VEGA®

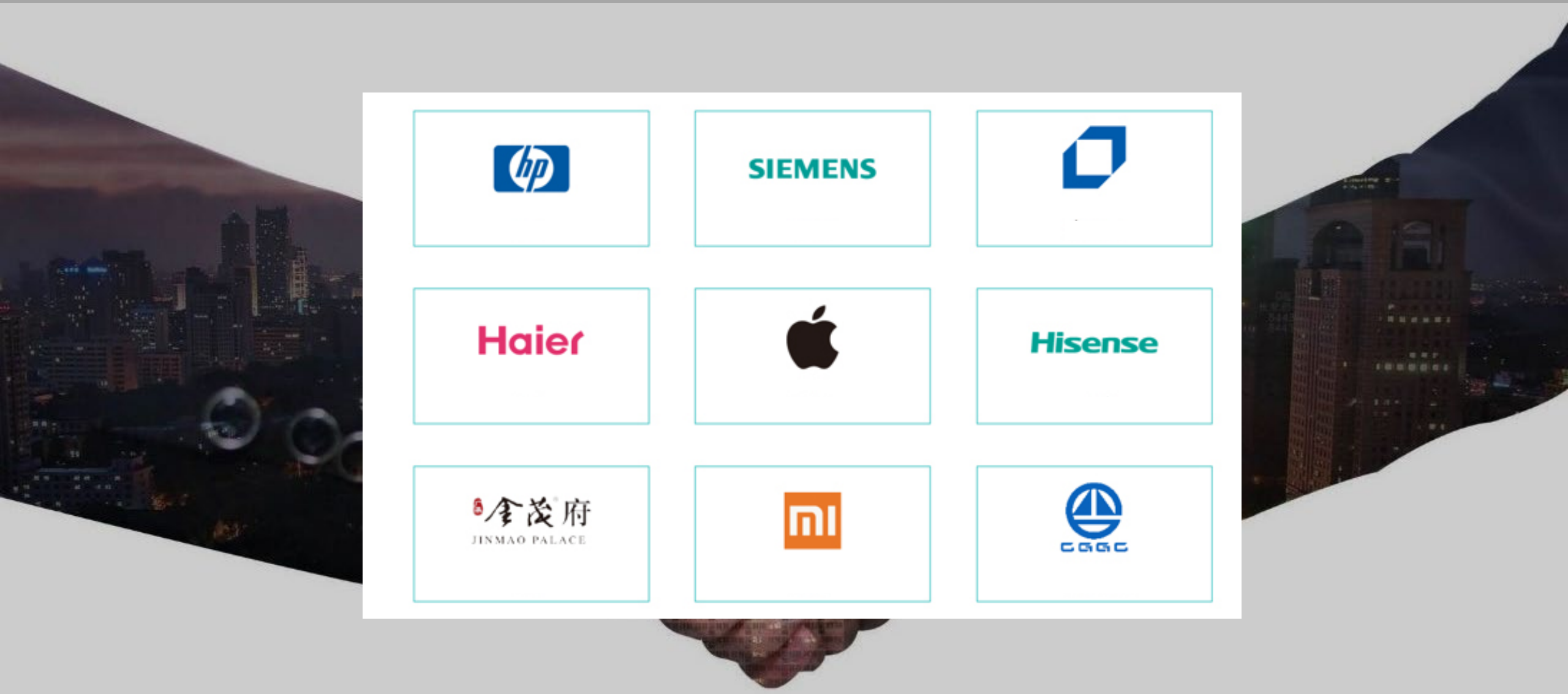
# VEGA
# Whole House
# Smart Solution

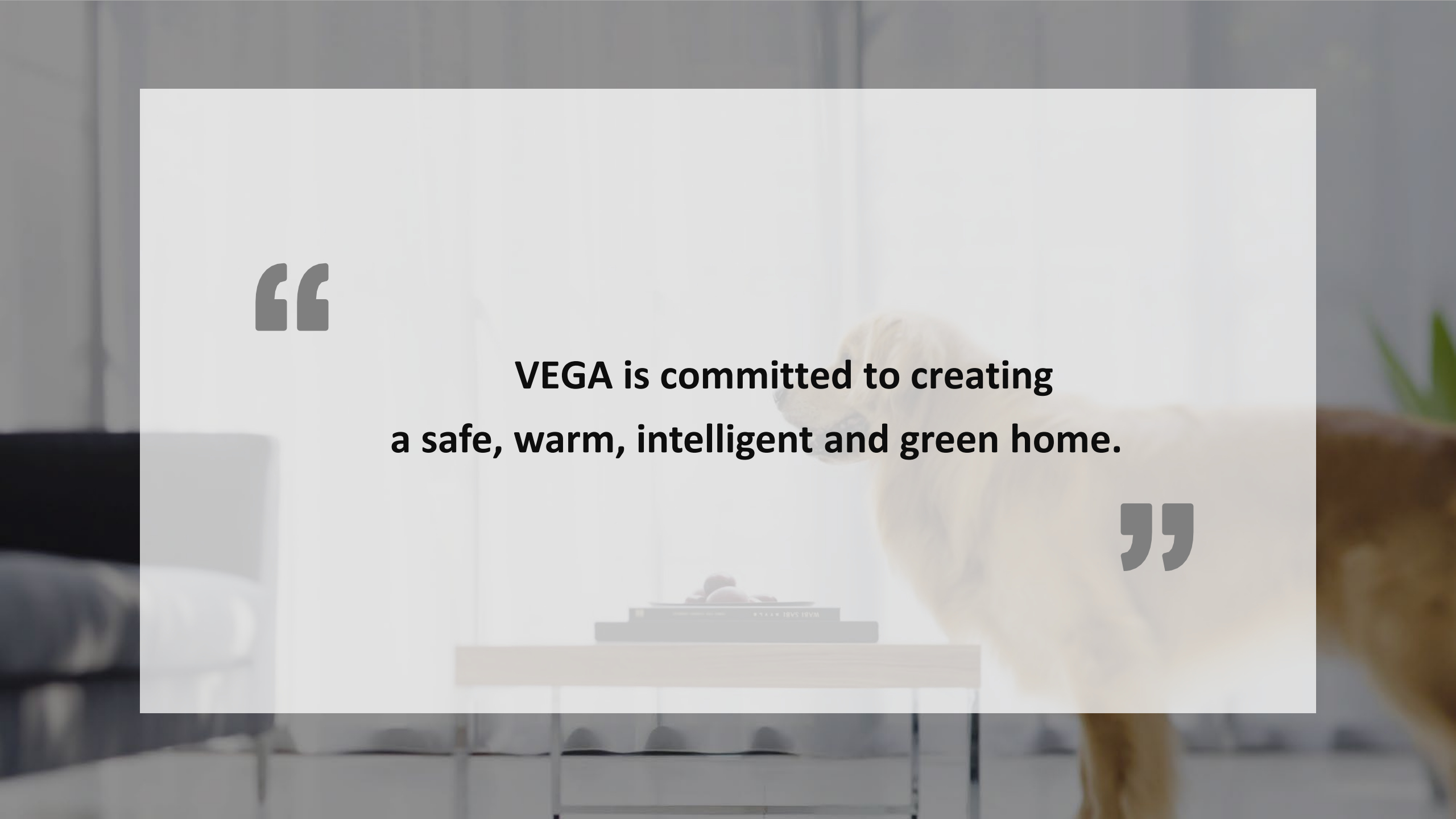
VEGA Integration Corp.(Japan)

# ABOUT US

VEGA develops technology based on integrated circuit design based on integrated circuit design.
Layout of the "chip, software (module), terminal, system, information service" industry chain.
Focus on the two strategic emerging areas of **Energy Internet and Intelligence** to build a world-class enterprise.

