



# VEGA Whole House Smart Solution

VEGA Integration Corp.(Japan)



# Vega Integrations Corporation

‘In Power We Trust’



VEGA Integrations is a Japanese international startup company established on 2016 and is primarily engaged in smart IoT products and communication technology integration. We committed to provide cost-effective, robust and reliable wired and wireless network systems, smart IoT products including terminals and information services. VEGA Integrations offers turnkey solution for a complete hardware and software platform. For quick product deployment. VEGA Integrations headquarter is located in Japan with branch office in Taipei.





UAE, Abu Dhabi

UAE, Dubai

**Branch Office**  
Taiwan, Taipei

Korea, Gyeonggi-do

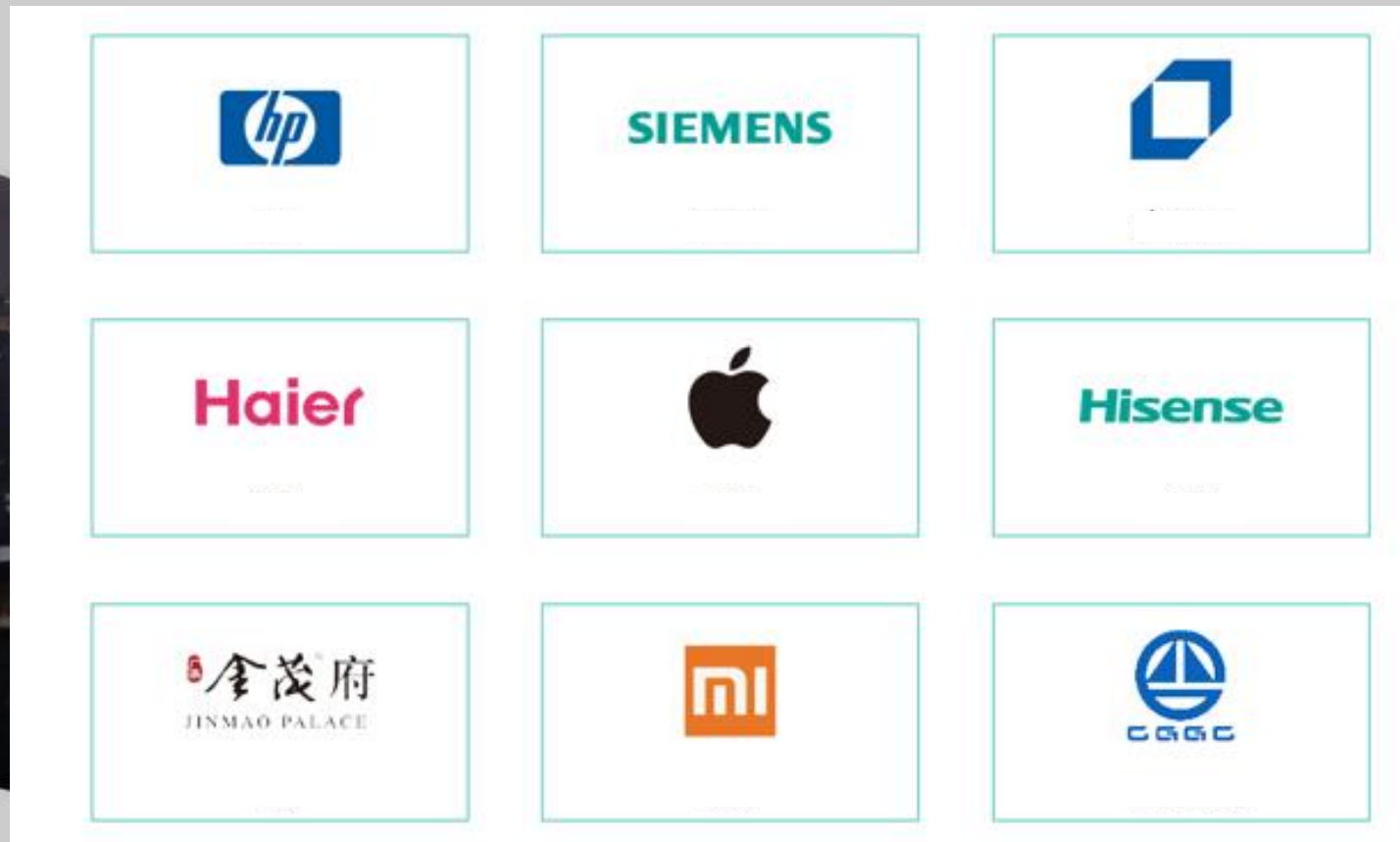
**VEGA Integration**  
Japan, Osaka

Philippines, Manila

Philippines, Cebu

Singapore

Australia, Brisbane



# What is Power Line Communication (PLC)?

- PLC is a robust, reliable and advanced communication technology that uses existing power lines or cables as medium to transmit and receive data.
- PLC is a matured technology and is the de facto communication standard for smart grid automated metering used by power utility companies worldwide.
- PLC is now gaining popularity as an economical communication infrastructure in the field of IoT, smart home and building automation applications.



# How does VEGA PLC system work?

- PLC in a nutshell is a communication technology wherein the digital information is modulated into a carrier signal such that it can be easily transmitted and received using the main power line.
- PLC functions like a traditional computer modem but instead of using telephone wires it uses the power line as communication link.
- Nowadays, PLC uses the same advanced modulation technique, signal conditioning, error correction and security data encryption found in common wireless communication applications.



# PLC vs. wireless (Zigbee, Z-wave, Wi-Fi) automation network

Criteria	PLC (Wired)	Wireless
Installation	Simple and easy installation since existing power lines are used. Plug and Play setup.	Simple and easy installation since no cabling is required. Plug and Play setup.
Reliability	No signal dropouts since data collision is minimal. PLC networks of neighboring homes are independent from each other because of external isolation transformers.	Signal dropouts occasionally happens due to many wireless devices competing on common limited bandwidth resulting to frequent data collision. Even wireless data from neighboring premises contribute network traffic congestion.
Robustness	Full-range network coverage. Afterall, the PLC devices are wired together through the power lines.	Network coverage suffers whenever concrete or metal obstructions exist between the signal paths of the communicating devices.
Security	A cyberattack is more difficult in a PLC home network because a physical connection is necessary. Data eavesdropping from outside the premises is also prevented due to the presence of isolation transformer.	Wireless data can be intercepted outside the premises of the home network and is prone to cyberattack. Signal jammer can also be deployed to disrupt the network system forcing it to break down.

# Vega PLC Smart Solution vs PLC (programmable logic controller)

Criteria	PLC Smart Solution	PLC (Programmable Logic Controller)
Installation	Simple and easy installation since existing power lines are used.	Requires special wirings like coaxial or twisted pairs.
Device Setup and Configuration	PLC smart solution uses distributive control and data acquisition. PLC smart devices have built-in microcontrollers simplifying setup and configuration. Intuitive and user-friendly interface allow a non-technical person to do the job.	Devices like controls and sensors connect to a central processing unit. Setup and configuration become very difficult to modify once the whole system is programmed. It requires a technical person to handle the schematic like system programming.
Maintenance	Plug and play when adding new devices. Device firmware is directly downloaded from online without removing ensuring up-to-date functionality at all times.	Complicated reprogramming whenever new devices are added. In most cases, require technical support from the PLC vendor.
Troubleshooting	Due to the distributive processing configuration the devices can be debugged independently without shutting the whole system.	Since the devices are connected to a central processing unit then depending on the gravity of the issue shutting down the whole system maybe required.



# Vega's PLC ecosystem solution

- Provides a robust, reliable and secured communication infrastructure.
- Full-range network coverage. Uses mesh network topology for added network stability.
- Immune to concrete or metal obstructions.
- Plug and play installation and user-friendly setup using a touch panel interface or smartphone.
- Supports internet access and cloud server for remote control and monitoring.
- Supports advanced scheduled, linkage and triggered functions.
- Supports online firmware updates to ensure up-to-date functionality.

