



# HNC IIoT Series Product Brochure >>Cloud HMI&BOX&PLC

Version:V2.0 HNC Electric Limited 2023





## HT3000-D4 Series

| Model      | TFT Screen | Storage   | LAN+COM | USB | Voice | WiFi | Wireless  | Hole Size | Dimension<br>W*H*D |
|------------|------------|-----------|---------|-----|-------|------|-----------|-----------|--------------------|
| HT3000-D4  | 4.3"       | 4G + 512M | 1+2     | 1   | Yes   |      |           |           |                    |
| HT3000-D4W | 800*480HD  | 4G + 512M | 1+2     | 1   | Yes   | Yes  |           | 132x80mm  | 137x85x30mm        |
| HT3000-D4E |            | 4G + 512M | 1+2     | 1   | Yes   |      | Global 4G |           |                    |

### Feaures

- > HD screen. Built-in quad-core high-performance processor, smoother operation, faster speed, stronger stability.
- The real color and exquisite with IPS hard screen technology. Integrated design, full-view visual experience, immersive enjoyment.
- Provide exclusive maintain identity for equipment manufacturers, as well as exclusive enterprise platforms. More convenient for equipment vendors.
- Supports remote programming, download, diagnostics, monitoring and debugging of PLC programs
- Supported voice function, access microphone and loudspeaker via USB, Supported text-to-speech, voice broadcasting, intercom function, innovative device cloud voice



### Multiple security protection mechanisms

Higher safety level with A/B Key+local confirmation safety mechanism, ensure the safe and stable operation of equipments.

### Support for video playing

HMI built-in quad-core high-performance processor, can play video files in the USB flash drive. Supported MP4 video format, equipped with IPS hard screen technology, so that the video picture is more delicate and much smoother, color is



#### (IoT) Third party IoT Platform

Support access to third-party IoT platforms such ad Alibaba Cloud, Amazon, Google, etc.

### Support data interconnection and distribution

By the Haiwell data interconnection tool, realtime data/historical data can be stored in databases such as MySQL/SQL Server, and data distribution is supported, help to generate various data reports.



#### Web API inerface

Third-party software and platforms can easily and securely obtain device data and control devices through the built-in Web API function using HTTP protocol, support real-time data push, support PHP, Java, C#, C++ languages. Support Internet and LAN network.



### Support Cloud maintenance for equipment manufacturers

Provide exclusive maintain identity for equipment manufacturers, as well as exclusive enterprise platforms. More convenient for equipment vendors.



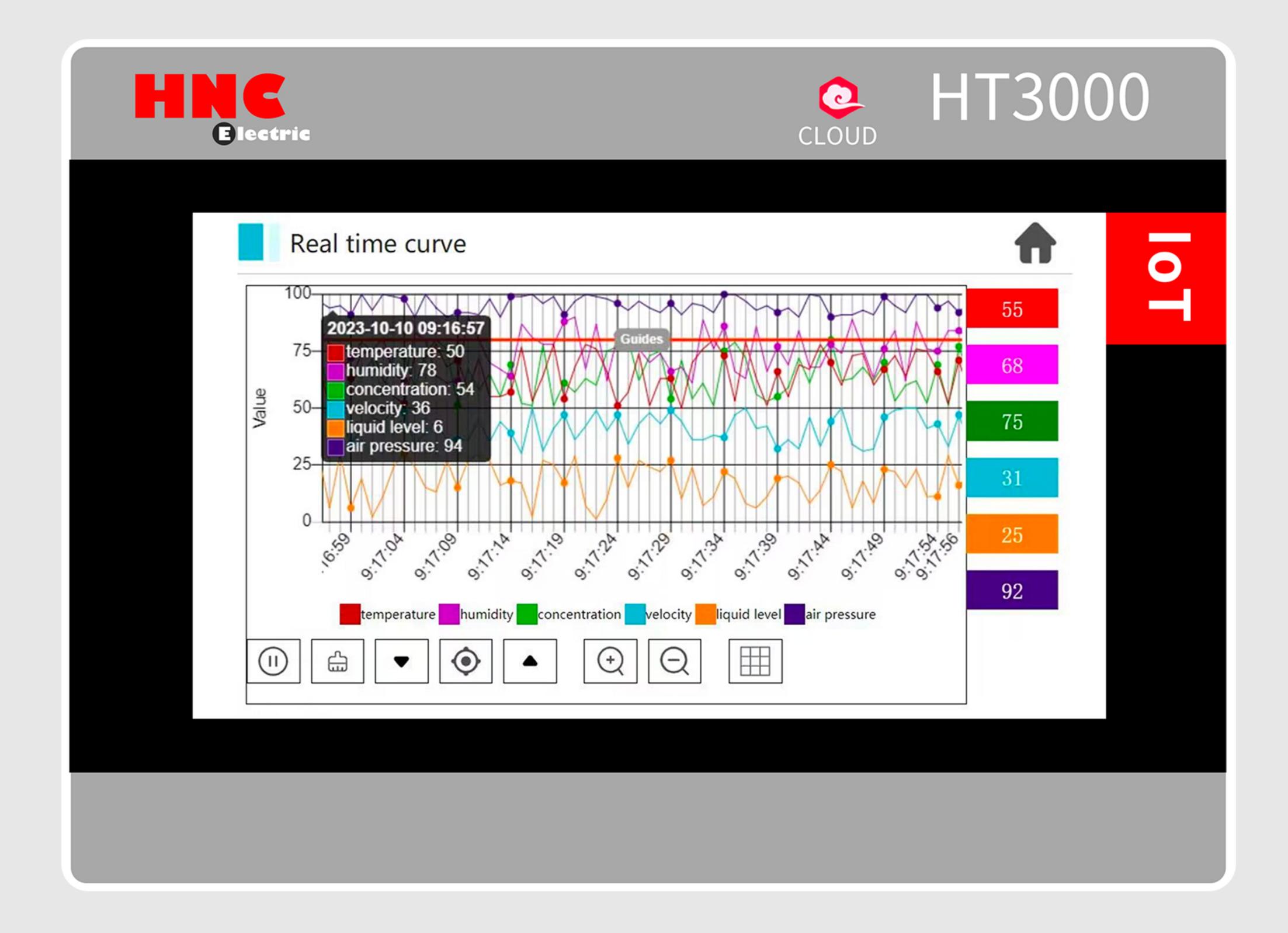
#### Support Cloud Data Center

No need to build an MQTT server to realize data collection and reporting, and connect to ERP/MES and other systems. Through Haiwell Cloud Data Center function, you can also flexible call of equipment variable data from various places, easy to realize remote centralized control of equipments.

### Specification

| S          | pecification          | 4.3"   |
|------------|-----------------------|--|
| Software   | Programming software  | HTCloud Designer   |
|            | Display screen        | 4"TFT  |
|            | Resolution            | 800x480pixels  |
| Display    | Color                 | 16.7M  |
|            | Brightness(cd/m²)     | 450Cd/m2   |
|            | Touch Type            | Resistance touch screen  |
| <b>C</b> 1 | Flash                 | 4GB  |
| Storage    | RAM                   | 512M   |
|            | Backlight Type        | LED  |
| Backlight  | Backlight Life Time   | > 30000H   |
|            | Automatic Dormancy    | Support and Configurable   |
|            | 4G                    | Optional   |
|            | WIFI                  | Optional   |
| 1/0        | Ethernet Port         | 10/100 Base-T  |
| I/O port   | COM port              | COM1:R232 COM2:RS485   |
|            | USB HOST              | USB2.0 x 1   |
|            | Print Port            | COM1:R232 COM2:RS485   |
|            | Input power           | 24±20%VDC  |
|            | Power Consumption     | < 6W   |
| <b>D</b>   | Power Protection      | Surge protection   |
| Power      | Voltage Resistance    | 500VAC   |
|            | Isolation Resistance  | Exceed 50MΩ @500VDC  |
|            | Vibration Endurance   | 10~57HZ amplitude 0.075mm, acceleration 1G, X, Y, Z 10 times in triaxial direction |
|            | Cooling Type          | Natural air Cooling  |
|            | Protection Structure  | IP65   |
| Enviroment | Storage Temperature   | -20 ~70°C  |
|            | Operating Temperature | -10°C ~ 60°C   |
|            | Relative Humidity     | 10 ~ 90%RH (non-condensing)  |
|            | Shell material        | ABS + PC   |
|            | Shape size (WxHxD)    | 137x85x30mm  |
| Structure  | Cutout size(WxH)      | 132x80mm   |
|            | Net weight            | 0.3kg  |





## HT3000-B Series

| Model       | TFT Screen     | Storage    | LAN | USB | COM | Voice | WiFi | Wireless  | Hole Size       | Dimension W*H*D  |
|-------------|----------------|------------|-----|-----|-----|-------|------|-----------|-----------------|------------------|
| HT3000-B7H  | 7" 1024*600 HD | 4GB + 512M | 1   | 2   | 2   | Yes   |      |           |                 |                  |
| HT3000-B7HW | 7" 1024*600 HD | 4GB + 512M | 1   | 2   | 2   | Yes   | Yes  |           | 193×138mm       | 200×146×37mm     |
| HT3000-B7HE | 7" 1024*600 HD | 4GB + 512M | 1   | 2   | 2   | Yes   |      | Global 4G | 193 × 130111111 | 200×140×3/111111 |
| HT3000-B10  | 10.1" 1024*600 | 4GB + 512M | 1   | 2   | 2   | Yes   |      |           | 260×202mm       | 270×212×35mm     |
| HT3000-B10W | 10.1" 1024*600 | 4GB + 512M | 1   | 2   | 2   | Yes   | Yes  |           | 200×202111111   | 2/0×212×3311111  |
| HT3000-B10E | 10.1" 1024*600 | 4GB + 512M | 1   | 2   | 2   | Yes   |      | Global 4G |                 |                  |

### **Products Festures**

- Full fit screen design, brighter color, wider view, much brighter brightness and more clear dissolutio.
- Adopt new generation hardware, the anti-interference is more stable, Integrated IoT gateway+DTU+HMI all in one.
- Supported voice function, access microphone and loudspeaker via USB, Supported text-to-speech, voice broadcasting, intercom function, innovative device cloud voice.
- Support MQTT protocol. Can be connected to database server/ERP/MES etc.
- Supports remote programming, download, firmware upgrade, debugging etc.
- Management by HTCloud Designer.





#### Web API inerface

Third-party software and platforms can easily and securely obtain device data and control devices through the built-in Web API function using HTTP protocol, support real-time data push, support PHP, Java, C#, C++ languages. Support Internet and LAN network.



#### Configuration Screen Integration

Innovatively opened the integration function of the device configuration screen to third parties. Through a safe and easy-to-use interface, the device screen can be integrated into a variety of personalized scenarios such as third-party software, websites, APPs. Let third-party applications immediately have the remote control capabilities of the device.



### Multiple security protection mechanisms

Higher safety level with A/B Key + local confirmation safety mechanism, ensure the safe and stable operation of equipments.



#### Integrated Cloud access & alarm notification

Remote devices can be accessed through IoTBus Cloud APP and website. Supports real-time abnormal alarm notification.



#### Support Cloud maintenance for equipment manufacturers

Provide exclusive maintain identity for equipment manufacturers, as well as exclusive enterprise platforms. More convenient for equipment vendors.

