

# Smart Home Solutions

Everything you need to know.



HDL®



Who we are?

## Who we are?

HDL is a manufacturer of comprehensive automation systems and provider of integrated solutions for homes, commercial buildings and hotels.

Its business has been presented over 100 countries and regions. It offers products of proprietary technologies as well as open standards like KNX.

Tens of thousands of projects have adopted HDL products and solutions, such as Dubai International Airport, the office building of the Australian Institute of Architects 41X, Macau Morpheus Hotel, the Banc Apartment Building in Australia, Beijing MOMA multi-dwelling apartment buildings, etc.

HDL<sup>®</sup>



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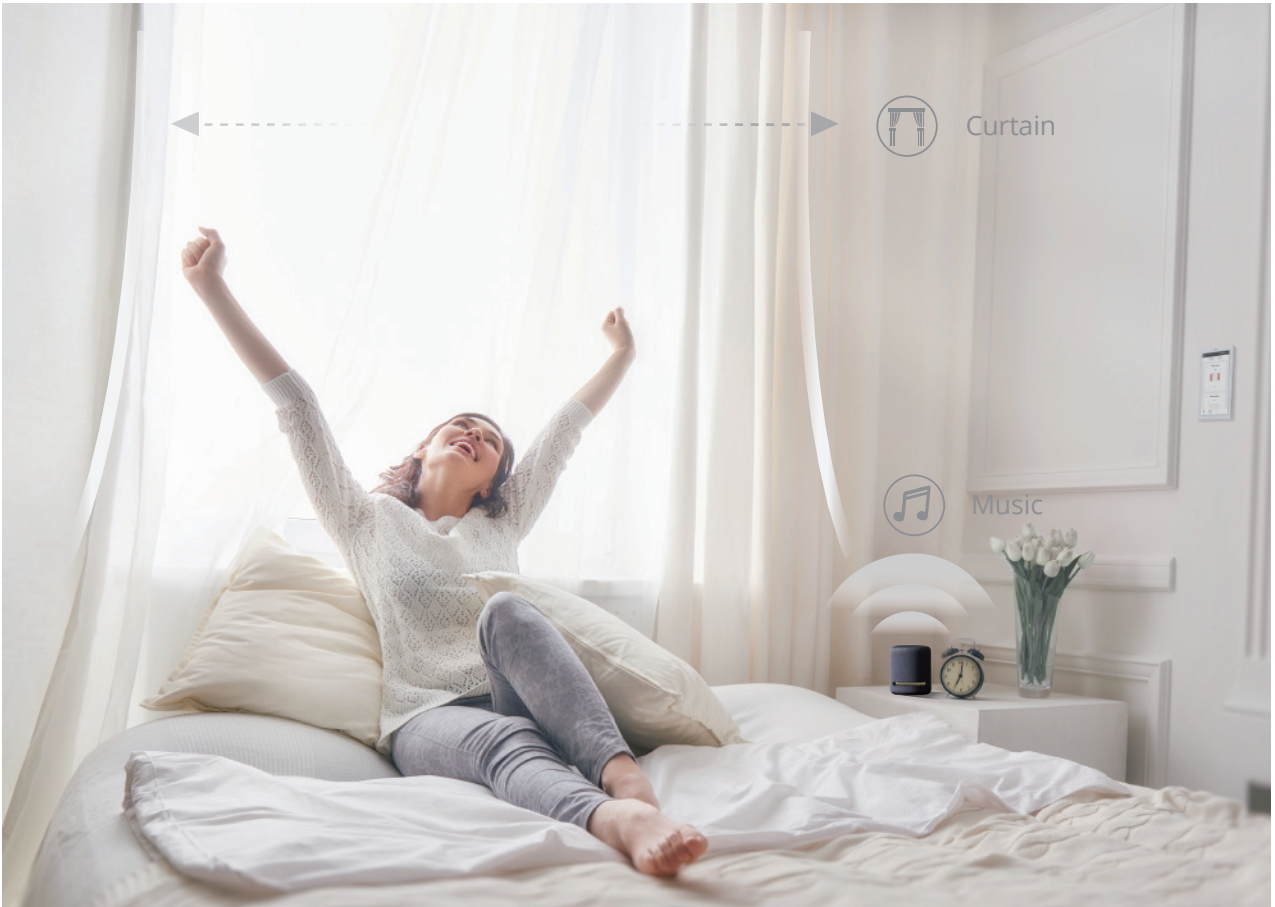




# Some typical scenarios with smart home

Smart home technologies can naturally merge into our daily life. Look at the following scenarios, you will clearly know how we can benefit from home automation.





## 7:00 a.m. Get up

The beautiful music sounds out in air as the curtains slowly open. The sunshine spreads on your bed and wakes you up...Welcome to a brand-new day.

**Curtain:80%**



**Music:50%**





## 8:00 a.m. Go to work

Ready to go? Press the “Away” button on the smart panel, your garage door will open while the system is shutting down the air-conditioner and other devices.

The entire home will be on “Armed” mode. You just go to work in a peaceful mind and won’t be bothered by any concerns.

**Air Conditioner:Closed**

16°C ————— ● ————— 35°C

**Lights:Closed**

- ● ————— +





## 10:00 a.m. Check up on your home during a break

It's time for a break. Open the HDL smart home app on your phone and see if everything is good at home. Seeing your cute puppy is enjoying the sunshine in the garden, you forget about work pressure and feel relieved.

## 5:00 p.m. Set the temperature before home

It's about to leave work. You take out your phone to turn on the air-conditioner in the living room, and set it to the right temperature. But if it's in winter, you can remotely turn on the heating system. When you walk into your home, the indoor temperature is already at a comfortable level.

**Air Conditioner(Summer):25°C**



**Floor Heating(Winter):22°C**





## 6:00 p.m. Back home

Pick up your kid from school and drive back home. The garage door automatically opens. The lights in the garage and along the doorway are also turned by the system. You unlock the front door with your fingerprint. A personalized Back Home mode is triggered as the Armed mode is disabled. You happily watch your kid run into this comfortable home.