# Vega PLC smart home system

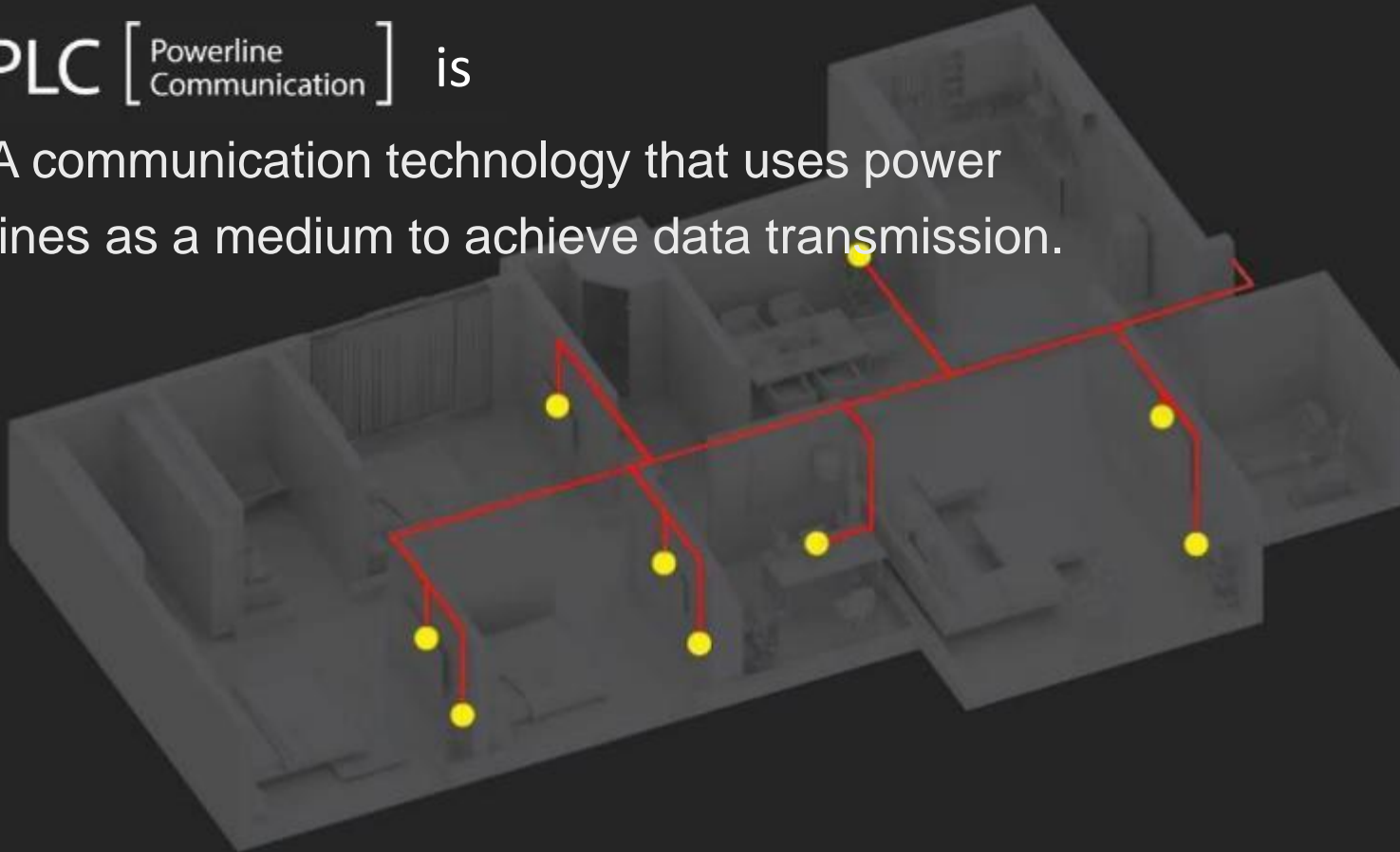
- Provides home owners security, convenience, comfort, and energy efficiency by allowing them to control and monitor the home network using smartphones or touch panel interface.
- Offers a full range of integrated smart devices to ensure complete interoperability. These include lighting control, temperature control, voice control, curtain sun-shading control, background music, appliance control, security system, intercom system, door lock control and energy management.
- Internet access and cloud server for remote control and monitoring of the home network.
- User-friendly smart home App that runs on both IOS and Android smartphones.
- Smart devices are powered from the main line that enables them to function according to their specifications at all times.

# Vega PLC smart building system

- An economical alternative network system that utilizes existing power lines as the communication link. Typical building management system requires special wirings such as twisted pairs and coaxial.
- Provides a one-stop Building Management System that runs on freely available Linux OS.
- Plug and play device installation. Simply connect a new device to the power line and it becomes part of the network through simple and easy configuration.
- Secured and peer to peer network. Mesh network topology for a full-range network coverage.
- Real-time energy consumption monitoring that provides relevant data that helps the user to make energy-saving solutions.
- A three phase smart gateway is available that supports industry standard BACnet protocol. Vendors of BMS platforms can easily add PLC functionalities in their network with ease.

PLC [ Powerline  
Communication ] is

A communication technology that uses power lines as a medium to achieve data transmission.



- ✓ Wire is network cable
- ✓ No signal attenuation
- ✓ High reliability
- ✓ Easy networking



## Intelligent control

Devices can be made aware of each other through the linkage and triggering functions that make the whole network interoperability real intelligent.



## Full coverage

Powerline is the communication network system



## Wireless

Existing power lines as network data communication. No additional wirings needed.



## Proprietary IP

Proprietary development of IP rights, network and physical layers and algorithms.



## Fast and easy installation

Plug and Play Intelligence



## Ad hoc Network

Mesh peer to peer network topology allowing the nodes to intercommunicate even from corner to corner distance from each other.



## Cost-effective

Easily expandable network system that translates to more than half of labor cost savings. Investment is preserved.



## Easy Maintenance

Automatic upload of failure warning, locally replaceable and customer self-maintenance.



## Robustness

Power lines are very stable making the equipment to work optimally to last for a longer period of time.

# Project cases



Energy management

Video intercom

Smart air conditioner

Smart mirror

Network control

Smart floor heating

Voice control

Security alarm

Smart lighting

Appliance control

Smart lock

Smart shading



PLC ( 電力線通信 ) による駅ホーム用の照明制御システムを JR東日本と共同研究開発  
 Panasonic and JR-East jointly research and develop a platform lighting control system using PLC (power line communication).

高輪ゲートウェイ駅に納入～  
 Takanawa Gateway Station is currently in use



パナソニック株式会社 ライフソリューションズ社は、東日本旅客鉄道株式会社（以下、JR東日本）とPLC（電力線通信）による調光調色可能な駅ホーム用の照明制御システムを共同で研究開発。2020年3月14日に開業予定の新駅「高輪ゲートウェイ」駅に、合計594台のPLC通信部内蔵ホーム用照明器具を納入しました。なお、PLCによる調光調色照明制御駅ホームに本格採用されるのは、国内初（※1）となります。

The PLC (Power Line Communication) dimming and toning platform lighting control system jointly developed by Panasonic Life Solutions and JR-East has been adopted by the newly opened "Takanawa Gateway" station on March 14, 2020. The station uses 594 platform lighting appliances with PLC communication modules. This is the first time in Japan that a PLC dimming and toning station platform lighting control system adopted in Metro Station.

照明器具を調光調色するためには、電源線とは別に信号線を敷設する必要があり、費用と工期がかかるため、駅での照明制御システムの導入は数多くありません。特に、駅ホームでの改修は、工事可能な時間が終電から始発までの短時間に限られるため、導入しづらいという背景がありました。信号線不要の通信方式として無線方式がありますが、駅構内では無線LANや列車無線などさまざまな無線が利用されているため、混信による通信性能の低下が懸念されます。そこで、信号線が不要かつ無線を使わない方法としてPLCに着目しました。

In order to adjust the dimming and toning of lighting equipment, it is necessary to lay a signal line separately from the power line, which requires cost and construction period, so there are not many installations of lighting control systems at stations. In particular, renovation at station platforms was difficult to introduce because the construction time was limited to a short time from the last train to the first train. There is a wireless method as a communication method that does not require a signal line, but since various wireless systems such as wireless LAN and train radio are used in the station yard, there is a concern that communication performance will deteriorate due to interference. Therefore, we focused on PLC as a method that does not require signal lines and does not use wireless.



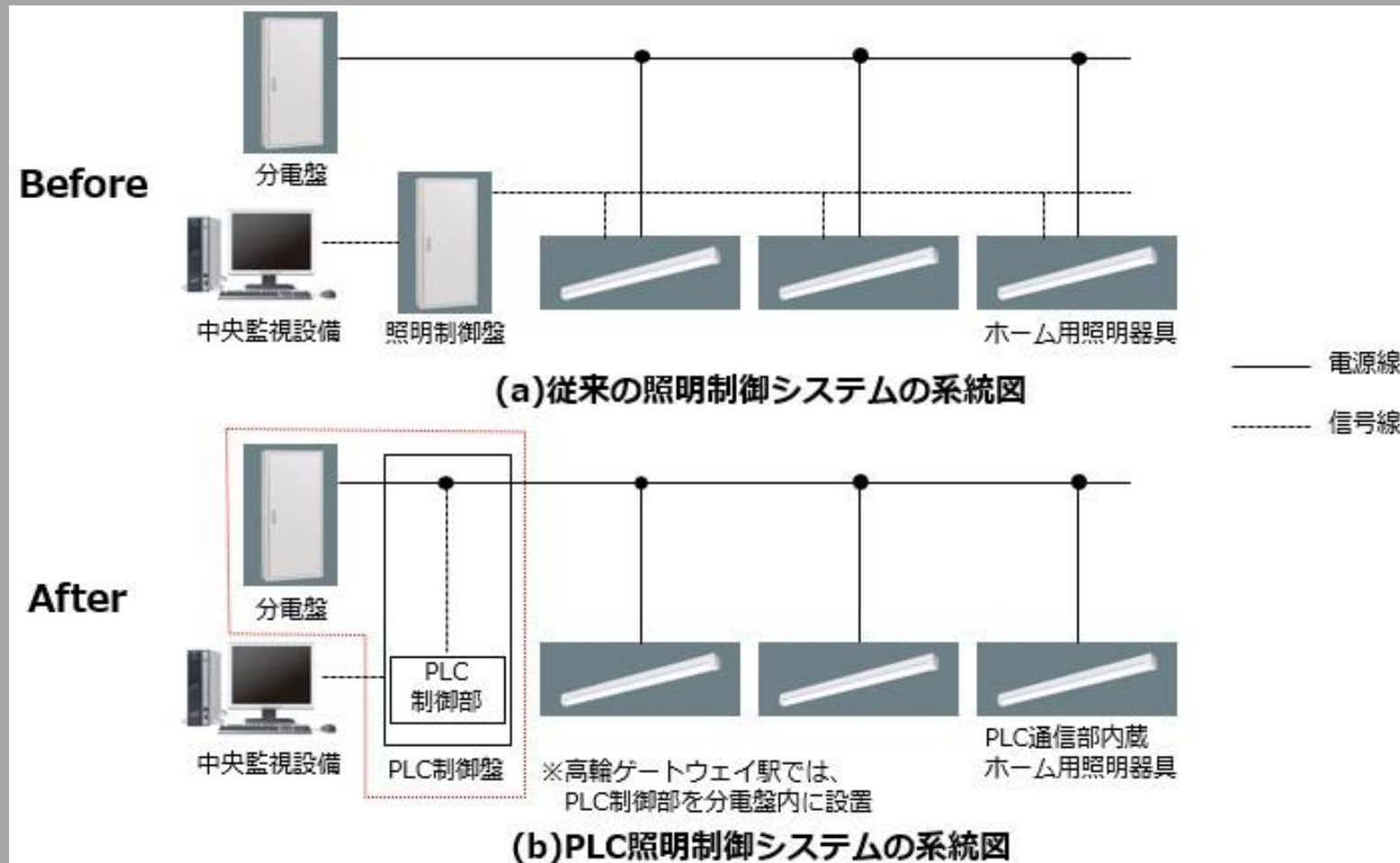
## ■ PLC照明制御システムの仕組み

### ■ The composition of PLC lighting control system

従来は、照明制御盤から各照明器具へ信号線を敷設する必要がありましたが、PLC照明制御システムでは信号線が不要になります。

動作は、駅全体の中央監視設備からの指示を受け、PLC制御部が調光調色信号をPLC信号に変換して電力線に重畳し伝送致します。その後、PLC通信部内蔵ホーム用照明器具が、受信したPLC信号を調光調色信号に再変換して指示した点灯状態（色温度、明るさ）を再現致します。各照明器具にアドレスが割り当てられるため、信号線を付け替えなくても、照明器具個別に点灯状態を変更することも可能となっています。

