay channels and 2 MOSFET dimming channels；
- Supports short circuit protection and overheat protection；
- Inner Bus communication is adopted；
- supports hardware identificationand and adopts dial code control;
- Working voltage：15~30V DC；
- Working current：180mA/24V DC.

SMART BUILDING SOLUTIONS

What Is HDL Smart Building Solution?

HDL smart building solution is an automation solution designed for commercial buildings basing on smart systems. It enables users to control and manage lighting, shading, HVAC, security system or more features in the building to improve energy saving, efficiency and occupant comfort.

As smart technology developed, a building solution can be improved with the building management system (also known as BMS) that can utilize all kinds of actuators and gateways to enable device communication and control of multiple applications on a single software platform.

Lighting System

Shading Control System

HVAC System

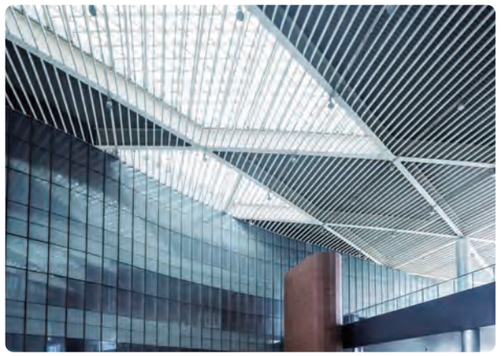
Audio-Video Entertainment System

Sensor

Security System



Why we need automation solutions for commercial buildings ?



Energy Saving

Reducing at least 30% consumption of power



Efficiency

Improving efficiency and optimizing operating costs



Comfort

Ensuring a comfortable and healthy environment



Security

Providing integrated security solutions to protect people and buildings.

Smart Building

WHAT HDL OFFERS FOR SMART BUILDING SOLUTIONS?



Smart Lighting System

Automatic control according to occupancy

Automatic lighting control according to occupancy is commonly applied in buildings. With motion sensors, lighting control could be energy-efficient. For example, the system will automatically switch off the lights in a empty room. But one enters the room, lights will be switched on again.

Circadian lighting

With smart lighting solutions, the brightness can be kept at a comfortable level and the color temperature of indoor lighting will be automatically adjusted according to the variations of natural light to create healthy lighting for buildings.

Lighting effect

On occasions like meeting, eating and party, you can adjust the brightness, color and color temperature of the lights to create the right atmosphere.





Smart Shading System

Centralized control

With centralized control over all devices and appliances, you can remotely draw the curtains in a room, or all the curtains in the building by pressing a single button. Convenience and ease through automation is achieved effortlessly.

Accurate control

With the HDL curtain motors, you can select a percentage to let them stop at a preset position to make agreeable luminous environments as you want.

Quiet operation

The sound made by the curtain motor is lower than 35dB. The operation can be such smooth and quiet without disturbing the occupants.



Smart Audio and Video System

Diversified control mode

With the audio and video system connected to HDL smart system, the occupants are allowed to manage the electrical devices and appliances in multiple ways, such as wall panel, smartphone, tablet, PC and even voice assistant, to maximize productivity and make their life easier. For example, when the device isn' t within arm' s reach, voice control provides the convenience of being hands-free.

One-step scene control

HDL automation system provides occupants with one-step management of multiple devices through the setting of scene linkage, for example, when you are preparing for the meeting, just need to press one button to open all devices such as projector and music to quickly create a perfect meeting scenario.

Smart HVAC Control System

Easy control

HDL smart system can automatically run the air-conditioning, heating and ventilation system. It keeps the ambience healthy and comfortable for the occupants. It also gives building managers intuitive and convenient ways to do it manually. For example, you can set your AC temperature with a PC, mobile device, or simply touch the wall panel right beside you.

Save energy

If the windows are left open for a certain period, HDL system can automatically shut down the air conditioning or heating systems to avoid wasting energy. In the meantime, the building manager will be notified on the phone.





Smart Security System

Improve safety management

With HDL security system, some of the functions can be realized to guarantee the safety of the occupants, such as fire alarm, water leakage, and broken light circuits detection. For example, lighting and audio can be fully incorporated into a building's fire protection system to warn the occupants in case of an emergency.

Real-time monitoring and alert

Most buildings particularly have the demand for security systems, which can be configured with access control, security alarm systems, CCTV systems, etc. The management staff will receive a message when an intruder is detected.



Multiple Solutions For Different Types Of Buildings

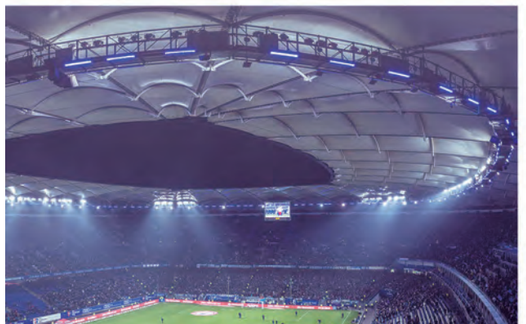
A building automation system can be used in many different projects, ranging from commercial buildings to public non-residential buildings. Discover here the different use cases.

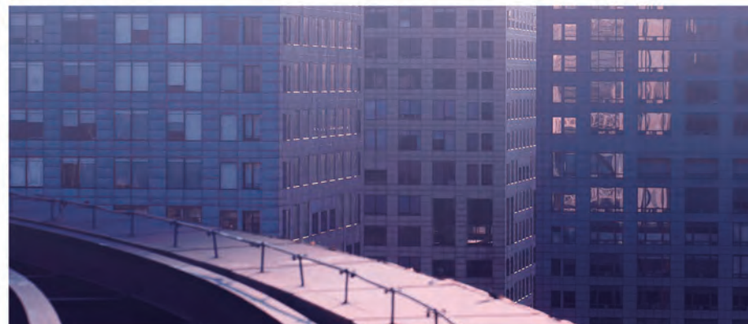












Office



There are many ways that HDL smart building solutions can benefit offices. For example, HDL system can automatically turn off lights, air-conditioners and other devices in an empty room to save energy. Centralized control on a PC or mobile app will greatly improve the efficiency for property management.