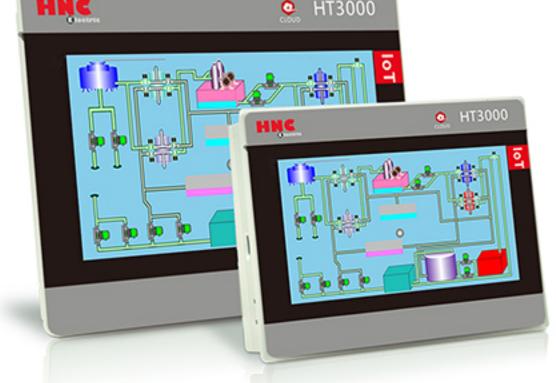


### Support data interconnection and distribution

By the data interconnection tool, real-time data/historical data can be stored in databases such as MySQL/SQL Server, and data distribution is supported, help to generate various data reports.



Supported text-to-speech, automatically broadcast alarm information of Chinese and English

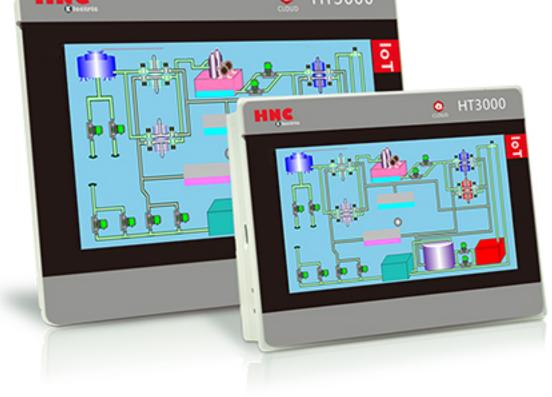


Supported to broadcast fast batch voice notification through the device





Supported the intercom function, easily communicate by devices in groups



USB flash disk to audio



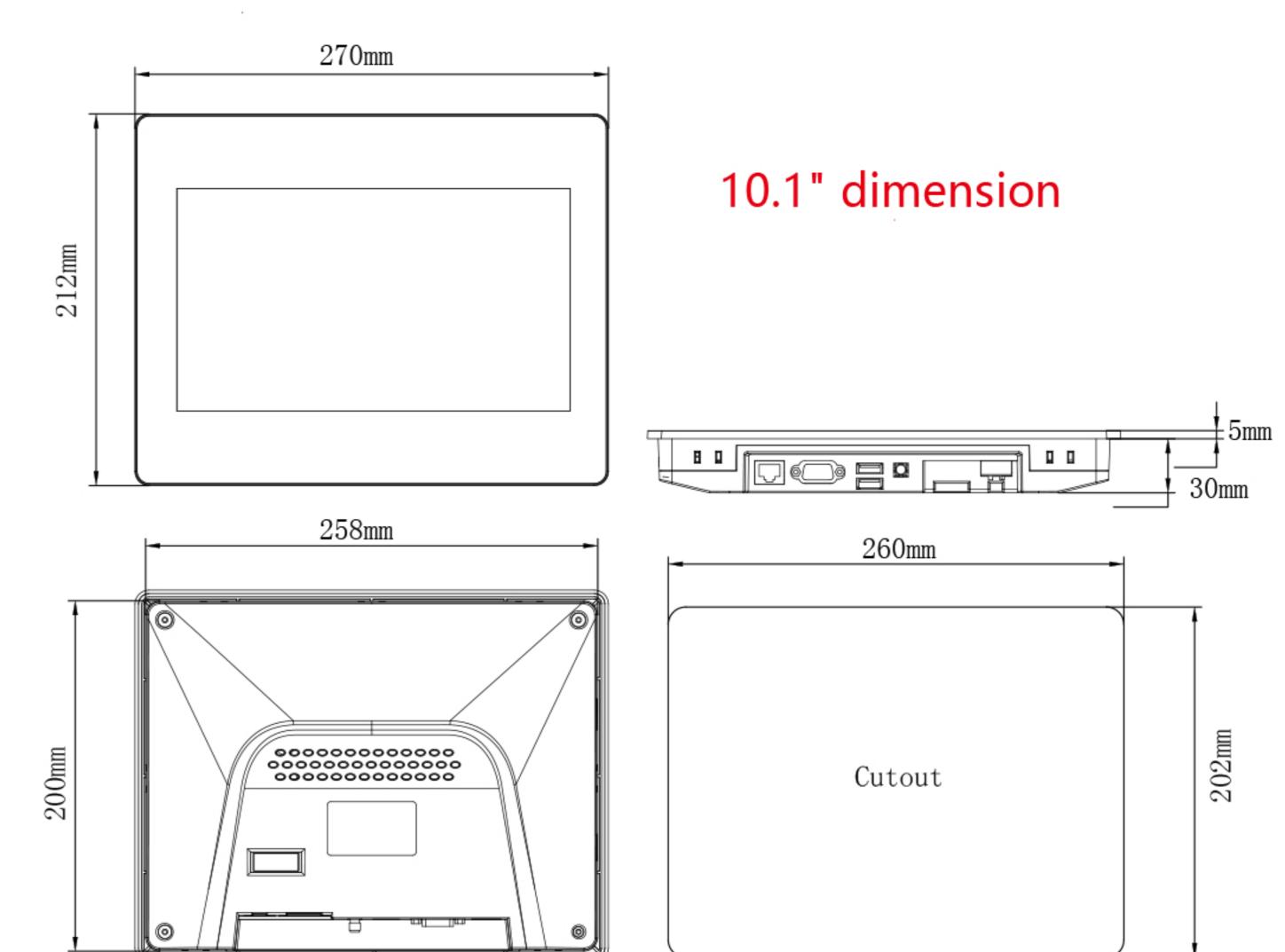
The innovative device cloud voice, support mobile phone remotely intercom and broadcast



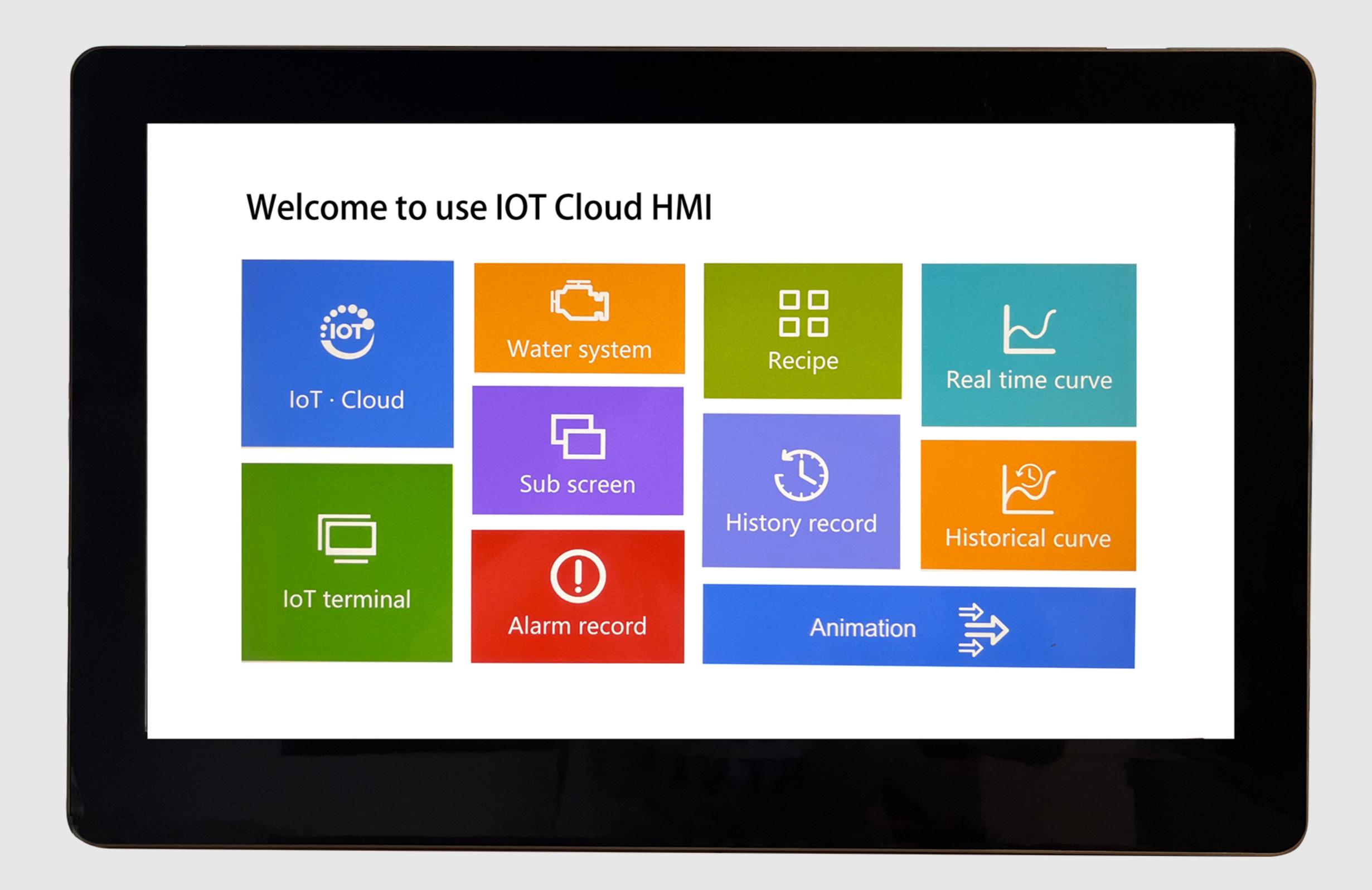
### **Products Specification**

| 5          | Specification         | 7"   | 10.1"                                      |  |
|------------|-----------------------|--|--|--|
| Software   | Programming software  | HTCloud                                      | d Designer                                 |  |
|            | Display screen        | 7 " TFT                                      | 10.1 " TFT                                 |  |
|            | Resolution            | 1024x600pixels                               | 1024x600pixels                             |  |
| Display    | Color                 | 16M  | 16M  |  |
|            | Brightness(cd/m²)     | 350  | 350  |  |
|            | Touch Type            | Resistive Type                               | Resistive Type                             |  |
| Ctoroso    | Flash                 | 4GB  | 4GB  |  |
| Storage    | RAM                   | 512M   | 512M                                       |  |
|            | Backlight Type        | LED  | LED  |  |
| Backlight  | Backlight Life Time   | > 30000H                                     | > 30000H                                   |  |
|            | Automatic Dormancy    | Support and Configurable                     | Support and Configurable                   |  |
|            | WIFI                  | Optional                                     | Optional                                   |  |
|            | 4G                    | Optional                                     | Optional                                   |  |
| 1/0        | COM port              | 2 (232/485)                                  | 2 (232/485)                                |  |
| I/O port   | Ethernet Port         | 10/100 Base-T                                | 10/100 Base-T                              |  |
|            | USB HOST              | USB2.0 x 2                                   | USB2.0 x 2                                 |  |
|            | Print Port            | COM Port/USB Print                           | COM Port/USB Print                         |  |
|            | Input power           | 24±20%VDC                                    | 24±20%VDC                                  |  |
|            | Power Consumption     | 7W   | 10W  |  |
| Power      | Voltage Resistance    | 500VAC                                       | 500VAC                                     |  |
|            | Isolation Resistance  | Exceed 50MΩ @500VDC                          | Exceed 50MΩ @500VDC                        |  |
|            | Vibration Endurance   | 10 ~ 25 Hz (X, Y, Z direction 2G/30 minutes) | 10 ~ 25 Hz (X, Y, Z direction 2G/30 minute |  |
|            | Cooling Type          | Natural air Cooling                          | Natural air Cooling                        |  |
|            | Protection Structure  | IP65   | IP65                                       |  |
| Enviroment | Storage Temperature   | -20 ~70°C                                    | -20 ~70°C                                  |  |
|            | Operating Temperature | -10°C ~ 60°C                                 | -10°C ~ 60°C                               |  |
|            | Relative Humidity     | 10 ~ 90%RH (non-condensing)                  | 10 ~ 90%RH (non-condensing)                |  |
|            | Shell material        | ABS + PC                                     | ABS + PC                                   |  |
| C+         | Shape size (WxHxD)    | 200x146x37mm                                 | 270x212x35mm                               |  |
| Structure  | Cutout size(WxH)      | 193x138mm                                    | 260x202mm                                  |  |
|            | Net weight            | 0.8kg  | 1.3kg                                      |  |