### Garage:

Open  Close

### Access Control System:

Open  Close

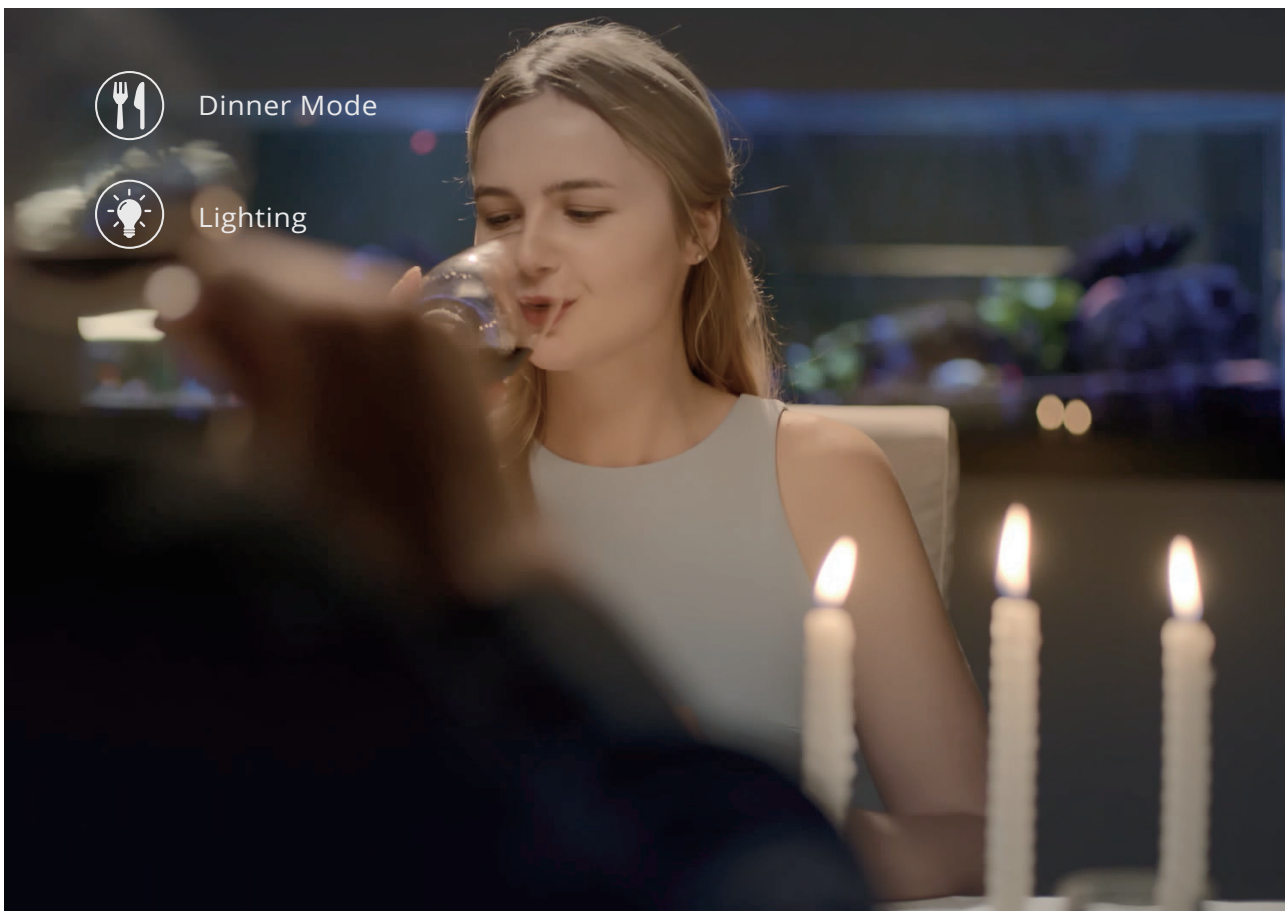
## 7:00 p.m. Dinner

Prepare a big dinner under the pleasant background music. Select the Dinner Mode. Then the light over the table turns soft and warm as the curtains automatically close. Sit down with your loved ones to enjoy the delicious food with cheerful chats.

RGB Light Color:



Brightness:80%





## 9:00 p.m. Recreation

There are various ways to spend the time at home. You may have fun with your family, or invite some friends over for a get-together. Regardless what activities are undergoing at home, you just need to press one button to set everything into the right ambience: Meeting Mode, Dinner Mode, Party Mode, TV Mode, Movie Mode, etc.

**Curtain: 0%**

0%  100%

**RGB Light Color:**



## 11:00 p.m. Go to bed

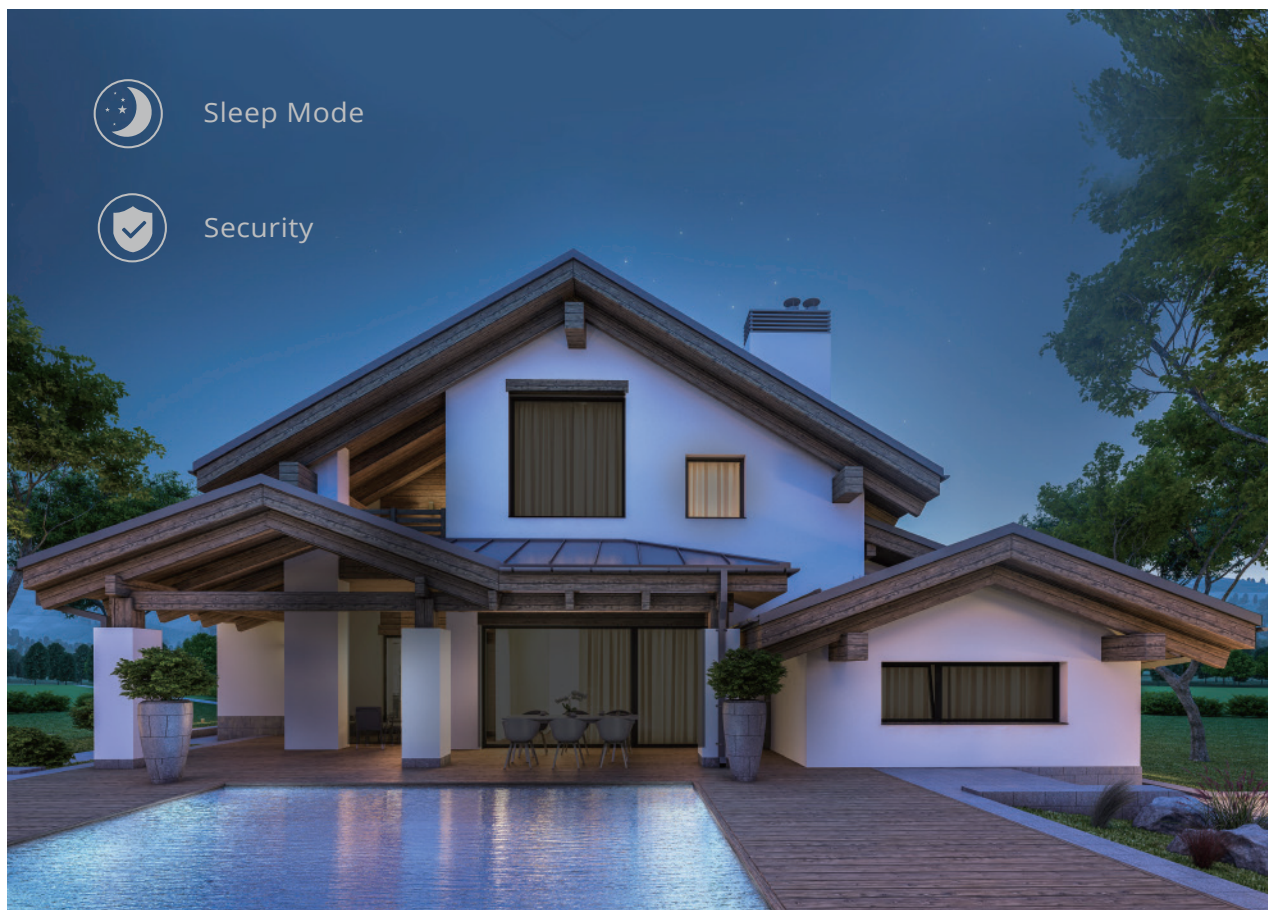
When the kid falls asleep, select the “Reading Mode” and the reading lamp is on. Read a few pages of your favorite book. Press the “Good Night” button when you feel tired. The lights gradually dim down to dark, the air-conditioner switch to Sleep Mode, and the system enables the “Night Security” mode. You start the sweet dream under such cozy ambience.