Constant lighting

The system can keep the brightness at a constant range by automatically controlling lights and curtains. The occupants can focus on their work without being distracted while using the least electricity for lighting.

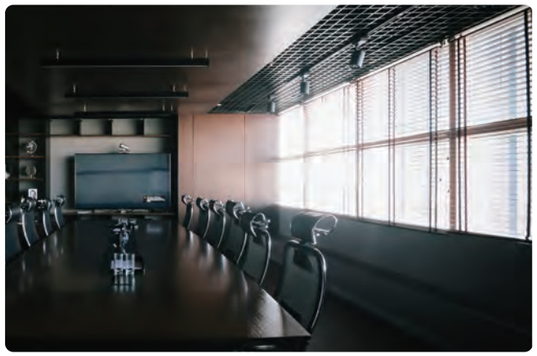
Easy control for administrative staff

When the office is automated with smart systems, administrative staff are allowed to manage electrical devices and appliances on a PC or mobile devices. The simple and intuitive user interface will make their work more efficient.



Reduce chances of wasting energy

Integrating sensors and logic settings, HDL system can turn off lights, air-conditioners and other electrical devices in an unoccupied room. You are not going to waste energy even when you forget to turn them off.





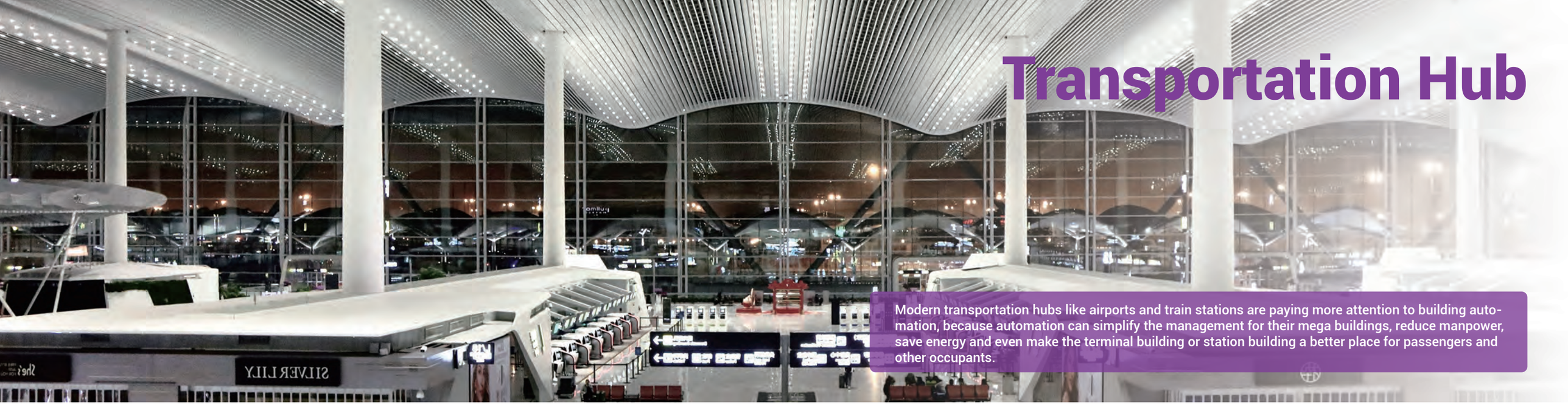
Scene control with one-button

With scene control, you can easily set the ambience for your ongoing activity. For example, when you need to use the projector in the meeting room, select the "Presentation Mode", then the system will dim down the light and close the curtains while turning on the projector.



Healthy air quality

Most offices have ventilation system to refresh the air. Smart systems can help detect air quality and trigger ventilation when it is needed and only when it is needed. It keeps the air healthy in the office. But the administrative staff don‘ t need to bother.



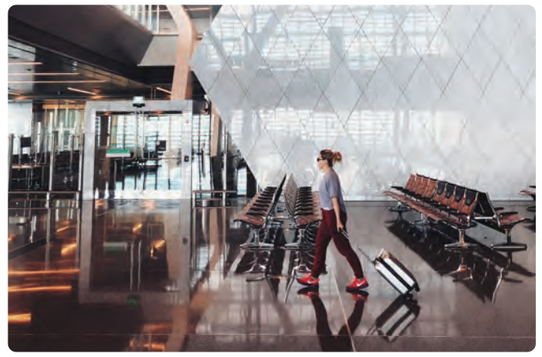
Transportation Hub

Modern transportation hubs like airports and train stations are paying more attention to building automation, because automation can simplify the management for their mega buildings, reduce manpower, save energy and even make the terminal building or station building a better place for passengers and other occupants.



Centralized control

HDL allows management staff to intuitively control lights, HVAC system, shading and background music system for the station building with a PC in the control room, or anywhere with an iPad. This approach can also apply to other areas such as cargo warehouses.



Turn off unnecessary lights

In public areas like corridors, the system can turn off some lights to save energy when it' s been empty for a given period of time. When one enters the place, it can turn on more lights.

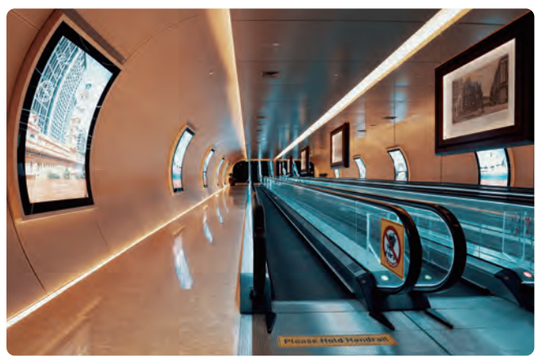
Make use of natural light

HDL solution can keep the lounge at a comfortable brightness level by integrating blinds and lighting devices. In the meantime, natural light is fully used to save energy. For example, the system will open curtains to let in light. But if the light is not bright enough when curtains are fully open, then it will switch on lighting devices.