### 







## HT3000-D15 Series

| Model        | TFT Screen | Storage | LAN+COM | USB | Local Video | Voice | WIFI | Wireless  | Hole Size | Dimension W*H*D                       |
|--------------|------------|---------|---------|-----|-------------|-------|------|-----------|-----------|---------------------------------------|
| HT3000-D15   |            | 4G + 1G | 1+3     | 2   | Yes         | Yes   |      |           | 383x245mm | 394x256x41mm<br>Aluminum alloy casing |
| HT3000-D15W  | 15.6"      | 4G + 1G | 1+3     | 2   | Yes         | Yes   | Yes  |           |           |                                       |
| HT3000-D15E  | 1920x1080  | 4G + 1G | 1+3     | 2   | Yes         | Yes   |      | Global 4G |           |                                       |
| HT3000-D15EW |            | 4G + 1G | 1+3     | 2   | Yes         | Yes   | Yes  | Global 4G |           |                                       |

### **Features**



### Supports local video monitoring

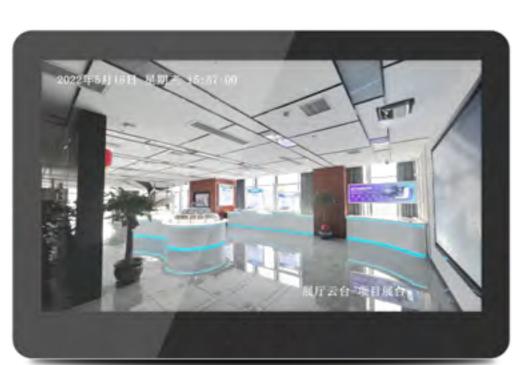
HMI can connect the camera that supports RTSP protocol transmission or cloud video channel through Ethernet to display the camera video smoothly on the screen. It can also carry out local or remote monitoring through IoTBus cloud APP.



### Support for video playing

HMI built-in quad-core high-performance processor, can play video files in the USB flash drive. Supported MP4 video format, equipped with IPS hard screen technology, so that the video picture is more delicate and much smoother, color is more real.











### Remote Data Interaction

Data interaction is the key to breaking down in formation silos. HNC IIoT HMI can help realize seamless data transmission between remote devices and flexibly realize data sharing and interaction. For a huge production or management system, real-time and effective remote data interaction is the first condition to truly realize the global optimization of production, scheduling and distribution.



### Remote Access Monitoring

Anytime and anywhere, users can login and remotely access the HMI through IoTBus APP or IoTBus Cloud website, and remotely monitor the running status of devices in real time. Even if you are in a different place, you can check the production status of the factory at anytime, which is convenient form management. Greatly save the human, material and time cost of running to the site.



#### Remote data collection

Data gathering is essential before effective data analysis. Through HMI, we can unify the device data from all over the country and even the world for intensive management and utilization, and help enterprises realize "talking with data, making decisions with data and managing with data" .



#### Real-time exception alarm push

When the device alarms, HMI will send alarm information in real-time through the IoTBus to realize timely response and processing of abnormal state. Acctrate fault location can improve the trouble shooting efficiency.



### Docking ERP/MES and other databases

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IoTBus IoT Cloud HMI can easily connect to ERP/MES and other database systems, so that the front-line production management data can be synchronized with the enterprise's existing ERP/MES and other databases. Resource sharing can be realized, and comprehensive data reports across modules and systems can be easily completed to further improve the production management capability of enterprises.

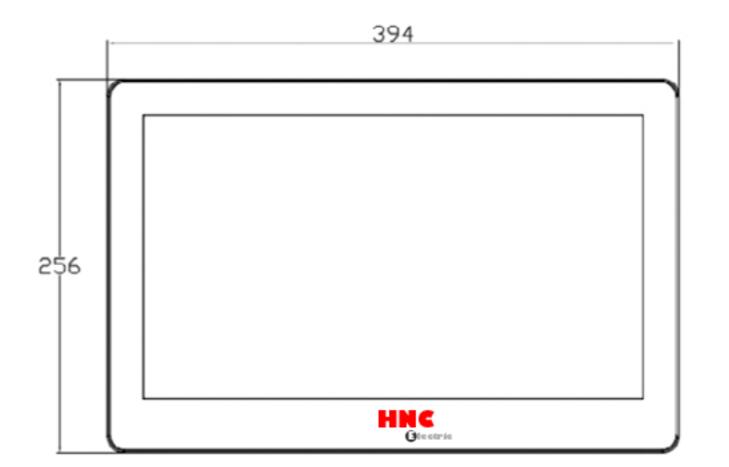
### Remote Centralized Control

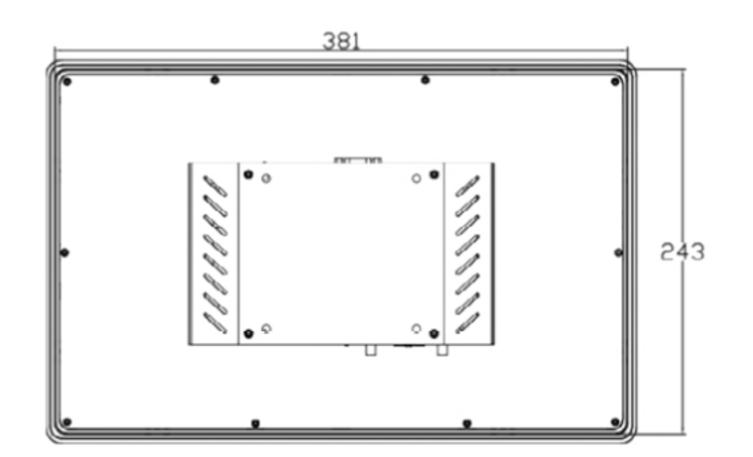
When multiple devices need to be maintained and managed, managing each device one by one is not only time-consuming and laborious, but also may cause artificial operation and management security risks. IoTBus IoT Cloud HMI multi-devices can support remote centralized management and control, which not only greatly improves the centralized intelligent monitoring ability of the enterprise, but also greatly reduces the operation and maintenance cost of the entire system.

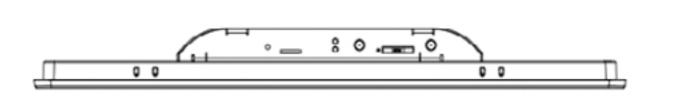
### Specification

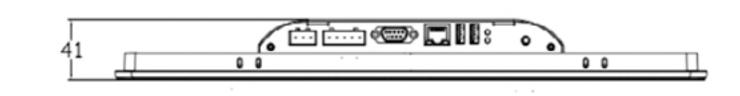
| Specification |                       | Parameter                                    |  |  |  |
|---------------|-----------------------|--|--|--|--|
| Platform      |                       | Linux  |  |  |  |
| Software      | Programming software  | HTCloud Desiger                              |  |  |  |
|               | Touch Type            | Resistance touch screen                      |  |  |  |
|               | Display screen        | 15.6" TFT                                    |  |  |  |
| Display       | Resolution            | 1920x1080 pixels                             |  |  |  |
|               | Color                 | 2.6M   |  |  |  |
|               | Brightness(cd/m²)     | 400Cd/m2                                     |  |  |  |
| Storago       | FLASH                 | 4G   |  |  |  |
| Storage       | RAM                   | 1G   |  |  |  |
|               | Backlight Type        | LED  |  |  |  |
| Backlight     | Backlight Life Time   | > 30000H                                     |  |  |  |
|               | Automatic Dormancy    | Support and Configurable                     |  |  |  |
|               | 4G                    | Optional                                     |  |  |  |
|               | WIFI                  | Optional                                     |  |  |  |
|               | USB HOST              | USB2.0×2                                     |  |  |  |
|               |                       | COM1: RS232/RS485                            |  |  |  |
|               | COM port              | COM2: RS485                                  |  |  |  |
| I/O port      |                       | COM3: RS232                                  |  |  |  |
|               | Ethernet Port         | 10/100 Base-T                                |  |  |  |
|               | Voice                 | Support                                      |  |  |  |
|               | Print Port            | COM Port/USB Print                           |  |  |  |
|               | Input power           | 24±20%VDC                                    |  |  |  |
|               | Power Consumption     | <15W   |  |  |  |
|               | Power Protection      | Surge protection                             |  |  |  |
| Power         | Voltage Resistance    | 500VAC                                       |  |  |  |
|               | Isolation Resistance  | Exceed 50MΩ @500VDC                          |  |  |  |
|               | Vibration Endurance   | 10 ~ 25 Hz (X, Y, Z direction 2G/30 minutes) |  |  |  |
|               | Cooling Type          | Natural air Cooling                          |  |  |  |
|               | Protection Structure  | IP65   |  |  |  |
| Enviroment    | Storage Temperature   | -20°C ~60°C;                                 |  |  |  |
|               | Operating Temperature | 0°C ~50°C                                    |  |  |  |
|               | Relative Humidity     | 10~90%RH (non-condensing)                    |  |  |  |
|               | Shell material        | Aluminum alloy casing,Glass Panel            |  |  |  |
|               | Shape size (WxHxD)    | 394mm×256mm×41mm                             |  |  |  |
| Structure     | Cutout size(WxH)      | 383mm×245mm                                  |  |  |  |
|               | Net weight            | 2.6  |  |  |  |