**Brightness:10%**

0% 100%








**Armed Mode:**

Open  Close







<b>Lighting</b>	
<b>Shading</b>	
<b>Climate Control</b>	
<b>Music</b>	
<b>Scene control</b>	
<b>Safety and Security</b>	
<b>Automatic control</b>	

## Complete and integrated smart home experience

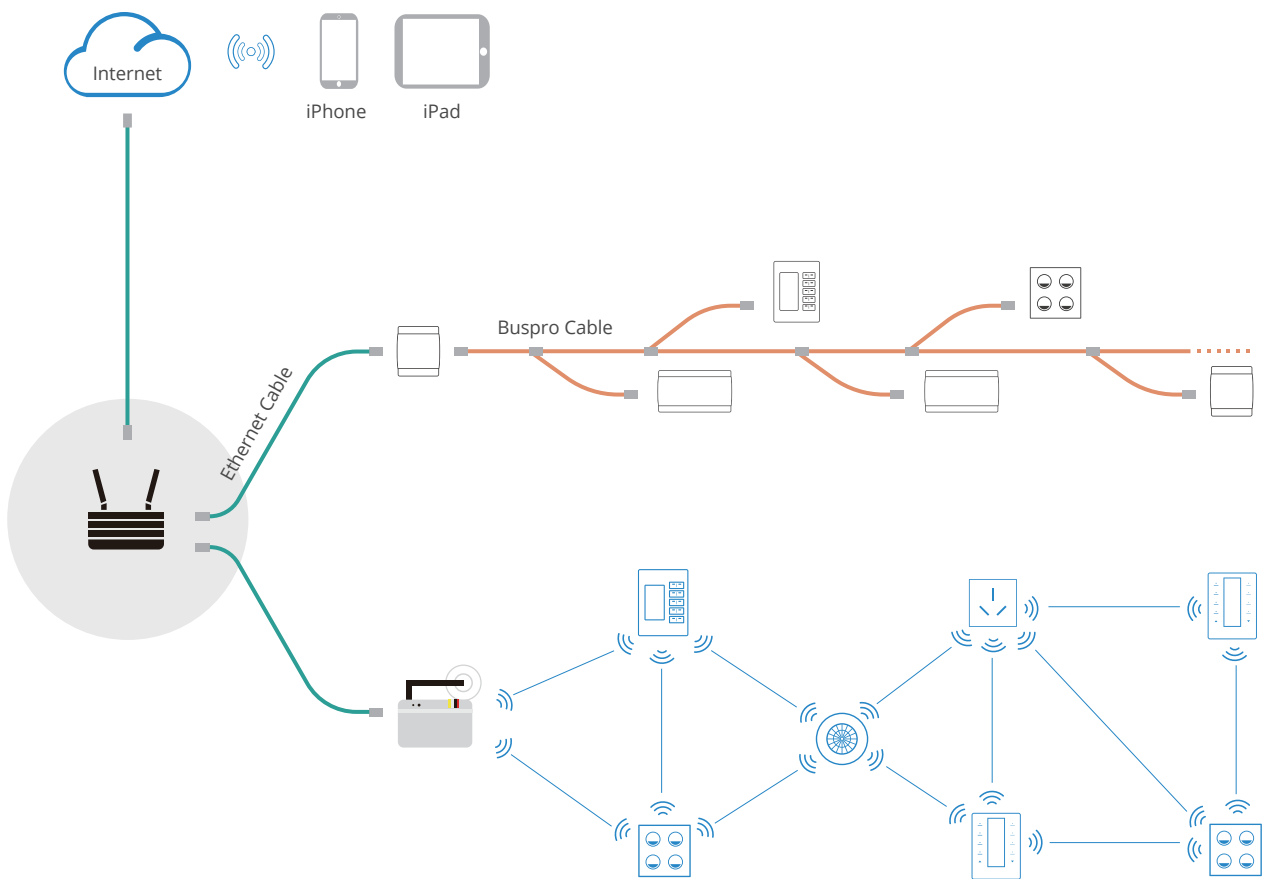
HDL connects your lights, curtains, air-conditioners and other devices into the system, and allows you to control them on a mobile phone, tablet or wall panel. For example, you can turn off the lights with a phone on the way to work. With the settings of sensors and logic conditions, the system can also run the tasks automatically. We offer you smart home solutions that are able to integrate various functions and cover every area of your home.



Being smart means your home somehow knows what you need and takes care of you. When you arrive home in the day time, it opens the curtains for you. But when you come back in the evening, it will turn on the lights for you. It ensures that every time you are walking into a properly lit room.

# buspro + buspro WIRELESS

## Mixed Application of Wired and Wireless Systems



We have both wired and wireless solutions. Tell us what you need. We will design personalized solutions right for you. You can choose what rooms to automate and what functions to implement. It's that simple.



# Lighting

Shading 

Climate Control 

Music 

Scene control 

Safety and Security 

Automatic control 

The smart systems of HDL can connect with various lighting devices.  
We make lighting control simpler and more interesting.



Granite Display



**Brightness: 53%**

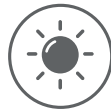
0% ————— 100%



**RGB Light Color:**



## Brightness



Apart from turning ON/OFF the lights, you can adjust the brightness as well with HDL. 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.

In some cases, you can set the fade-in and fade-out time of brightness change to make the process smooth and comfortable.



## 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 perfect lighting effect with colors.



## Color temperatures

From cold to warm, different color temperatures of light may give us a different mood. We need cold light in the hot summer to cool us down. Warm light on foods can increase our appetite... Set your mood with HDL.





Lighting



# Shading



Climate Control



Music



Scene control



Safety and Security



Automatic control



We put up curtains to adjust the amount of natural light in our room, because it directly affects our comfort. HDL let you adjust the position of curtains effortlessly.

Curtain: 53%



Stop at any position



All on



Stop



All off





## Curtains or blinds

HDL smart home system is able to control curtains and blinds. You can always find the right solution for your windows.

## Stop at any position

In the home automated with HDL, your curtains don't have to be fully open or closed, they can be stopped at any position to let in perfect amount of light.

## Super quiet

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



Lighting



Shading



## Climate Control



Music



Scene control



Safety and Security



Automatic control

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



Air conditioning



Floor heating



Air quality



## Save energy by automating climate control

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.



Lighting



Shading



Climate Control



## Music



Scene control



Safety and Security



Automatic control

HDL offers background music control in smart home solutions. You can play music from an SD card, a USB drive or your phone. It allows you to manage the music on a wall panel and mobile devices.



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.



Control Panel



HDL On App



Lighting



Shading



Climate Control



Music



## **Scene control**



Safety and Security



Automatic control

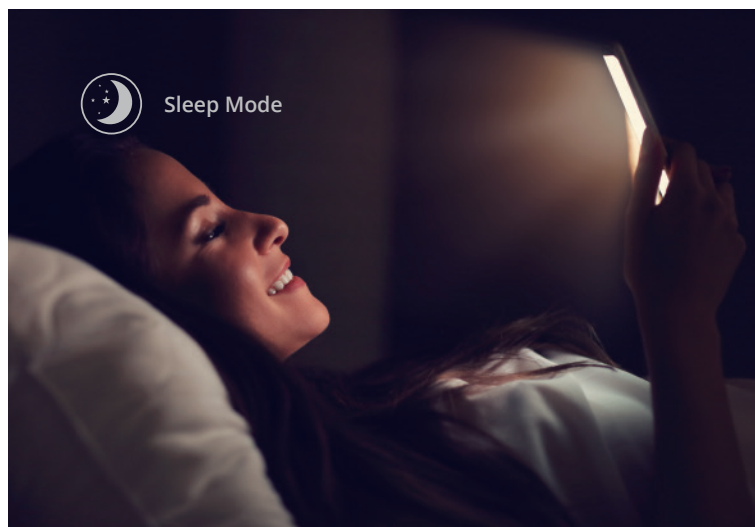
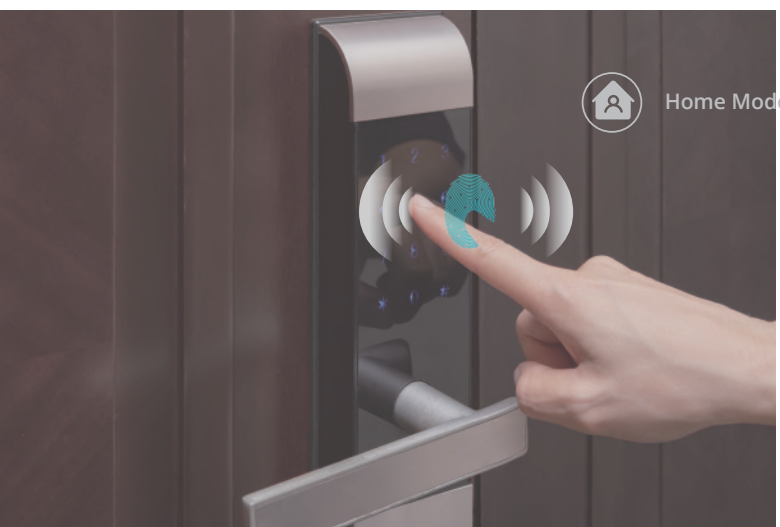
Scene control provides great convenience to control multiple devices. Just one button away to set the perfect ambience for your activity. For example, we can create a "Romantic" mode, which when you select it, the system will close curtains, turn on color lights and play soft music.