Easy control for decorative lighting

Decorative lighting is commonly used in modern station buildings. Designers are turning airports into attractions by adopting all kinds of lighting effects. HDL smart system will make it easy to control the brightness, colors and color temperatures of lights. You can simply control lighting on a wall panel with intuitive UI.



School



The buildings like teaching buildings, laboratory buildings and the library in a school are scattered in a large area. To improving the management efficiency and promote the happiness of faculty and students, automation solutions are needed in a school. Meanwhile, the management staff can realize centralized control of lighting, HVAC and other devices to avoid the waste because of careless work.



Constant lighting

The bad lighting conditions in classrooms or libraries could be needlessly harming student's health and school performance. With HDL smart lighting solutions, the brightness in the classrooms can be kept at a comfort level while making full use of natural light to protect the occupant' s eyesight.

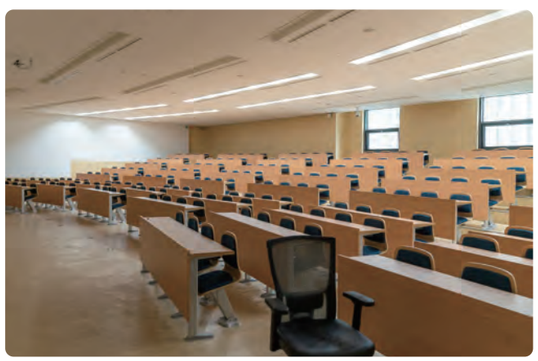
Automatic control according to occupancy

Automatic lighting control according to occupancy is commonly applied in buildings. For example, the system will automatically switch off the lights in the corridors of teaching buildings at weekend. But one passes the corridors, lights will be switched on again.



Scene control

Different modes were offered to meet different needs. The teachers and students can easily get the different scenes in the classroom on the panel, such as self-study mode, projection mode, etc.





Electricity safety

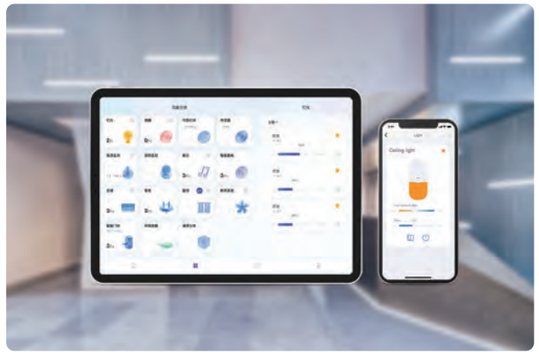
With HDL electricity safety management system, the management staff are allowed to get a clear picture of the electricity consumption and view real-time electricity usage by area and facility on management platform. To avoid electrical hazards, the power supply is automatically cut off in emergency for abnormal conditions such as leakage and overload, and the management staff will recieve an alert.

Hospital

Although hospitals need to take the comfort of patients as the priority, they can still benefit from automation solutions. With smart systems installed, nurses, doctors or other hospital staff members can control electrical devices and appliances in a more convenient way.

Efficient control of all rooms

As lights, air-conditioners and curtains are connected to smart systems, hospital staff members can control all these devices from the Nurse Station on a PC, or with an iPad on the go. This feature allows nurses to check room status and react in real-time. Just imagine, a nurse is able to set the temperature for a specific room with the iPad in her hands.



Lighting with colors

RGB lighting could be applied to areas like activity rooms and gardens. With HDL solutions, it is easy to control lighting effects of colors. Hospital staff can select a specific color or a dynamic lighting effect on the wall panel or app. Decorate the hospital with colorful light, ease the pain of sickness.





Maximize energy efficiency

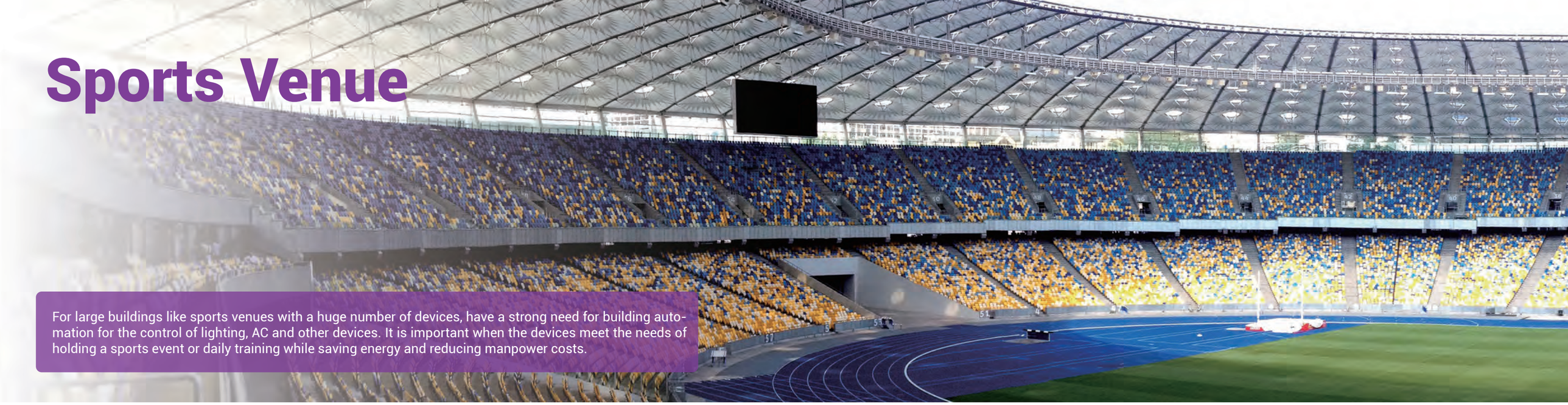
With motion sensors, corridors, staircases, and infrequently used areas can utilize on-demand activation of lighting and HVAC for maximum energy efficiency. HDL smart system also can take care of lighting for open areas such as the helicopter pads, gardens, outdoor parking lots, etc.



