

Transfer your ideas to a tangible device or system Deliver full-package service to achieve your business goal

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Home Automation & Security Smart Grid & Smart Metering

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Wireless Devices. Smart Home System. IoT Platform

ODM Service Provider since 1993

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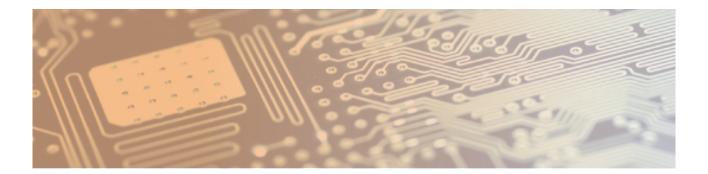
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OWON

About OWON



OWON Technology Inc. (part of LILLIPUT Group) is an ISO 9001:2008 certified Original Design Manufacturer specialized in the design and manufacturing of electronic and computer-related products across the world since 1993.

OWON deploy's state-of-the-art IoT technologies to facilitate the transformation of various industries. At the device level, OWON offers both standard products and well-tailored devices as per customers' requirement; while at the system level, OWON provides both off-the-shelf system and customizable platforms for direct deployment and integration purpose.

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- Deliver full-package service to achieve your business goal



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Company Profile



OWON SmartLife aims at deploying state-of-the-art technologies to propel the efficient use of energy, and to create a "Greener, Cozier and Smarter" home environment, improve life standards and eventually contribute to human well-being.

"Sincerity, Success and Sharing" are the core values that OWON shares with both our internal and external partners, building up sincere co-operation relationships, striving together for win-win success and sharing a brilliant future.

- 22 years in the electronics industry
- 20 years in LCD display technology
- 15 years in embedded computer technology
 - years in the test & measurement industry

Quick Facts

Business Areas	 Smart Metering In Home Devices Home Automation & Security Systems 	
Services	Original Design Manufacturing	
Quick Facts	 Founded: 1993 Number of Manufactories: 2 Total Plant Area: 18,000 square meters Workforce: 350 Brand Name: OWON, LILLIPUT Annual Revenue: over \$20 Million 	
Locations & Branches	 Head Sales Office - Toronto, Canada R&D Office - Xiamen, China Manufacturing Base - Zhangzhou, China Overseas Branch Offices - USA, United Kingdom and Hong Kong 	
Core Technologies	 Embedded Computer System Design M2M Wireless Connectivity Smart Meter Interoperability Software Application Design 	





Assembly Line



Dust-Free Workshop

SMT(1)

R&D Department

SMT(2)



Exhibition Room



Material Testing

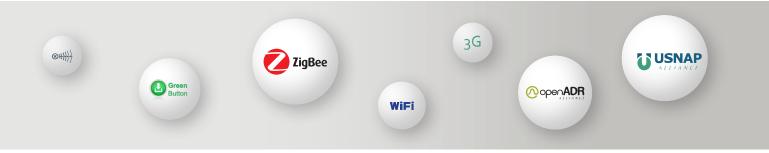


Injection Molding Machine



Tooling Fabrication Department

Technologies



Embedded Computer System



- Solutions: Ember, TI, Freescale, Samsung, Gainspan, ST
- Operating System porting: Linux, Android, WinCE, uCOS
- Peripheral driver development
- MCU Firmware design



M2M Wireless Technology

- ZigBee
- Wi-Fi
- TCP/IP
- Z-Wave
- GPRS
- 433MHz



Smart Meter Interoperability

- Interoperable Standards: ZigBee SEP, SMETS, Siemens, Trilliant, Silver Spring, Itron
- Integrates Home Area Network with Smart Meter
- Retrieves and displays energy data from Smart Meter
- Conducts utility Demand Response commands



Software Application Design

- UI (User Interface) and UE (User Experience) design
- Android mobile apps design
- iOS mobile apps design
- WinCE application design
- Third-party cloud server integration

ODM Services

- Transfers your ideas to a tangible device or system Delivers full-package service to achieve your business goal



Core Competencies

• Technology-oriented strategy that enables the sound capability of R&D and technical implementation;

• 20 plus years of manufacturing experience backed up with a mature and efficient supply chain;

• Stable and consistent human resources as well as active employee involvement due to the humanity corporate culture;

• The combination of "international accessibility" and "made in China" guarantees high-level customer satisfaction without sacrificing cost effectiveness.

Professional ODM Service

OWON is highly experienced in designing and customizing electronic devices specified by the customer's needs. OWON offers full-line R&D technical service including industrial & structural design, hardware & PCB design, firmware & software design, as well as system integration.

• Sound & Solid Technology Platforms A variety of "ready-to-go" technology mix to satisfy customer demand in various industries and applications	• Unique and Outstanding Talents Professional team backed by strong technical background and business proficiency that enables seamless technical communication with customers worldwide
• Flexible Order Volume Welcomed	• Competitive Operational Cost
Willing to grow with customers, OWON welcomes	Complete R&D and manufacturing facilities located in
projects and orders in flexible scales	China offering cost-effective ODM service

Cost-Effective Manufacturing Service

OWON has been engaging in volume production of both standardized and customized electronic products since 1993. Through the years, OWON has accumulated abundant experience and competence in product manufacturing, such as Mass Production Management, Supply Chain Management, Total Quality Management, etc.

• Production Capacity	• Stable Human Resource
Sophisticated workers with streamlined production	80% of production line workers have 5+ years' experience
lines in meeting various mass production tasks	within the company
• Manufacturing Planning – MRP & ERP	• Quality System – ISO & TQM
Equipped with Manufacturing Resource Planning (MRP)	ISO9001 certified since 2003, continuously implements
and Enterprise Resource Planning (ERP) systems	company-wide Total Quality Management (TQM)

Home Automation & Security

For Residential and Commercial Application

Any Home Can Be Smart



At the device level, OWON offers a variety of white-labeled ZigBee Certified devices in compliance with ZHA or ZLL standards, including Home Automation Gateway, Smart Thermostat, Split A/C Control, Smart Plug, Power Relay, On/Off Dimmer Switch, Remote Control, Range Extender, etc. In addition to providing off-the-shelf models, OWON is also highly experienced in providing our customers with "well-tailored" devices as per their requirements so as to perfectly match their technical and business goals.

- Transfer ideas to a tangible device and deliver full-package service to achieve the business goal
- Practical functions and features that contribute to people's day-to-day life
- Sleek industrial design and friendly user interface to enhance user's experience
- Follow industrial standards to enable the interoperability with third-party system

At the system level, OWON has been dedicated in creating UNIVERSAL and PLUG&PLAY smart home systems, which could not only significantly ease the installation efforts at consumer side, so that any home can transit to a smart home within a blink; but also dramatically simplify the pre-sales efforts from the dealer aspect, thus eventually facilitate the entire distribution process. Moreover, OWON system is designed in a modular topology allowing each module to be freely added to or removed from the platform. Therefore, instead of a one-time investment, the customers could start their Smart Home migration step by step from any starting packs and gradually build up their smart home dream. The system is ideal for

- Cable/Broadband operators who are seeking a Plug & Play Home Security System to enrich their value-added services
- Home builders who are interested in a Smart Home System to enhance their property's living experience
- Property-management service providers who desire a well-tailored management system to facilitate their day-to-day operation

• Consumer electronics distributors and retailers who are searching for an easy-to-install Smart Home System to minimize their pre and after sales activities

While at the platform level, OWON's solution is a complete system consists of Home Automation Gateway, Surrounding ZigBee Components, Cloud Server and Mobile App that cover each segment of the entire IOT framework. By offering open API (Application Programming Interface) and CPI (Communication Protocol Interface) for third-party development or system integration, users can either develop their own firmware right on the Gateway device by deploying the API, or integrate the Gateway with a designated Cloud Server/Mobile App following the CPI.

- Reliable ZigBee Home Area Network backed with mature node management technology
- Complete ZigBee to IP conversion to facilitate the integration with Cloud Server or Mobile Application
- Customizable hardware package for flexible application
- Modular design to allow easy and expandable application













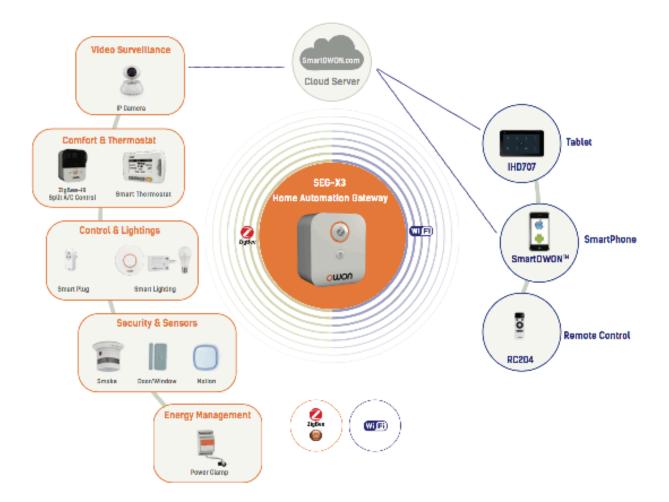
Multiple Control Devices

Solutions – All-in-One Home Automation & Security System



HASS 6000 is a completely wireless system centralized by a Home Automation Gateway that equipped with both ZigBee and Wi-Fi connectivity. The Gateway integrates the Home Area Network using its ZigBee connectivity, while connects to personal mobile devices directly or via a Cloud Server given its Wi-Fi connectivity. Customers could either install the mobile app on their own mobile devices, or choose OWON's pre-integrated tablet with the mobile app already installed. Meanwhile, the users could also simply use a Mini ZigBee remote controller to control the system. Thus enables consumers to enjoy the system not only whilst in their house but also anywhere else away from home.