Dinner Mode Party Mode Romantic Mode TV Mode Sleep Mode Home Mode More...

You can select a Scene on a wall panel, mobile phone or the door lock with your fingerprints. What's more, different finger prints can be linked to different Scenes.





Lighting



Shading



Climate Control



Music



Scene control



## **Safety and Security**



Automatic control



Safety and security are the premises of everything else at home. HDL smart home solution takes care of your home by integrating various devices and functions such as sensors. With HDL smart home, there are many ways to better protect our family.



## Smoke detection

When smoke is detected, the system will trigger alarms in the house. Meanwhile, notifications will be pushed to your phone.

## Scene simulation

Turn on lights, play music, open and close curtains like someone's at home. Prevent possible intrusion when you are away from home.





## Intruder detection

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 be notified via your phone so that you can take any actions needed.

## Security cameras

Wherever you are, you can always learn about the situation of your home by viewing video images on your phone.





Lighting



Shading



Climate Control



Music



Scene control



Safety and Security



## **Automatic control**

With logic settings in the system, devices or functions can be linked to achieve advanced smart features. In many cases, the system makes the judgement and run the tasks automatically. User interference can be largely reduced.



For example, when you turn on the TV in the day time, the system can close the curtains to make the ambience lighting better for watching TV. If you turn on the TV in the evening, it can dim down the lights.

**HDL**<sup>®</sup>

# Personalized whole-home solutions





Your smart home solution is based on your requirements. You decide what functions are integrated and what areas to be automated. Your solution could be a basic one with only a few functions as well as one has all features available. The solution could be applied to the entire house or just a specific room. It's designed only for you.