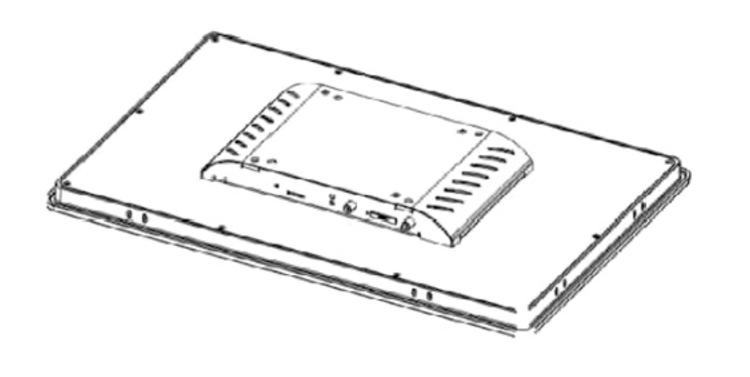
### Dimension

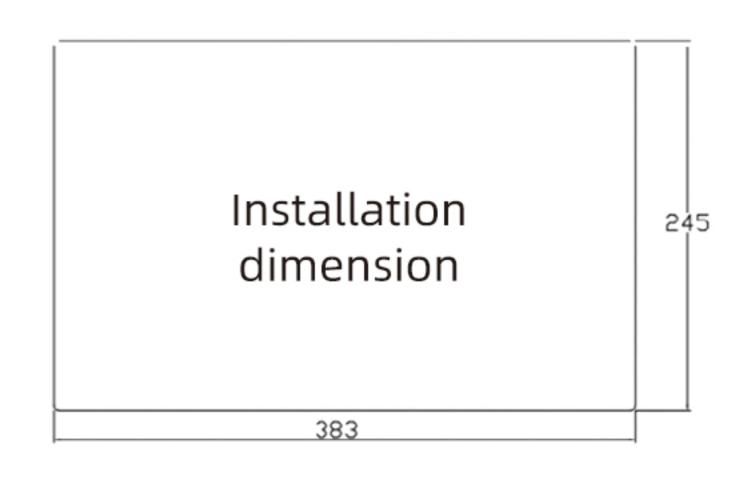
















H-BOX Series

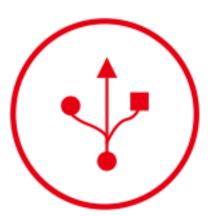
| Model   | TFT Screen | LAN | USB | COM | Voice | WiFi | Wireless Network | Dimension   |
|---------|------------|-----|-----|-----|-------|------|------------------|-------------|
| H-BOX   | 4G + 512M  | 2   | 2   | 2   | Yes   | Yes  |                  | F01200Fmama |
| н-вох-е | 4G + 512M  | 2   | 2   | 2   | Yes   | Yes  | Global 4G        | 50×120×85mm |



Ethernet Interface



WiFi Network



USB Interface



Cloud function



Voice function



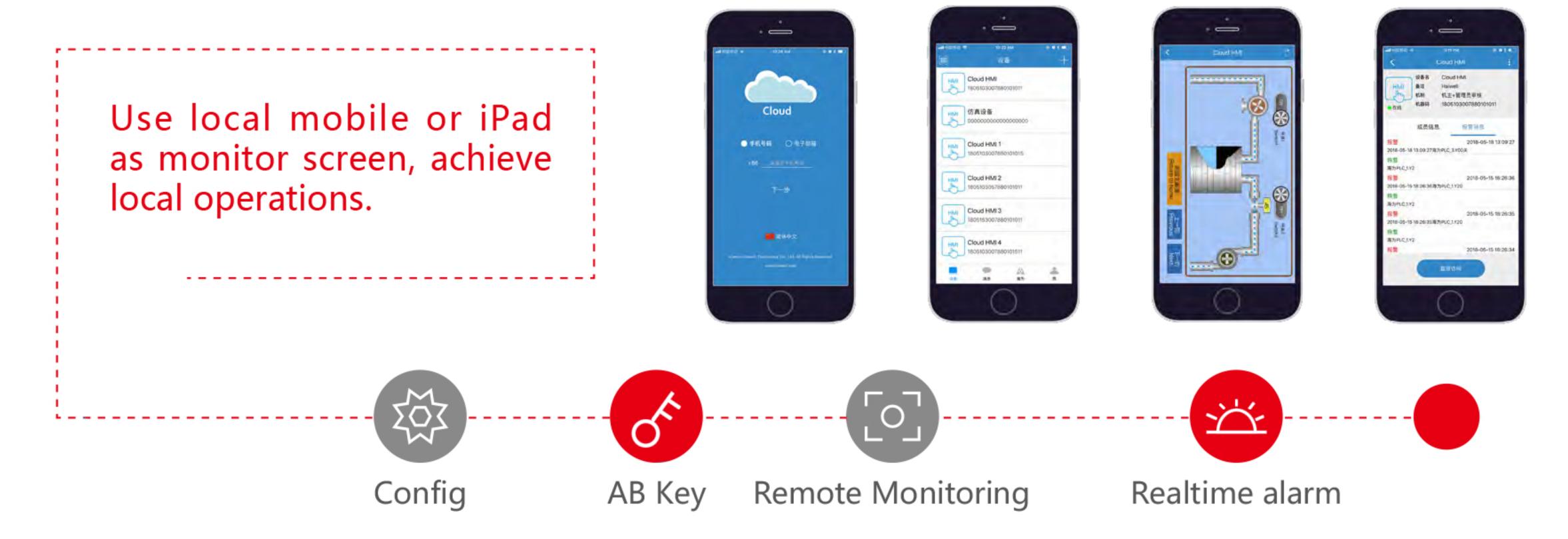
Edge Computing



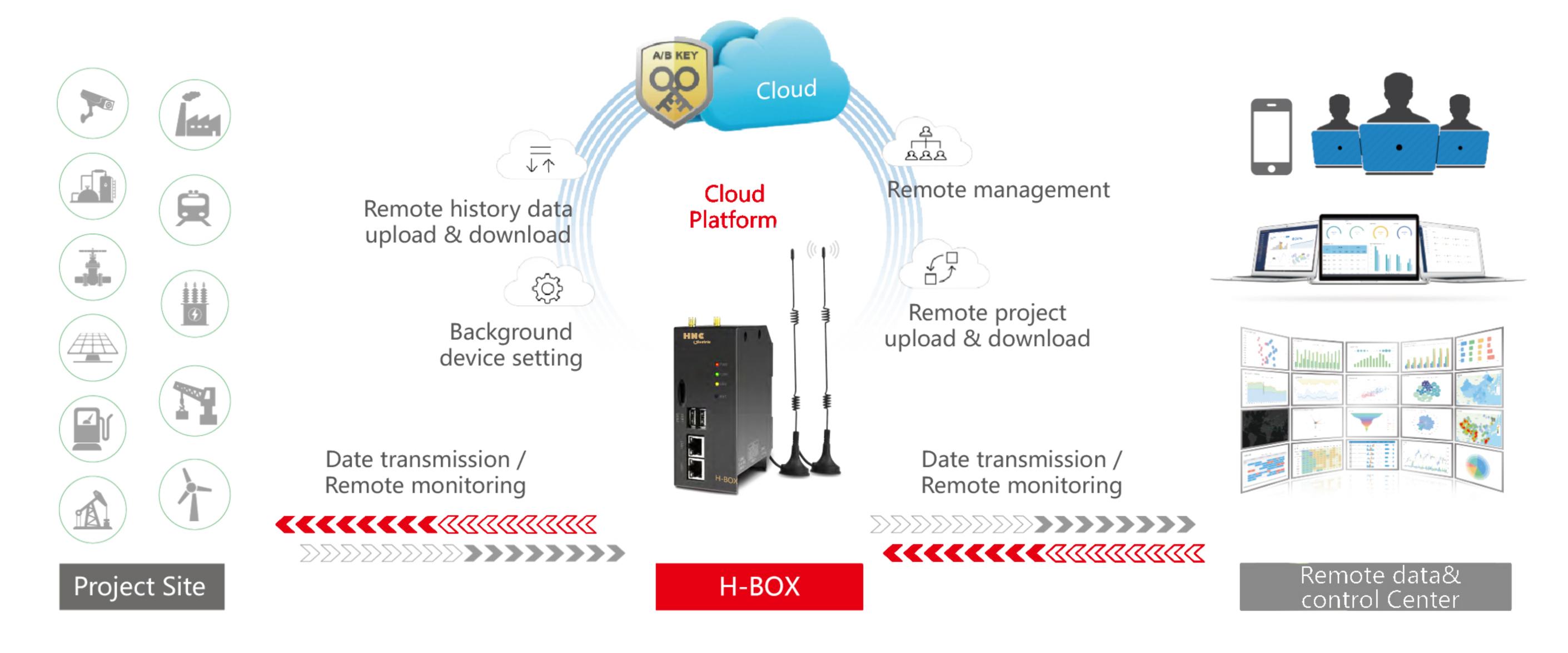
4G Network

### **Product Features**

- Integrated IoT gateway+DTU+HMI all in one, saving cost and space. Small box, big application.
- Supported voice function, access microphone and loudspeaker via USB, Supported text-to-speech, voice broadcasting, intercom function, innovative device cloud voice.
- Built-in Web API function, can control and obtain the device data through HTTP protocol.
- Support configuration screen integration. Device screen can be integrated into various personalized scenes
- Support access to third-party IoT platforms such as Alibaba Cloud, Amazon, Google, etc.
- Innovative A/B Key security mechanism, multi-unit networking, database, multi-screen interaction, Cloud camera remote monitoring etc.
- No need to develop the remote control interface twice, all projects are developed at one time, what you see is what you get. The display screen can be directly monitored through the mobile phone/PC terminal instead of the HMI screen, and the control is flexible and convenient.
- Support MQTT protocol. It can be connected to database server/ERP/MES and other systems to easily realize data collection and reporting. Support millions of terminal concurrent networks.
- Support HTCloud Designer. Built-in Cloud engine, integrated Cloud service. Supports Cloud and mobile accessing control.
- Supports multiple third party protocols. Built-in a variety of industrial equipment drivers, support the current mainstream PLC, inverter, instruments.



### **Architecture Diagram**



### Advantage

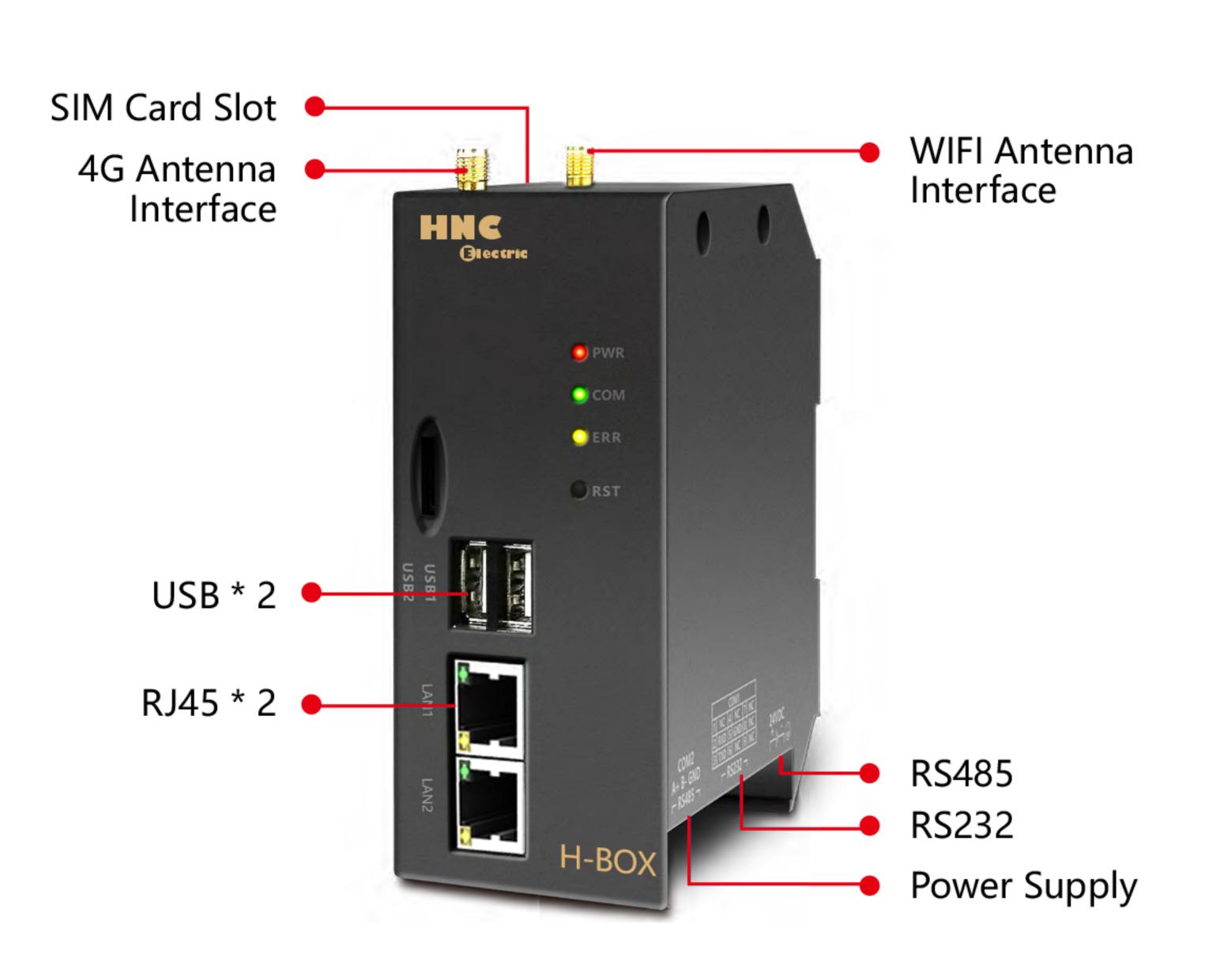
- Built-in Web API function, can control and obtain the device data through HTTP protocol.
- Support configuration screen integration. Device screen can be integrated into various personalized scenes
- Built-in MQTT server, can enable proxy function and easily implement MQTT networking.