The system consists of 5 sub-modules (Energy, Temperature, Automation, Security and Video), which is designed in a modular topology allowing each module to be freely added to or removed from the platform. Therefore, instead of a one-time investment, the customers could start their Smart Home migration step by step from any of the 5 Starting Packs and gradually build up an ideal system specially for their home.



Solutions – Home Automation & Security System

HASS 6000V – Video Kit

Key Components: • IP Camera: IPC801

Video Surveillance

Simply leave the IP cameras at home wherever with WiFi coverage, you are then able to monitor your front door and backyard, keep an eye on your sleeping baby, and watch over your pets even you are away from home.

HASS 6000A – Automation Kit Key Components:

- Smart Plug: WSP403-HA
- Smart Lighting: SLC601-HA, SLC602-HA

Smart Plug

The Smart Plug allows remote On/Off control of home appliances to save energy and prevent the appliances from overheating. Meanwhile it could measure the energy usage of each appliance and forward the information to the user's smartphones or tablets. The Smart Plug is also an ideal tool in converting desk lamps or floor lamps into smart lighting. Moreover, by working in conjunction with the Home Automation Gateway, the Smart Plugs will be able to run at a user-defined schedule.

Smart Lighting

Users could transform their ordinary lighting into a smart system simply by inserting the ZigBee power relay - SLC601 into the existing circuit. The user will then be able to control the lighting On/Off using their mobile devices, a remote control or the ZigBee wireless lighting switch - SLC602. By working in conjunction with the Home Automation Gateway, the lights could be turned On/Off according to schedule.

HASS 6000S – Security Kit

Key Components:

- Door/Window Sensor: DWS302
- Motion Sensor: PIR303
- Smoke Detector: SD304

Home Security Monitoring

OWON home security kit consists of various ZigBeeenabled security sensors, which join the Home Area Network and further connect to the Cloud Server, so that the periodical sensor status and alarm alerts could be forwarded to the user's mobile devices remotely.

HASS 6000C – Comfort Kit Key Components:

- Smart Thermostat: PCT501-HA
- Split A/C Control: AC201-HA

Central Temperature Control

By replacing the ordinary thermostat with the ZigBee enabled Smart Thermostat – PCT501, the users could integrate their central heating system with the Home Automation Gateway. Thus allows the users to monitor and control their home temperature using the mobile devices anywhere anytime. The system also supports 7-day scheduling and multiple hold options.

Split Air Conditioner Control

With the help of the ZigBee/IR converter – AC201, the system converts ZigBee protocol into split A/C's IR commands, which enables the users to control the Split A/C using mobile devices either locally or away from home. The AC201 is pre-configured with IR code-sets that work with most main stream split A/C models on the market. The system could also study new IR codes when rare models are encountered.

HASS 6000E - Energy Kit

Key Components:

• Power Clamp: PC301

Whole Home Energy Monitor

Users could clamp the Power Clamp onto the main power line within their Circuit Breaker Board. The whole home instantaneous power will be then detected and forwarded to the Home Automation Gateway, where the data will be calculated and analyzed before eventually displayed on the user's mobile devices. Thus the users are able to check on their energy usage including instantaneous power, accumulative power consumption, history data and more.

Solutions – Software Application

Mobile App

Description

SmartOWON[™]

SmartOWONTM mobile app is is a simple and easy-to-use way to control your home automation devices from anywhere at any time by logging your mobile devices either to the OWON gateway or compatible cloud servers.

Available for both Android-based devices such as smartphones, tablets, etc. and iOS-based devices such as iPhone, iPad, etc.

Connecting Mode

Customers could either install the mobile application on their own mobile devices, or choose OWON's preintegrated Android tablet IHD707.

A.Local: Register the gateway to a local WiFi network, and use mobile devices to visit the gateway locally within the Local Area Network

B.Cloud: Register the gateway to a Cloud Server, and use mobile devices to visit the gateway remotely via the Internet



Cloud Server

Cloud Server SmartOWON.com

OWON's Cloud Server SmartOWON.com allows the users to remotely access to the Home Automation Gateway so as to monitor and control their Home Automation & Security System using their mobile devices both locally and away from home.

Smart Lighting Solutions

For home application

— Brighten your home with one click



OWON Smart Lighting Solution is a powered by standard ZigBee Light Link technology that allows its devices to interface seamlessly with a number of mainstream lighting systems in the market. OWON offers a variety of white-labeled lighting switches and remote control to the industry with special design on the practical features, user's experience and sleek outlook, which become perfect complement to the existing ZLL lighting systems from all major industry players.

OWON also offers simple and cost-effective complete lighting system enabling the users to transform their home to a smarter and cozier living space with minimal efforts and investment. Hassle-free installation, convenience and comfort are the theme of OWON's smart lighting system.

Hassle-free Installation

OWON's system offers the quickest way to convert your existing lighting to an integrated smart system. This is to be done through replacing your household light bulbs with ZigBee-enabled LEDs for various smart applications. With the help of ZigBee-enabled LED bulb, you could remotely switch on/off the light, dim the light to the most comfortable brightness, adjust the right color temperature for different scenarios, or even choose the light color for special occasions.

Convenience

One of the best features of smart lighting is versatility of control, which means you do not have to be tied to a dedicated wall switch to power a light. Although the popular way is toward controlling lights wirelessly via apps on smart phones or tablets, let's imagine how many clicks you will have to make before you could actually switch On/Off a light. But with OWON's Smart Lighting solution, you could now simply switch On/ Off a light using a ZigBee wireless switch or remote control.

In an OWON system, each converted light could be paired with and remotely controlled by more than one Wireless Switch. It allows you to control your lights from anywhere in the house by sprinkling Wireless Switches around in your home. With the help of a Mini ZigBee Remote Control, the users are further allowed to integrate multiple groups of lightings into a single system, so as to monitor and control the whole-home lighting with a Mini Remote in hand.













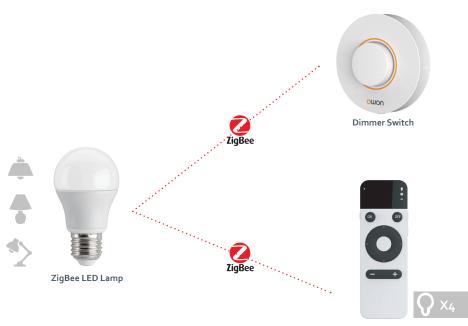
Dimmable

Color temperature

Solutions – Mini Smart Lighting Kits



HASS 7000 system is a simple and convenient ZigBee Light Link (ZLL) profile based solution. It enables the users to realize their Smart Home dream with minimal efforts and investment. Households could simply replace their light bulbs with ZigBee-enabled LEDs for various smart applications such as remote On/Off, dimming and even the adjustment of color temperature. Each LED bulb could be paired with and remotely controlled by one or more Remote Switches from anywhere at home. With the help of a Mini ZigBee Remote Control, the users are further allowed to integrate up to 4 groups of lightings into a single system, so as to monitor and control the whole-home lighting with a Mini Remote in hand.



Remote Control

Smart Metering In Home Devices

For Utility Application

– Bring substantial value to the end customers

There has been massive deployment of Smart Grid infrastructure and Distribution Automation solutions in the past years, which brings considerable benefits to the utilities and the energy sector as a whole. Time is now ready for the second movement by encouraging active customer involvement to maximize the value of Smart Grid deployment. However, there seems to be an insurmountable barrier between the industry and the end customers. Government legislation, customer education, complimentary devices and even monetary incentives, none of the above could actually break the ice and fundamentally inspire the passion of the end customers. It seems that smart customers may not care about "Free Junks", but they would pay for what they perceive to be VALUABLE.

By deploying universal industrial standards and partnering with major industry players, OWON aims at bringing intuitive and substantial VALUE to the end customers.

• Introduces home-friendly industrial design and user-friendly UI into the In-Home Display (IHD) concept, thus to increase the attractiveness and practicality of the IHD devices

• Delivers Customer Accessible Devices (CAD) and mobile apps to convert customers' smart devices into a smart energy platform, offering enhanced users experience without sacrificing the cost-effectiveness

• Utilizes Smart Energy Gateway to integrate practical control features and fun gadgets into the Smart Metering HAN, thus to increase the customer initiative and willingness to be involved

• Helps the end customers to actually save their energy usage and money spending

OWON has been engaged in Smart Metering deployment projects since 2011 by offering In-Home Display, Customer Accessible Device, and Programmable Communicating Thermostat to the Utility industry. The team has successfully deployed ZSE1.2 stacks and followed UK SMETS2 standard in our Smart Energy products enabling the interoperability with a number of mainstream AMI systems and Smart Meter suppliers such as Trilliant, Silver Spring, Itron, GE, Siemens, etc.

In addition to the individual ZSE devices, OWON also provides a Demand Response Management Solution centralized by a Smart Energy Gateway SEG-X₃. In parallel with the Utilities Demand Response framework, the system also allows end-users to easily monitor and control their pool pumps or PCTs away from home using a mobile App. The Energy Gateway interfaces with the Smart Meter and the load control devices within the Home Area Network using its ZigBee connectivity, while further bridges the HAN to the Cloud Server via broadband.