Improve power safety

Based on safety considerations, HDL energy management solution can detect a variety of power consumption indicators. If abnormal conditions occur in the building, such as excessive equipment current, disconnection, high temperature, etc., the system alerts the admin in time to prevent emergency accidents and ensure 24H stable operation.

Sports Venue



For large buildings like sports venues with a huge number of devices, have a strong need for building automation for the control of lighting, AC and other devices. It is important when the devices meet the needs of holding a sports event or daily training while saving energy and reducing manpower costs.

Centralized control

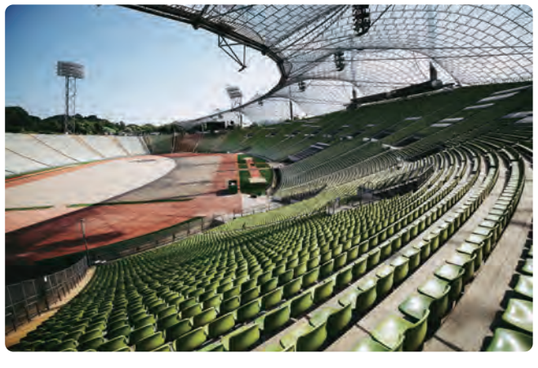
An entire sports venue can unify its lighting channels into one centrally controlled system. The management staff can remotely control lights, HVAC system, shading and background music of areas like swimming pool, track field and basketball court in the control room.





Turn off unnecessary lights

In public areas like training venues, the system can turn off some lights to save energy when it's been empty for a given period of time. When one enters the place, it can turn on more lights.



Scene control

To quickly control the devices and appliances at the sports venues for particular occasions, the management staff can preset the scenes and activate it by pressing one button. For example, only the lights and other devices in the training area can be activated in a training mode. Commonly lighting scenes include Game Mode, Training Mode and Cleaning Mode.

Efficient energy saving

HDL offers a visualized energy management platform, through which the power consumption of equipment in each area can be viewed at any time to achieve efficient control, and the energy consumption data analysis can be conducted according to the operation status of power consumption to optimize energy solutions and achieve energy saving.





Industrial Plant

Apart from production machines, the electricity of the HVAC and lighting systems can also be a big cost of an industrial plant. With HDL automation solutions, the plant staff can centrally control all the connected devices and automatic control can be realized through HDL extensive modules and sensors so that the plants owner can save costs while the operation meets basic needs.



Centralized control

An entire plant, including offices and production plants, can realize centralized control of all automated elements. Users can easily control the connected devices on a PC, HDL wall panels or an iPad to improve working efficiency. The staff can turn off all the devices by pressing one button at the end of the work hour.

Automatic control

For some areas like corridors and stairwells, the system will automatically switch off the lights to save energy. And all the connected devices can be activated when someone passes by.



Energy management system

A monitoring system is necessary for a plant manager. With HDL PC based management software, the manager can monitor the electricity of the whole plants in real-time on the dashboard and get a report about the power consumption for optimizing resource allocation.



Musuem

A museum is an institution that cares for a collection of artifacts and other objects of artistic, cultural, historical, or scientific importance. It not only makes efforts to protect the exhibits but also show the exhibits to visitors. With smart building solutions, the managers can easily set the proper temperature for the exhibits and create the perfect atmosphere for visiting.

Centralized control

The managers can control the entire museum's lighting, HVAC, audio, and other connected devices through password-protected wall panel beside the exhibits, or centrally via a PC based management software.



Display effect

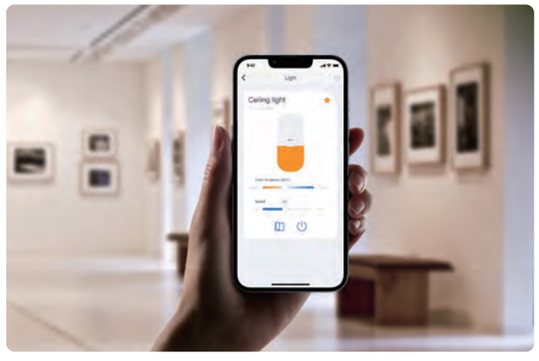
According to different conditions, the lighting effect can be different to better highlight the exhibits. For example, for different exhibits like wood carvings, artwork and pottery, the museum can select the various light color temperature for the perfect effect.





Automation for exhibit protection

It' s an important job of protecting the exhibits at a museum and automation solutions could really help. For example, the museum can strictly control the lighting feature and flexibly adjust the color temperature on a PC to make sure the visitors see all the details while reducing damage.



Safety

To ensure the safety and performance effect, in the event of a bulb or lighting channel malfunctions, the system manager will receive an alert message when unusual conditions detected.



Exhibition Center

With a good flow of people and large areas, an exhibition and convention complex has a high demand for high-intensity lighting and excellent HVAC systems to guarantee the exhibition going well. Therefore, it's important to automated an exhibition center for centralized control, automatic control, etc.

Centralized control

The managers can control all the lighting, HVAC, audio, and other connected devices of the entire exhibition center on a PC. For example, he/she can quickly turn on all the devices of a simple area or the whole hall at opening time to improve efficiency.