- Remote Mobile APP monitoring and management. A/B Key security
- Support access to third-party IoT platforms such as Alibaba Cloud, Amazon, Google, etc
- Supports MQTT protocol.

  Easy connect to database as ERP/MES etc

- Supports remote devices centralized monitoring and management
- Cloud transparent transmission.
  Supports remote PLC
  programming, debugging etc
- No need for users to build MQTT server, easily achieve remote centralized control of equipment through Haiwell Cloud data center

### Interface Description



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#### 4G Networking

In the case of outdoor work such as mining, or limited networking conditions, 4G networking well be very helpful.

Fearless from the wind and the sun
Strong housing protection design, even in
harsh outdoor environments, no need to
worry about hardware damage caused by
exposed to the sun.



Inside or outside cabinet installation
No additional cabinet protection required,
can be installed inside or outside the
cabinet, saving costs.





H-BOX-M Series

| Model         | Storage   | I/O                   | LAN | СОМ | WIFI | Wireless<br>Network | Dimension(mm)<br>w×h×d |
|---------------|-----------|-----------------------|-----|-----|------|---------------------|------------------------|
| H-BOX-M       | 4G + 512M | 8 DI                  | 1   | 1   | Yes  |                     | 400565                 |
| H-BOX-M-E     | 4G + 512M | 8 DI                  | 1   | 1   | Yes  | Global 4G           | 40×95×65               |
| H-BOX-M pro   | 4G + 512M | 8 DI/DO, User-defined | 1   | 1   | Yes  |                     | 40×95×65               |
| H-BOX-M-E pro | 4G + 512M | 8 DI/DO, User-defined | 1   | 1   | Yes  | Global 4G           | 40 > 33 > 03           |

- Built-in 8 digital points. User can customize DI/DO. Design for flexible application is more and cost-effective.
- Built-in Web API function, can control and obtain the device data through HTTP protocol.
- Support configuration screen integration. Device screen can be integrated into various personalized scenes.
- Support access to third-party IoT platforms such as Alibaba Cloud, Amazon, Google, etc.
- Integrated HMI+RTU+IoT Gateway functions all in one. Supports accessing through mobile APP/PC etc.
- Management by HTCloud Designer. Built-in Cloud engine, integrated Cloud service
- Support base station positioning, IP positioning, device map viewing. Real-time device status can be viewed through mobile APP or large monitor screen.

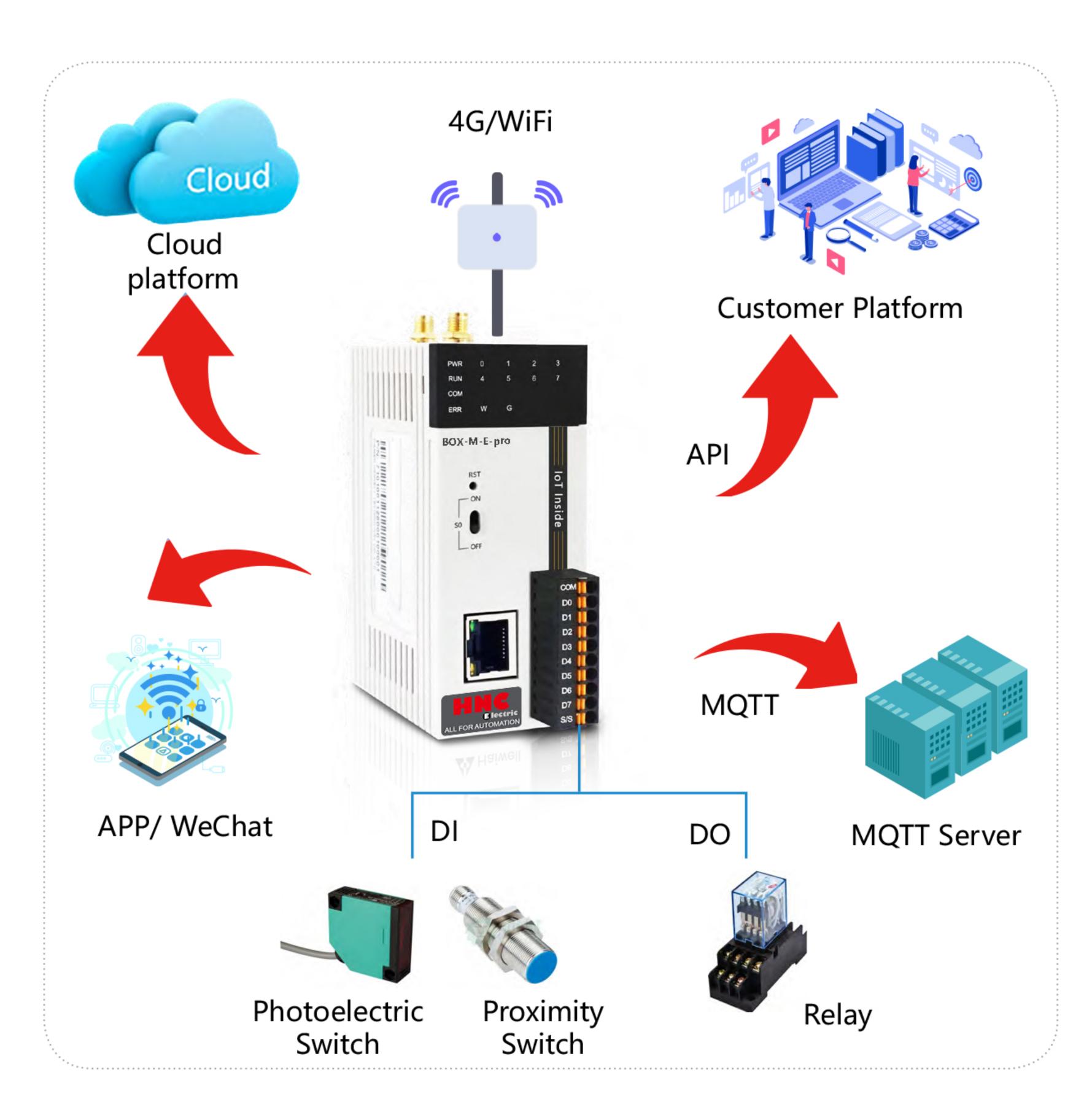
### Application

More than having serial port / Ethernet communication, and HMI+PLC mode, the H-BOX-M comes with configurable IO points, realize real-time data collection and transmission.

H-BOX-M can connect to IoT Cloud platform through WiFi/Ethernet/4G multiple ways to push data to the Cloud server, and realize remote configuration, diagnosis and management through the platform.

By IoTBus App, you can remotely monitor it, view historical data, and receive alarm information.

H-BOX-M supports data query by connecting to the customer's self-developed platform through the API interface. Support connect to MQTT server to realize data transmission and storage.



### **Features**



#### Built-in IO points, integrated RTU functions

Built-in 8 digital points. User can customize DI/DO. More flexible for applications.



#### Web API Interface

Third-party software and platforms can easily and securely obtain device data and control devices through the built-in Web API function using HTTP protocol, support real-time data push, support PHP, Java, C#, C++ languages. Support Internet and LAN network.



### Configuration Screen Integration

Innovatively opened the integration function of the device configuration screen to third parties. Device screen can be integrated into a variety of personalized scenarios such as third-party software, websites, APPs. Let third-party applications immediately have the remote control capabilities of the device.



#### Multiple security protection mechanisms

Higher safety level with A/B Key + local confirmation safety mechanism, ensure the safe and stable operation of equipments.



#### Connect to database

Real-time&history data can be stored to MySQL, SQL Server etc. Support data distribution, and cooperate to generate various real-time data reports.



#### Real-time alarm notification

Alarm information can be pushed to designated management personnel by APP, etc.



#### MQTT protocal & Built-in MQTT server

Support MQTT protocol. Can be connected to database server/ERP/MES etc. Actively report, supports millions of terminal concurrent networks. Built-in MQTT server.







Currently suppored IOT platforms. Keep updating...



#### Equipment manufacturer maintains identity

Exclusive maintenance identities and enterprise platform for equipment manufacturers, convenient for administrator management



#### Cloud transparent transmission

Support remote programming, uploading and downloading, firmware upgrade, diagnosis, monitoring and debugging of PLC etc.



#### Remote data interraction

Supports remote device data interaction through MQTT server, and invocation of the remote device data by HTCloud Designer.