# VEGA | Partners





“

**VEGA is committed to creating**

**a safe, warm, intelligent and green home.**

”

# VEGA | Smart Home System Solution

## Smart lighting system

Scene mode, sensor linkage, smart dimming, single light control.

## Smart shading system

Timing and linkage opening and closing, scene control.

## Smart security system

Smoke alarm, gas leakage alarm, illegal intrusion alarm, emergency call for help in multiple defense zones, etc.

## Smart temperature control system

According to time, temperature, humidity and other parameters, air conditioning, floor heating, etc. are monitored, automatically adjusted and linked control.

## Background music system

Multi-zone whole house music, custom independent zones, one-click setting of scene mode, make home music enjoyment more intelligent.

## Building intercom system

Property security linkage, smart home control, smart voice control, doorway monitoring function, community information release, access push phone, TV, remote door opening.

## Voice control system

Voice control of all electrical equipment in the home.

## Smart appliance control

Centralize the control functions of the infrared remote control to achieve centralized and remote control of home appliances.

## Energy management system

Energy collection, energy efficiency benchmarking, energy consumption alarms, energy savings accounting, and energy analysis.

# VEGA | Applicable Scene

APARTMENT

VILLA

# Smart Lighting

- 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.

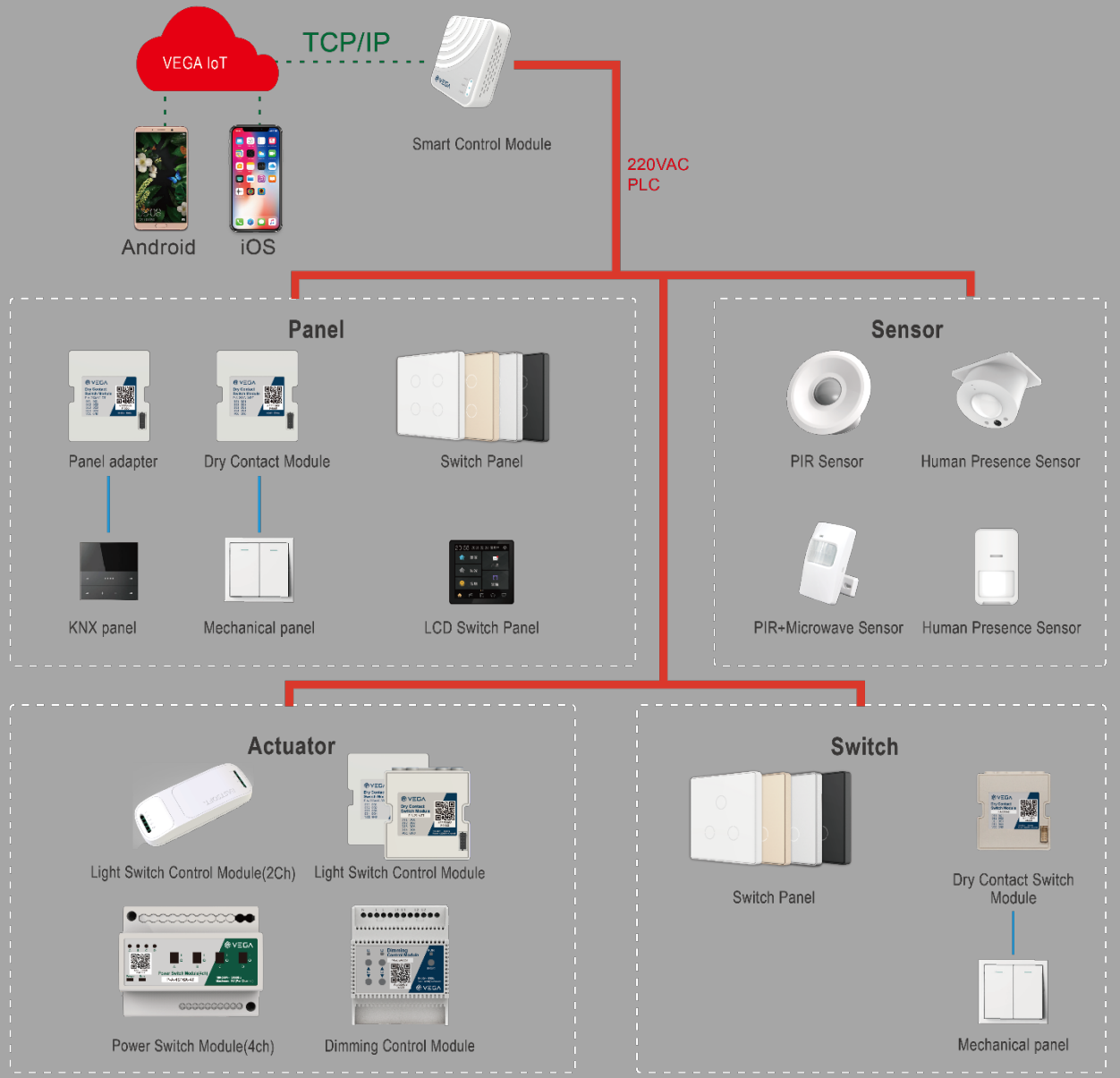
## Timing control

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

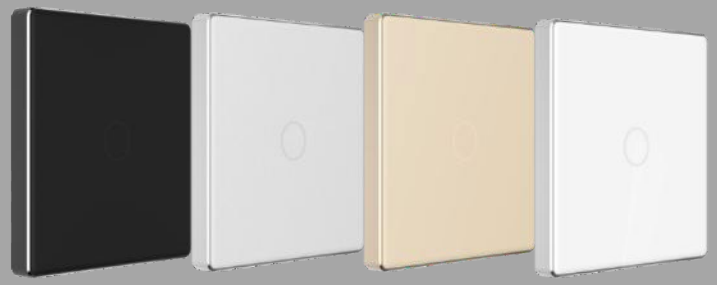


# Smart Lighting System

Smart switch

## Smart Series

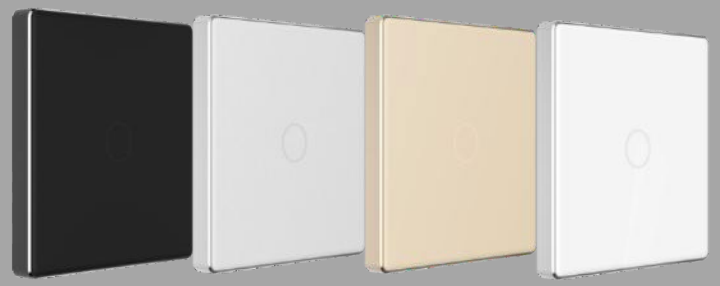
- 1/2/3 Button