## Solutions for condo



### Basic



### Standard



### Premium



# Solutions for apartments



Basic



Standard



Premium



Living Room



TV&Home Cinema



Music



HVAC Control



Lighting



Shading



Floor Heating



Security



Intercom

Bedroom



Music



Emergency Panel



Air Conditioning



Lighting



Shading

## Dining Room



Shading



Music



Lighting



Air Conditioning



Lighting



Gas Leakage Detection



Gas Valve



Heat and Smoke  
Detection



Ventilation  
Control





## Bathroom



Emergency  
Panel



Lighting



Garage Door Control



Lighting



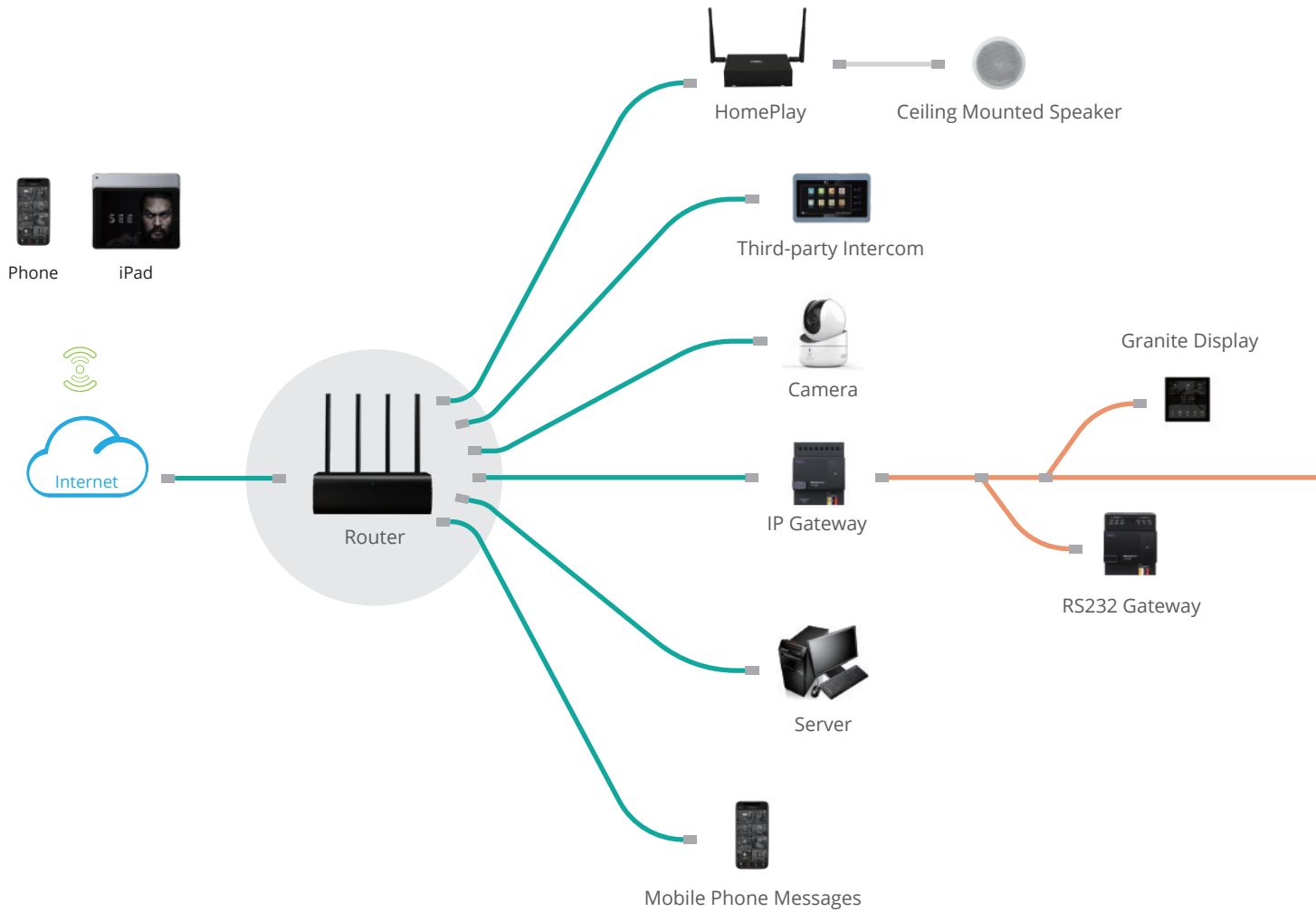
Lighting



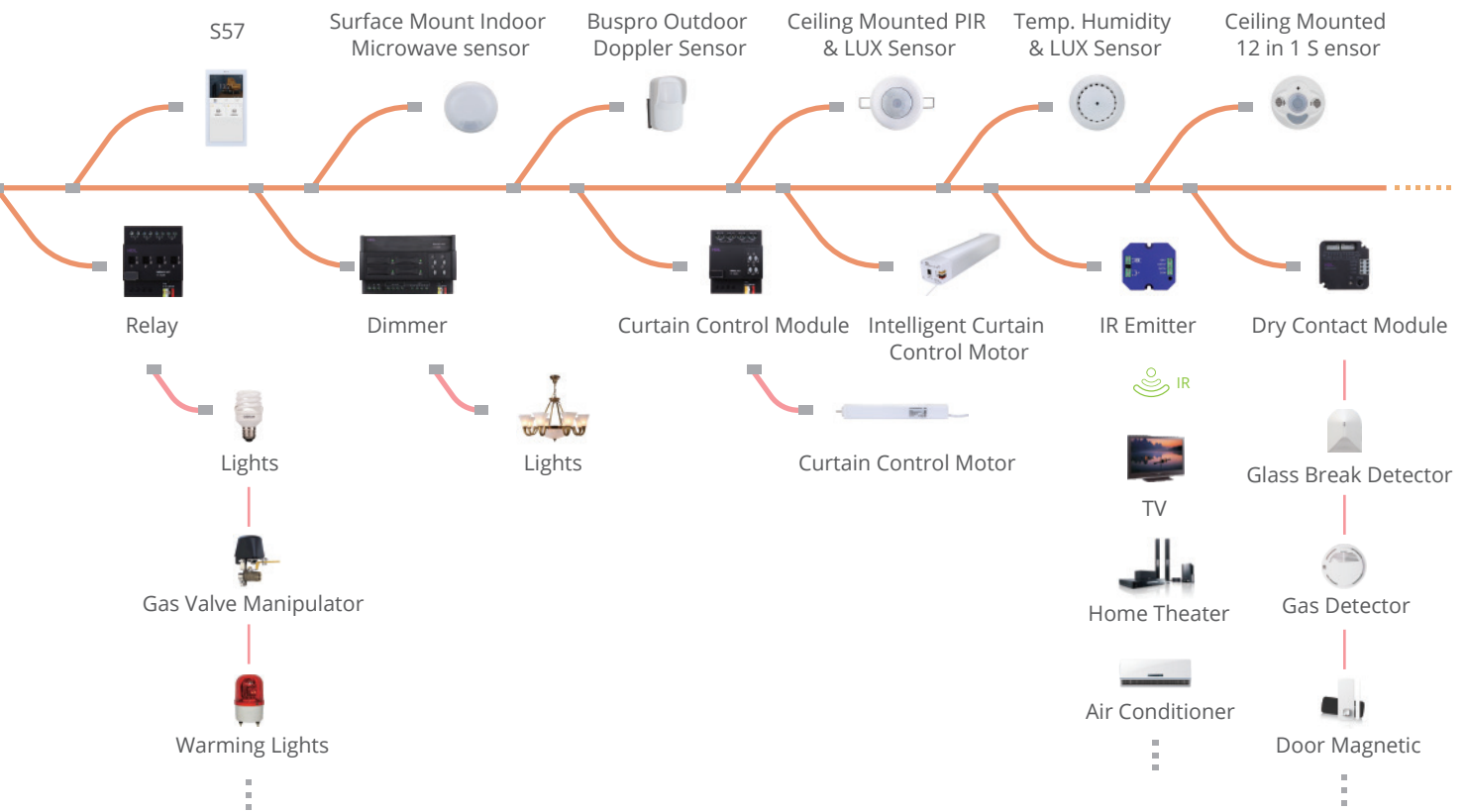
Irrigation



## The powerful technology behind the solutions



HDL has provided numerous of smart home projects with products and solutions. Most of the solutions are based on our proprietary technology Buspro, which consists of wall panels, controllers, sensors, software and other components.



Buspro, based on RS485, is distributed system that able to connect with various devices and appliances such as lighting devices, air-conditioners, motorized curtains, etc. It allows users to control or manage their home with a smart phone, tablet or wall-mounted smart panels. With sensors and logic settings, automatic control is also available. Smart home solutions are designed with Buspro to meet different requirements.



Buspro can integrate with Amazon Alexa and Google Assistant. Add HDL Smart Home to your Skills and control your home by speaking.





# Smart home app HDL ON

HDL ON is the official smart home app from HDL. it's available for both iOS and Android platforms. You can access to all functions of your smart home via this app.

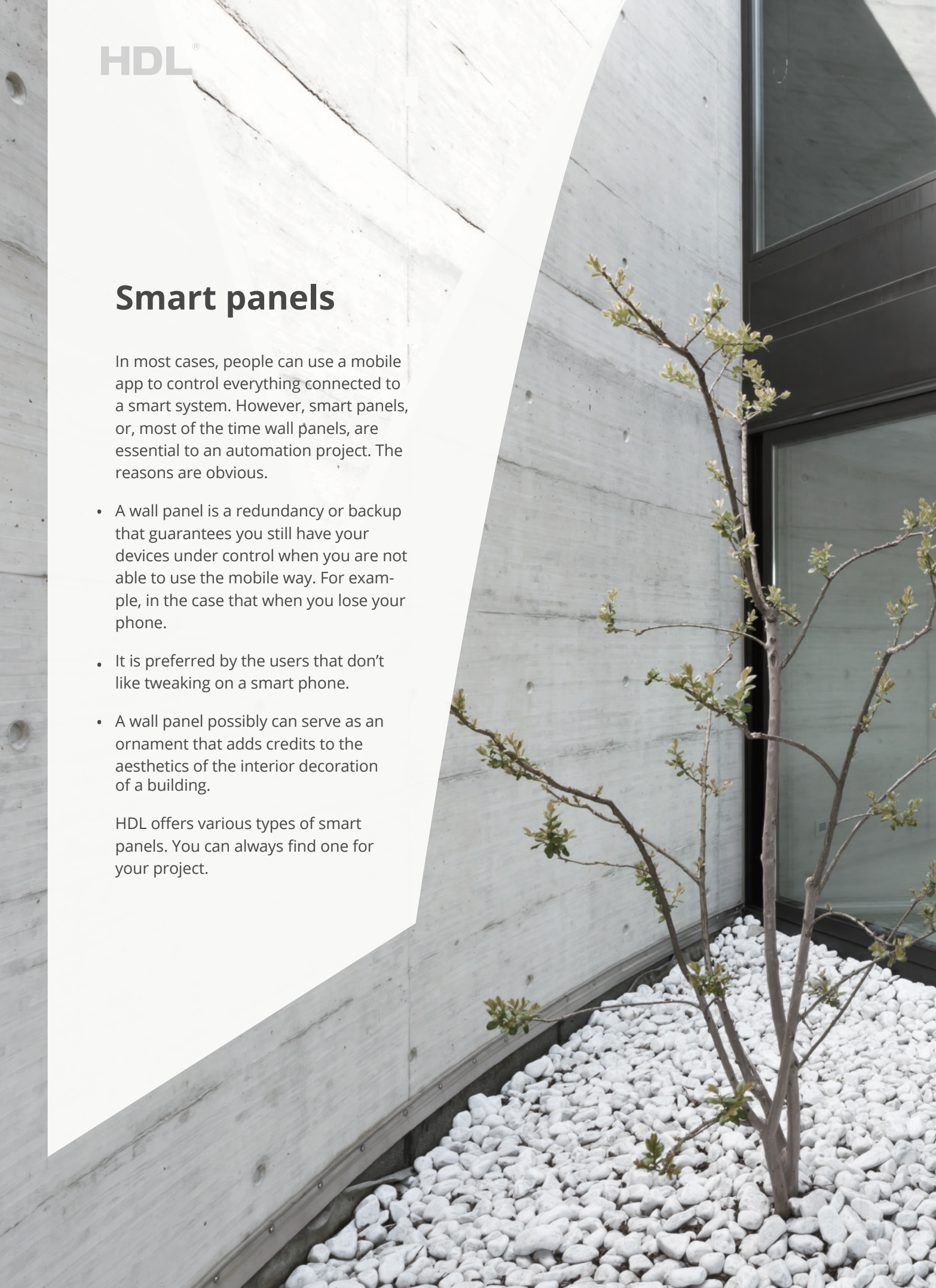


## Smart panels

In most cases, people can use a mobile app to control everything connected to a smart system. However, smart panels, or, most of the time wall panels, are essential to an automation project. The reasons are obvious.