In the past, it was necessary to lay a signal line from the lighting control panel to each luminaire, but the PLC lighting control system eliminates the need for a signal line. The operation is instructed by the central monitoring equipment of the entire station, and the PLC control unit converts the dimming and toning signal into a PLC signal, superimposes it on the power line, and transmits it. After that, the home lighting fixture with built-in PLC communication unit reconverts the received PLC signal into a dimming toning signal and reproduces the indicated lighting state (color temperature, brightness). Since an address is assigned to each luminaire, it is possible to change the lighting status of each luminaire without changing the signal line.



一般的な照明制御システムとPLC照明制御システムの系統図

System diagram of general lighting control system and PLC lighting control system

“

**VEGA is committed to creating  
a safe, warm, intelligent and green home.**

”



APARTMENT

VILLA





<https://www.youtube.com/watch?v=t3bSL96I7rQ>

- Turn on the whole house light with one click, saving time and effort.
- When going out for a long time, you can combine the sunshade system to turn on and off the lights, curtains and other equipment at home through the mobile phone APP at a regular time. This is analogous to the owner at home, making the thief discourage and avoid property damage.
- Step into the cloakroom, the light will automatically light up gradually, and turn off automatically after leaving.
- The study room combines a light sensor and a human presence sensor to create a constant light environment.





# Smart Lighting System



## Scene mode

Owners can customize the scene mode through APP, which can realize smart panel and APP one-key smart remote group control.



## AI control

The system combines smart sensors to learn the user's control habits, monitor the environment such as light intensity in real time, and intelligently adjust the brightness of the light.



## Panel smart combination

Users can choose the mechanical panel according to their preferences and decoration styles, which can be docked to our intelligent system and easily and intelligently.



## Induction linkage

Install the human presence sensor to realize automatic lighting control in the bathroom, entrance, corridor, cloakroom and other areas.



## Timing control

Set the time through the APP. When you go out for a long time, you can turn on and off the lights at home at night to simulate the master at home, so that the thief can stop and avoid property damage.

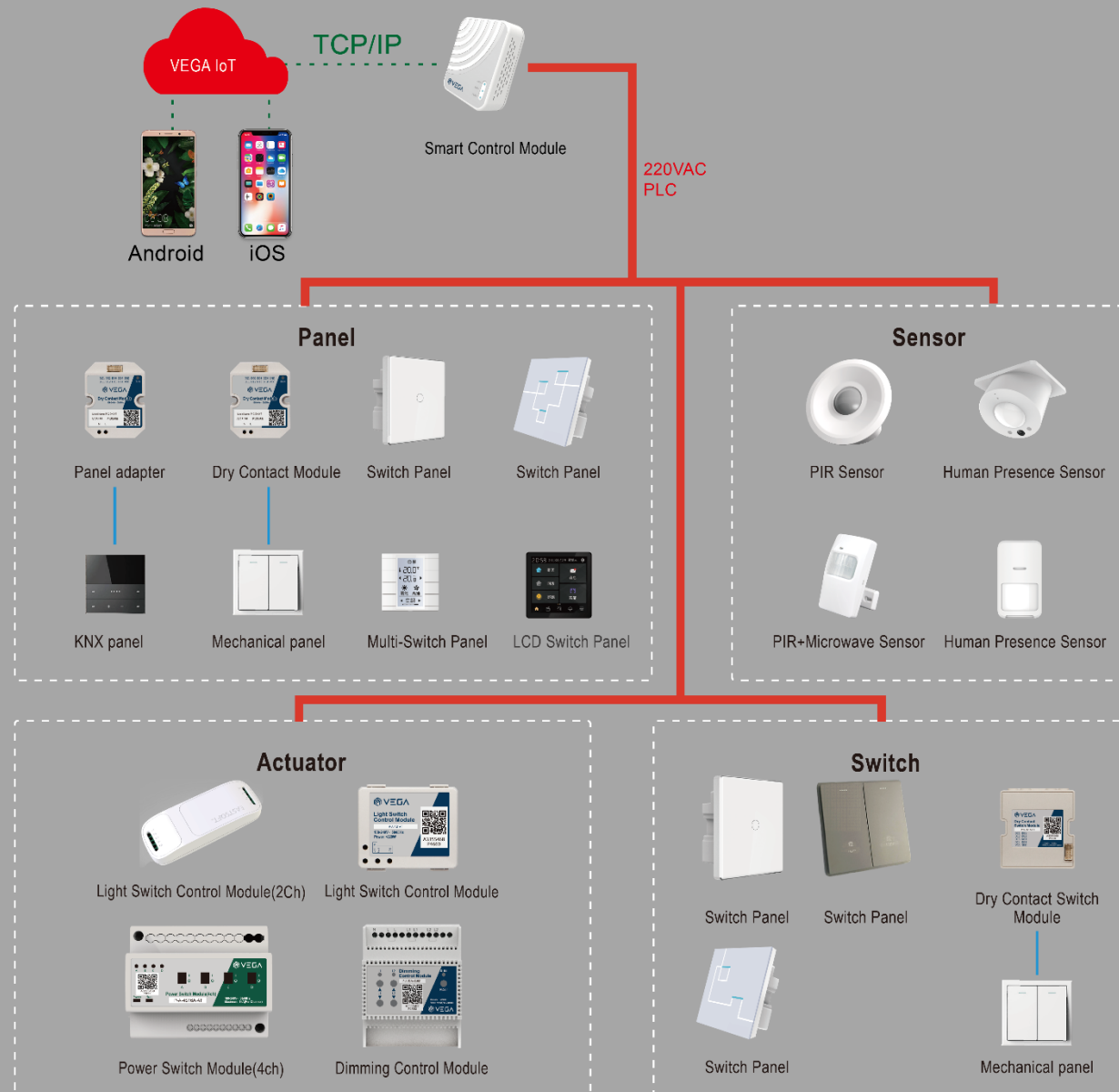


## Voice control

Realize the immediate control of lighting through simple words, avoid the complicated operation of manual control, and bring more convenient and intelligent operation experience.



# Smart Lighting System







# Smart Lighting System



Smart switch

## Smart Series

- 1/2/3 Button
- Metal frame



Black Silver Gold White

## Intelligent Series

- 1/2/3 Button
- Injection frame



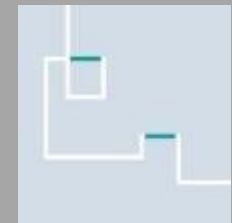
Black Silver Gold White

## Chinese style series

- 1/2/3 Button
- Glass panel



Gold



White

## Button series

- 1/2 Button
- Self reset switch



Light champagne gold



Gray



# Smart Lighting System



Smart panel + Actuator

## Smart series

- 1/2/3/4 Button
- Metal frame



Black Silver Gold White

## Intelligent Series

- 1/2/3/4 Button
- Injection frame



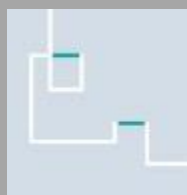
Black Silver Gold White

## Chinese style series

- 1/2/3/4 Button
- Glass panel



Gold



White



## 4CH switch actuator

- Centralized control



## Switch controller

- Distributed control



# Smart Lighting System



Self reset panel+ Dry contact switch



## Self reset panel

- Optional brand



## Dry contact switch

- 4 CH dry contact signal inputs
- 2 CH thyristor outputs



# Smart Lighting System



Self reset panel + Dry contact module + Actuator



## Self reset panel

- Optional brand



## Dry contact module

- 4 CH dry contact signal inputs
- 4 CH LED indicator outputs



## 4CH switch actuator

- Centralized control



## Switch controller

- Distributed control



# Smart Lighting System



Smart sensor + smart switch / actuator, sensor control



Black      Silver      Gold      White



## 4CH switch actuator

- Centralized control

## PIR sensor

- Light sensing
- Human motion sensing

## Smart switch series

- Smart series
- Intelligent series



## Switch controller

- Distributed control

- Opening, closing, starting and stopping of curtains through voice and smart panels.
- Combined with the illumination sensor to sense the ambient illumination, the curtain opening and closing is automatically adjusted to ensure a comfortable environment with constant illumination in the room.
- When the air conditioner is turned on, the curtains are closed to prevent the air conditioner from consuming more energy to deal with the heat generated by the sun.



# Smart Shading System



## Smart panel

Through the touch terminal and panel products, it can realize the arbitrary opening and closing degree control of the curtains.