#### Supports multiple protocols

Supports for multiple third party protocols. Builtin a variety of industrial equipment drivers





Using local mobile, iPads and computers as the control interface to realize local operations

### Specification

| Specification            |                                      | Н-ВОХ-М  | H-BOX-M-E  | H-BOX-M pro  | H-BOX-M-E pro                           |  |  |  |  |  |  |
|--------------------------|--------------------------------------|--|--|--|---|--|--|--|--|--|--|
|                          | Software                             |  | HTCloud  | Designer   |   |  |  |  |  |  |  |
|                          | Input power                          | 24VDC±20%  |  |  |   |  |  |  |  |  |  |
| Power                    | Power Consumption                    |  | < .  | 5W   |   |  |  |  |  |  |  |
|                          | Power Protection                     | Surge protection   |  |  |   |  |  |  |  |  |  |
|                          | Voltage Resistance                   | 500V AC  |  |  |   |  |  |  |  |  |  |
|                          | Environmental temperature & humidity |  | Working temperature: 0 $\sim$ + 55 $^{\circ}$ C , storage temperature: - 25 $\sim$ 70 + $^{\circ}$ C , humidity: 5 $\sim$ 95% RH, no condensation. |  |   |  |  |  |  |  |  |
|                          | Vibration resistance                 | 10∼57HZ a  | mplitude 0.075mm, 57HZ 150HZ acc   | eleration 1G, X, Y,                                | Z 10 times in triaxial direction        |  |  |  |  |  |  |
|                          | Impact resistance                    |  | 15G, 11 Ms, X, Y, Z, 6 time  | es in the triaxial d                               | irection                                |  |  |  |  |  |  |
| Enviroment<br>Parameters | Insulation impedance                 |  | 500V DC between AC terminal and GND terminals, 5M $\Omega$ or more (all input / output points to ground 500V DC)                                   |  |   |  |  |  |  |  |  |
|                          | Using environment                    | Anti-dust, moisture-proof, corrosion-proof, protection from electric shock and external force impact, etc. |  |  |   |  |  |  |  |  |  |
|                          | Protection Level                     | The complete machine is subjected to a salt spray test of 48 hours   |  |  |   |  |  |  |  |  |  |
|                          | Cooling Type                         | Natural air Cooling  |  |  |   |  |  |  |  |  |  |
|                          | Storage                              | Flash 4G,RAM 512MB   |  |  |   |  |  |  |  |  |  |
|                          | COM port                             | Support 1 isolated communication (RS232/RS485)   |  |  |   |  |  |  |  |  |  |
|                          | Ethernet Port                        | Ethernet port: 1 * 10/ 100 Base-Tx   |  |  |   |  |  |  |  |  |  |
|                          | Hardware system reset                |  | Sup  | port   |   |  |  |  |  |  |  |
|                          | Switch S0                            |  | Single-pole o  | double-throw                                       |   |  |  |  |  |  |  |
| Hardware                 | WIFI                                 |  | Sup  | port   |   |  |  |  |  |  |  |
| Parameters               | 4G                                   | /  | Global 4G  | /  | Global 4G                               |  |  |  |  |  |  |
|                          | SIM                                  | /  | 1 self-elastic Micro SIM card interface  | /  | 1 self-elastic Micro SIM card interface |  |  |  |  |  |  |
|                          | IO port                              | 8 way optoeled   | tronic isolation digital point input   | 8 way optoelectronic isolation digital point input |   |  |  |  |  |  |  |
|                          | Dimension                            |  | 40mm*95mm*6  | 5mm (W*H*D)  |   |  |  |  |  |  |  |
|                          | Shell material                       | Engineering pla  | stics ABC PC (flame retardant require  | ements: 94V0 grad                                  | de, in line with ROHS requirements.     |  |  |  |  |  |  |
|                          | RoHS                                 | Yes  |  |  |   |  |  |  |  |  |  |

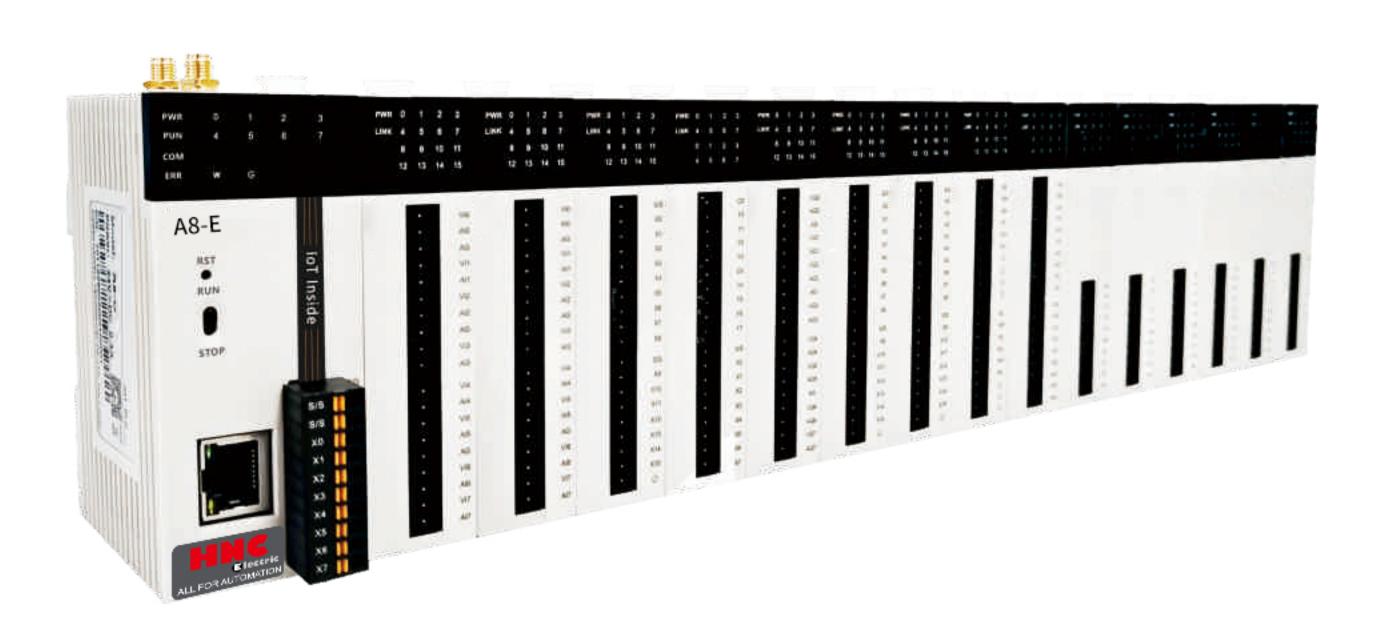


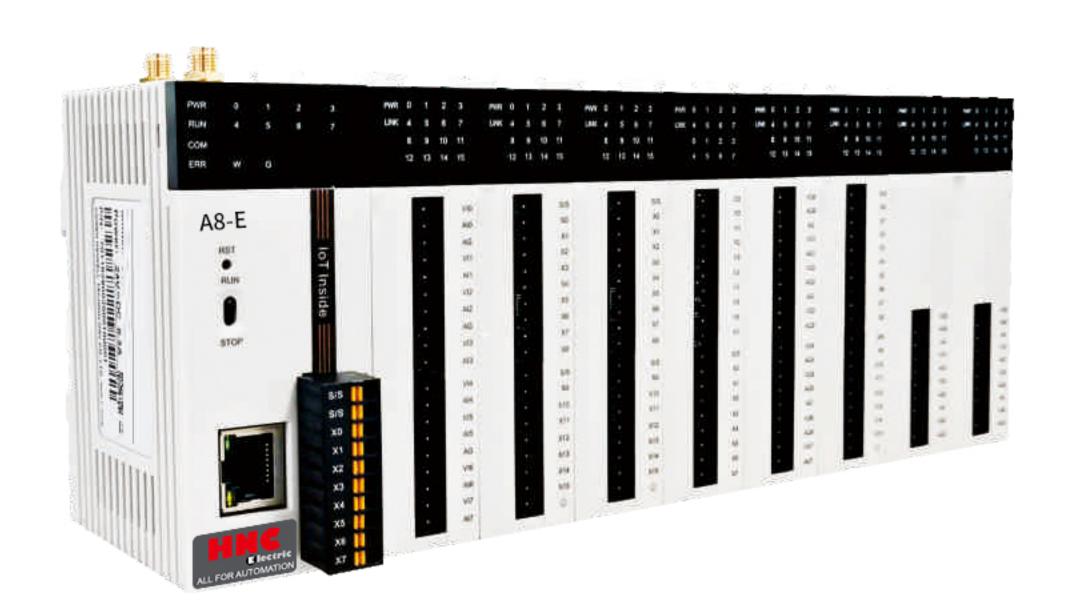


HCC-A8 Series

| Model    | Storage<br>(Flash+RAM) | Max Exp | I/O  | LAN | сом | WIFI | Wireless<br>Network | Dimension<br>W×H×D(mm) |
|----------|------------------------|---------|------|-----|-----|------|---------------------|------------------------|
| HCC-A8   | 4G+512M                | 15      | 8 DI | 1   | 1   | Yes  |                     | 10×05×65               |
| HCC-A8-E | 4G+512M                | 15      | 8 DI | 1   | 1   | Yes  | Global 4G           | 40×95×65               |

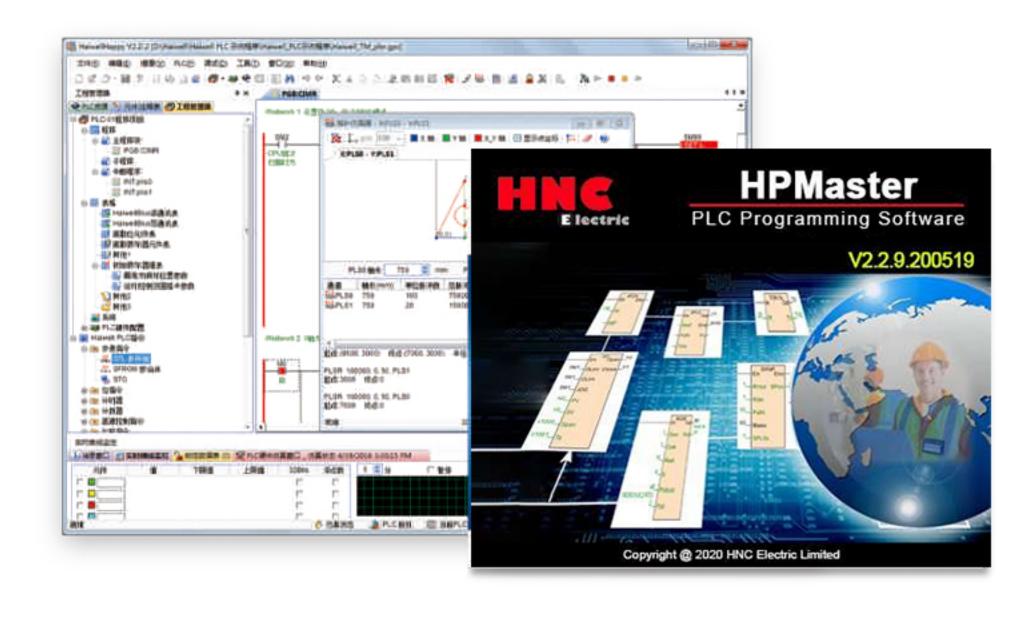
<sup>\*</sup> series supports Single machine can expand up to 15 modules, A8 does not support expand AE-1C.