- A wall panel is a redundancy or backup that guarantees you still have your devices under control when you are not able to use the mobile way. For example, in the case that when you lose your phone.
- It is preferred by the users that don't like tweaking on a smart phone.
- A wall panel possibly can serve as an ornament that adds credits to the aesthetics of the interior decoration of a building.

HDL offers various types of smart panels. You can always find one for your project.













## Granite Display



Granite Display is a multifunctional touch-control panel with 4-inch high-resolution display. You can quickly access the most frequently used functionality or scenes by the short-cut buttons on the home screen.

And you may change the short-cut settings as you wish. As you explore more on the user interface, you may find it different but comfortable controlling your home devices on Granite Display.

- Built-in proximity sensor
- Built-in temperature and humidity sensor
- Adjustable screen backlight brightness
- Colors: Space Gray  Arctic Silver
- 4-inch 720 x 720P HD touch display
- Available for: [buspro](#) [KNX](#)

 Lighting	 Shading	 Scenes
 Music	 HVAC	 More



# Granite



Granite is a push-button panel with premium metal finish. The RGB indicators, icons and the firm button feedback all together make your control comfortable and intuitive.

**Available for:**

- 4 Buttons Smart Panel (EU)
- 6 Buttons Smart Panel (US)

- Premium metal finish
- Natural and comfortable push feedback
- Endures at least 100,000 times of pushes
- Power supply: DC 24V
- Color: Arctic silver  space gray  rose gold
- Dimensions: 86 x 86 mm (EU), 86 x 116.5 mm (US)
- Available for:  



Lighting



Shading



Scenes



Music



Dresser



More

## S10



S10 is a touch panel equipped with a 10.1-inch 800 x 1280P HD display and a dedicated user interface. With the excellent industrial design and UI, a panel of such size will just make your building more beautiful apart from its tech features.

- 10.1-inch 800X1280P display
- Built-in real-time clock (RTC)
- Built-in proximity sensor, temperature sensor
- Power supply: DC 9 ~ 25V
- Available for: **IP buspro**



Lighting



Shading



Scenes



Music

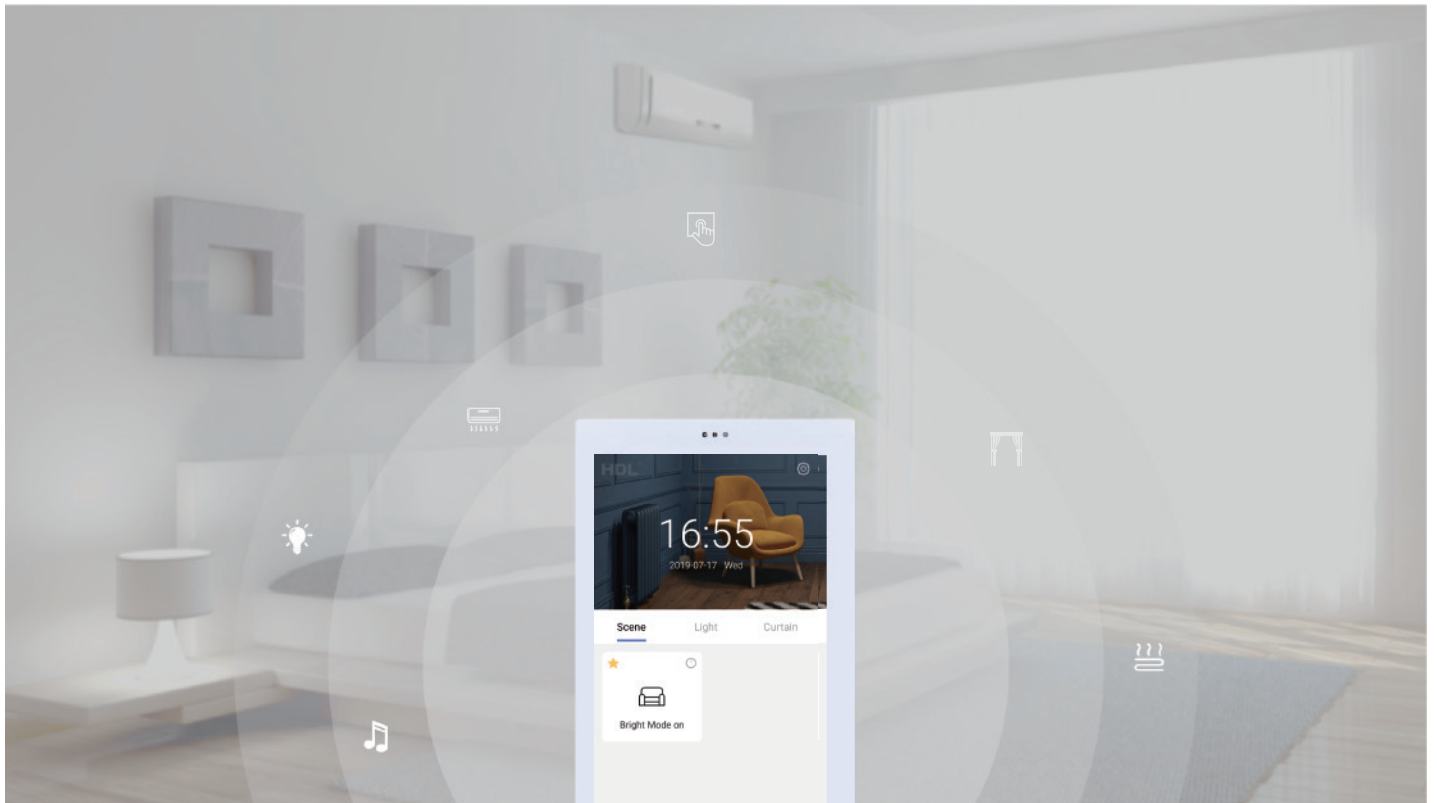


HVAC





More

## S57



S57 is a multifunctional touch-control panel with a 5.7-inch display. It is equipped with high performance CPU and uses WallApp as the default user interface. You can easily control every device connected to the smart system just by flipping your fingers on the screen.

- 5.7-inch 1280 x 640P display with 18:9 aspect ratio
- Built-in proximity sensor, brightness sensor
- Built-in microphone and speaker
- Power supply: DC 24V or PoE
- Available for:  



## Tile



The basic unit of Tile is a keypad or socket panel in EU standard. You can use just one unit if it meets your requirement, or combine multiple units to serve more functions in a specific area. Tile series comes with two versions of different materials: metal and plastic. Each one is able to give you a sense of premium quality, either with the refined sandblasting finishes on the metal one or the skin-like touch feeling on the plastic one.

- Supports various types of control targets
- Flexible combinations for required functions
- RGB icon backlight
- Customizable button icons
- Users are allowed to set the colors of icon backlight
- Available in two materials

Plastic:86×86×11(mm)

Metal:90×90×11(mm)

Available for: **buspro** **KNX**

Available in four colors:

**Metal:** Space Gray  Champagne Gold

**Plastic:** Ash Gray  Ivory White

**Horizontal:**



3-gang



4-gang

**Vertical (Metal Version Only):**



3-gang



4-gang

# Enviro



Enviro is a touch-control panel equipped with a 4.3-inch display. It allows you to control lighting, curtains, HVAC, music and more functions effortlessly on its graphic user interface. What you need to do is just a touch on the screen.