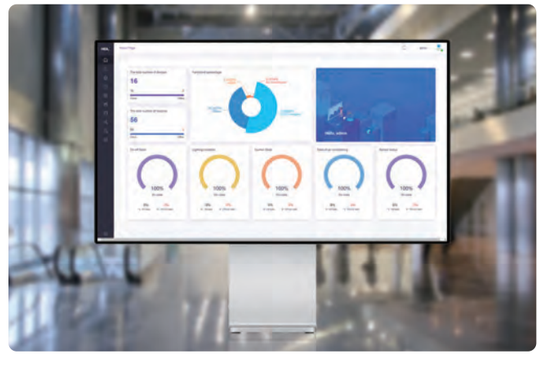


Automatic control

According to the different scenarios of each area and each time period, all needed devices can be quickly controlled for different operational requirements in the exhibition center. For example, it's time to close exhibition, Closing Time Mode will be automatically activated, so you will have background music, LED lights and HVAC system for reminding the visitors and exhibitors.

Energy management system

To ensure the operations of an exhibition and convention complex, it' s crucial that the manager can monitor all the devices centrally. On HDL management software, the manager can monitor the electricity of the whole hall in real-time for safety and get a graphical report about the power consumption for saving energy.



City Complex



As a large combination of buildings for various functions, a city complex has to adopt automation solutions to at least facilitate management and attract customers in public areas. With HDL solutions, you can easily manage numerous lights covering multiple floors and large areas. And you also can create more possibilities for facade lighting and landscape lighting.

Centralized control for large areas

The building manager can control all devices in the control room, or with a mobile device anywhere. You can easily monitor and control devices on all floors and no longer have to spend time patrolling to check electrical appliances one by one, which will greatly improve the management efficiency.





Turn off unnecessary lights

In public areas like corridors, the system can turn off some lights to save energy when it' s been empty for a given period of time. When one enters the place, it can turn on more lights.



Quickly create the right ambience settings

Quickly control all needed devices for different scenarios in the city complex by pressing one button. For example, select the Business Hour Mode, you will have background music, LED lights, HVAC system and curtains ready at the right status. Or select New Year Mode for lighting effects of the New Year' s Day.

Use more natural light and less electricity

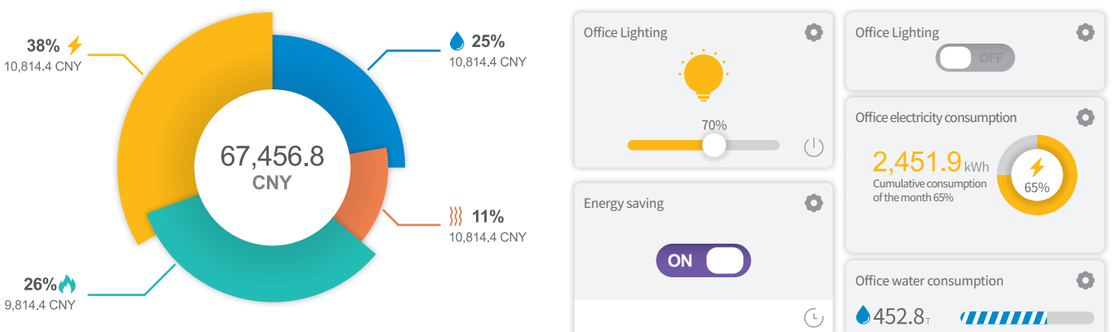
With lux sensors installed, the system knows the brightness level of the building. It can open curtains or blinds to let in as much as light as possible before it switch on the lighting devices, keeping the brightness level at a comfortable level while using as least as electricity as possible.



HDL GraView Platform

GraView is a web-based building management platform designed by HDL specifically for public building projects. The interface is simple and avoids redundant learning and operation steps. It can centrally control various devices in different areas, optimize building performance, and improve management efficiency.







Intuitive operation interface

The design of GraView is modular and concise. The navigation bar is classified, all components in the selected area are automatically arranged, and the equipment status, scene, and energy consumption are at a glance.

Real-time monitoring, efficient operation and maintenance

The platform displays the device's on, off, and fault status in real time, and can set device life reminders. When there are abnormal conditions such as device failure, disconnection, and control failure, it will simultaneously send alerts to the admin to reduce inefficiencies caused by information gaps.





Clear picture of the electricity consumption

With HDL energy management solution, users can view real-time electricity usage by area and facility on GraView. The graphical visualization provides a clear view of the electricity consumption.

Statistical analysis of energy efficiency

HDL GraView is able to monitor the operation status of energy consumption in a multidimensional and comprehensive way and analyze the dynamics of energy consumption in detail, so as to efficiently control and optimize the status of equipment management.



HDL Case Studies

From high-end urban living areas to villas close to natures
From cities's famous landmarks to upscale hotels
What lies behind these countless excellent cases is the continuous stability and reliability of HDL

Emirates Hills

Project information

As the world's most luxurious residential area, Emirates Hills is a gated community located in Dubai, United Arab Emirates, and it is composed of 475 Villas and 175 of the Villas were automated by HDL.

Solutions

The villas here deserve the best features of smart home solutions. So HDL team designed a With HDL Buspro installed, the users can use an iPhone to control every connected device in the building: lights, AC, curtains, security system and audio device as well as the outdoor lighting in the garden.

Result

HDL's stable smart home systems and integrated solutions makes the total home control easier than ever before, also brings more comfort and enhances security level.

Smart Home



Wave Island Apartments

Pain points

The challenge was to integrate a smart home system that matched the luxury of the development, offering residents seamless control over their environment for a comfortable and convenient stay.

Solutions

HDL delivered a tailored KNX smart home solution for each apartment, elevating the living experience in Wave Island to new heights. Key features include:

·**Lighting and Blinds Control:** The solution featured DALI dimming modules and curtain controllers, allowing residents to effortlessly adjust the ambiance of their living spaces.

·**Climate Regulation:** By integrating LG heat pumps and fresh air systems, the smart home solution ensured automatic temperature regulation, humidity control, and ventilation.

·**Third-Party Integration:** The system also integrated various third-party devices, which offered the residents the flexibility to control their environment according to their preferences.