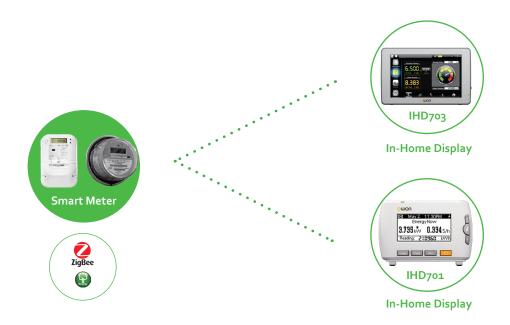
Solutions – In-Home Display



HEMS 1000 enables a ZigBee-based In-Home Display to talk to the Smart Meter allowing real-time & historic energy data to be received and displayed on the user's desktop.

Key Components:

- Smart Meter
- In-Home Display: IHD701 or IHD703



Solutions – Customer Accessible Device



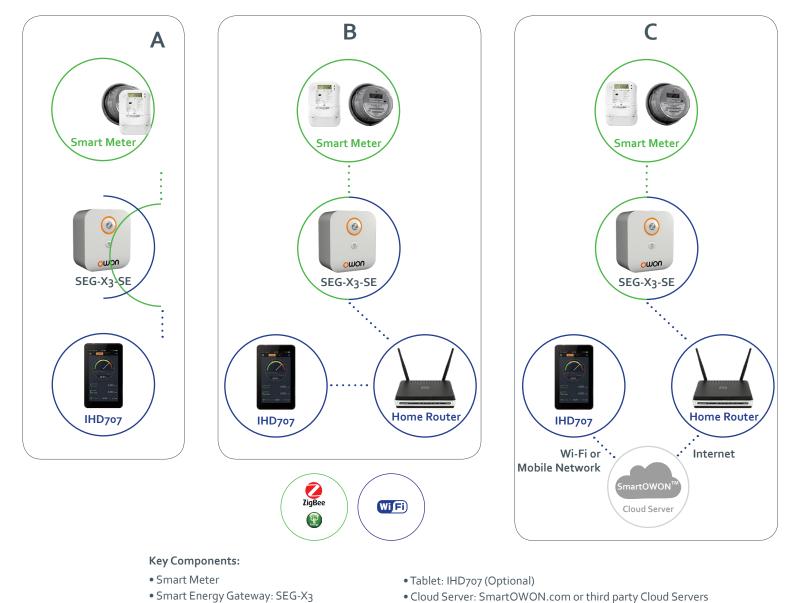
OWON Smart Meter CAD consists of a smart energy gateway SEG-X₃, the mobile application and the cloud server. Equipped with both ZigBee & Wi-Fi connectivity, SEG-X₃ is able to collect energy usage and pricing information from the Smart Meter; while forward the data to customers' mobile devices locally or via the Internet. This enables consumers to check on energy usage and receive alerts not only whilst in their house but also anywhere else away from home.

Customers could either install the mobile application on their own devices, or choose OWON's preintegrated tablet IHD707 with the mobile application already installed. Users could then choose from the following three options in accessing to the Smart Meter information:

A. DIRECT LINK: Connect mobile devices to the gateway's Wi-Fi signal and retrieve data directly from the gateway

B. WLAN: Register the gateway to a local Wi-Fi network, and use mobile devices to visit the gateway locally within the Local Area Network

C. CLOUD: Register the gateway to a Cloud Server, and use mobile devices to visit the gateway remotely via the Internet



Mobile Application: SmartOWON[™]

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Solutions – Demand Response Management (AMI-based)



HEMS₃₁00 is a Demand Response Management system centralized by a Smart Meter that allows utilities to control and manage the Demand Response programs via the AMI network. The Smart Meter acts as a ZigBee coordinator that integrates all Smart Energy components within Home Area Network at one side, while connects to the utility back office at the other side. It receives the Demand Response commands from the utility back office and passes down to each component that runs on ZigBee Smart Energy Profile.

Key Components:

- Utility Back Office
- Smart Meter
- OWON Components: Programmable Communicating Thermostat, Split A/C Control, Smart Plug, Power Relay
- Third-party Components: Circuit Breaker, Load Control



Solutions – Demand Response Management (Cloud-based)



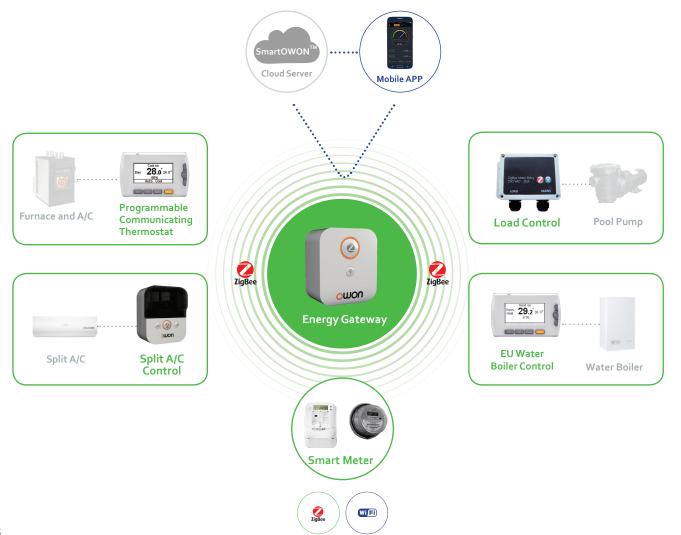
OWON Demand Response Management system consists of an Energy Gateway and a number of surrounding DR components such as US standard Programmable Communicating Thermostat, European standard Heating Unit, Split A/C control and Load Control Switch.

The Energy Gateway and the DR devices are all equipped with ZigBee SEP1.1x protocol and will be able to join the same Home Area Network coordinated by a SEP1.x Smart Meter. Such system topology allows both utility and household to control and manage the demand response programs, which unlocks more value so that customers better benefit from the smart grid deployment.

At the Utility side, the DR command from the back office will be delivered to a specific device through a Smart Meter. While at the end users side, the Energy Gateway not only interacts with the DR components given its ZigBee connectivity; but also connects to the end user's mobile devices either directly or via a cloud server using its WiFi connectivity. This allows the end users to access to their Home Energy Management either locally or from distance, so as to actively involve in the Demand Response Program.

Key Components:

- Cloud Server: Utility Cloud Server
- Smart Meter
- Smart Energy Gateway: SEG-X3
- OWON Components: Programmable Communicating Thermostat, Split A/C Control, EU Water Boiler Control
- Third-party Components: Load Control
- Mobile Application: SmartOWON[™]
- Tablet: IHD707 (Optional)





- ZigBee HA1.2 compliant
- ZigBee SEP 1.1 comliant
- Smart meter interoperability (SE)
- ZigBee coordinator of the home area network
- Powerful CPU for complicated calculation
- Mass storage capacity for historic data
- Cloud server interoperability
- Firmware upgradable via micro USB port
- Affiliate mobile apps

Main Specifications

Hardware		
CPU	• ARM Cortex-M3	
Flash Rom	• 1M	
Data Interface	• Micro USB port	
Data Storage Capacity	• TF Card: 8G	
Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4 • Wi-Fi	
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m	
Power Supply	• AC 100 ~ 240V, 50~60Hz • Rated power consumption: 1W	
LEDs	• Power, ZigBee, Wi-Fi	
Dimensions	• 56(W) x 66 (L) x 36(H) mm	
Weight	• 103 g	
Mounting Type	 Direct Plug-in Plug Type: US, EU, UK, AU 	

API and CPI for Third-party Integration

OWON offers open API (Application Programming Interface) and CPI (Communication Protocol Interface) to facilitate the flexible integration between the Energy Gateway and the third party Cloud Server. The users can either develop their own firmware right on the Gateway device by deploying the API, or integrate the Gateway with a designated Cloud Server / Mobile App following the CPI.

Software		
WAN Protocols	• IP Addressing: DHCP, Static IP • Data Porting: TCP/IP, TCP, UDP • Security Modes: WEP, WPA / WPA2	
ZigBee Profile	 Home Automation Profile Smart Energy Profile 	
Downlink Commands	• Data format: JSON • Gateway Operation Command • HAN Control Command	
Uplink Messages	 Data format: JSON Home Area Network information Smart meter data 	
Security	Authentication • Password protection on mobile apps • Server/gateway interface authentication ZigBee Security • Preconfigured Link Key • Certicom Implicit Certificate Authentication • Certificate-Based Key Exchange (CBKE) • Elliptic Curve Cryptography (ECC)	





- ZigBee HA1.2 compliant
- ZigBee coordinator of the home area network
- Powerful CPU for complicated calculation
- Mass storage capacity for historic data
- Cloud server interoperability
- Firmware upgradable via micro USB port
- Affiliate mobile apps

API and CPI for Third-party Integration

OWON offers open API (Application Programming Interface) and CPI (Communication Protocol Interface) to facilitate the flexible integration between the Energy Gateway and the third party Cloud Server. The users can either develop their own firmware right on the Gateway device by deploying the API, or integrate the Gateway with a designated Cloud Server / Mobile App following the CPI.