Available for: **buspro** **KNX**

**Dimensions:** 86 x 116.5 mm (US)

**Available in two colors:** Black  White

- Color capacitive touch display
- Customizable UI
- Built-in proximity sensor
- Built-in temperature sensor
- Built-in IR receiver
- Built-in real-time clock
- Aluminum frame
- Power supply: DC 24V



## DLP Touch



DLP Touch is designed to offer you a quick and simple touch-control experience. Its face is entirely covered by one piece of glass.

With the LCD in the middle, you can have the icons or text customized. Every time you touch the panel, you clearly know what to control. Not a single thought is needed.



Lighting



Shading



Scenes



Music



HVAC



More

Available for: buspro 

Dimensions: 86 x 116.5 mm (US)

Available in two colors: Black  White 

- Mono-color LCD
- Customizable icons and captions
- Built-in temperature sensor, proximity sensor, IR receiver
- Aluminum frame
- Power supply: DC 24V



# DLP



If you prefer physical buttons but want to have a display to indicate the control targets, then the DLP panel is here for you.



Lighting



Shading



Scenes



Music



HVAC



More

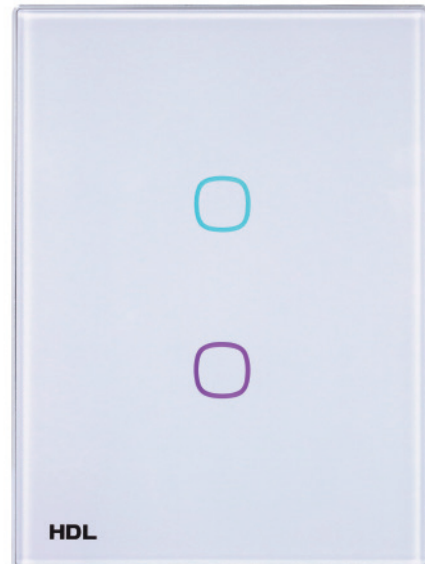
- Mono-color LCD
- Supports 147 languages
- Customizable icons or captions
- Built-in temperature sensor
- Aluminum frame
- Power supply: DC 24V

Available for: buspro  buspro WIRELESS

**Dimensions:** 86 x 86 mm (EU), 86 x 116.5 mm (US)

**Available in two colors:** Black  White 

## iTouch



iTouch is always a great option if you are looking for a beautiful keypad of minimal design. Its body is enclosed by a fine aluminum frame, while the face is a piece of glass with touch buttons. It perfectly matches any interior decoration.

- Touch button with RGB backlight
- Aluminum frame
- Supports online upgrade
- Power supply: DC 24V
- Dimensions: 86 x 86 mm (EU), 86 x 116.5 mm (US)

### Available for(EU)

- 2 Buttons
- 4 Buttons

### Available for(US)

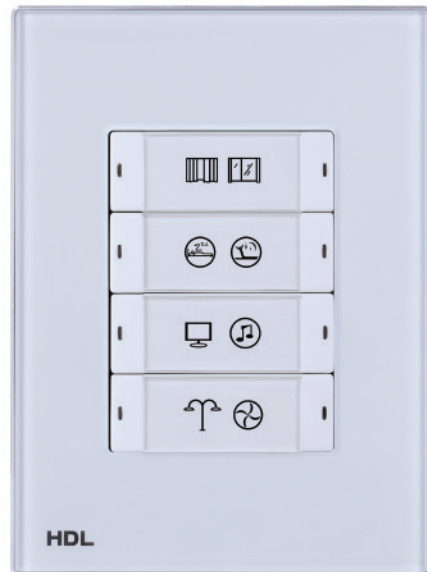
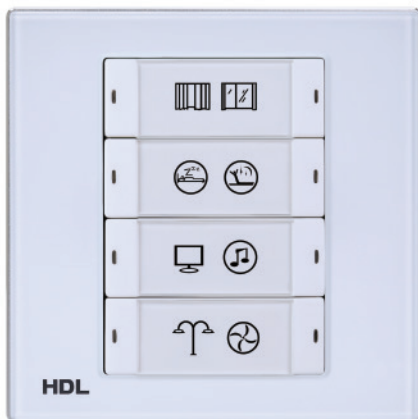
- 2 Buttons
- 4 Buttons
- 6 Buttons

Available for: buspro 

buspro  
WIRELESS

Available in two colors: Black  White 

# iFlex



What do you think is the easiest way to put an icon or caption on a button? Right, we can draw an icon or write a caption on a piece of paper, and place it on the button. And we call that piece of paper a tag. This is the idea of HDL iFlex.

**Available for(EU)**

- 2 Buttons
- 4 Buttons
- 6 Buttons
- 8 Buttons

**Available for(US)**

- 4 Buttons
- 8 Buttons

- Push button with removable tags
- Aluminum frame
- Power supply: DC 24V
- Dimensions: 86 x 86 mm (EU)  
86 x 116.5 mm (US)
- Available for: **buspro** **KNX**



Lighting



Shading



Scenes



Music



Ventilate



More

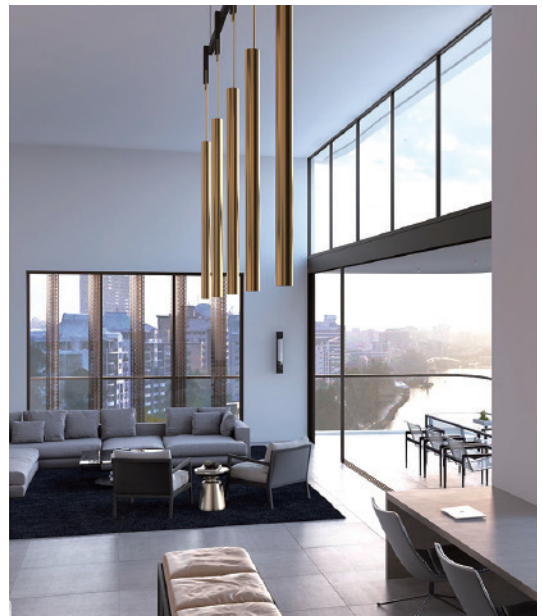
## Case Studies

From condos to multi-apartment buildings, from cottages to mansions, there are plenty of homes using HDL products or solutions. Here are some of the projects we would like to share with you.

# Banc Apartment, Australia

As an impressively designed building, Banc was regarded as one of the premier apartment buildings in Brisbane. HDL installed a fully automated smart home system for the 34 high-end apartments, including lighting control, HVAC control and music control and intercom system.

- Panel
- Ipad
- Lighting
- Floor Heating
- Music
- Intercom



## Beijing MOMA Apartment Buildings

Located in the Chaoyang District of Beijing, the MOMA Apartment buildings accommodate most of the families of diplomats. HDL Buspro system was installed in 119 apartments of T7 and T8 buildings for lighting control and background music control.



Panel



Lighting



Shading



Music



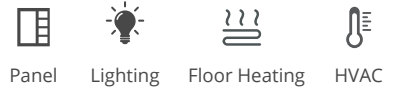
## 2010 Guangzhou Asian Games Village

To prepare for the 2010 Guangzhou Asian Games, the government built the Asian Games Village where 60 apartments were for technical officials. HDL intelligent control system was installed in these 60 apartments for lighting control, AC control and security.



## Tianyue Project of Poly Real Estate in Nanjing, China

Tianyue is one of the most expensive real estate projects in Nanjing City. HDL Buspro system was installed in 516 apartments of Tianyue to control lights, air-conditioners, ventilation, floor heating and the video intercom system.