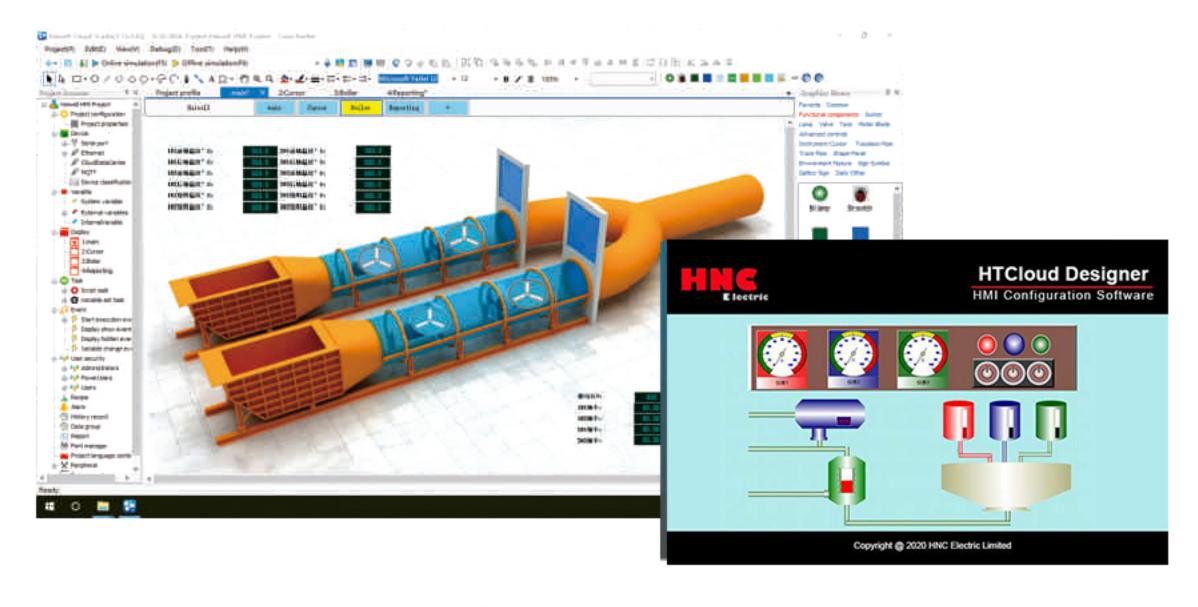


### **Festures**

- Multi in 1=PLC+HMI+RTU+IoT Gateway ,Support Cloud and MQTT, Small size, high appearance level, Low cost
- O Built-in 8 digital points input, Single machine can expand up to 15 modules, maximum expansion I/O up to 248 points
- O Supports all functions of PLC and HMI, Use local mobile or iPad as monitor screen, achieve local operations.
- Strong password protection function, Self-diagnostic function, power failure protection function, calendar (RTC), floating point operations, etc.
- O Support access to third-party IoT platforms such as Alibaba Cloud, Amazon, Google, etc.
- O Supports for edge calculations. Edge computing through scripting engines built into the terminal, function operations, and interaction with device data
- Using HPMaster PLC programming software and HTCloud Designer for programming and management



**HPMaster** 



HTCloud Designer

### Advantage



#### PLC executable file Generation

PLC program can be generated to executable file which is released and executed independently. So you do not need to send the PLC program to the user, it can be very easy, very safe to put the PLC excutable file to the user to download, but do not worry the user would can see the program content.



Support MQTT protocol
Supports MQTT protocol, can be connected to database server/ERP/MES etc. Actively report, support millions of terminal concurrent network, can easily surpass and replace DTU equipment.



#### realize local operations

Local mobile, iPads and computers can be used as the control interface to realize local operations.



#### Web API Interface

Third-party software and platforms can easily and securely obtain device data and control devices through thebuilt-in Web API function using HTTP protocol, support real-time data push, support PHP, Java, C#, C++ languages. Support Internet and LAN network.



### Strong password protection function

Three levels of password protection function (program files password, each block password, application to upload.



#### **Configuration Screen Integration**

Innovatively opened the integration function of the device configuration screen to third parties. Device screen can be integrated into a variety of personalized scenarios such as third-party software, websites, APPs . Let thirdparty applications immediately have the remote control capabilities of the device.



#### Radical innovation

Built-in simulator programming software, supports interpolation simulation, communication simulation, easy study, easy use. Greatly reduce the field debugging time, reduce debugging.



#### Remote data interraction

Supports remote device data interaction through MQTT server, and invocation of the remote device data by HTCloud Designer.



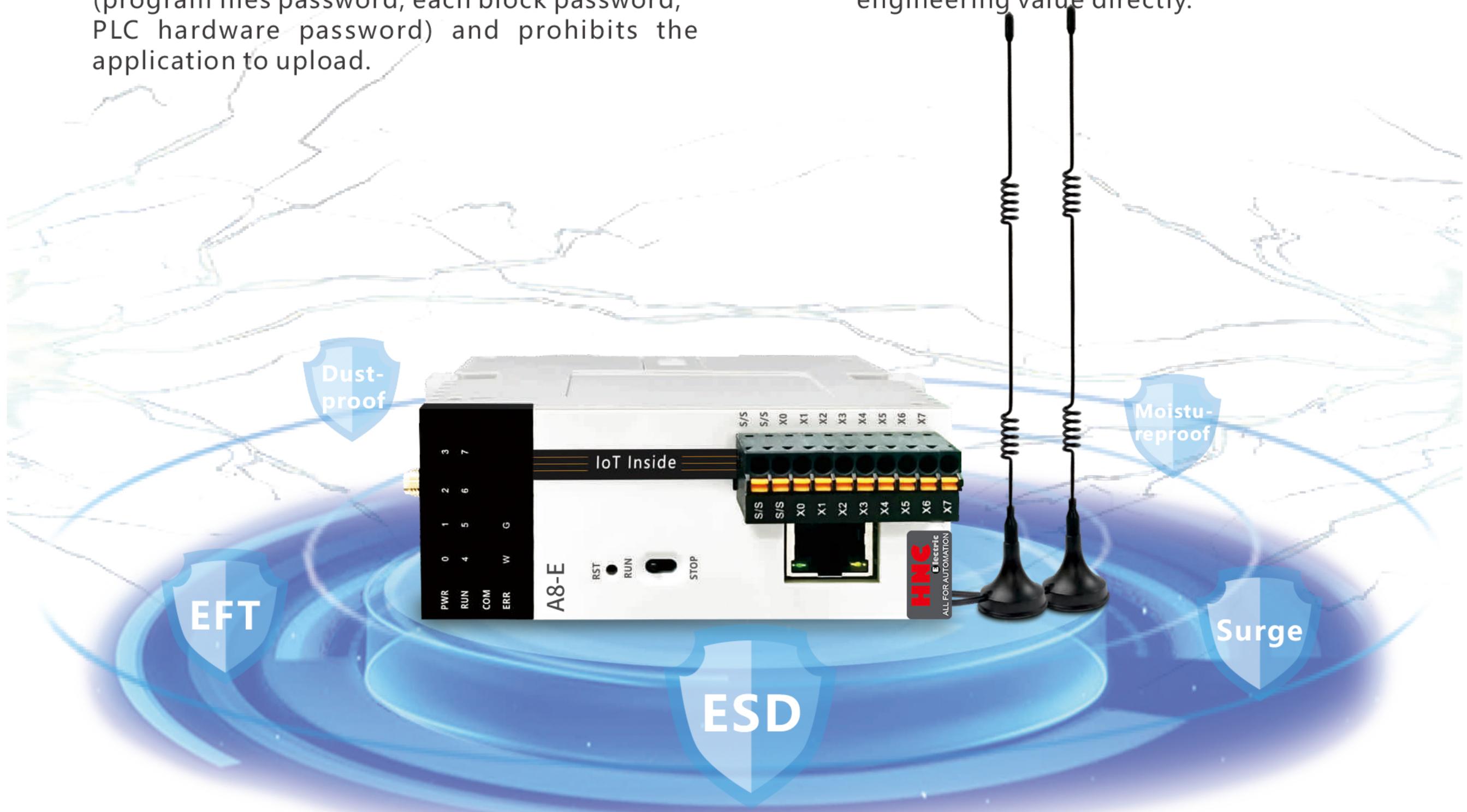
#### **Private Deployment**

Support deploy a user-specific Cloud platform on user's own server, without requires of thirdparty IoT platform providers. Unlimited number of access devices. User can have company's own domain name and logo on the cloud platform, and have an own APP etc.



### Powerful analog processing function

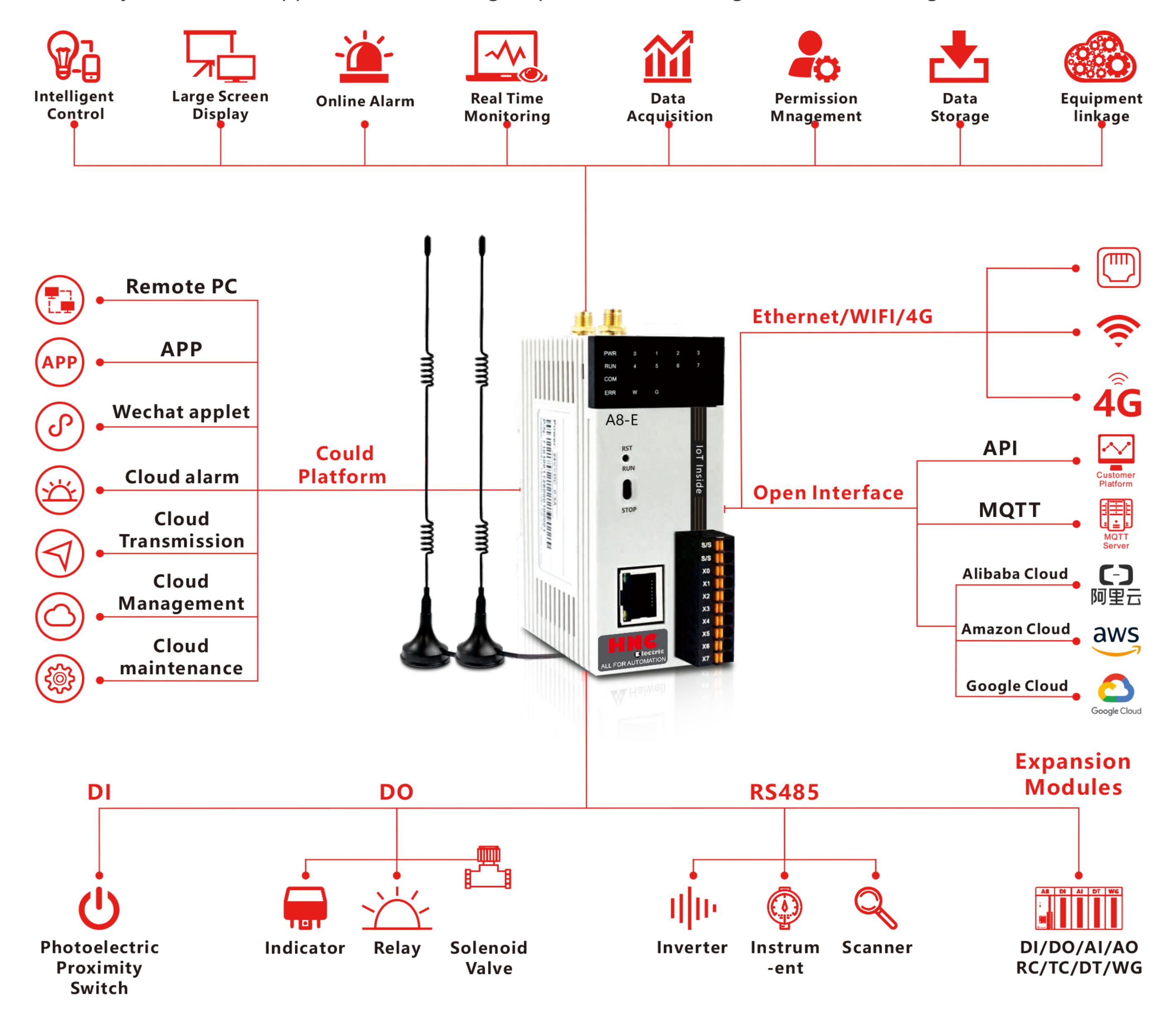
No need of programming, we can read AI/AQ engineering value directly.