Hardware		
CPU	• MIPS, 200MHz	
Flash Rom	• 2MB	
Data Interface	• Micro USB port	
SPI Flash	• TBD	
Ethernet	• 100M bps • Auto MDIX	
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m	
Power Supply	• 5V DC • Rated power consumption: 1W	
LEDs	 Power, ZigBee, Ethernet, Bluetooth 	
Dimensions	• 91.5(W) x 133 (L) x 28.2(H) mm	
Weight	• 103 g	
Mounting Type	 Direct Plug-in Plug Type: US, EU, UK, AU 	

Software	
WAN Protocols	• IP Addressing: DHCP, Static IP • Data Porting: TCP/IP, TCP, UDP • Security Modes: SSL
ZigBee Profile	Home Automation Profile
Downlink Commands	• Data format: JSON • Gateway Operation Command • HAN Control Command
Uplink Messages	Data format: JSONHome Area Network information
Security	Authentication • Password protection on mobile apps • Server/gateway interface authentication ZigBee Security • Preconfigured Link Key • Certicom Implicit Certificate Authentication • Certificate-Based Key Exchange (CBKE) • Elliptic Curve Cryptography (ECC)



- ZigBee HA1.2 compliant
- Bluetooth BLE4.0

• Converts wearable device's Bluetooth siganl to ZigBee signal so as to remotely monitor heath status

• Pass-through socket for various country standards: EU, UK, AU

Wireless Connectivity	• Bluetooth 2.4GHz ISM band • ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m
ZigBee Profile	Home Automation Profile
Bluetooth Specification	• BLE4.0
Operating Voltage	• AC 100 ~ 240V
Max. Load Current	• 10 Amps @ 110VAC; or 10 Amps @ 220 VAC
Dimensions	• 102 (L) × 64(W) × 38 (H) mm
Weight	• 125 g



• Converts home automation gateway's ZigBee signal into IR command so as to control the split air conditioners in the home area network.

• All-angle IR coverage: equipped with 7 IR emission sensors to cover 180° of the target area.

• Room temperature display

• Pre-installed IR code for main stream split air conditioners

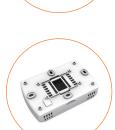
• IR code study functionality for unknown brand A/C devices

• Switchable power plugs for various country standards: US, EU, UK

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4 • IR
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m • TX Power: 6~7mW(+8dBm) • Receiver sensitivity: -102dBm
ZigBee Profile	Home Automation Profile
IR	 Infrared emission and receiving Angle: 120° all-angle covering Working temperature: 0-70°C Carrier frequency: 15kHz-85kHz
Temperature Sensor	• Measuring range: -10-85°C
Power Supply	• Direct plug-in: AC 100~240V (50~60Hz) • Rated power consumption: 4W
Dimensions	• 66.5(L) x 85(W) x 43(H) mm
Weight	• 116 g
Mounting Type	• Direct Plug-in • Plug Type: US, EU, UK, AU









- ZigBee HA1.2 compliant (HA)
- Temperature remote control (HA)
- Single stage heating and single cooling control
- 3" LCD display
- Temperature and humidity display
- Supports 7-day programming
- Multiple HOLD options
- Heating & cooling indicator

SOC Embedded Platform	• CPU: ARM Cortex-M3
Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor:100m/30m
ZigBee Profile	Home Automation Profile Smart Energy Profile
Data Interfaces	• UART(Micro USB port)
Power Supply	• AC 24V • Rated power consumption: 1W
LCD Screen	• 3" LCD • 128 x 64 pixels
Built-in Li-ion Battery	• 500 mAh
Dimensions	• 120(L) x 22(W) x 76 (H) mm
Weight	• 186 g
Thermostat	Stages:Single Heating and Single Cooling Switch positions (System): HEAT-OFF-COOL Switch positions (Fan): AUTO-ON-CIRC Power method: Hardwired Sensor element: Humidity/Temperature Sensor
Mounting Type	• Wall Mounting





Thermostat

Heat receiver

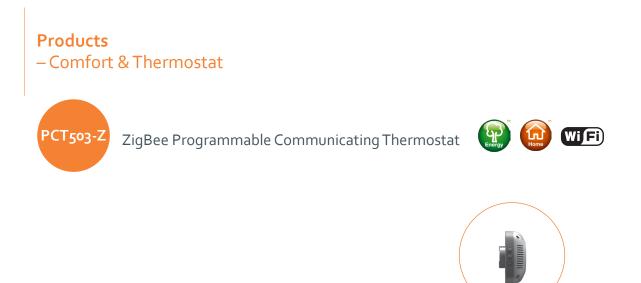
Main Features

- ZigBee HA1.2 compliant
- Support Combi boiler, S-plan/Y-plan Central
- Heating (Hot Water not supported)
- Temperature remote control
- Back-up battery
- 3" LCD display
- Temperature and humidity display
- Supports 7-day programming
- Freeze protection

Heat Receiver Specifications

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
Power input	•100-240 Vac
Size	• 64 x 45 x 15 (L) mm

SOC Embedded Platform	• CPU: ARM Cortex-M ₃
Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor:100m/30m
ZigBee Profile	 Home Automation Profile Smart Energy Profile
Data Interfaces	• UART (Micro USB port)
Power Supply	 DC 5V/DC 12v (Optional) Rated power consumption: 1W
LCD Screen	• 3" LCD • 128 x 64 pixels
Built-in Li-ion Battery	• 500 mAh
Dimensions	• 120(L) x 22(W) x 76 (H) mm
Weight	• 186 g
Compatible Systems	•Y-PLAN /S-PLAN Central Heating (Hot Water not supported) •Combi-boiler
Installation Type	• Wall Mounting • Stand







HVAC Control

- Supports 2H/2C multistage conventional system and Heat Pump system
- One-touch AWAY button to save energy while you are on the go
- The 4-period and 7-day programming fits perfectly with your life style.
- Program your schedule either on the device or through the APP
- Multiple HOLD options: Permanent Hold, Temporary Hold, Back to Schedule
- Automatic heating and cooling changeover
- Fan cycle mode periodically circulates air for comfort
- Compressor short cycle protection delay
- Failure protection by cutting off all circuit relays after power outage

Information Display

- 3.5" TFT color LCD divided into two sections for better information display • The default screen displays the current temperature/humidity, temperature set-points, system mode, and schedule period
- Display time, date and day of the week in a separate screen

• The system working status and fan status are indicated in different backlit colors (Red for heat-on, Blue for cool-on, Green for fan-on)

Unique User Experience

- Screen lights up for 20 seconds when motion is detected.
- Interactive wizard guides you through the quick setup without hassles
- Intuitive and simple UI to ease the operation even without user's manual
- Smart rotary control wheel + 3 side-buttons for easy operation while adjusting temperature or navigating menus

Wireless Remote Control

Remote control using mobile APP by working with compatible ZigBee Smart Home Systems, allowing multiple thermostats to be accessed from single APP
Compatible with ZigBee HA1.2 with complete technical document available to facilitate the integration with 3rd party ZigBee hubs
Over-the-Air firmware upgradable via WiFi as optional

Future Upgrades

• Shows you the temperature/humidity outside or other indoor locations using remote temperature/ humidity sensors

• You could choose the onboard sensor temperature, any remote sensor temperature or the average temperature to be compared with set points temperature

• Sends you notifications if the temperature gets too cold or too hot

 \bullet Auto heat cut-off at or higher than 99°F (37°C); Auto heat cut-in at or lower than 39°F (4°C)

• Equipped with both ZigBee Smart Energy and WiFi modules to interface with Smart Meter and Cloud Server at the same time

PCT503-ZHA Technical Specifications

Compa	atible Systems
<u> </u>	• 2-stage heater and 2-stage cooling
RF Characteristics	HVAC systems • Supports natural gas, heat pump, electric, hot water, steam or gravity, gas fireplaces (24 Volts), oil heat sources
	• Supports any combination of systems
Heat	• Up to 2 stages
Cool	• Up to 2 stages
Aux Heat	Up to 2 Stages
Heat Pump	 Up to 2 Stages 1 stage + 1 aux 1 stage + 2 aux 2 stage + 1 aux 2 stage + 2 aux Dual Fuel Heat Pump 4 stage heating (2 compressor, 2 aux heat), 2 stage cooling
Wiring Ter	rminals Definition
RH	• 24VAC primary for heating
RC	• 24VAC primary for cooling
С	• 24VAC common
Wı	• 1st stage Primary heating relay / Aux heat
W2	• 2nd stage Secondary heating relay / Aux heat
Yı	• 1st stage Primary cooling compressor contactor
Y2	• 2nd stage Secondary cooling compresson contactor
G	• Fan relay
O/B	• Changeover valve for heat pumps.
*	 Multiple use reserved, including but not limited to: emergency heat line, humidifier control.
S	• Optional wiring module terminal to combine W and G, while reserve an extra in-wall wire to power on the thermostat
HVAC Co	ontrol Functions
System Mode	• Heat, Cool, Auto, Off, Emergency Heat (Heat Pump only)
Fan Mode	• On, Auto, Circulation
Advanced	 Local and remote setting of the temperature Auto-changeover between heat and cool mode (System Auto) Compressor short cycle protection delay of 2 minutes Failure protection by cutting off all circuit relays thanks to the Super Capacitor
Auto Mode Deadband	• 1.5° C, 3° F
Temp. Sensing Range	• -10°C to 125°C
Temp. Resolution	• 0.1° C, 0.2° F
Temp. Display Accuracy	•±1°C
Temp. Setpoint Span	• 0.5° C, 1° F
Humidity Sensing Range	• o to 100% RH
Humidity Accuracy	• ±4% Accuracy through the range of o% RH to 80% RH
Humidity Response Time	• 18 seconds to reach 63% of the next step value