Result

HDL smart home system enhanced the luxury living experience at Wave Island, offering residents seamless control, comfort, and convenience in a stunning setting.

Smart Home



Banc Apartments

Pain points

The developer wanted to make Banc different from other luxury apartment by smart home system, and also to offer unique amenities that genuinely enhance residents'lifestyles.

Solutions

Each apartment has a HDL Buspro Wireless System automatic system designed to control:

· lighting - each circuit is dimmable, redidents are allowed to easily control the devices by smart panel or mobile app to saves their time and energy.

· HVAC - temperature and air quality in each room are automatically kept in a comfortable range.

· Music - each apartment is installed with HDL Home-Play players with stereo surround sound to realize multi-zone music control.

· Intercom - intercom at the entrance have connected the HDL automation system so as to improve the convenience and security of the home by letting residents monitor the front door from wherever they are.

Result

The development has installed HDL's wireless smart system covering lighting control, HVAC, music and intercom system, which allows it to be the best seller in the local market.

Smart Home



Novi Dorćol Complex

Pain points

The developers needed a smart home system that could seamlessly integrate into both the modern design and the historical elements of the Novi Dorćol Complex. The goal was to provide residents with smart control over their living spaces while preserving the architectural essence of the area. Additionally, the system had to cater to the growing demand for energy efficiency and environmental consciousness.

Solutions

HDL equipped all 1,300 apartments in the Novi Dorćol Complex with the comprehensive HDL Smart System. This system allowed users to effortlessly manage various aspects of their homes, including lighting, heating, cooling, blinds, ventilation, and water valves. What set this project apart was the integration of a meteorological station within the smart system, which monitored real-time data on wind speed and sunlight intensity. The system automatically adjusted the blinds based on these factors, enhancing comfort and optimizing energy usage. For ease of use, users can control all these functions through a smart panel, a computer, or the HDL On Pro App. This user-friendly interface allowed for the customization of living spaces to suit individual preferences, making everyday life more convenient and enjoyable.

Result

With 1,300 apartments set to feature HDL smart home solutions, the Novi Dorćol Complex stands as a testament to HDL's expertise and reliability in meeting the specific demands of the European market. This project not only showcases HDL's ability to deliver sophisticated and dependable smart home systems on a large scale but also highlights how technology can be harnessed to transform living spaces while respecting and preserving the historical character of the area.



Smart Home

W Macau - Studio City

Pain points

The project needs to ensure the network security, system stability and data backup. At the same time, it requires the functions can interface with the hotel's Opera PMS system. What's more, in order to match the luxury positioning of the hotel, the hotel also put forward the demand for high-end personalized customization.

Solutions

HDL has configured 557 guest rooms, a public area and a water park at the W Hotel with HDL Smart Hotel Solutions. All equipment in the guest rooms can be controlled through the HDL Tile Series Panel, lighting can be controlled through different zones. It can also be linked through the scene mode to reach the ideal state. In addition, the user interface of the panel has been customized to provide easier control and integrate with the unique design style of the guest room. Adopting the HDL cardless power activation system, once the sensor in the guestroom no longer detects any activity, the light turns off automatically after 3 minutes and activate the energy-saving mode. This convenient and energy-saving feature ensures that the guest room remains well-lit, while also conserving energy when not in use. In addition, the customized IP protocol system provides a safe and stable data transmission service.

Result

W Macau - Studio City officially opens on September 8, 2023, together with HDL, will further enhance the guests' intelligent hotel experience, allowing them to experience Macau's fascinating cultural history from a new perspective.

China

Smart Hotel

IHG HOTELS & RESORTS

InterContinental

Pain points

To ensure that the guests of the Intercontinental were provided with a truly five star service, and every element of a guest's room must convey luxury, comfort, and convenience for a truly memorable guest experience.

Solutions

After evaluating what the hotel wished to accomplish through automating all of its 450 guest rooms, HDL provided a combined solution offering circuit protection, power management, lighting control, all interfaced with the door access system to provide energy saving alongside a seamless guest experience. Customized HDL switches and panels were installed to allow guests to control their lighting, shading, and HVAC systems effortlessly. These one of a kind switches and panels were also interfaced with the door access system so that as soon as a guest opened their door, the lighting, shading, and HVAC entered into a preset welcome scene.

In addition to this when a guest leaves their room, the system automatically deactivates the room systems and saves the room state settings. When the guest returns, every automated element resumes its prior operation or mode. This attention enables a guest to not only create their perfect environment, but have it automatically reactivated so that they needn' t waste time adjusting the lighting and appliances again.

Result

HDL hospitality solutions enable the hotel to truly elevate their service level, while providing increased efficiency and guest comfort. Able to be fully customized with tailored functions, materials, colors, logos, icons and languages, HDL is the perfect partner for boutique hotels or international chains.

London

Smart Hotel



Türkiye

Mövenpick Istanbul Marmara Sea

Pain points

Managing large-scale hotel operations while ensuring top-tier comfort and energy efficiency is a complex challenge. The need for a centralized and intelligent control system was crucial for optimizing hotel operations and delivering superior hospitality services.

Solutions

HDL Türkiye team provided a comprehensive automation solution, ensuring that all lighting, curtain, and AC systems in the hotel are seamlessly integrated. All rooms and common areas are equipped with lighting control, curtain control, and climate control through the HDL Buspro system.

HDL Guest Room Management System works together with the Vingcard door lock to create synchronized check-in and check-out scenes, optimizing room comfort and energy efficiency. Also, we integrated with NETx Automation for real-time management of all the devices. And Guests can control room devices via a mobile app ensuring convenience and personalization.

Result

The implementation of HDL smart control systems has transformed the hotel's operational efficiency and guest experience. The seamless integration of automation with PMS minimizes unnecessary energy consumption, reducing operational costs. With HDL solutions, Mövenpick Istanbul Marmara Sea ensures a luxurious yet energy-efficient stay for its guests.