### PLC+HMI without screen all-in-one machine

HCC-A8 series IoT PLC is a small size, compact Internet of things PLC, as a high cost performance product launched by HNC. A8 integrated PLC, HMI, IoT gateway, multi-functional RTU, data transmission DTU functions as one, without any external IoT module. PLC, BOX integration design, small volume, increasing space utilization, greatly simplifying the site wiring construction and reducing the cost of operation and maintenance. One device easily realizes the remote operation and maintenance of PLC, data acquisition, edge calculation and analysis, so that the engineer saves time, effort and worry.

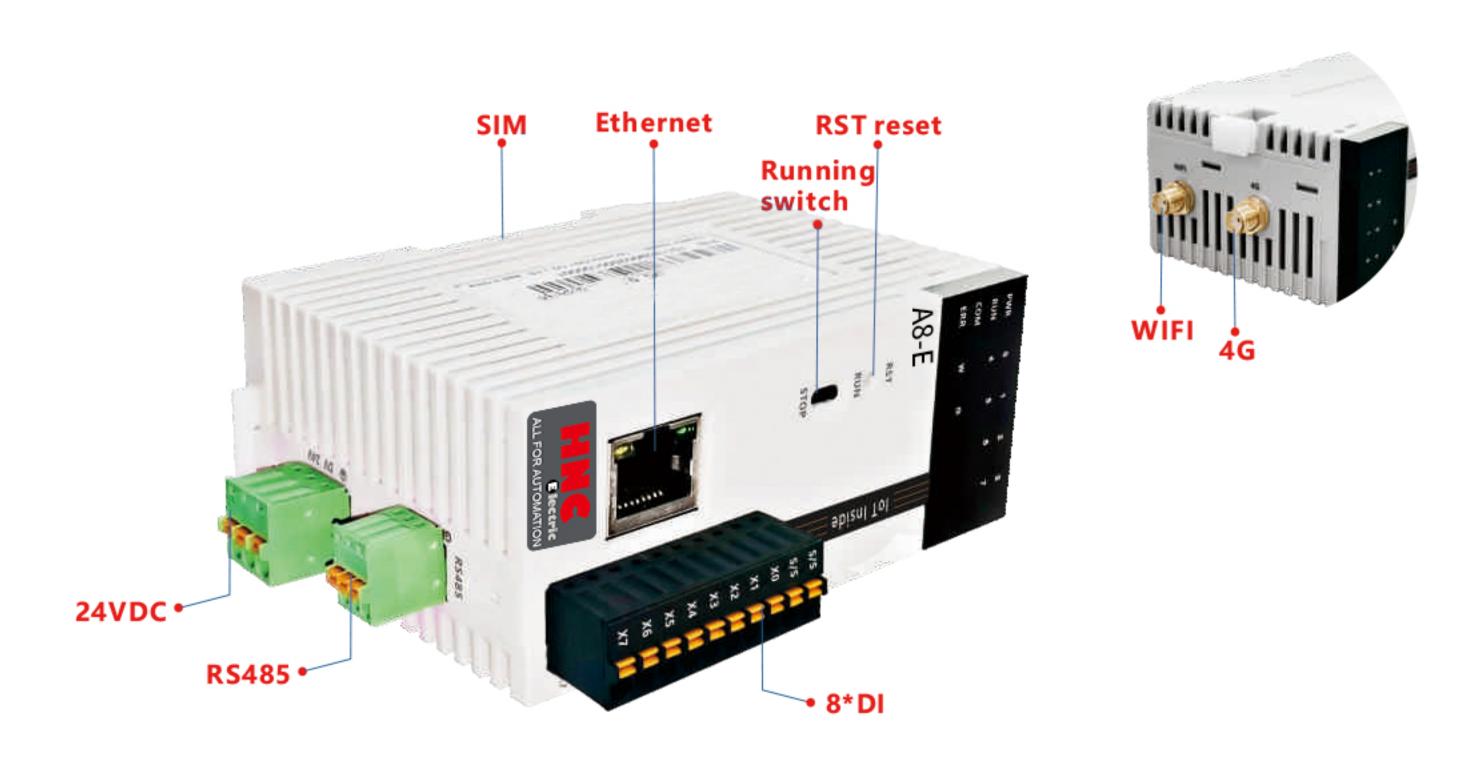
HCC-A8 supports all functions of PLC and HMI. At the same time, it can also expand 15 A series PLC modules, through HPMaster PLC programming software and HTCloud Designer for programming management. It can connect to the Internet of Things(IoT) Cloud platform through WiFi/ 4G/ Ethernet, and connect to Alibaba Cloud, Amazon cloud and other mainstream IoT platforms through MQTT protocol, so that can fully tap the IoT capability of equipment, and help enterprises realize the leap from traditional factory Information to cloud remote information. The more efficient monitoring and management of devices, and the scheduling of the production resource, greatly improve the operational efficiency of industrial applications. It is a big step forward to intelligent manufacturing.

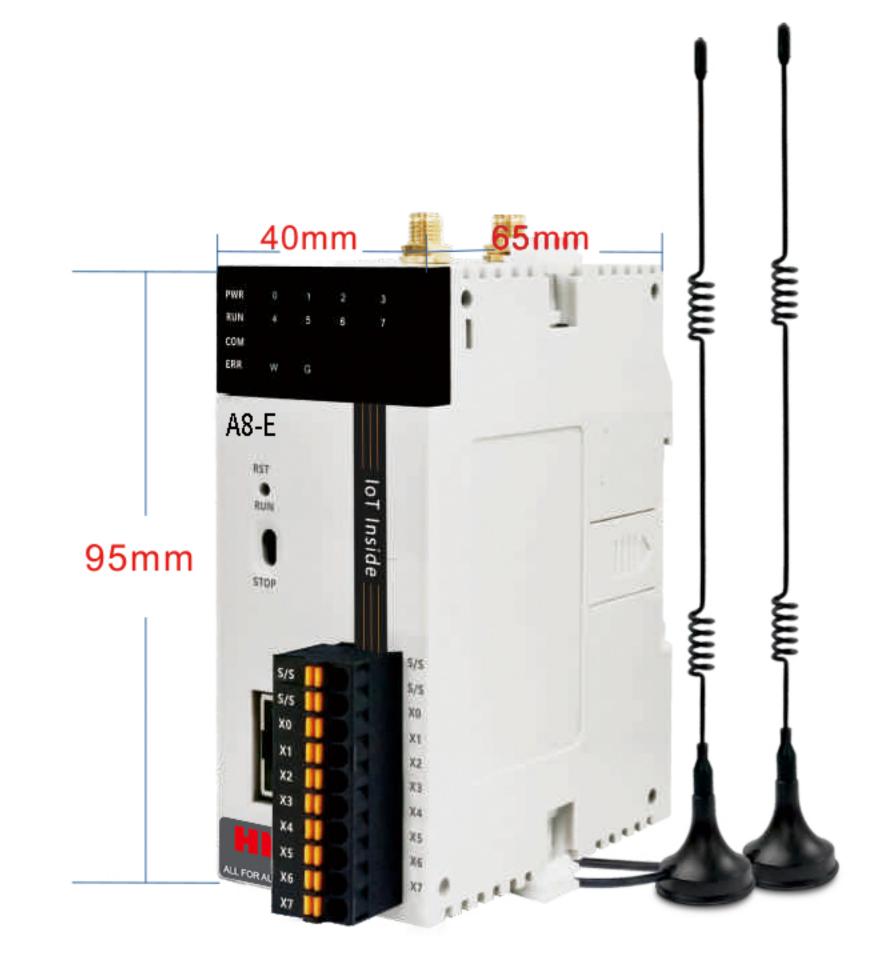


### Specification

|            | Specification                           | HCC-A8   | HCC-A8-E  |  |  |  |  |  |
|------------|---|--|---|--|--|--|--|--|
| Software   | Programming software                    | HPMaster, HTCould Designer   |   |  |  |  |  |  |
|            | Program control model                   | Cycle scan model   |   |  |  |  |  |  |
|            | Input/output (I/O) control model        | Refresh once each cycle scan, support immediately refresh instru   | ycle scan, support immediately refresh instruction (MPU and expansion module) |  |  |  |  |  |
|            | Execution speed of instruction          | 0.05μs/basic instruction   |   |  |  |  |  |  |
| PLC        | Program language                        | LD (ladder) + FBD (function block) + IL (instruction list)   |   |  |  |  |  |  |
|            | Program apacity                         | 48K  |   |  |  |  |  |  |
|            | Storage way                             | Flash ROM permanent storage, dispense with   | backup battery  |  |  |  |  |  |
|            | Maximum expansion                       | 15   |   |  |  |  |  |  |
|            | Storage                                 | Flash 4GB, RAM 512MB   |   |  |  |  |  |  |
|            | COM port                                | Support 1 isolated communication (   | RS485)  |  |  |  |  |  |
|            | Ethernet Port                           | Ethernet port: 1 * 10/ 100 Base-   | Tx  |  |  |  |  |  |
|            | Hardware system reset                   | Support  |   |  |  |  |  |  |
| I/O port   | Switch S0                               | Single-pole double-throw   |   |  |  |  |  |  |
|            | WIFI                                    | Support  |   |  |  |  |  |  |
|            | 4G                                      | No   | Global 4G   |  |  |  |  |  |
|            | SIM                                     | No   | 1 self-elastic Micro SIM card interface                                       |  |  |  |  |  |
|            | IO port                                 | 8 way optoelectronic isolation digital point input   |   |  |  |  |  |  |
|            | Input power                             | 24VDC±20%  |   |  |  |  |  |  |
| D          | Power Consumption                       | < 8W   |   |  |  |  |  |  |
| Power      | Power Protection                        | Surge protection   |   |  |  |  |  |  |
|            | Voltage Resistance                      | 500V AC  |   |  |  |  |  |  |
|            | Environmental<br>Temperature & humidity | Working temperature: -10 ~ +60 ℃ , storage temperature: -10 ~ 90% RH, no condens                                 |   |  |  |  |  |  |
|            | Vibration resistance                    | 10~57HZ amplitude 0.075mm, 57HZ 150HZ acceleration 1G, X   | , Y, Z 10 times in triaxial direction   |  |  |  |  |  |
| Enviroment | Impact resistance                       | 15G, 11 Ms, X, Y, Z, 6 times in the triaxia  | l direction   |  |  |  |  |  |
|            | Insulation impedance                    | 500V DC between AC terminal and GND terminals, 5M $\Omega$ or more (all input / output points to ground 500V DC) |   |  |  |  |  |  |
|            | Protection Level                        | The complete machine is subjected to a salt spr  | ay test of 48 hours   |  |  |  |  |  |
|            | Cooling Type                            | Natural air Cooling  |   |  |  |  |  |  |
| <b>C.</b>  | Dimension                               | 40mm*95mm*65mm (W*H*D)   |   |  |  |  |  |  |
| Structure  | Shell material                          | Engineering plastics ABC PC (flame retardant requirements:94V0 g   | rade, in line with ROHS requirements  |  |  |  |  |  |

### **Dimensional interface description**















Thanks for choosing HNC product Any technique support, please feel to contact our support team

URL: www.hncelectric.com Email: support@hncelectric.com