## Artificial intelligence

Combined with smart illuminance sensor, it realizes the linkage between curtain automatic control and lighting system to achieve comfortable lighting effect and achieve indoor constant illuminance; through shading to reduce sunlight radiation, linkage with air conditioning system to achieve energy saving effect.



## Power reserve

For windows with electric curtains, a power supply line or a 5-hole socket should be designed near the motor. The power supply line can be used as a separate socket circuit, or it can be designed in parallel with the touch terminal or sensor of the lighting system.



## Scene mode

Curtains can participate in the scene mode and be combined with other systems and devices to achieve one-click scene collective control.



## Curtain type

It can be supported according to different functional requirements.

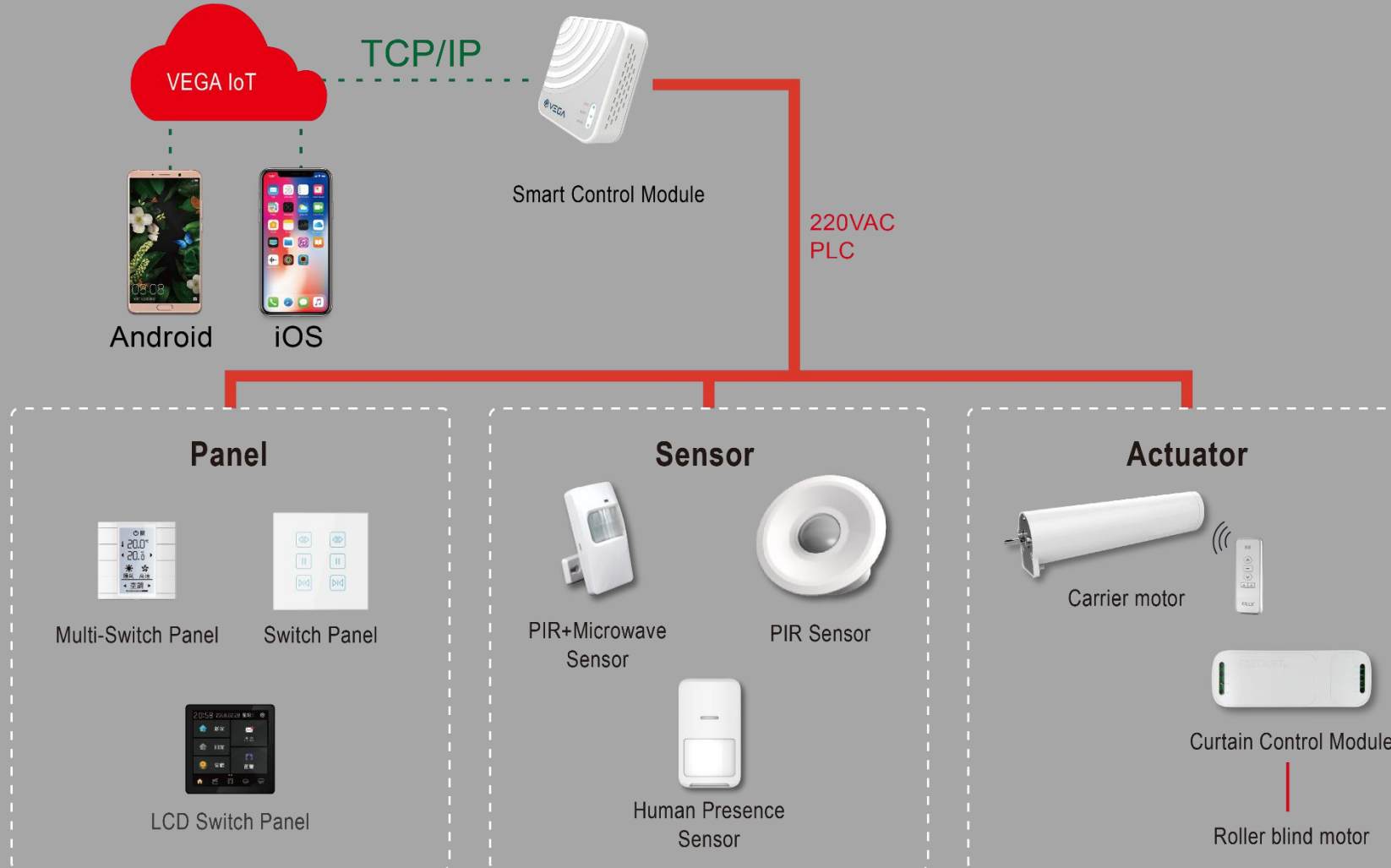


## Voice control

Through simple words, curtains can be controlled instantly, eliminating the complicated operations of manual control, and bringing a more convenient and smart operation experience.



# Smart Shading System







# Smart Shading System



Control panel



PLC motor



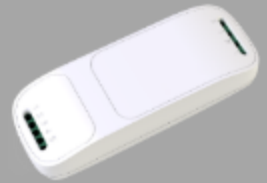
Control panel



Cooperation manufacturer motor

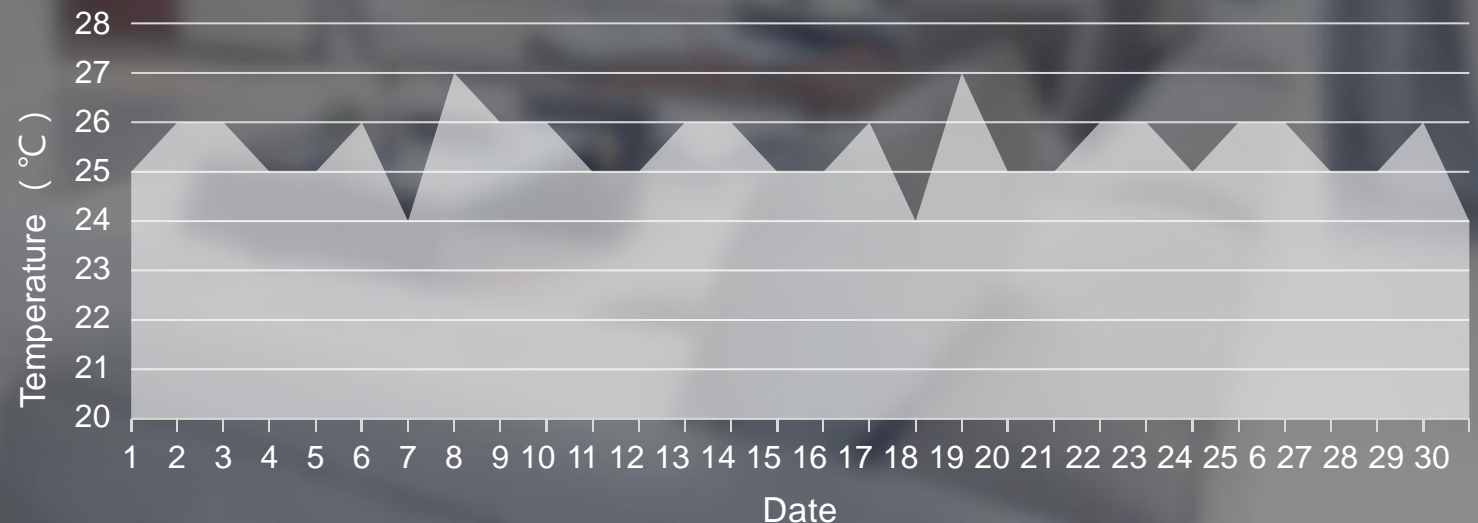
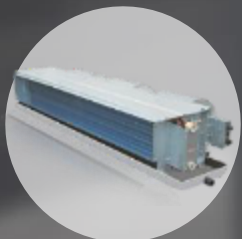


Controller



# VEGA | Smart Temperature Control

- Learn user habits and automatically adjust the temperature.
- Multi-user habits analysis, wisdom recommends a more comfortable operation mode in different rooms.
- Automatically adjust to energy-saving mode after leaving home to maintain low-power operation.
- Combine human body presence sensor, temperature and humidity sensor, weather forecast, etc. to intelligently adjust temperature and humidity to create a constant temperature and comfortable environment.
- The indoor temperature can be adjusted and monitored at any location through the mobile phone APP.
- It can control multi-wire air conditioning, central water air conditioning, electric floor heating, water floor heating and other equipment.





# Air Conditioning Control System



## Adapt to various types of air conditioning control

Support local, remote and timing control management of single air conditioner. Supports intelligent control of capillary network water air conditioners. Supports intelligent control of multi-connected air conditioners.



## Multi-screen control

Multi-screen integration, lighting smart terminal equipment, and support for local control of air conditioning.



## Scene mode

One-click to open the preset scene mode, let the air-conditioning floor heating work according to the user's predetermined mode. One-click scene control to turn off or turn down air conditioning and floor heating operation to reduce energy waste.



## Artificial intelligence

The system combines intelligent sensors to monitor the presence of people and the temperature and humidity of the environment, automatically adjust the operation of air conditioning and floor heating, learn user habits, and provide a constant temperature home experience.



## Remote, timing control

Remote control of equipment such as air conditioners can be achieved through the mobile phone APP. Time switch reduces energy waste.