- Metal frame



Black Silver Gold White

## Intelligent Series

- 1/2/3 Button
- Injection frame



Black Silver Gold White

## Button series

- 1/2 Button
- Self reset switch

Light champagne gold

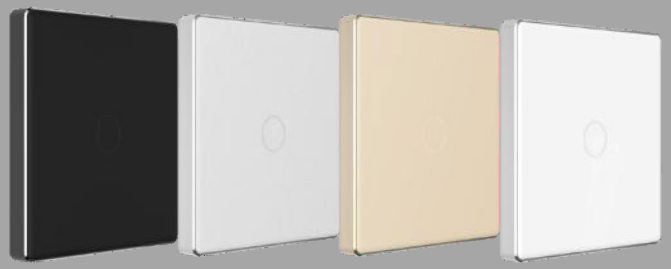
Gray

# Smart Lighting System

Smart panel + Actuator

## Smart series

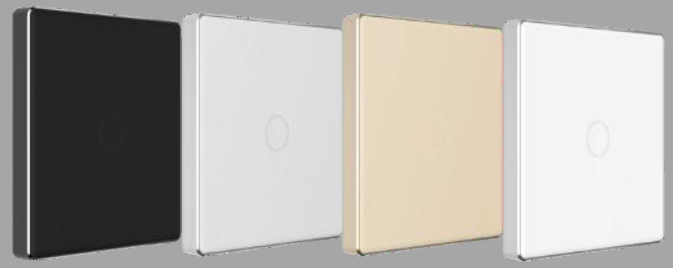
- 1/2/3/4 Button
- Metal frame



Black Silver Gold White

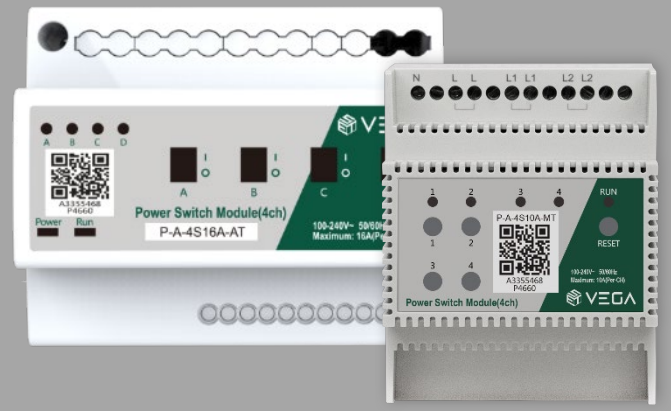
## Intelligent Series

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



Black Silver Gold White

+




## Power Switch Module(4ch)

- Centralized control

## Dry Contact Switch Module

- Distributed control

# Smart Lighting System

Self reset panel+ Dry contact switch module

## Self reset panel

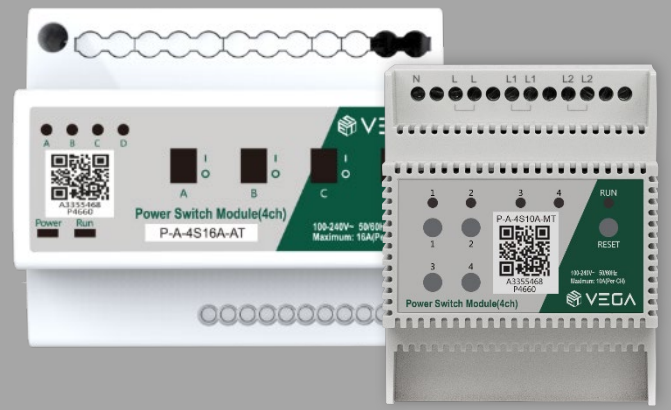
- Optional brand

## Dry contact switch module

- 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

## Power Switch Module(4ch)

- Centralized control

# Smart Lighting System

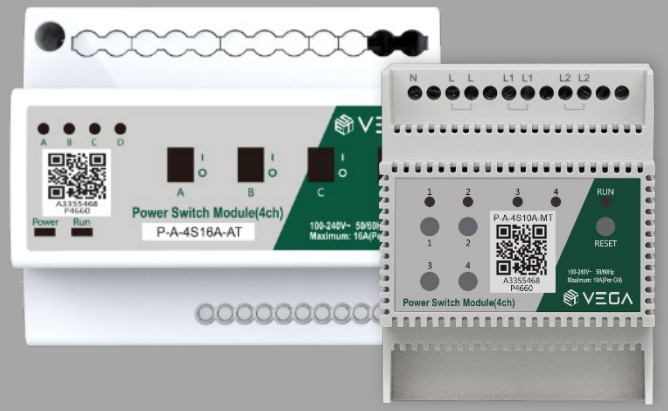
Cooperation manufacturer panel + Panel adapter + Actuator

## Cooperation manufacturer panel

- Comes with serial communication
- KNX interface

## Panel adapter

- 4/8 Button




## Power Switch Module(4ch)

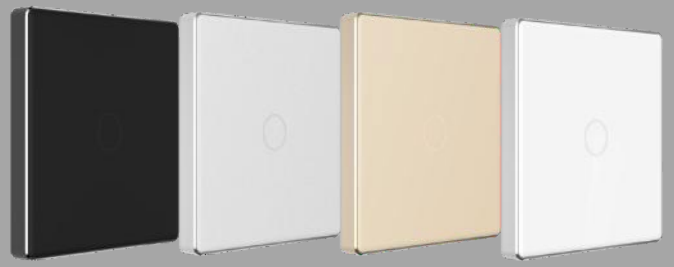
- Centralized control

## Dry Contact Switch Module

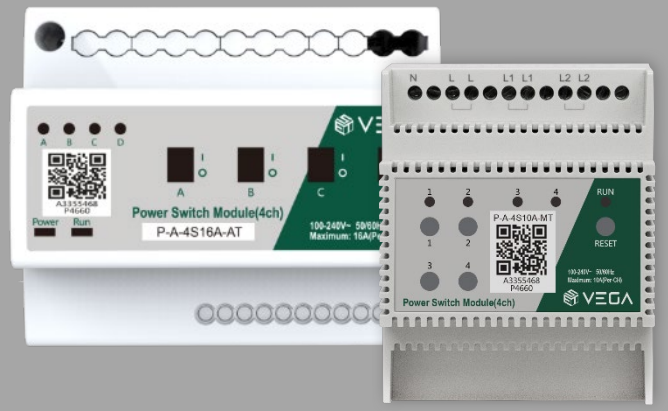
- Distributed control

# Smart Lighting System

Smart sensor + smart switch / actuator, sensor control



Black Silver Gold White




## Power Switch Module(4ch)

- Centralized control

## Dry Contact Switch Module

- Distributed control

## Human Presence Sensor

- Light sensing
- Human motion sensing

## Smart switch series

- Smart series
- Intelligent series

# Smart Shading

- 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.