# Tianlu St. Regis Holiday Villa, Lijiang, China

This villa adopted the HDL KNX intelligent control system, which can be connected to the conventional electrical devices and appliances of the villa, such as lights, air conditioners, curtains and so on. With the logic settings and sensors, the system can perform many functions automatically to satisfy the actual needs of this villa.



Panel



Lighting



HVAC

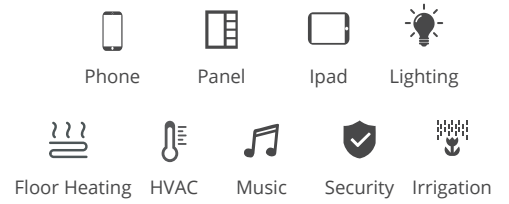


Shading



## A 3-floor house, Vancouver

This is a 3-floor house in the north of Vancouver, Canada. HDL engineers designed a smart home solution for the owner covering lighting, shading, HVAC, irrigating, safety, security and background music.



## A 3-Floor Villa in Dubai

HDL Buspro intelligent control system was installed in this villa for lighting control and climate control. Its 5 bedrooms, dining room, living room, office, meeting room, lobby, kitchen, gym and garden were all covered with HDL Buspro.



## Seaside Holiday Villa in Croatia

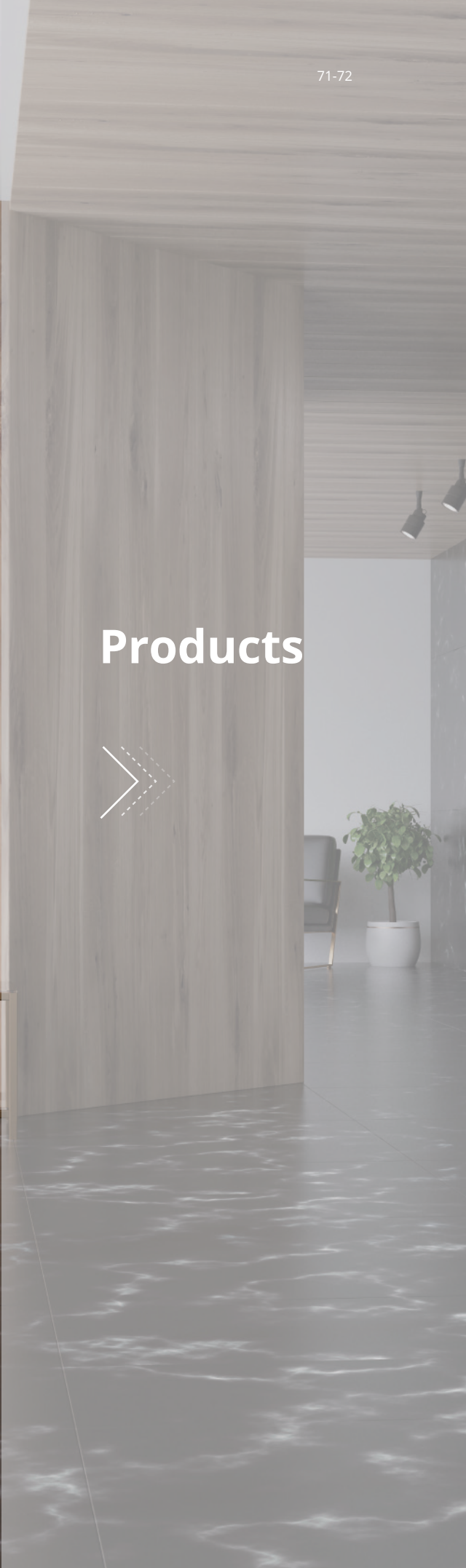
HDL Buspro system was installed in this seaside villa. All the lights, blinds, air-conditioners and security cameras were connected to Buspro. Users can easily control the system by HDL wall panels or their mobile phones.

-  phone
-  Panel
-  Lighting
-  HVAC
-  Shading





# Products



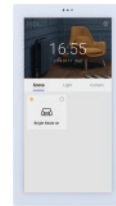
HDL®

buspro

## Control Panel



Granite Display



S57  
Touch Panel



S10  
Touch Panel



Granite(EU)



Tile Series OLED Panel



Tile Series Buttons Panel



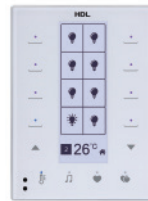
Prism Lite



Prism Pro



Enviro Touch Panel



Modern Series DLP Touch Panel(US)



Modern Series DLP Smart Panel(US)



iTouch Series Buttons Touch Panel(EU)



iFlex Series Buttons Panel(EU)



LCD Touch Thermostat

## Dimmers



4CH 3A Leading Edge  
Dimming Actuator



4CH 1.5A Trailing Edge  
Dimming Actuator



2CH 10A Mosfet  
Power Amplifier



Traic Constant  
Current Module



64CH DALI Ballast  
Dimming Actuator



6CH 10A 0-10V Ballast  
Dimming Actuator



6CH 5A Intelligent LED  
Dimming Actuator



6CH input & output Module



6CH 20A High Power  
Leading Edge Dimming Actuator



6CH 10A High Power Trailing  
Edge Dimming Actuator



## Relays



4CH 10A High Power Switch Actuator



4CH 16A High Power Switch Actuator



12CH 20A High Power Switch Actuator with Current Detection

## Shading



2Ch Motorized Curtain Control Module



Buspro Blind Motor



Buspro Curtain Motor



Curtain Remote Controller

## DMX Controller



3CH 650mA LED Driver



48CH DMX Scene Controller



512CH DMX Scene Controller

## Climate Controller



CoolBox VRV Gateway



Air Conditioning Control Module



4CH Electric Fan Controller



6CH Floor Heating Module

## IR Emitter / Dry Contact



4 Zone Dry Contact Module with Temp. Sensor



8 Zone Dry Contact Module



24 Zone Dry Contact Module



4CH IR Emitter with Current Detection

## Auido



Smart IR Transmitter with Current Detection



Infrared Code Learner



HomePlay Network Player

## Sensor



Wall Mount Outdoor  
Microwave Sensor



Surface Mount Indoor  
Microwave sensor



Surface Mount 7in1 Sensor



Surface Mount 8in1 Sensor



Recess Mount  
Ultrasonic Sensor



Recess Mount  
PIR & LUX Sensor



Surface Mount 12in1 Sensor



Surface Mount  
Temp. Humidity & LUX Sensor



Surface Mount Lux &  
Air Quality Sensor

## Gateway



1 Port Programming Gateway



Buspro-RS485 Interface Mini



RS232/RS485 Gateway



HDL-BUS and KNX-EIB  
Interface Converter

## Security



Security Command Module



Logic Automation Module

## System Device



HDL 6 Ports Switch



HDL BUS 6 Lines



750mA Power Supply Module



1200mA Power Supply Module



2400mA Power Supply Module



# buspro

WIRELESS



## Control Panel



DLP Series Panel(EU/US)

iTouch Series Panel(EU/US)

## Power Interface



Wireless Power Interface EU

3CH Wireless Dimming Power Interface EU

3CH Wireless Switch Power Interface EU

3CH Wireless Dimming Power Interface EU

## Sensor



Wireless PIR & Lux Sensor



Surface Mount Wireless Ultrasonic & PIR Sensor

## Shading



Wireless Curtain Control Motor

## Gateway



Wireless Mesh Gateway



Buspro/ Wireless Gateway

## IR Emitter



Wireless IR Emitter

## Actuator



1CH Wireless Dimming Actuator



4CH Wireless Ballast Dimming Actuator



1CH Wireless Relay Actuator



2CH Wireless Relay Actuator



1CH Wireless Curtain Actuator



4CH Wireless Dry Contact Module

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