Smart Hotel

DoubleTree by Hilton Karaka

Pain points

The hotel needs to ensure that all guests can easily use their facilities, so that guests can experience the best service of a four-star hotel.

Solutions

HDL configured the HDL KNX Control System for the DoubleTree by Hilton Karaka, and adopted a professional Smart Hotel Solution. The projects involved: external lighting control, automatic lighting control through presence sensor detection and time logic, usage monitoring, HVAC control, BMS integration, projector screens control and so on.

Meanwhile, the public area are automated with HDL lighting system, covering the corridors, staircases as well as conference hall. Conference meeting rooms have dividing walls and depending on the configuration of the rooms the lights can be controlled from the single point. With sensors and logic modules, all lights can be automatically adjusted in brightness according to external lighting conditions. The brightness and color temperature of the lights can also be adjusted individually through the DLP Smart Panel.

Result

The HDL Smart Lighting System at the DoubleTree by Hilton Karaka creates a great atmosphere for guests to stay in. At the same time, the system also saves the hotel's energy consumption, saving labor costs.

New Zealand

Smart Hotel

Hyatt Place Taghazout Bay

Pain points

The hotel rooms and public areas need to be intelligently controlled. And as a beachfront hotel, the guest rooms need to create a relatively quiet environment to ensure guests get a good rest.

Solutions

HDL equipped 60 guest rooms and public areas of the hotel with HDL Smart Control System. In the guest rooms, the hotel mainly uses Guest Room Control Modules (RCU). And through the Enviro Smart Panel, guests can control the lighting, curtains, HVAC and other equipment in the guest rooms. In addition, a variety of pre-set scene modes allow guests to control a variety of devices to achieve the ideal state with one click, so as to have a quiet and comfortable accommodation experience.

In the public area, the hotel is equipped with HDL Smart Lighting Control, which adopts back-edge dimming technology and supports 512 levels of brightness adjustment. It not only realizes light on or off, but also realizes the adjustment of color, color temperature, and brightness to meet the lighting needs of different scenes.

Result

Hyatt Regency Tahazout Bay is a seaside hotel, which has gradually become a popular tourist destination with the support of HDL Smart Control System. With HDL Smart Control System, every guest can experience the magic of smart technology and the comfort of being at home.

Morocco

Smart Hotel



Myanmar

Wyndham Grand Yangon Hotel

Pain points

The hotel wanted to achieve unified and efficient management of lighting in guest rooms, lobby, banquet hall, lounge and other public areas. In addition, the control of lighting atmosphere in the lounge and banquet hall is also important.

Solutions

HDL Buspro System was installed in all 260 luxury guest rooms and public areas of the hotel. In the lobby area, HDL equipped the hotel with an intelligent dimming module that enables the hotel to maintain the softest lighting atmosphere at all times. At the same time, the staff can easily switch between various lighting modes through the wall-mounted panels, phones, tablets or PC, which improves the efficiency of management and brings a comfortable experience to the guests.

In lounges and banquet halls, HDL realizes different lighting effect through Smart Control System, creating different dining atmospheres for guests.

In the guest rooms, HDL Smart Control System sets up various scene modes. When a guest enters a room, the system will open the Welcome mode and turn on the lights and air conditioning automatically; when the guest watches a movie in the room, the system will dim the lights in the room or turn off some of the lights, to create the most comfortable mode of watching a movie.

Result

HDL empowered Wyndham Grand Yangon Hotel with the digital management and helped the hotel to become a new landmark in Myanmar. HDL Buspro System was also recognized by the hotel for its advanced technology and stability.

Smart Hotel

Office Block of the Australian Institute of Architects 41X

Pain points

The project has been designated as a "five-star green building" by the Green Building Council of Australia. It is intended to provide a safe office environment and create a comfortable lighting environment while reducing light pollution.

Solutions

HDL equipped the building with the advanced KNX products, including DALI gateways, relays, multifunctional sensors and smart panels, which could run differently in different scenarios based on the human traffic, time period and working mode. For example, turning off unnecessary lights and automatically turning them on when necessary to save energy.

Meanwhile, HDL KNX system was provided in the building to detect the use status of electrical equipment on each floor and monitor the energy consumption. Thus, management staff could effectively manage the central air conditioning of each floor according to the status information shown in the system.

Result

HDL provided the building with stable, flexible, environmentally friendly lighting system. It significantly extended the service life of lights and electrical equipment, and made them safe, energy-saving, user-friendly and intelligent, thus helped those who worked in the building to maximize the efficiency of their tasks.

Smart Office



International Airport

Pain points

The airport had strict requirements for the stability of the lighting system, requiring that the lighting system would not hamper the operation of the airport. Meanwhile, the question of how to efficiently, conveniently control the lighting system was also an important focus.

Solutions

In order to satisfy the intelligent control of LEDs and fluorescent lamps at Dubai Airport, HDL's technicians and engineers decided to integrate multiple dimming technologies including leading-edge dimming, trailing edge dimming and DALI dimming to achieve the automation control of lighting brightness and color temperature, while equipping the airport with HDL's DMX scene controllers for the control of light color and brightness.

The HDL smart touch wall panels allowed airport staff to directly monitor all lighting equipment and HVAC equipment connected to the system and to separately control a single equipment or multiple equipment at any time, thus making the system's use quick, convenient and labor-saving.

Result

HDL's smart lighting control system is highly appreciated for its stable, energy-efficient operation, which enhanced the airport's overall operational efficiency and user experience.

Dubai

Smart

The library of the University of the Arts

Pain points

Considerable waste is generated through inconvenient management together with the low efficiency of operation and maintenance because of broadly dispersed control points.

Solutions

HDL was installed for automating lighting, HVAC, energy measurement, safety, etc.The library is equipped with presence sensors, so the lights can be turned on automatically where there comes someone and turned off after a delay of 3 minutes when there is no one. The system can also detect the intensity of natural light and automatically adjust the brightness of indoor lights, which can save a lot of energy, but also bring a more comfortable feeling.