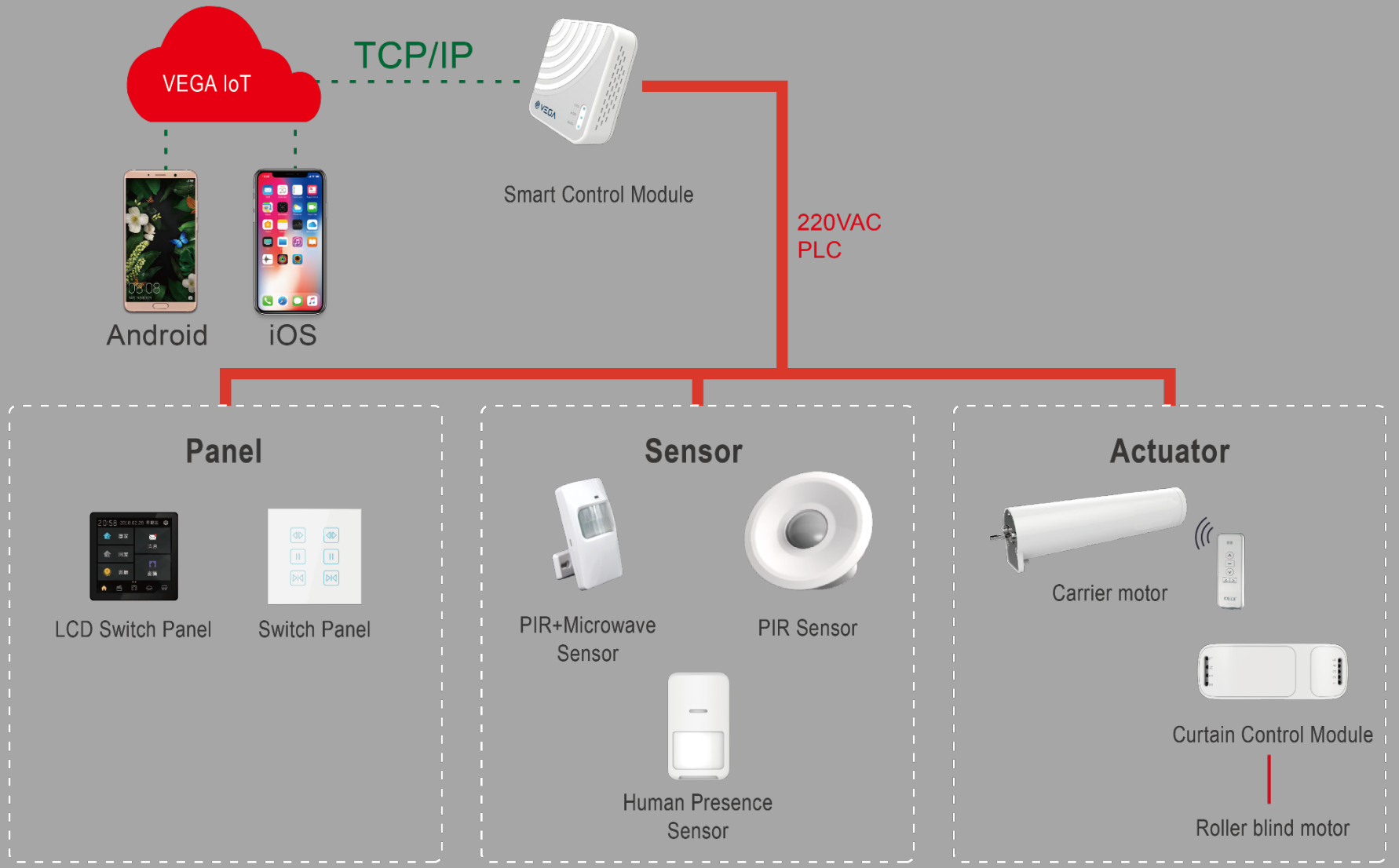
## Curtain type

It can be supported according to different functional requirements.

## Voice control

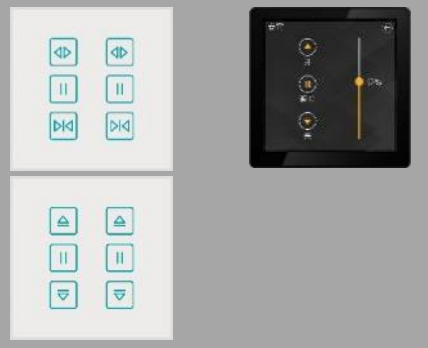
Through simple words, curtains can be controlled instantly, eliminating the complicated operations of manual control, and bringing a more convenient and smart operation experience.

# Smart Shading System

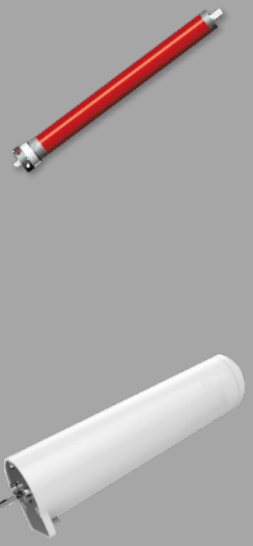


# Smart Shading System

Control panel



PLC motor

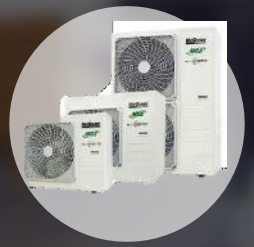


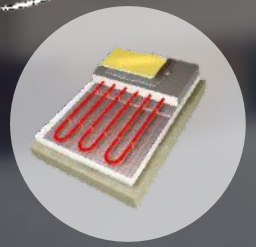
Control panel

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.