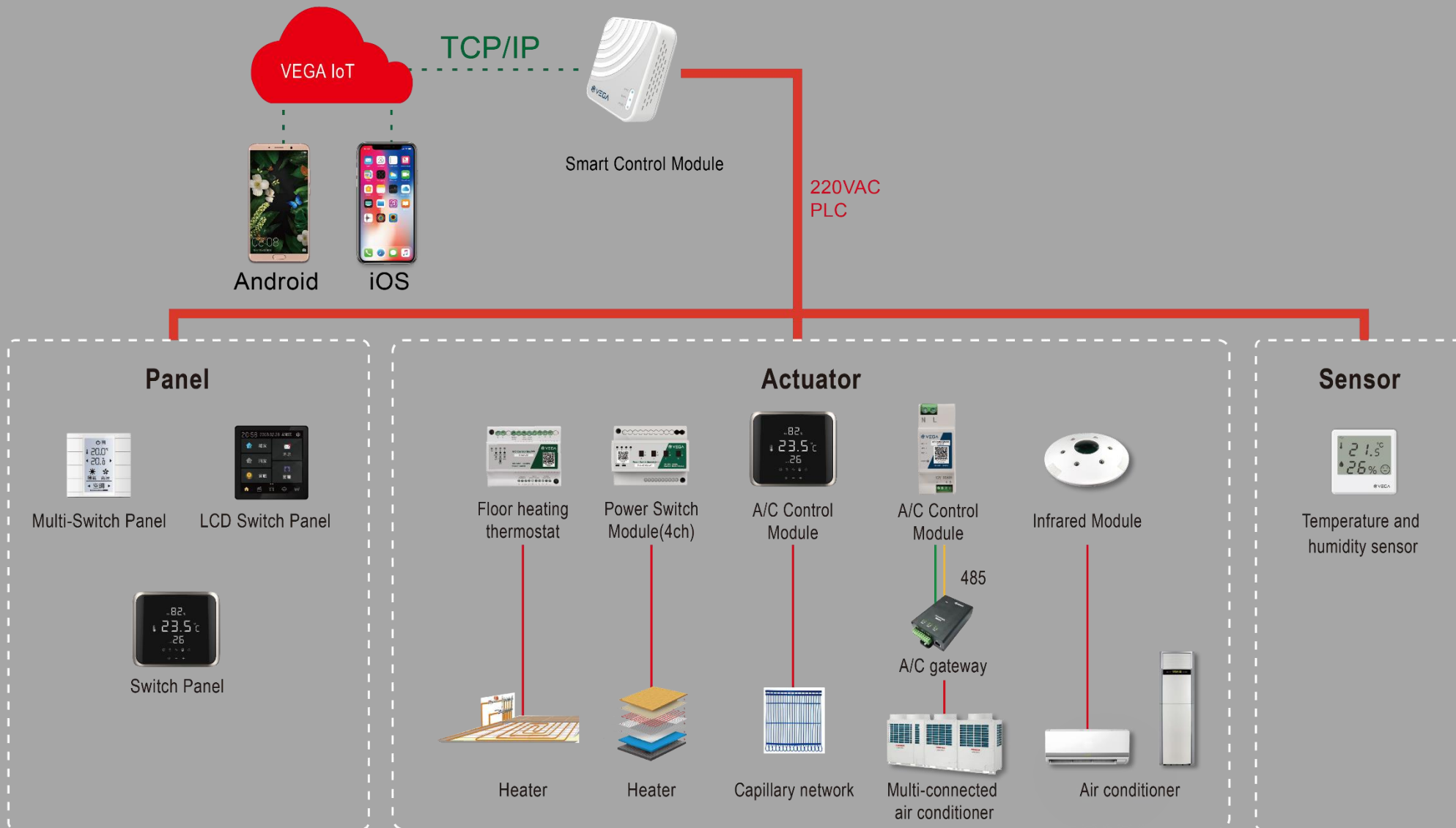


## Voice control

Real-time control of curtains can be achieved through simple words, eliminating the complicated operation of manual control and bringing a more convenient and smart operation experience.



# Air Conditioning Control System





# Air Conditioning Control System



Air conditioner



Smart terminal



Air conditioning companion

Multi-connected air conditioner



Smart terminal



Multi-connected air conditioner controller

Central water conditioning



Networked thermostat



# Floor Heating Temperature Control System



Floor heating thermostat



Temperature control panel



4CH switch actuator



The smart environmental monitoring system can instantly monitor indoor air quality. When abnormal air is detected, the window is automatically closed and the fresh air system is opened to improve indoor air quality and create a comfortable environment of constant oxygen.





# Smart Environment System



## Environmental sensing linkage

It is detected that the content of formaldehyde, dust particles, carbon dioxide, TVOC, etc. exceeds the standard, and the windows automatically open for ventilation or open the fresh air system.



## Weather sensing linkage

- When the outdoor environment is detected as dirty, the window automatically closes.
- The weather sensor detects that it is windy and raining, and the window closes automatically.
- In good weather, the windows automatically open for ventilation.



## Remote control

When going out for a long time, you can control the switch of the window through the APP remote, and open the window regularly for ventilation.





# Smart Environment System



Fresh air controller



Air quality sensor



Weather sensor

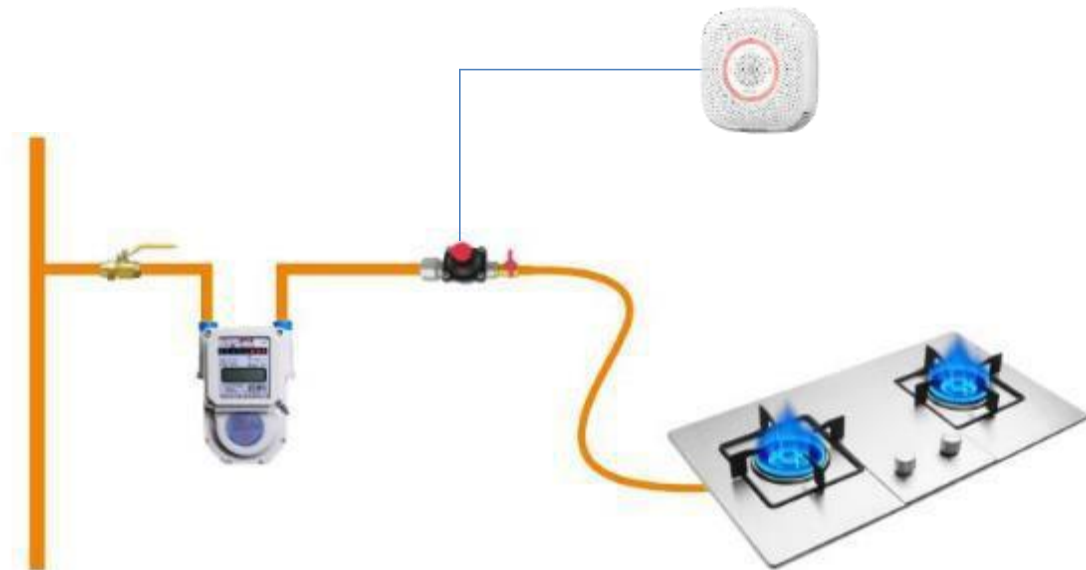


Window pusher






- **Remote alarm:** When a gas leak is detected, the alarm information is pushed to the owner's mobile phone (APP or SMS) and property platform as soon as possible.
- **Linked valve closing:** When gas leakage is detected, the system immediately links the manipulator to automatically close the gas valve, push the window opener to open the doors and windows for ventilation, and users no longer need to worry about gas leakage.



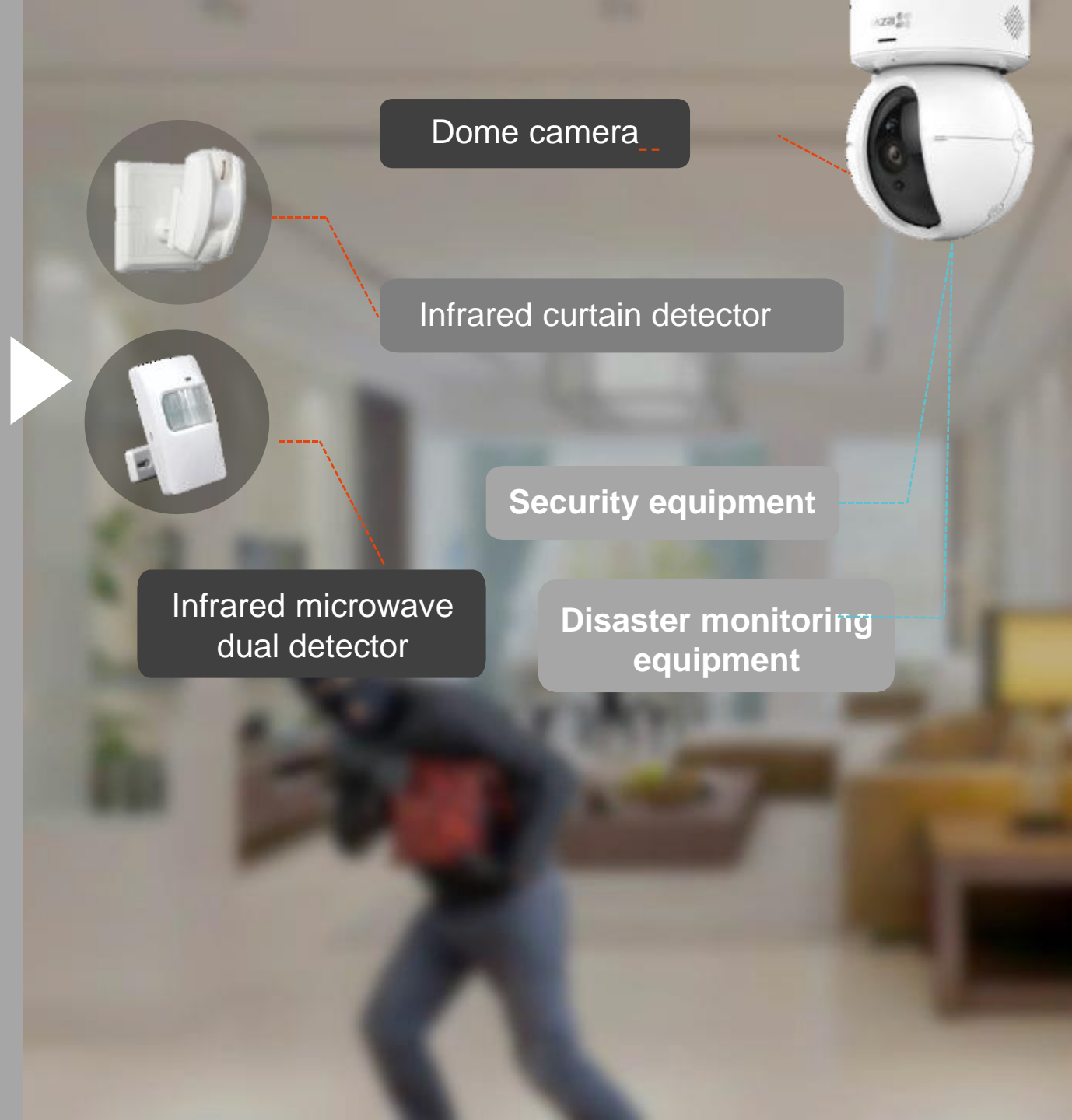
- In the event of water overflow, the linked alarm device immediately sends out an audible and visual alarm signal, and at the same time sends an alarm message to the mobile phone and property related personnel to make an emergency response to reduce the loss of the owner.



