

The background features several water droplets of varying sizes and colors (blue, green, and clear) floating in the upper left quadrant. On the right side, there are large, overlapping, curved shapes in blue, red, and orange, resembling torn paper or abstract geometric forms. The overall design is clean and modern.

The introduction of the integrated processing unit

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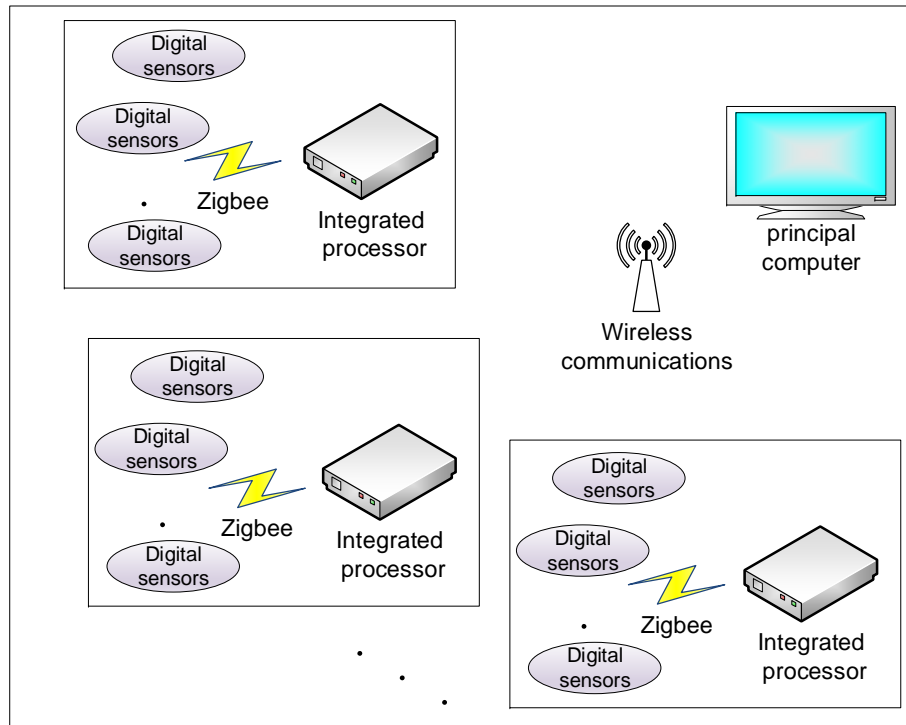


Over view

Composition

Basic functions

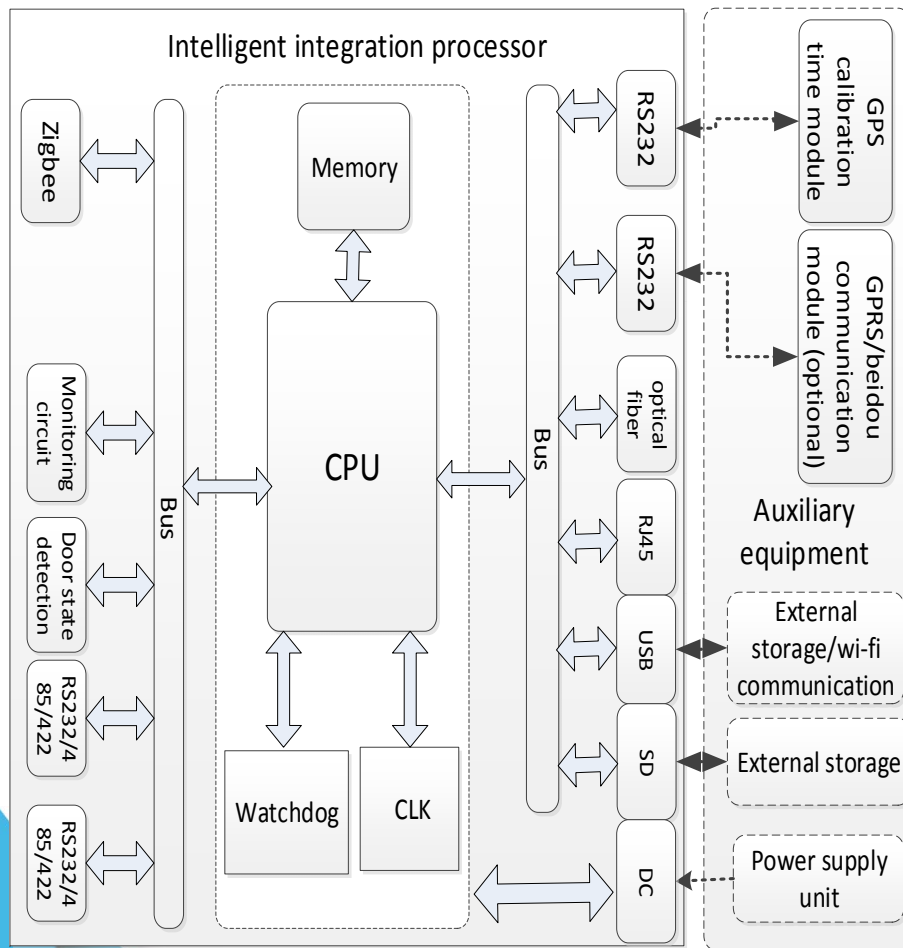
Over view



Integrated processing unit as an ISOS core integration components, mainly to complete the data processing, storage, transmission, control.