## 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.

## Multi-screen control

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

## Remote, timing control

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

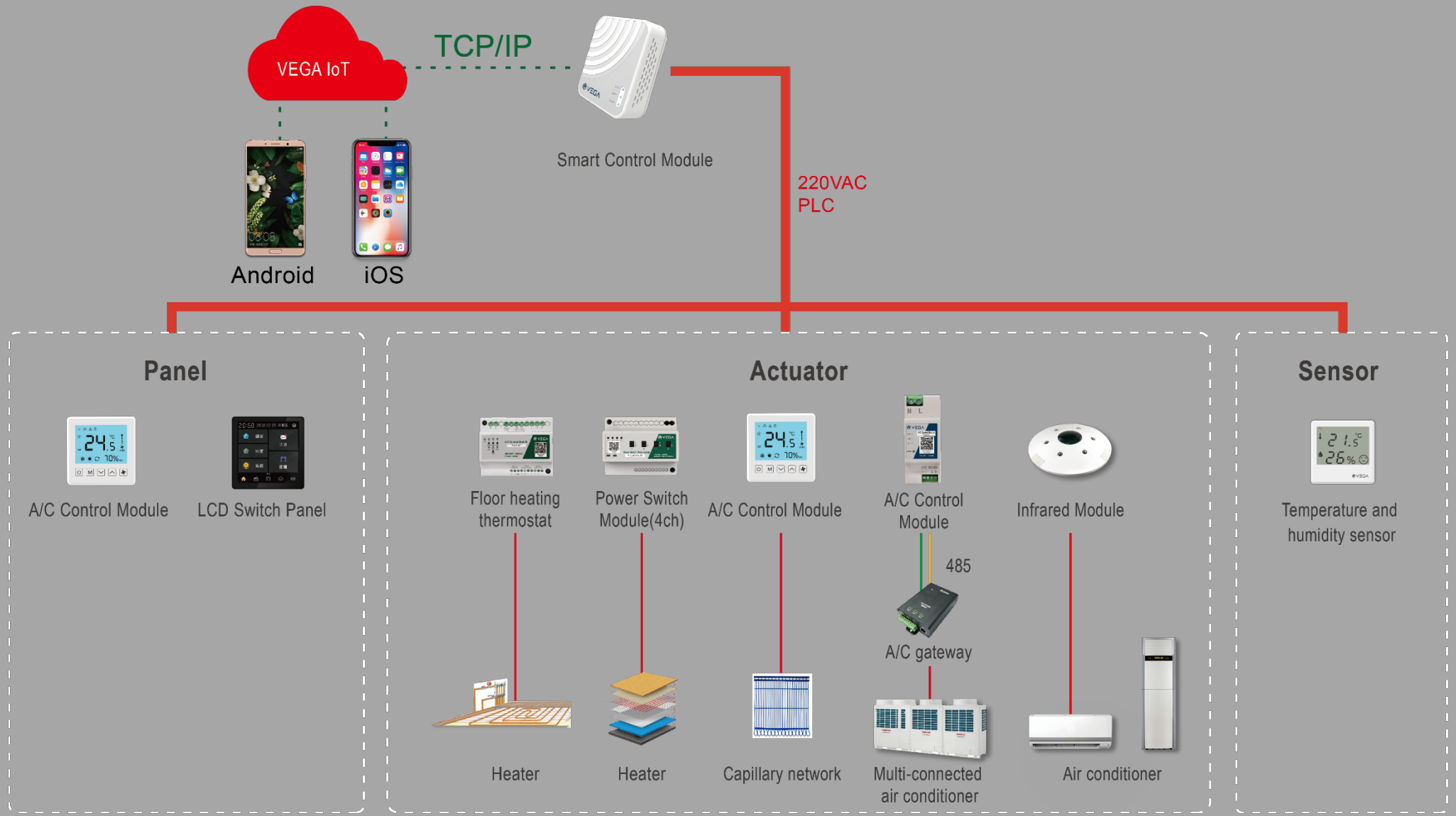
## Scene mode

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.

## 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

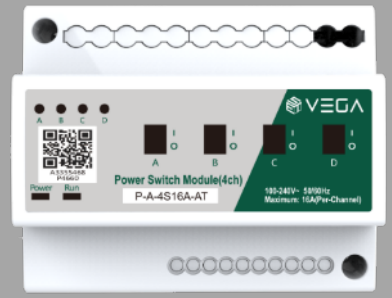
Networked thermostat

# Floor Heating Temperature Control System

Floor heating thermostat

Temperature control panel

Power Switch Module(4ch)



# Smart Environmental Monitoring

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

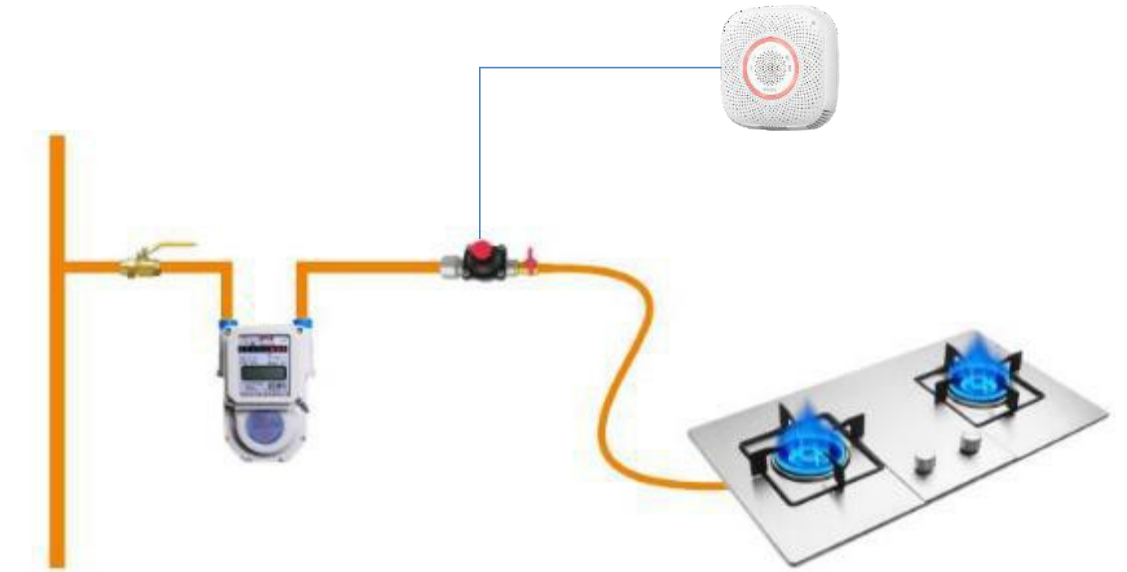
## Air quality sensor

## Weather sensor

## Window pusher

# Gas Alarm

- **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.



# Overflow Detection

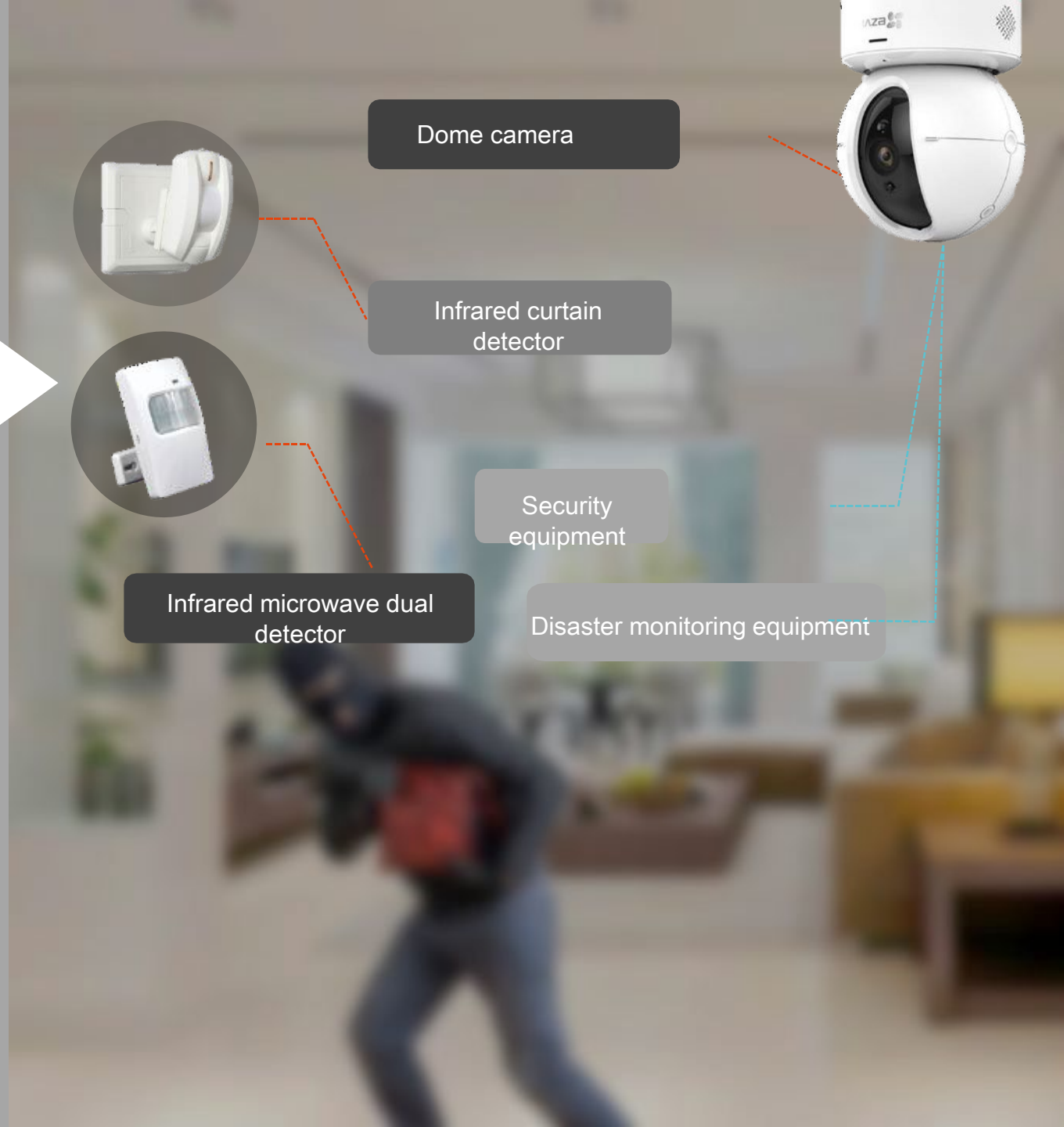
- In the event of water overflow, the linked alarm device immediately sends out an audible and visual alarm signal, and at the same time sends an alarm message to the mobile phone and property related personnel to make an emergency response to reduce the loss of the owner.