Wirele	ess Connectivity
ZigBee	• ZigBee 2.4GHz IEEE 802.15.4, ZHA1.2 Profile, Router Device
Output Power	• +3dBm (up to +8dBm)
Receive Sensitivity	• -100dBm
OTA	Optional Over-the-Air Upgradable via wifi
WiFi	• Optional
Physical Specifications	
Embedded Platform	• MCU: 32-bit Cortex M4; RAM: 192K; SPI Flash: 16M
LCD Screen	• 3.5" TFT Color LCD, 480*320 pixels
LED	• 3-color LED (Red, Blue, Green)
Buttons	• One rotary control wheel, 3 side-buttons
PIR Sensor	• Sensing Distance 5m, Angle 30°
Speaker	Click sound
Data Port	• Micro USB
DIP Switch	Power selection
Electrical Rating	• 24 VAC, 2A Carry; 5A Surge 50/60 Hz
Switches/Relays	 Latching type relay, 2A maximum loading 1. 1st stage control 2. 2nd stage control 3. 3rd stage control 4. Emergency Heating control 5. Fan Control 6. Heating/cooling Reverse Valve Control 7. Common
Dimensions	• 16o(L) × 87.4(W)× 33(H) mm
Mounting Type	Wall Mounting
Wiring	• 18 AWG, Requires both R and C wires from the HVAC System
Operating Temperature	• 0° C to 40° C (32° F to 104° F)
Storage Temperature	• -30° C to 60° C
Certification	• FCC, CE



HVAC Control

- Supports 2H/2C multistage conventional system and Heat Pump system
- One-touch AWAY button to save energy while you are on the go
- The 4-period and 7-day programming fits perfectly with your life style.
- Program your schedule either on the device or through the APP
- Multiple HOLD options: Permanent Hold, Temporary Hold, Back to Schedule
- Automatic heating and cooling changeover
- Fan cycle mode periodically circulates air for comfort
- Compressor short cycle protection delay
- Failure protection by cutting off all circuit relays after power outage

Information Display

• 3.5" TFT color LCD divided into two sections for better information display • The default screen displays the current temperature/humidity, temperature set-points, system mode, and schedule period

Display time, date and day of the week in a separate screen
The system working status and fan status are indicated in different backlit colors (Red for heat-on, Blue for cool-on, Green for fan-on)

Unique User Experience

- Screen lights up for 20 seconds when motion is detected
- Interactive wizard guides you through the quick setup without hassles
- Intuitive and simple UI to ease the operation even without user's manual
- Smart rotary control wheel + 3 side-buttons for easy operation while
- adjusting temperature or navigating menus

Wireless Remote Control

Remote control using mobile APP by connecting to cloud server via Wi-Fi connection, allowing multiple thermostats to be accessed from single APP.
Complete technical document available to facilitate the integration with 3rd party platform

• Over-the-Air firmware upgradable

Future Upgrades

• Shows you the temperature/humidity outside or other indoor locations using remote temperature/ humidity sensors

• You could choose the onboard sensor temperature, any remote sensor temperature or the average temperature to be compared with set points temperature

• Sends you notifications if the temperature gets too cold or too hot

 \bullet Auto heat cut-off at or higher than 99°F (37°C); Auto heat cut-in at or lower than 39°F (4°C)

• Equipped with both ZigBee Smart Energy and WiFi modules to interface with Smart Meter and Cloud Server at the same time

PCT503-W Technical Specifications

	PCI 503-W Techn
Cor	mpatibility
Compatible systems	 2-stage heater and 2-stage cooling HVAC systems Supports natural gas, heat pump, electric, hot water, steam or gravity, gas fireplaces (24 Volts), oil heat sources Supports any combination of systems
Heat	Up to 2 stages
Cool	Up to 2 stages
Aux Heat	Up to 2 Stages
AuxTreat	Up to 2 Stages
Heat Pump	 I stage + 1 aux I stage + 2 aux 2 stage + 1 aux 2 stage + 2 aux Dual Fuel Heat Pump 4 stage heating (2 compressor, 2 aux heat), 2 stage cooling
Wiring Tei	minals Definition
RH	• 24VAC primary for heating
RC	• 24VAC primary for cooling
С	• 24VAC common
Wı	• 1st stage Primary heating relay / Aux heat
W2	• 2nd stage Secondary heating relay / Aux heat
Yı	• 1st stage Primary cooling compressor contactor
Y2	2nd stage Secondary cooling compressor contactor
G	• Fan relay
O/B	Changeover valve for heat pumps.
*	 Multiple use reserved, including but not limited to: emergency heat line, humidifier control.
S	• Optional wiring module terminal to combine W and G, while reserve an extra in-wall wire to power on the thermostat
HVAC Co	ontrol Functions
System Mode	• Heat, Cool, Auto, Off, Emergency Heat (Heat Pump only)
Fan Mode	• On, Auto, Circulation
Advanced	 Local and remote setting of the temperature Auto-changeover between heat and cool mode (System Auto) Compressor short cycle protection delay of 2 minutes Failure protection by cutting off all circuit relays thanks to the Super Capacitor
Auto Mode Deadband	• 1.5° C, 3° F
Temp. Sensing Range	• -10°C to 125°C
Temp. Resolution	• 0.1° C, 0.2° F
Temp. Display Accuracy	• ±1°C
Temp. Setpoint Span	• 0.5° C, 1° F
	• 0 to 100% RH
Humidity Sensing Range	
Humidity Sensing Range Humidity Accuracy	• ±4% Accuracy through the range of o% RH to 80% RH

Wireles	ss Connectivity	
Wi-Fi	• Wi-Fi 802.11b/g/n 2.4GHz	
RF Power	• 17dBm@11b,14dBm@11g ,13dBm@11n	
Sensitivity @PER	• 1M: -92dBm@8%PER • 6M: -88dBm@10%PER • 11M:-86dBm@8%PER • 54M:-72dBm@10%PER • 72.2M:- 68dBm@10%PER	
OTA	• Over-the-Air Upgradable	
Physical Specifications		
Embedded Platform	• MCU: 32-bit Cortex M4; RAM: 192K; SPI Flash: 16M	
LCD Screen	• 3.5" TFT Color LCD, 480*320 pixels	
LED	• 3-color LED (Red, Blue, Green)	
Buttons	• One rotary control wheel, 3 side-buttons	
PIR Sensor	• Sensing Distance 5m, Angle 30°	
Speaker	Click sound	
Data Port	• Micro USB	
DIP Switch	Power selection	
Electrical Rating	• 24 VAC, 2A Carry; 5A Surge 50/60 Hz	
Switches/Relays	 Latching type relay, 2A maximum loading 1. 1st stage control 2. 2nd stage control 3. 3rd stage control 4. Emergency Heating control 5. Fan Control 6. Heating/cooling Reverse Valve Control 7. Common 	
Dimensions	• 160(L) × 87.4(W)× 33(H) mm	
Mounting Type	• Wall Mounting	
Wiring	• 18 AWG, Requires both R and C wires from the HVAC System	
Operating Temperature	• 0° C to 40° C (32° F to 104° F)	
Storage Temperature	• -30° C to 60° C	
Certification	• FCC	



- ZigBee HA1.2 compliant
- ZigBee ZLL compliant
- Upgrades existing lighting to a remote control lighting system (HA)

• Easy installation by simply inserting the Power Relay into the existing power line

• Extra control cables available to integrate with existing physical switch

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m
ZigBee Profile	• Home Automation Profile • ZigBee Light Link Profile
Operating Voltage	• AC 110 ~240V AC
Max. Load Current	• 6 Amps @ 240 VAC; 6 Amps @ 220 VAC • Load: 500W for incandescent bulb or halogenated bulb, 100W fluorescent lamp
Weight	• 42 g
Dimensions	• 39 (W) × 55.3 (L) × 17.7 (H) mm



- ZigBee HA1.2 compliant
- ZigBee ZLL compliant
- Wireless On/Off switch
- Easy to be installed or adhered anywhere in the house
- Extremely low power consumption

	Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
where in the house	RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m
	ZigBee Profile	• Home Automation Profile • ZigBee Light Link Profile
	Battery	• Type: 2 x AAA batteries • Voltage: 3V • Battery Life: 1 year
	Dimensions	• Diameter: 80mm • Thickness: 18mm
	Current	• Standby: ≤ 1.3 uA • Triggering: ≤ 28.5mA
	Weight	• 52 g



- ZigBee HA1.2 compliant
- ZigBee ZLL compliant
- Wireless On/Off switch
- Brightness dimmer
- Color temperature tuner
- Easy to be installed or adhered anywhere in the house
- Extremely low power consumption

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m
ZigBee Profile	Home Automation Profile ZigBee Lighting Link Profile
Battery	• Type: 2 x AAA batteries • Voltage: 3V • Battery Life: 1 year
Current	• Standby:≤1.3∪A • Trigger: ≤28.5mA
Dimensions	• Diameter: 90.2mm • Thickness: 26.4mm
Weight	• 66 g



- ZigBee HA 1.2 compliant
- Remote on/off control

• Extends the range and strengthens ZigBee network communication

• Enables scheduling for automatic switching

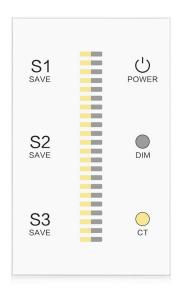
Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range outdoor/indoor:100m/30m
ZigBee Profile	Home Automation Profile
Power Input	• 85~250 VAC 50/60 Hz
Operating Power	• Load Energized: < 0.7 Watts; • Standby: < 0.7 Watts
Max Load Current	• 120V 10A 1200W
Dimension	• 107 x 50 x 41 mm