- 
- Once the smoke abnormality is detected, the system immediately links the local alarm device to send out an audible and visual alarm signal, automatically alarms to the property management center, and simultaneously reports to the owner's mobile phone.

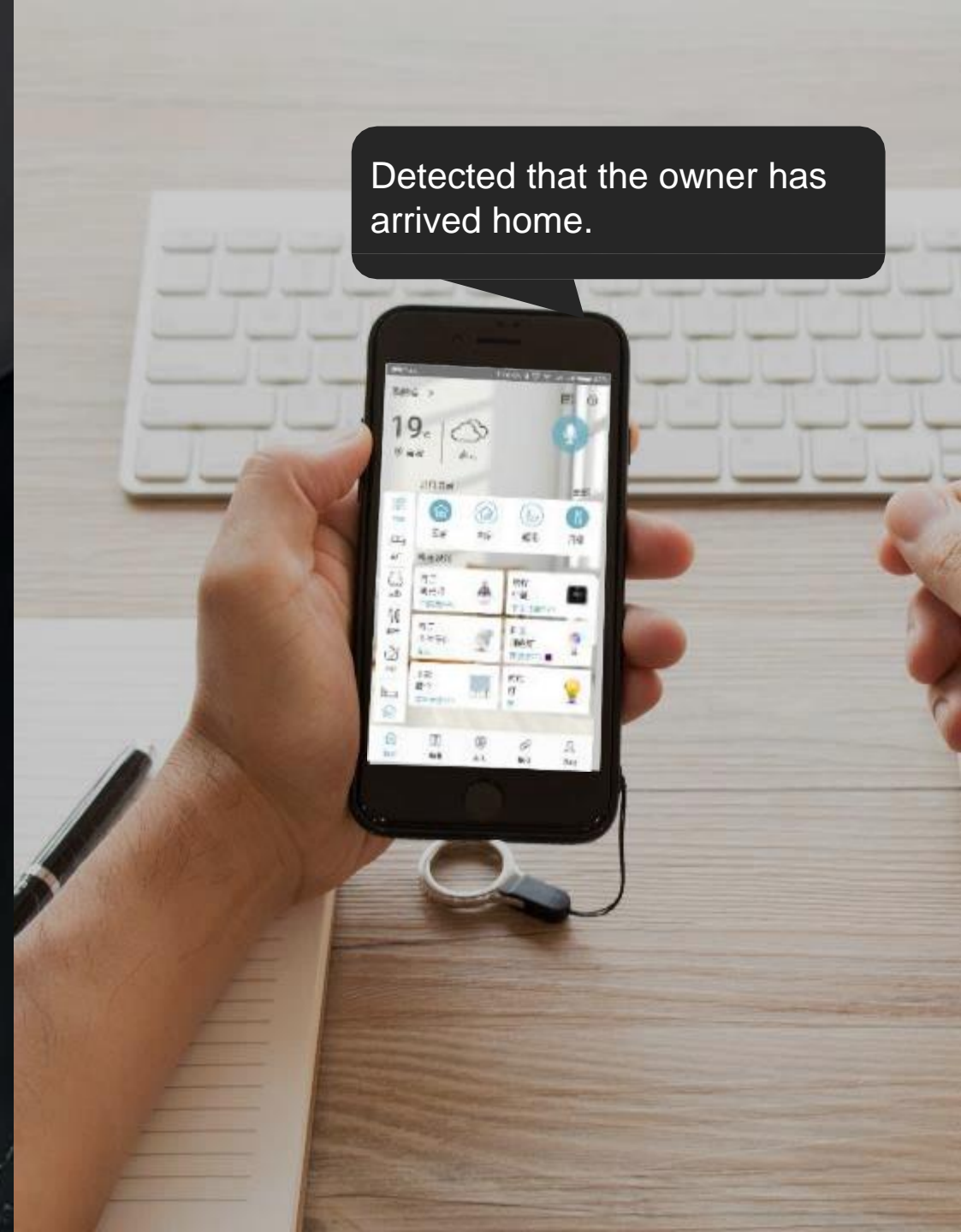


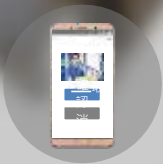
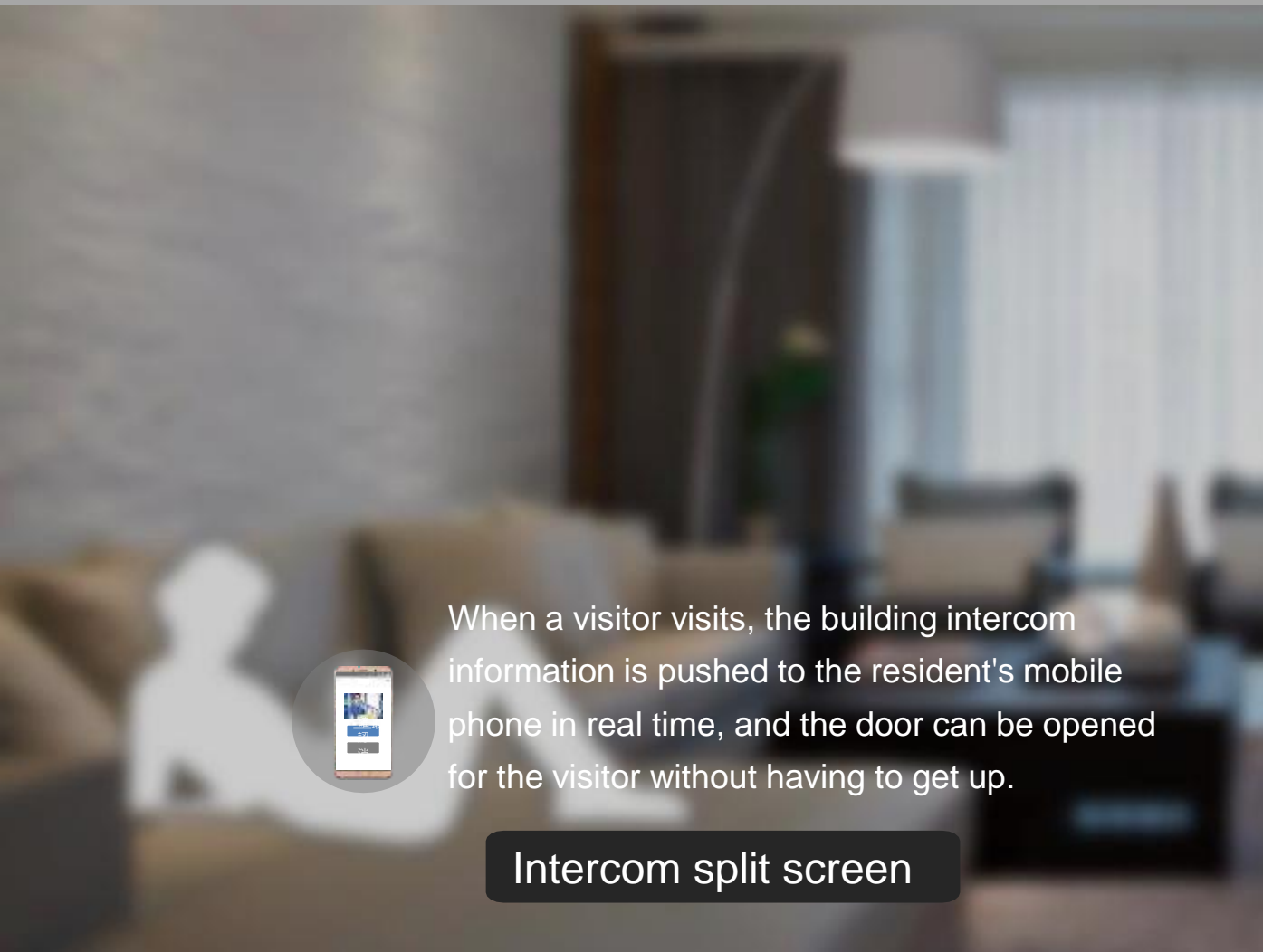
Users can view the situation at home at any time through the mobile APP. Once the smart sensor detects an intrusion, it will immediately link the camera to capture the record, and immediately push the alarm information to the user's mobile APP and property center.



- Support face recognition unlock, fingerprint unlock, IC card unlock, etc.
- Wisdom identification and identity linkage execute different scenarios.
- Remote monitoring by mobile phone APP, when the child returns home after school to open the door lock, the family mobile phone APP will receive the prompt message.

Detected that the owner has arrived home.