# Smoke Alarm

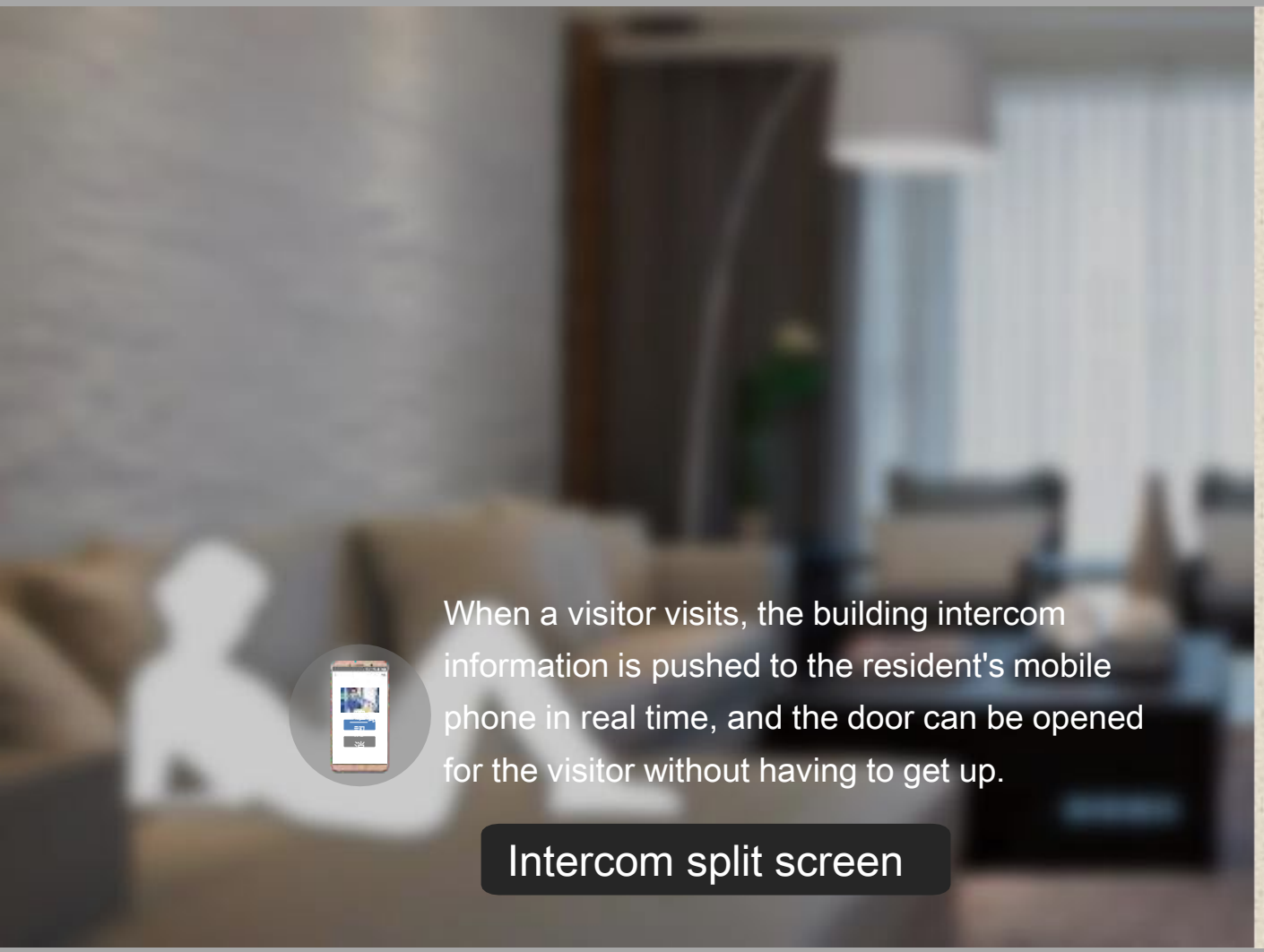
- Once the smoke abnormality is detected, the system immediately links the local alarm device to send out an audible and visual alarm signal, automatically alarms to the property management center, and simultaneously reports to the owner's mobile phone.

# VEGA | Security Alarm

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.



# Building Intercom





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

# VEGA | Background Music

Multi-zone whole house music

Independent partition panel control

Mobile APP control

# Background Music

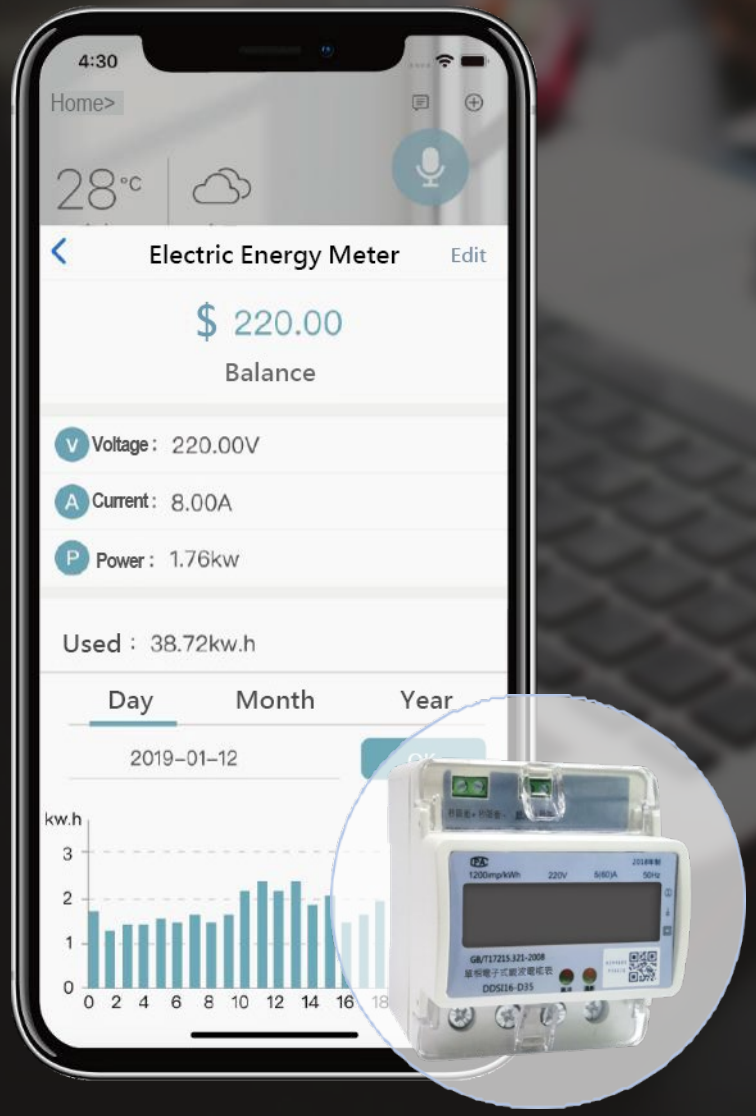
Touch panel

Player module

Touch panel

Central host computer

# VEGA | Energy Management




- 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.