- ZigBee HA 1.2 compliant
- Remote on/off control
- Enables scheduling for automatic switching
- 1~3 channel on/off

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range indoor: 30m
ZigBee Profile	Home Automation Profile
Power Input	• 100~277 VAC 50/60 Hz
Working temperature	• -20°C~+55°C
Max Current	• 7A x 1 channel • 5A x 2 channels • 3A x 3 channels
Size	• 115 x 69 x 24 mm



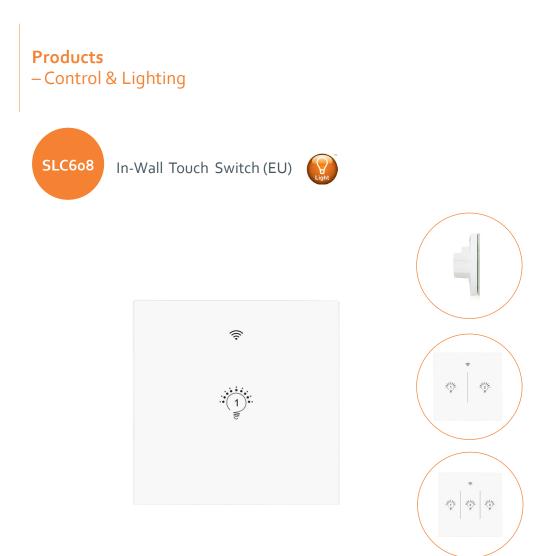


Main Specifications

Main Features

- ZigBee HA1.2 compliant
- ZigBee ZLL compliant
- Wireless On/Off switch
- Brightness adjustment
- Color temperature tuner
- Save your Brightness setting for easy access

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range indoor: 30m
ZigBee Profile	Home Automation Profile
Power Input	• 100~277 VAC 50/60 Hz
Working temperature	• -20°C-+55°C
Size	• 116 x 70 x 38 mm
Weight	• 270g



- ZigBee HA 1.2 compliant
- Remote on/off control
- Enables scheduling for automatic switching
- 1~3 channel on/off

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range indoor: 30m
ZigBee Profile	Home Automation Profile
Power Input	• 100~240VAC 50/60 Hz
Working temperature	• -20°C to 55°C
Max Current	• 7A x 1 channel • 5A x 2 channels • 3A x 3 channels
Size	• 86 x 86 x 37 mm



Main Specifications

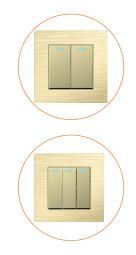
Main Features

- ZigBee HA1.2 compliant
- ZigBee ZLL compliant
- Wireless On/Off switch
- Brightness adjustment
- Color temperature tuner
- Save your Brightness setting for easy access

Wireless Connectivity• ZigBee 2.4 GHz IEEE 802.15.4RF Characteristics• Operating frequency: 2.4 GHz
• Internal PCB Antenna
• Range indoor: 30mZigBee Profile• Home Automation ProfilePower Input• 100~240VAC 50/60 HzWorking temperature• -20°C~+55°CSize• 86 x 86 x 37 mmWeight• 205g







- ZigBee HA 1.2 compliant
- Remote on/off control
- Enables scheduling for automatic switching
- 1~3 channel on/off

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range outdoor/indoor:100m/30m
ZigBee Profile	Home Automation Profile
Power Input	• 220 VAC 50/60 Hz
Power Rating	800V for every channel
Working temperature	• -30°C to 70°C
Size	• 86 x 86 x 47 mm



Main Specifications

Main Features

- ZigBee HA 1.2 compliant
- Remote on/off control
- o~10 V Dimmable
- Enables scheduling for automatic switching

Note: work with dimmable LED lights

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range outdoor/indoor:100m/30m
ZigBee Profile	• Lighting Link Profile
Power Input	• 110-277 VAC • 20mA
Output Current	• 20mA
Operation temperature	• -40°C to 60°C
Dimension	• 140 x 50 x30 (L) mm
Weight	• 120 g



- ZigBee HA 1.2 compliant
- Remote on/off control
- Single color dimmable
- Enables scheduling for automatic switching

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range outdoor/indoor:100m/30m
ZigBee Profile	 Home Automation Profile Lighting Link Profile
Power Input	• 110~277 VAC 50/60Hz
Output Current	• 950mA MAX
Output DC	• 24~38V
Working Temperature	• -40°C to 60°C
Size	• 118 x 74 x 32 (L) mm
Weight	• 185 g



Main Specifications

Main Features

- ZigBee HA 1.2 compliant
- ZigBee ZLL compliant
- Remote on/off control
- Single color dimmable
- Enables scheduling for automatic switching

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	 Operating frequency: 2.4 GHz Internal PCB Antenna Range outdoor/indoor:100m/30m
ZigBee Profile	Home Automation Profile Lighting Link Profile
Power Input	• 100-277 VAC MAX 0.40A 50/60 Hz
Output	• 24-38VDC MAX 950mA
Operating Temperature	• -40°C to 85°C
Size	• 190 x 86 x 37 (W) mm
Weight	• 418 g

RABX



- ZigBee ZLL compliant
- Remote on/off control
- Applies to strip light control
- Enables scheduling for automatic switching

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range outdoor/indoor:100m/30m
ZigBee Profile	Lighting Link Profile
Power Input/Output	• DC 12/24V
MAX power	• 144W
Working Temperature	• -40°C to 60°C
Dimension	• 105 x 73 x28 (L) mm
Weight	• 140 g

Products – Control & Lightings



ZigBee CCT Tunable LED Bulb





Main Features

- ZigBee HA 1.2 compliant
- Adjustable brightness and color temperature
- Compatible with most Luminaires
- RoHS and no Mercury
- More than 80% Energy Saving

Operating Voltage	• E27 (EU): 220 - 240V • E26 (US): 120V
Operating Wattage	• 8.5 W
Lumen	• 8o6 lm
Average Lifetime	• 25000Hrs
Optional Base	• E27 • E26
ССТ	• 2700 ~ 6000k
CRI	• Ra70 - 90
Beam Angle	• 240°
Dimensions	• Diameter: 6omm
Thickness	• 108mm
Weight	• 75 g
Mounting Type	• Mounted on bracket



- ZigBee HA 1.2 compliant
- ZigBee ZLL compliant
- On/Off dimming control
- Lights status feedback
- All-lights-on, All-lights-off
- Rechargeable battery backup
- Power saving mode and auto wake-up

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Range outdoor/indoor: 100m/30m • Antenna: Internal PCB antenna
ZigBee Profile	Home Automation Profile Lighting Link Profile
Battery	• 500mAh rechargeable battery (1 year battery life) • voltage: 3.7V
Current	• Standby current: ≤44uA • Trigger curruent: ≤28.5mA
Environment parameters	• Temperature: -28°C to 70°C • Humidity: up to 85% RH
Weight	• 51 9
Dimension	• 17 (W) x 45 (L) x 129 (H) mm



- ZigBee HA 1.2 compliant
- Compatible with other ZigBee products
- Remote on/off control
- Remote arm/disarm
- Low power consumption
- Easy installation
- Mini size

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating Frequency: 2.4GHz • Outdoor/Indoor range: 100m/30m
ZigBee Profile	Home Automation Profile
Battery	• CR2450, 3V Lithium battery • Battery Life: 1 year
Current	• Standby current: ≤1.3uA • Trigger curruent: ≤28.5mA
Operating Ambient	• Temperature: -15~45°C • Humidity: up to 85% RH
Dimension	• 37.6(W) x 75.66(L) x 14.48(H) mm
Weight	• 31 g



- ZigBee HA1.2 compliant
- ZigBee SEP 1.1 compliant
- •Remote On/Off control, ideal for home appliance control
- Energy consumption measuring
- Enables scheduling for automatic switchingExtends the range and strengthens ZigBee
- network communication
- Pass-through socket for various country standards: EU, UK, AU

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m
ZigBee Profile	Smart Energy Profile Home Automation Profile
Operating Voltage	• AC 100 ~ 240V
Current	• Standby current: < 0.7 Watts; • Max current : 220AC 10A 2200V
Calibrated Metering Accuracy	 ≤ 100W within ±2W >100W within ±2%
Dimension	• 102 (L) x 64(W) x 38 (H) mm



• Complies with ZigBee HA1.2 profile to work with any standard ZHA ZigBee Hub

• Converts your home appliances to smart devices, such as lamps, space heaters, fans, window A/Cs, decorations, and more, up to 1800W per plug

• Controls your home devices on/off globally via the Mobile APP

• Automates your home by setting schedules to control connected devices

• Measures the instantaneous and accumulative energy consumption of the connected devices

• Switches on/off the Smart Plug manually using the toggle button on the front panel

• Slim design fits with standard wall outlet and leaves the second outlet free

• Supports two devices per plug by providing two outlets one at each side

• Extends the range and strengthens ZigBee network communication

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
ZigBee Profile	Home Automation Profile
Outdoor/indoor range	• 100m/30m
Operating Voltage	• AC 100 ~ 240V
Rated Current	• 10A
Calibrated Metering Accuracy	• ≤ 100W(within ±2W) • > 100W(within ±2%)
Dimensions	• 130 (L) × 55(W) × 33 (H) mm
Weight	• 120 g

Products – Energy Control & Management

PC301

ZigBee Power Clamp





Main Features

- ZigBee HA 1.2 compliant
- Supports two current transformers
- Measures real time and total energy consumption
- Suitable for both residential and commercial application
- Lightweight and easy to install