In addition to lighting, the temperature and humidity sensors and quality sensors are installed in the system. When the temperature, humidity and air quality reach the preset specific standards, the air conditioning and fresh air system are turned on to realize the partition control and automatic control.

As energy consumption meter and security system are integrated for the library, the data provided by energy consumption meter can help property managers to analyze and summarize the energy consumption situation on time so that they can take more targeted measures. And during the closing, if doors and windows are opened without permission, the HDL smart system will trigger an alarm to alert intruders to ensure the security of library items.

Result

HDL intelligent control system connects kinds of devices to a platform, which is conducive to saving energy and improving efficiency.



Monash Children's Hospital

Pain points

The sensitivities of doctors and patients must be fully taken into account in the design of light control to provide a healthy, environmentally friendly and comfortable lighting environment. Hospital is running ceaselessly the whole day, so equipment stability is very important.

Solutions

HDL used KNX DALI and the DMX dimming mode for Monash Hospital, incorporating different smart lighting solutions for different functional areas.

For public areas and wards, both single control and centralized control of light loop were available on the panel, and the system could automatically adjust the brightness of lights based on natural light so as to ensure a more healthful, comfortable environment.

For leisure areas, with DMX512 controllers applied, staff could preset multiple lighting effects and change the light color at any time o perfectly match the themes of activities held in children's leisure areas.

For outdoor spaces, the system could automatically turn on outdoor lights based on the brightness of natural light at dusk, such as when it's below 50 lux, and automatically turn off them at dawn so as to make full use of the natural light.

Result

HDL's intelligent lighting solution effectively improves the hospital's lighting environment and create a comfortable, relaxed lighting atmosphere for medical staff and patients, and the application of KNX sensors and modules is beneficial to dramatically reducing energy consumption and cost and improving management.

Australia

Smart Hospital

Baška Topola Stadium

Pain points

This is the first and largest stadium in Serbia where most attention was paid to energy efficiency by investing in heat pumps and solar panels to reduce electricity consumption and at the same time the designers took care of the environment and conditions for sustainable development.

Solutions

1.Substation and recuperator on the whole stadium are able to managed and control by HDL smart control system.

2. On/off and dimmable lighting are available in the hallway with HDL 300 sensors applied so people can easily move without having to think about turning the lights on and off. Also, in the each room (sky box, offices, press conference) there is one central Enviro panel which controls all devices in that room and has scenario such as all on, all off, presentation, led lights.

3. With smart heating and cooling system, all fan coils unit are controlled by panels or application Magiesta as well as floor heating zones. Alongside the floor heating inside the building, the football field has underfloor heating with active monitoring of the temperature and humidity of the field.

Result

With whole automation system provided by HDL, the project achieves the maximum level of comfort either for the visitors and employees, and optimizes the usage of energy electricity.

Serbia

BMW Welt

Pain points

As a youth center with a science and technology function hall, it must face the young public with a vibrant and positive image. This places a high demand on the light effect and light environment inside the function hall.

Solutions

Car Model Showroom of BMW Welt applied modern HDL lighting and audio system as well as multimedia technology. It can create a fancy performance effect through the changes of sound and light, and bring the visitors superior visual and audio experience.

Besides, HDL automation system was also installed in the Module Assembly Room, Science Popularization Room, Lounge and Coffee Room. With HDL motion sensor, the lights in the lounge, corridors and other public areas will turn on automatically when the system detects human presence, and gradually go out when people leave so as to achieve the purpose of energy saving and intelligent control.

Result

In addition to the charm of the BMW brand and the avant-garde technology, people can also enjoy the comfortable environment and unique atmosphere brought by HDL intelligent lighting control solutions.

Smart Musuem

Germany

Hainan International Convention and Exhibition Center

Pain points

The project needs a automation system to achieve effective control of the ambient lighting and save costs.

Solutions

According to the architectural characteristics and functional requirements of the exhibition center, HDL smart lighting solution adopts a variety of control methods to achieve a multi-strategy management mode of lighting.

Central Monitoring: With the graphical visual software, the users can efficiently monitor and control the lighting system, for example, they can easily change the dimming modes on different occasions, and detect the status of the lighting equipment in real time, such as light brightness, power consumption, damage, or failure.

Logical Time Control: According to the different operational requirements of each area and each time period, the lighting system adopting the logical modules is used to perform appropriate switching of the lighting modes at regular intervals.

Auxiliary Illumination: The system uses light-sensation detectors to compensate for sunlight in areas near the periphery of buildings and areas with sufficient outdoor natural light.

Scene Control: Smart control panels are installed to realize a variety of scene controls for the lighting circuits, and the lighting scenes can be switched freely bu simply touching the button.

Result

With the help of HDL intelligent lighting systems, the building finally achieved the goal of saving energy and optimizing the management.

China

Smart Exhibition Center

The State Opera Prague

Pain points

To help the State Opera provide audience with an immersive experience, and to meet the needs of not affecting the lighting effects due to signal distortion or interference.

Solutions

HDL team offered a perfect, proven and easy-to-use KNX lighting control system with emphasis on modular and bus solutions.

HDL used the DALI modules to support lighting technicians to flexibly control the lighting equipment there. During the performance, the lighting technicians can easily achieve the precise linear control of the color temperature and brightness of the lighting under the stage according to the development of the plot, so as to provide a connection and interaction between lighting scenes and stage space for spectators, director and lighting technicians as well as audience.

Besides, according to different scene requirements, various specific scene modes can be preset in the system so as to realize lighting effects in different scenes with one-click.

The system can detect the status of the lighting equipment in real time, such as light brightness, power consumption, scene mode status, damage or failure.

Result

HDL building solutions can not only greatly meet a variety of lighting control needs, but also save human resources and costs, achieve high efficiency and low energy consumption.

Smart Theatre

Czech