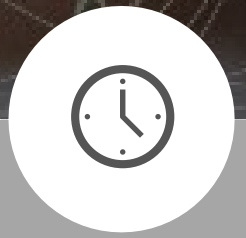
## Single-phase PLC smart meter

- Level 2 Measurement Certificate
- Rail mounting

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

Voice control

Comprehensive screen



Automatic control

Under Development

VEGA® | Integrated Touch Terminal

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.

# LCD Switch Panel

VEGA® | 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.

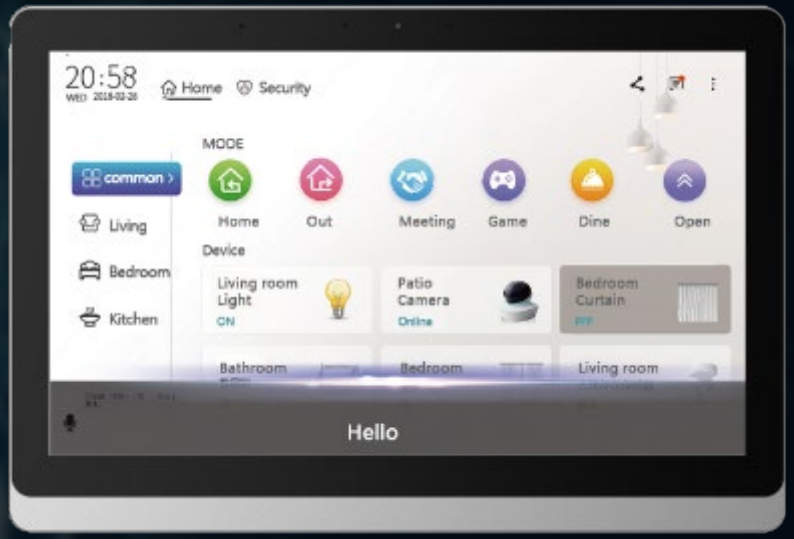
# *Smart Home Gateway Panel*

# VEGA | Smart Gateway

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

## 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.

## Three-phase smart gateway

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

Silver Gold Black

## 10-Inch Panel Gateway

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

## Panel gateway

- PLC, WiFi communication
- 7-inch touch screen

VEGA® | Mobile APP

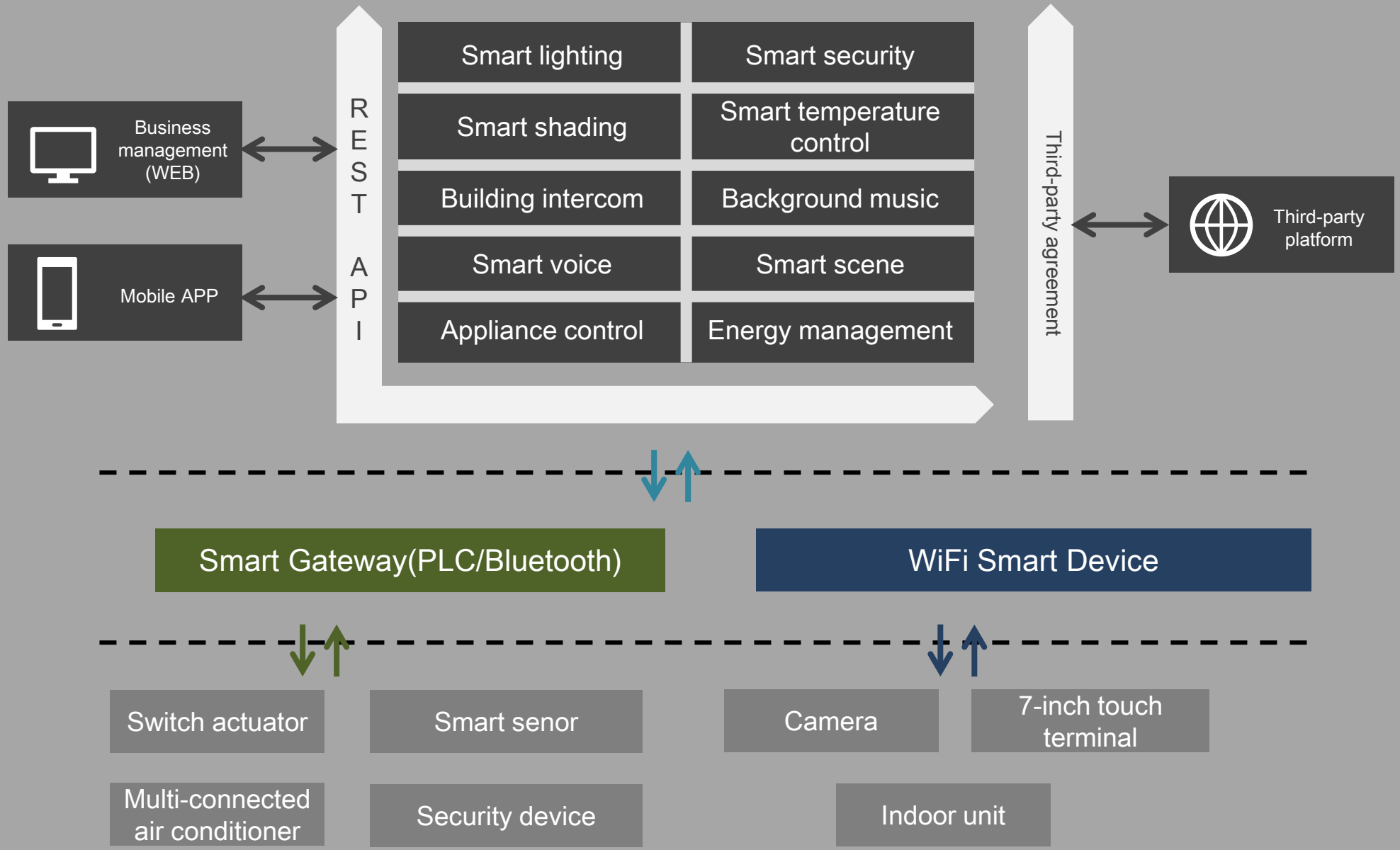
*Smart Life*
*Stay with you*

# 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

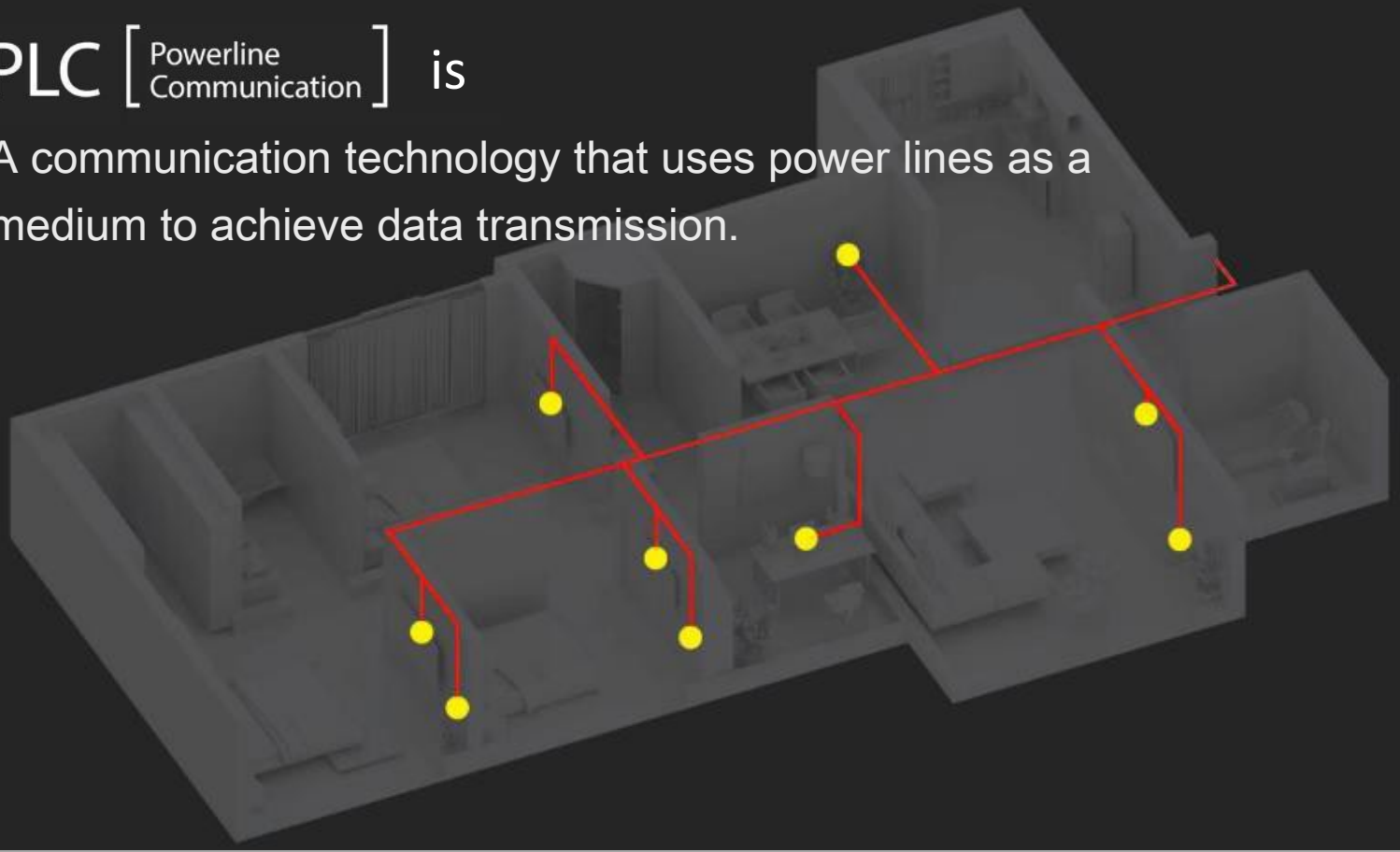
# Whole House Intelligent System Architecture



# Powerline networking is a building that already exists.

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

# VEGA® | Our Advantage

## True Intelligence

Smart sensing and human habits learning technologies

## 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 case

# Jiu-Yuan Collection

## Luxury Residence, Taipei, Taiwan

- **LCD Switch Panel**
  Multi-channel situation mode, user friendly set defined 30 profile maximum.
- **Power Meter Control Module**
  Electric energy metering function, real-time monitoring voltage, current, active power, and turn on/off the power by remote control.
- **Dry Contact Switch Module**
  Easy to install, no extra wire needed.
- **Power Switch Module(4ch)**
- **Infrared Module**
  Intelligent IR remote , Home appliances control
- **Smart Control Module**
  Intelligent Home app and local switch panel control.

# Project case

# Tai Residence

## Luxury Residence, Taipei, Taiwan

- **LCD Switch Panel**
  Multi-channel situation mode, user friendly set defined 30 profile maximum.
- **Power Meter Control Module**
  Electric energy metering function, real-time monitoring voltage, current, active power, and turn on/off the power by remote control.
- **Dry Contact Switch Module**
  Easy to install, no extra wire needed.
- **Power Switch Module(4ch)**