When a visitor visits, the building intercom information is pushed to the resident's mobile phone in real time, and the door can be opened for the visitor without having to get up.

**Intercom split screen**



- Building intercom screen
- Smart control screen
- One click control profile
- One click arming and disarming



- Face recognition
- Radio frequency punch card to open the door
- Password to open the door
- Remote video surveillance



# Smart Security System



## Emergency call

When an emergency occurs, press the emergency button, and the system will notify the property and family members to do emergency treatment through sound and light alarm, PC management system and mobile phone APP. After the emergency situation is processed, the SOS distress switch is popped up through the special key, and the alarm prompt is automatically cancelled, which is convenient without human intervention.



## Anti-theft alarm

The anti-theft alarm protection area is divided into building perimeter protection and building interior protection. When someone invades, the system controls the local alarm device to send out sound and light alarm signals, and at the same time the alarm signal is transmitted to the owner's mobile phone and property management center through the Internet of Things cloud.



## Overflow alarm

The kitchen is equipped with a water immersion sensor for real-time water leakage monitoring. When a water leak is detected, the detector transmits an alarm signal to the management system, APP, etc., and the owner immediately knows that the home is leaking.



## Gas leak alarm

When a gas leak is detected, it can be linked to a local siren to automatically alarm to the property and reported to the owner's mobile phone.



## Smoke alarm

When abnormal smoke is detected, it can be linked to a local siren to automatically alarm to the property and reported to the owner's mobile phone.





# Smart Security System



Camera



Smart lock



Infrared curtain detector



Infrared microwave dual detector



Emergency button



Emergency button



Dry contact module

Smoke alarm



Smoke detector



Dry contact module

Overflow alarm



Overflow detector



Dry contact module

Gas alarm



Combustible gas alarm



Dry contact module



Solenoid valve / manipulator

# VEGA | Background Music



Multi-zone whole house music



Independent partition panel control



Mobile APP control





# Background Music



Touch panel



Player module



Touch panel



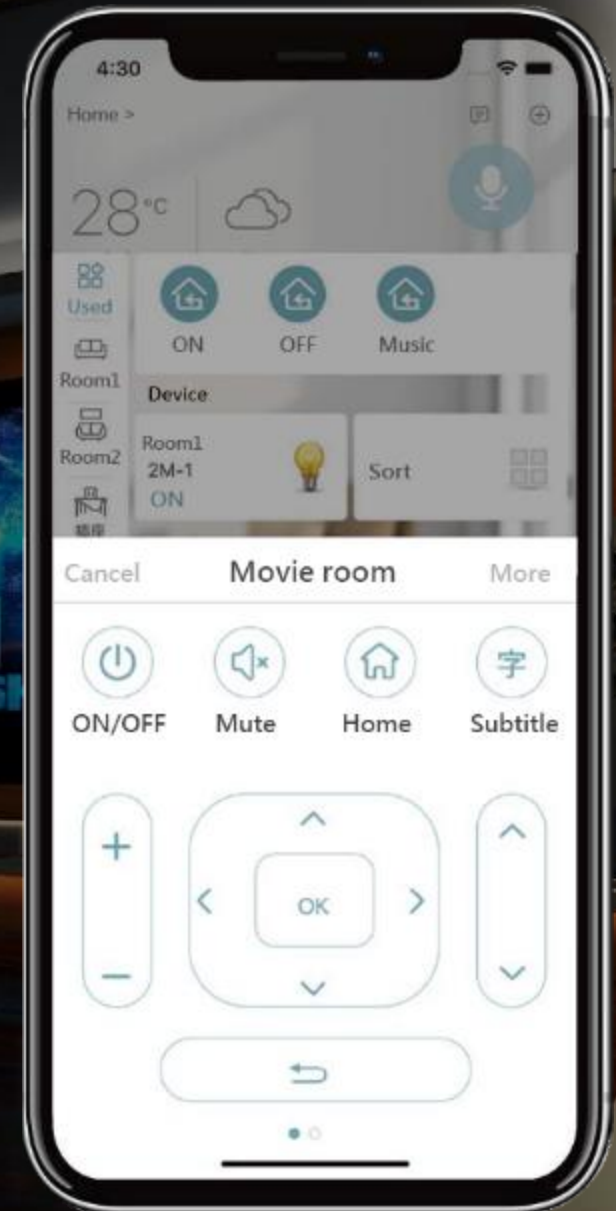
Central host computer



## Watching mode :

- Lighting device is turned off.
- Curtain slowly lowered.
- Turn on projection.
- Turn on the air conditioner.

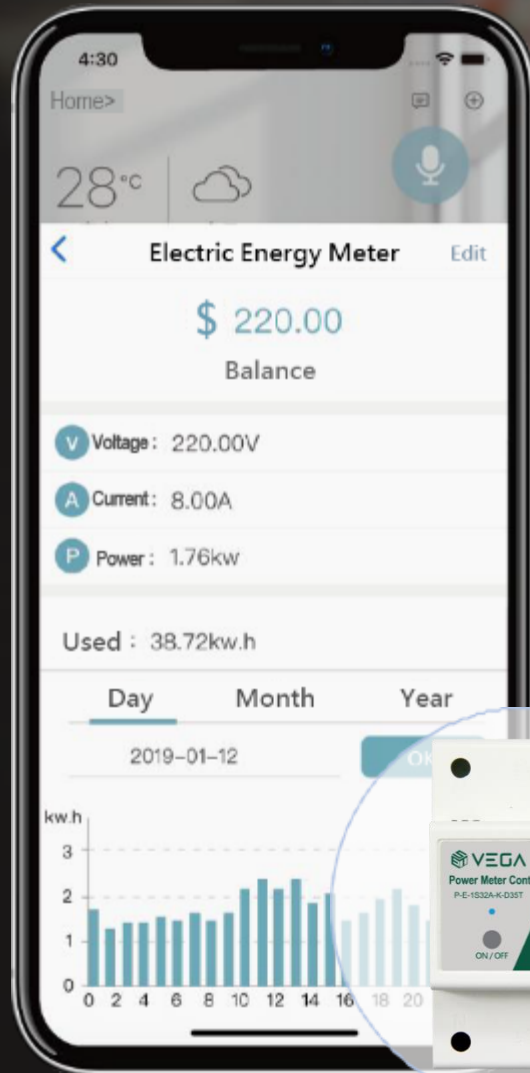
The system can realize intelligent control of players, projectors, curtains, timing devices, etc., and supports functions such as voice or APP to switch programs, volume adjustment, one click sequence switch, scene switching and so on.





The smart socket has the functions of power statistics and remote / local power on / off control, real-time display of power consumption information, and users can monitor and record the power consumption status of electrical equipment at any time.

*Smart socket*



- Support real-time electricity bill statistics
- Support power statistics by region
- Support daily, weekly and monthly power consumption statistics.
- Real-time monitoring of active power, voltage, current, frequency.

## Single-phase PLC smart meter

- Level 2 Measurement Certificate
- Rail mounting

It can memorize and store a variety of infrared remote-control commands, and comes with a code library, which can centralize the infrared remote-control functions to achieve centralized control and remote control of home appliances.

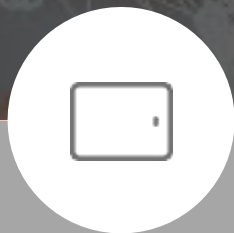
# *Infrared transponder*



**Multiple interactive modes are fully covered to meet different needs!**



Voice control



Comprehensive screen



Automatic control



Under Development





# Integrated Touch Terminal

Reshape the interactive form of smart home and create a new entrance to smart home.



- One screen can control the whole house intelligent equipment such as lighting, curtains, air conditioner, etc.
- It can control multiple intelligent devices with one click to achieve scene mode control.
- Support far-field voice interaction
- Integrated gateway function

## *10-Inch Panel Gateway*

Gateway + Control panel + Smart speaker

Reshape the interactive form of smart home and create a new entrance to smart home.



- Multi-screen integration, lighting, temperature control, fresh air, shading, scene mode, etc.
- Efficient and convenient, reject fragmented interaction.

*4-Inch Smart Panel*



# Integrated Touch Terminal



- Support power line carrier PLC / WIFI / Bluetooth fusion communication.
- Support power interaction and meter communication, display power information on the screen, or push advertisements and various news through power.
- Create an open platform to interface with cooperation manufacturer applications.
- Integrated gateway function, can control lamps, curtains, air conditioners and other smart home equipment.
- Connect indoors and outdoors to achieve interconnection and create a smart experience for the Internet of Things.

*Smart Home*

*Gateway Panel*

By docking smart speakers, you can easily achieve voice control of smart home devices, including controlling a single device, executing a scene mode, and security linkage.



Hi Siri, turn on birthday mode.

Okay, I have turned off the lighting, curtains and music for you.



Hi Siri, turn on the light.

OK.



The VEGA smart home gateway product is at the center of the smart home system. It connects to the VEGA IoT cloud platform upwards and docks with multiple smart home terminal products.

VEGA smart home gateway can ensure the normal operation of each subsystem in the case of network disconnection (unable to connect to the cloud). The powerful edge computing capability greatly expands the type of docking channels and can perfectly match the different requirements of smart scenarios.

VEGA smart home gateway products come in many forms to meet the diverse needs of users in different application environments.





## Smart gateway

- PLC, WiFi, RJ45
- Self-insertion and self-use, suitable for after-installation.



## Smart gateway ( BLE

- WiFi, BLE communication
- Support Bluetooth low power devices.
- Self-insertion and self-use, suitable for after-installation.



## Multifunctional gateway

- 86 boxes installed to prevent loss.
- Support voice broadcast and security alarm.



## Three-phase smart gateway

- PLC, RJ45 communication
- Guide rail installation, connect three-phase electricity.
- Suitable for villa projects.