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Outdoor/Indoor range: 100m/30m
ZigBee Profile	Home Automation Profile
Operating Voltage	• AC 100~240V
Max. Load Current	• 60 Amps 6600W @ 110VAC; • 60 Amps 13800W @ 220 VAC
Operating Ambient	• Temperature: -10°C to +50°C • Humidity: up to 85% non-condensing
Measurement Accuracy	• ±5%
Dimension	• 93(W) x 65.5(L) x 33(H) mm (with bracket





- ZigBee HA 1.2 compliant
- Three current transformers
- Monitor up to three separate power lines / loads
- Measures real time and total energy consumption
- Suitable for both residential and commercial application
- Lightweight and easy to install

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
ZigBee Profile	Home Automation Profile
Range outdoor/indoor	• 100m/30m
Operating Voltage	• 100-240 Vac / 45-65 Hz
Electrical parameters measured	• I _{rms} , V _{rms} , Active Power & Energy, • Reactive Power & Energy
Ranges of measured parameters	• Voltage: o to 240 Vac between phase and Neutral • Current: up to 125 Amps
Calibrated Metering Accuracy	• <1% of reading measurement error
Dimension	• 8o(L) x 27.8(W) x 58.3(H) mm
Weight	• 859



Main Features

- ZigBee HA 1.2 compliant
- Remote on/off control
- Energy consumption measuring
- Enables scheduling for automatic switching
- Remotely control from the mobile phone
- Easy installation

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
ZigBee Profile	Home Automation Profile
Range outdoor/indoor	• 100m/30m
Power Input	• 100-240VAC 50/60Hz
Max Load Current	• 220VAC 16A 3520W (with measurement) • 220VAC 20A 4400W (without measurement)
Calibrated Metering Accuracy	 ≤ 100W (less than ±2W) >100W (less than ±2%)
Dimension	• 85(L) × 40(W) × 61 5(H) mm
Weight	• 102g



- ZigBee HA 1.2 compliant
- Controls heavy duty equipment remotely using mobile phone
- Automates your home by setting schedules
- Switches on/off the circuit manually using the toggle button

• Suitable for pool, pump, space heater, air conditioner compressor etc.

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
ZigBee Profile	Home Automation Profile
Range outdoor/indoor	• 100m/30m
Load Current	• Max current: 220VAC 25a 5500W • Standby: <0.7W
Operating Voltage	• AC 100-240v, 50/60Hz
Dimension	• 171(L) × 118(W) × 48.2(H) mm
Weight	• 300g



- ZigBee HA 1.2 compliant
- compatible with other ZigBee products
- Easy installation
- Tamper protection protects the enclosure from being open
- Low battery detection
- Low power consumption

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating Frequency: 2.4GHz • Outdoor/Indoor range: 100m/30m
ZigBee Profile	Home Automation Profile
Battery	• CR2450, 3V Lithium battery • Battery Life: 1 year
Current	• Standby: 1.3∪A • trigger:≤ 28.5mA
Operating Ambient	• Temperature: -15°~45°C • Humidity: up to 85% RH
Dimension	• Sensor: 6.2(W) × 3.3(L) × 1 4(H) cm • Magnetic part: 5.7(W) × 1(L) × 1.1(H) cm
Weight	• 41 g





- ZigBee 1.2 HA Compliant
- Low consumption ZigBee module
- High stability
- Extra-thin luxury design
- Long battery life
- Low battery warning

Operating Voltage	• DC3V Lithium battery
Current	• Standby Current: ≤16uA • Alarm Current: ≤30mA
Installation Height	• 2.1 M
Detecting	• Distance: 9-12 m • Angle: 110 degrees
Operating Ambient	• Temperature: -15 ~ 50C • Humidity: maximum 95%RH (no congelation)
Networking	 Mode: ZigBee Ad-Hoc Networking Distance: ≤ 100 m (open area)
Dimension	• 65 x 65 x 28 mm





- ZigBee HA 1.2 Compliant
- PIR motion detection
- Temperature, humidity measuring
- Illuminance measurement (upcoming)
- Vibration detection (upcoming)
- Long battery life
- Low battery alerts
- Anti-tamper
- Sleek design

Main Specifications

Operating Voltage	• DC 3V (2*AA battery)
Rated Current	• Standby Current: ≤40uA • Alarm Current: ≤30mA
Illuminance (Photocell)	• Range: o ~128 klx • Resolution: o.1 lx
Temperature	• Range: -10~85° • Accuracy: ± 0.4°
Humidity	• Range: o~80% RH • Accuracy: ± 4% RH
Detecting	• Distance: 6m • Angle: 120°
Battery Life	• All-in-one version: 1 years
Networking	• Mode: ZigBee Ad-Hoc Networking • Distance: ≤ 100 m (open area)
Operating Ambient	• Temperature: -10 ~ 50°C • Humidity: maximum 95%RH (no congelation)
Anti-RF Interference	• 10MHz - 1GHz 20 V/m
Dimension	• 83(L) x 83(W) x 28(H) mm

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- DC-powered
- Transmits AC power failure, low battery and supervisory signals
- Receives signal from the control panel to activate
- sound or to emit entry/exit delay beeps

• Quick and simple installation

ZigBee Profile	• ZigBee Pro HA 1.2
RF Characteristics	• Operating frequency: 2.4GHz
Power Voltage	• 5V/1A Power Adapter
Battery	• 3.7V liuthium battery
Current	• Standby current: <17mA • Alarm Current: <400mA
Operating Ambient	• Working temperature: -10°C ~ + 60°C • Environment humidity: <95% RH
Networking	• ZigBee Ad-Hoc Networking
Dimensions	• 102 (L) x 64(W) x 38 (H) mm
Weight	• 88x55mm





- ZigBee HA compliant
- Low consumption ZigBee module
- Mini appearance design
- Low power consumption
- Sound alarm up to 85dB/3m
- Lower power warning
- Allows mobile phone monitoring
- Tool-free installation

Operating Voltage	• DC3V lithium battery
Current	• Static Current: ≤20uA • Alarm Current: ≤60mA
Sound Alarm	• 85dB/3m
Operating Ambient	• Temperature: -10 ~ 50C • Humidity: maximum 95%RH
Networking	 Mode: ZigBee Ad-Hoc Networking Distance: ≤ 100 m
Dimension	• 6o(W) x 6o(L) x 49.2(H) mm



- ZigBee 1.2 HA compliant
- Low consumption ZigBee module
- Low battery consumption
- Separate design of detector and sensor
- Tool-free installation

Operating Voltage	• 2 x AAA battery
Current	• Static Current: ≤5∪A • Alarm Current: ≤30mA
Sound Alarm	• 85dB/3m
Operating Ambient	• Temperature: -10 ~ 50C • Humidity: maximum 95%RH
Networking	 Mode: ZigBee Ad-Hoc Networking Distance: ≤ 100 m (in the open area)
Dimension	• 60(W) x 30(L) x 11.8(H) mm





- ZigBee 1.2 HA compliant
- Low battery consumption
- Low battery warning sends to the phone
- Low consumption ZigBee module

• Digital high-precision temperature and humidity sensor

Working voltage	• DC3V lithium battery
Battery life	• 1-3 years
Static current	• ≤10UA
Operating Ambient	• Temperature: -10 ~ 50C • Humidity: maximum 95%RH
Networking	 Mode: ZigBee Ad-Hoc Networking Distance: ≤ 100 m (in the open area)
Dimension	• 6o(W) x 6o(L) x 20.8(H) mm





- ZigBee HA 1.2 compliant
- Adopts high stability semi-conductor sensor
- Works with other system easily
- Monitor remotely using mobile phone
- Low consumption ZigBee module
- Low battery consumption
- Tool-free installation

Working Voltage	• AC 100V~240V
Average consumption	•<1.5W
Sound Alarm	• Sound: 75dB (1 meter distance) • Density: 6%LEL ± 3%LEL (natural gas)
Operating Ambient	• Temperature: -10 ~ 50C • Humidity: ≤95% RH
Networking	• Mode: ZigBee Ad-Hoc Networking • Distance: ≤ 100 m (open area)
Dimension	• 79(W) x 68(L) x 31(H) mm (not including plug)





- ZigBee HA 1.2 compliant
- Works with other system easily
- Low consumption ZigBee module
- Low battery consumption
- Receives alarm notification from phone
- Low battery warning

• Tool-free installation

Operating Voltage	• CR2450 lithium battery
Current	• Static Current: ≤20uA • Alarm Current: ≤60mA
Sound Alarm	• 85dB/1m
Operating Ambient	• Temperature: -10 ~ 50C • Humidity: maximum 95%RH
Networking	 Mode: ZigBee Ad-Hoc Networking Distance: ≤ 100 m (in the open area)
Dimension	• 54(W) × 54(L) × 45(H) mm





- ZigBee HA 1.2 compliant
- Compatible with other ZigBee productsPress the panic button to send notification

to the phone

- Low power consumption
- Easy installation
- Mini size

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating Frequency: 2.4GHz • Outdoor/Indoor range: 100m/30m
ZigBee Profile	Home Automation Profile
Battery	• CR2450, 3V Lithium battery • Battery Life: 1 year
Current	• Standby: ≤ 1.3uA
	• Trigger: ≤28.5mA
Operating Ambient	 Irigger: ≤28.5mA Temperature: -10~45°C Humidity: up to 85% non-condensing
Operating Ambient Dimension	• Temperature: -10~45°C