- **Electric curtain**
  Intelligent Home app and local switch panel control.
- **Smart Control Module**
  Intelligent Home app and local switch panel control.

# Project case

# Jia-Tai Collection Residence

## Luxury Residence, Taipei, Taiwan

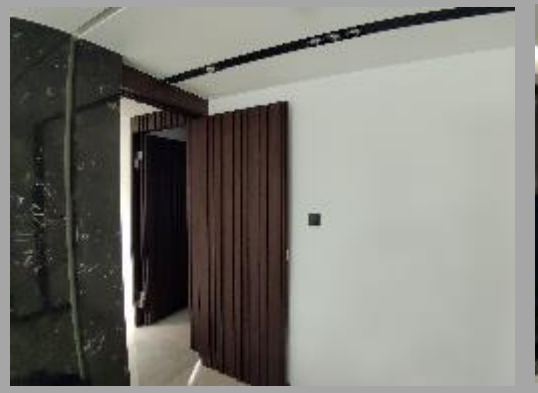
- **LCD Switch Panel**
  Multi-channel situation mode, user friendly set defined 30 profile maximum.
- **Dry Contact Switch Module**
  Easy to install, no extra wire needed.
- **Electric curtain**
  Intelligent Home app and local switch panel control.
- **Smart Control Module**
  Intelligent Home app and local switch panel control.

# Project case

# Mandarin Luxury

## Luxury Residence, Taipei, Taiwan

- **LCD Switch Panel**
  Multi-channel situation mode, user friendly set defined 30 profile maximum.
- **Power Meter Control Module**
  Electric energy metering function, real-time monitoring voltage, current, active power, and turn on/off the power by remote control.
- **Power Switch Module(4ch)**
- **Electric curtain**
  Intelligent Home app and local switch panel control.
- **Smart Control Module**
  Intelligent Home app and local switch panel control.
- **Switch Panel**
  Intelligent Home app control.



# Project case

# Giraffe American School

## Office Building & School, Taipei, Taiwan

- **LCD Switch Panel**
  Multi-channel situation mode, user friendly set defined 30 profile maximum.
- **Power Meter Control Module**
  Electric energy metering function, real-time monitoring voltage, current, active power, and turn on/off the power by remote control.
- **Power Switch Module(4ch)**
- **Smart Control Module**
  Intelligent Home app and local switch panel control.
- **Dry Contact Switch Module**
  Easy to install, no extra wire needed.
- **Dimming Control Module**
  Mainly used as dimming function for particular lighting devices such incandescent lamps, 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.
  Used to relay the power line carrier signal to improve the power line carrier cross-phase capability.
- **A/C Control Module**
  Through the comparison result of the ambient temperature and the set temperature, the working state of the 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 case

# 谷町くんTanimachi - kun

## Kyoto , Japan

- **LCD Switch Panel**
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# Thank you

THANK YOU FOR WATCHING

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