## 10-Inch Panel Gateway

- PLC, WiFi communication
- 10-inch touch screen
- Support far-field voice



Silver

Gold

Black



## Panel gateway

- PLC, WiFi communication
- 7-inch touch screen

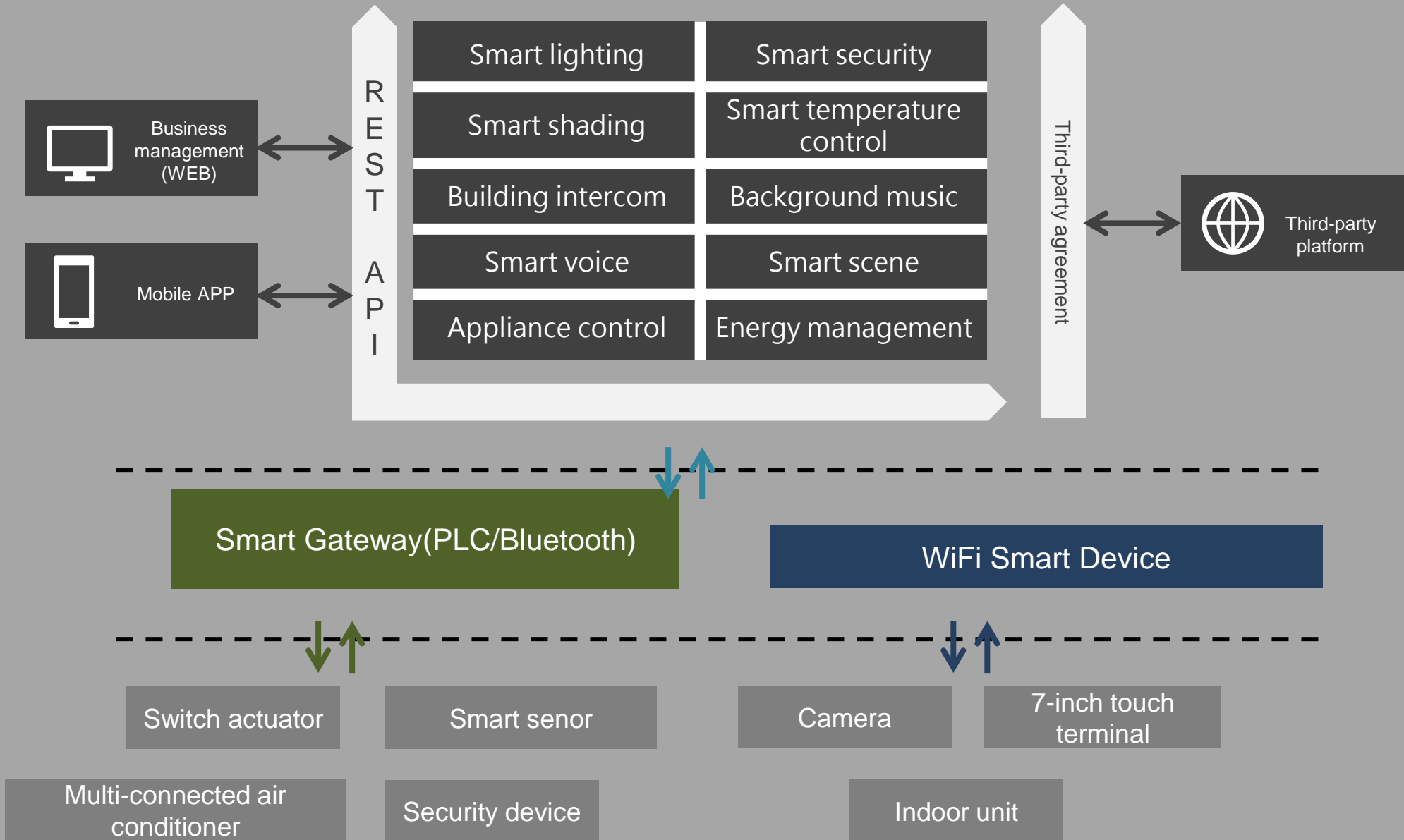


*Smart Life  
Stay with you*

## VEGA Smart Home APP

The smart home has global control and instantly obtains the operation status of home smart devices, smart scenes and device quick operations.

- Quick configuration
- One click execution
- Voice control
- Remote control





# Project cases



## Jiu-Yuan Collection

Luxury Residence, Taipei, Taiwan



- **4-inch smart panel**  
Linux base , up to 50 profiles setting with App and BMS system
- **VEGA PLC Smart Meter**  
With electric energy metering function, immediately monitor voltage, current, active power, remote control on/off the power with APP and BMS system
- **4-ch switch module (35mm DIN)**  
Broadband Power line communication is adopted as an updated product of the power control module, it is mainly used in smart home systems to achieve lighting control.
- **Smart Control Module**  
smart home product and App from Vega which can form a smart home system. User can set their own management program and scene mode on device.
- **Smart PLC Curtains**  
PLC curtains can be opened, closed, paused and opened to a specific position through the APP and BMS system



# Project cases



## Tai Residence

Luxury Residence, Taipei, Taiwan



- **4-inch smart panel**  
Linux base , up to 50 profiles setting with App and BMS system
- **VEGA PLC Smart Meter**  
With electric energy metering function, immediately monitor voltage, current, active power, remote control on/off the power with APP and BMS system
- **4-ch switch module (35mm DIN)**  
Broadband Power line communication is adopted as an updated product of the power control module, it is mainly used in smart home systems to achieve lighting control.
- **Smart Control Module**  
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- **Smart PLC Curtains**  
PLC curtains can be opened, closed, paused and opened to a specific position through the APP and BMS system





## Jia-Tai Collection Residence



Luxury Residence, Taipei, Taiwan

- **4-inch smart panel**  
Linux base , up to 50 profiles setting with App and BMS system
- **VEGA PLC Smart Meter**  
With electric energy metering function, immediately monitor voltage, current, active power, remote control on/off the power with APP and BMS system
- **4-ch switch module (35mm DIN)**  
Broadband Power line communication is adopted as an updated product of the power control module, it is mainly used in smart home systems to achieve lighting control.
- **Smart Control Module**  
smart home product and App from Vega which can form a smart home system. User can set their own management program and scene mode on device.
- **Smart PLC Curtains**  
PLC curtains can be opened, closed, paused and opened to a specific position through the APP and BMS system



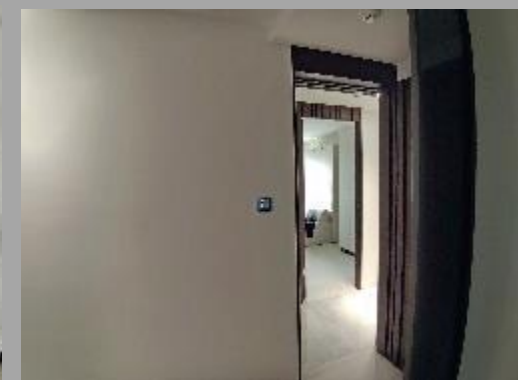
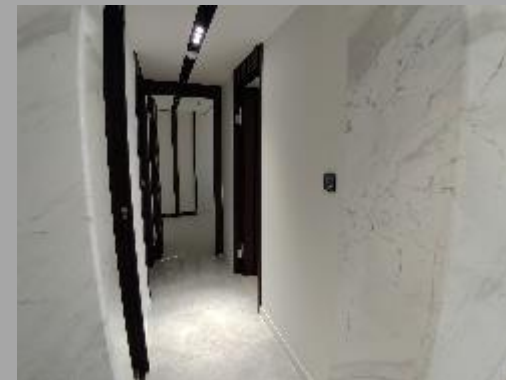


## Mandarin Luxury

Luxury Residence, Taipei, Taiwan



- **4-inch smart panel**  
Linux base , up to 50 profiles setting with App and BMS system
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# Project cases



## Giraffe American School



### Office Building & School, Taipei, Taiwan

- **4-inch smart panel**  
Linux base , up to 50 profiles setting with App and BMS system
- **VEGA PLC Smart Meter**  
With electric energy metering function, immediately monitor voltage, current, active power, remote control on/off the power with APP and BMS system
- **4-ch switch module (35mm DIN)**  
Broadband Power line communication is adopted as an updated product of the power control module, it is mainly used in smart home systems to achieve lighting control.
- **Smart Control Module**  
smart home product and App from Vega which can form a smart home system. User can set their own management program and scene mode on device.
- **Dry Contact Switch Module**  
Any button of an ordinary switch panel will be able to accomplish smart functions. remote control for common sensor devices.
- **Dimming Control Module**  
TRIAC dimming LED lamp, halogen lamps and others. The control module supports gradual lighting on power-on and with adjustable rate of change of brightness. The control module has built-in fuse and over-heat protection.
- **PLC-HUB**  
Three-phase electrical wiring method is used to relay the power line carrier signal to improve the power line carrier cross-phase capability.
- **A/C Control Module**  
Fan coil and electric valve, electric ball valve or air valve at the end of the air conditioning system is controlled to achieve the purpose of adjusting temperature and saving energy.



# Project cases



## 谷町く ん Tanimachi - kun Kyoto , Japan



- **4-inch smart panel**  
Linux base , up to 50 profiles setting with App and BMS system
- **VEGA PLC Smart Meter**  
With electric energy metering function, immediately monitor voltage, current, active power, remote control on/off the power with APP and BMS system
- **4-ch switch module (35mm DIN)**  
Broadband Power line communication is adopted as an updated product of the power control module, it is mainly used in smart home systems to achieve lighting control.
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Fan coil and electric valve, electric ball valve or air valve at the end of the air conditioning system is controlled to achieve the purpose of adjusting temperature and saving energy.





# Thank You

— THANK YOU FOR WATCHING —



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