- 1.0 Megapixel 720P HD progressive scan
- \bullet IR-CUT that automatically switches day and night
- Supports Two-way voice intercom
- Mobile phone controllable and receive notifications remotely
- Support ONVIF protocol and SDK for third party integration

Camera	• Lens: 1 megapixel • Prime lens: 3.6 mm
Local Storage	• Support maximum 32 GB TF card
Network Protocol	• TCP/IP, HTTP, DHCP, SSL, DDNS, FTP, NTP, RTSP, ONVIF
Network Wi-Fi	• Built-in Wi-Fi connectivity that can automatically search nearby Wi-Fi
Alarm	• Supports motion detection, sound alarm when network is disconnected, memory is full etc.
Frame Rate	• 720p @30 fps, 480P @25 fps
Power Supply	• USB Port DC 5V ±10%
Working Environment	•-10~+60 °C (≤95% RH)
Dimensions	• 70(L) × 115(H) × 35(W) mm

Products – Video Surveillance IPC805 IP Camera Fixed Wi 🗊



Main Features

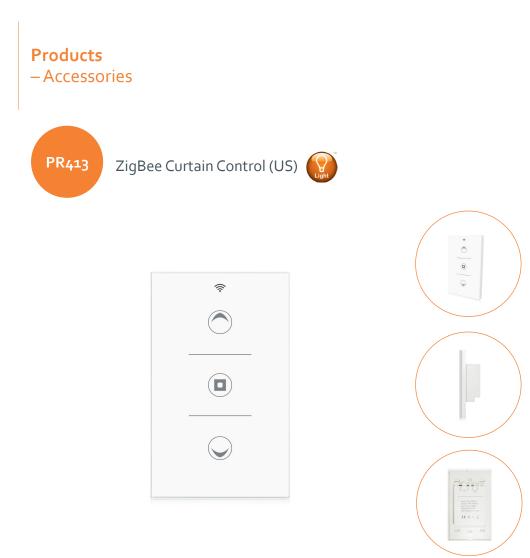
- 1.0 Megapixel 720P HD progressive scan
- IR-CUT that automatically switches day and night
- Supports Two-way voice intercom
- Mobile phone controllable and receive notifications remotely
- 110 degree Wide Angle View
- Motion detection (upcoming)

Camera	• Type: Fixed focus • Aperture: F2.5 • Effective Focal Length: f=2.8mm • View Angle: 110°
Storage media	• Internal memory: 16MB SPI • External memory: Micro SD, up to 32GB
Wirless standard	• IEEE 802.11 b/g/n
Interface	• USB: Micro USB • Power adapter: 5V/1.oA
Display Resolution	• 1280x720 @25fps
Main Features	 Internet Live Video/Monitoring 720P Video Record IR Night Vision Motion Detection Two-way Audio Talk 110 degree Wide Angle View P2P Network Free APP on App Store/Google Play
File Format	• Movie: H.264 • Photo: JPG
Dimension(s)	• 116.7*68*29.3 mm



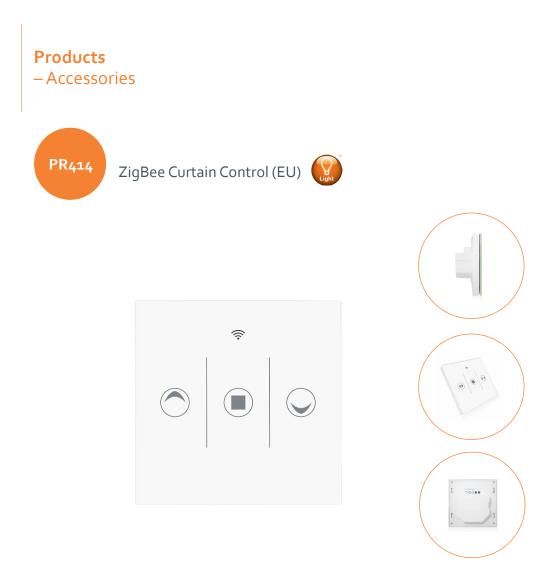
- ZigBee HA 1.2 compliant
- Remote open/close control
- Extends the range and strengthens ZigBee network communication

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range outdoor/indoor:100m/30m
ZigBee Profile	Home Automation Profile
Power Input	• 100~240 VAC 50/60 Hz
Load Current	• Max load current: 220 AC 6A 1320 V • Standby: 0.7 W
Dimension	• 64 x 45 x 15 (L) mm
Weight	• 77 g



- ZigBee HA 1.2 compliant
- Open/close the curtain remotely
- Extends the range and strengthens ZigBee network communication

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range indoor: 30m
ZigBee Profile	Home Automation Profile
Power Input	• 100~277 VAC 50/60 Hz
Working temperature	• -20°C-+55°C
Size	• 115x69x24 mm
Weight	• 2059



- ZigBee HA 1.2 compliant
- Open/close the curtain remotely
- Extends the range and strengthens ZigBee network communication

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4 GHz • Internal PCB Antenna • Range indoor: 30m
ZigBee Profile	Home Automation Profile
Power Input	• 100~240VAC 50/60 Hz
Working temperature	• -20°C~+55°C
Size	• 86x86x37 mm
Weight	• 150g





- Body temperature measurement
- Real-time measurement results can be transmitted and stored in the Cloud
- Sends data to mobile phone
- Alarm threshold can be set freely
- Automatic alarm comes from mobile phone
- Alarm when the device is far from mobile phone
- Slim design that brings more personal comfort

Battery	• CR2016
Working Environment	• 10~60°C
Accuracy	• 0.1°C
Measurement	• 32~44°C
Possible error	• ≤ 0.12°C
Measurement unit	• °C
Weight	• 93 g
Dimension	• R30.5 x 8.5 mm





- ZigBee HA1.2 compliant
- Upgrades existing electrical door to a remote control door.
- Easy installation by simply inserting the Access Control Module into the existing power line.
- Compatible with most electrical doors.

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m
ZigBee Profile	• Home Automation Profile • ZigBee Light Link Profile
Operating Voltage	• DC 6-24V
Operating Current/ MAX Current	• 30 mA 12V • 70 mA 12V
Weight	• 42 g
Dimensions	• 39 (W) × 55.3 (L) × 17.7 (H) mm



- ZigBee HA Compliant
- Provides expanded network range and adds redundancy to wireless network
- Extends the range and strengthens ZigBee network communication
- Pass-through socket for various country standards: EU, UK, AU

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Internal PCB Antenna • Range outdoor/indoor: 100m/30m
ZigBee Profile	• Smart Energy Profile • Home Automation Profile
Operating Voltage	• AC 100 ~ 240V
Dimensions	• 102 (L) x 64(W) x 38 (H) mm
Weight	• 113 g







Hardware and Firmware Highlights

- ZigBee SEP1.1 compliant
- Smart meter interoperability
- Powerful CPU for complicated calculation
- Mass storage capacity for historic data
- Dot matrix LCD screen for flexible UI application
- Sleep or Power Saving mode
- Backup Li-ion battery

IHD Features

- Real-time energy tracking both in data and graph
- Dynamic pricing information
- Accumulative energy usage tracking
- Historic data and graph display
- User-defined alerts for energy usage threshold
- Utility message and notification display
- Desktop calendar with date and time display
- Temperature and humidity display

MCU	• ARM Cortex-M ₃
Data Storage Capacity	• TF Card: 8G
Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	 Operating frequency: 2.4GHz Internal PCB Antenna Range outdoor/indoor: 100m/30m
Smart Meter Interoperability	• SEP1.1, SMETS • Trilliant, Silver Spring, Itron, Siemens
Data Interfaces	• Micro USB port
LCD Screen	• 3" Dot Matrix LCD • 128 x 64 pixels
Built-in Li-ion Battery	• 500 mAh (up to 4 hours)
Power Supply	 Power adapter input: AC 100 ~ 240V Power adapter output: DC 5V Rated power consumption: 1W
Dimensions	• 120(W) x 22(L) x 76 (H) mm
Weight	• 186 g
Mounting Type	• Desktop

ZigBee Smart Home Kits

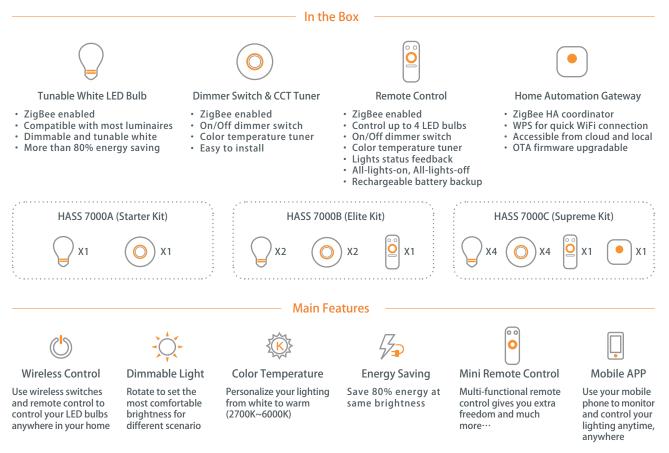


Smart Lighting Kit - HASS 7000

- Brighten your home within a blink



- Plug & Play to convert your Smart Lighting in a minute.
- Dimmable and tunable white LED.
- Turn on/off your lights individually or all together (using the Mini Remote).
- Use Smart Gateway to control your lighting from anywhere using your mobile phone.



Certificates and Partners