- ◆ Control and manage sensor,
- ◆ the statistics calculation,
- ◆ Data quality control, and
- ◆ Communicate with PC

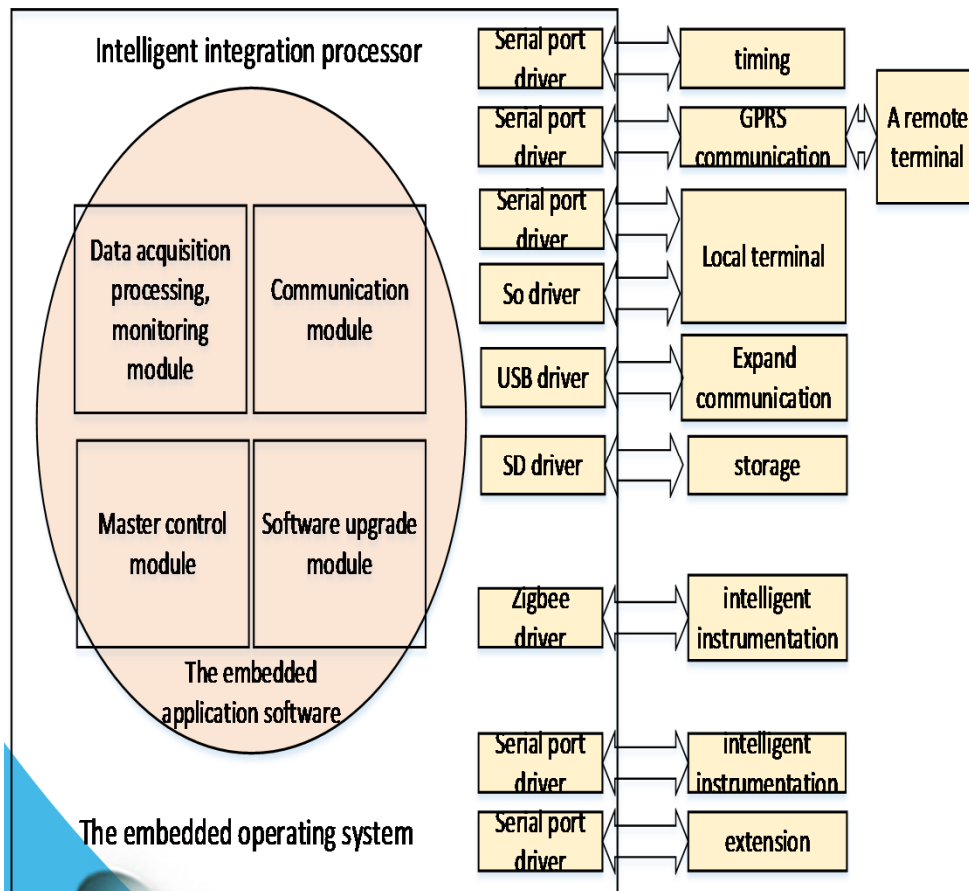
Composition



Integrated processor hardware contains a high performance processor, high precision clock circuit, memory, I/O interface, monitoring circuit, power supply interface and indicator lights. Interface:

- ◆ ZigBee,
- ◆ 485/422 of RS232 / serial port extension,two RS232 serial port, as GPRS/beidou wireless communication module and
- ◆ A navigation satellite (GPS and beidou) module interface
- ◆ A RJ45 front-end ports,
- ◆ A USB interface for communication,
- ◆ A DC power supply interface and

Composition



Embedded software includes four functional modules:

a master control module, a data acquisition processing and monitoring module, a communication module and a software upgrade

- ◆ Master control module: mainly completes the logical control of the system,.
- ◆ Data acquisition processing and monitoring module: mainly collect the meteorological information, complete data calculation, comprehensive quality control, data storage and status monitoring functions.
- ◆ Communication module: mainly interacts with the intelligent measuring instrument and peripheral equipment, and provides data to the service center station.
- ◆ Upgrade module: mainly implements the function of upgrading embedded software locally or remotely module.

Basic functions

Ad hoc networks

- A plurality of measuring instruments that meet the requirements in the network can be organized according to the rules, and multi factor observation can be realized.

Self processing

- Be able collect, calculate, transmit, store the observation data and do quality control automatically.

Self-adapting

- Be able to adapt to various communication modes.

Self diagnosis

- Be able to do automatic detection about data quality and communication status information of intelligent sensors and integrated processor

Self recovery

- Be able to revert to the standard state automatically according to device status information and self diagnostic results.

Online upgrade

- The program can be upgraded online through a local or remote network.

Plug and play

- According to the standardized data format and interface, plug and play can be realized. And the two-dimensional code identification information can be generated to facilitate the management of device access network.



thank you for your attention!

