

- ✓ **Dedicated IoT Gateway for Industrial communication and control application**
- ✓ **9~24VDC Working Power Input**
- ✓ **2-ch 100Mbps Ethernet Interface**
- ✓ **2-ch RS-485 serial equipment data transmission communication interface**
- ✓ **4G module dedicated Mini-PCle expansion installation function**
- ✓ **With RTC Chip and battery holder**
- ✓ **Easy Din-Rail installation**
- ✓ **With Simple Human Control Interface**
- ✓ **Embedded Linux Operating System**
- ✓ **Optional model: 5G, Analog Input, CAN BUS**



Product Features

☒ **ARM® Cortex®-A7 RISC low power consumption architecture, high stability**

EBox-AIO-009 adopts 1.2-GHz ARM Cortex®-A7 64-Bit 4-core RISC Processor, with 256MB DDR3 SDRAM · 4GB eMMC as system core · With built-in 4.14.x embedded Linux operating system · it is suitable for low power consumption and high communication performance requirements for industrial automation applications °

☒ **Multifunctional communication**

EBox-AIO-009 has 2 sets of Ethernet interface and 802.11 Wi-Fi could be expandable via USB interface °

EBox-AIO-009 has 2 sets of 115.2Kbps high-speed RS-485 serial port interface with ability to connect 128 multi-drop nodes, allowing EBox-AIO-009 to easily connect all kinds of monitoring equipment and meters °

☒ **Suitable for database and webpage monitoring applications**

EBox-AIO-009 could built MySQL Database for users to set up · record and exchange status message via database framework °

It can also work with common PHP/Java Script to easily accomplish remote monitoring system development °

☒ **Suitable for various High-level programming language**

With built-in Linux 4.14.x embedded Linux operating system · EBox-AIO-009 supports the most recent popular High-level programming language, such as Python · Java · Scratch · Node J...etc. · allowing developers to set up or porting applications in EBox-AIO-009 rapidly °

It also supports traditional C/C++ programs for those applications need to process lower level and higher speed I/O action or response °

☒ **Expandable 4G mobile communication function**

EBox-AIO-009 has 1 set of mini-PCle expansion wireless network interface to make 4G or 5G mobile communication seamless ° NB-IoT , the commonly used in the Internet of Things wireless communication, could be expandable °

☒ **Simple and easy human machine interface**

EBox-AIO-009 includes a DIP Switch, Tack Button etc. input determining function, and simple sound and light effects such as LED and Beeper that can be controlled by process, allowing developers to set system operation mode and display system operation in the simplest way °

☒ **Other expandable communication function**

EBox-AIO-009 could expand Analog Input or CAN BUS Signals, Digital I/O, Relay etc. via dedicated expansion module (Model Name : EBox-AIO-009-EXT) to make system more flexible °



Product specifications

Hardware

Core

- ▶ CPU : Allwinner H3 1.2GHz (Cortex®-A7)
- ▶ Memory : 256MB DDR3 SDRAM · 4GMB eMMC Flash

Network Interface

- ▶ Quantity : 2 Sets
- ▶ Type : 10/100BaseT Ethernet
- ▶ Connector : RJ45

RS-485 Serial interface

- ▶ Quantity : 2
- ▶ RS-485 Signal : Data+, Data-, GND
- ▶ Multi-Drop Nodes : 128 (1/4 Load)
- ▶ Built-in Terminal Resistor : 120/600Ω · By DIP Switch
- ▶ Pull High/Low Resistor : 1K/10KΩ · By DIP Switch
- ▶ Protection : 15KV ESD static, 400W Surge protection
- ▶ Connector : 5.00mm 3-pin pluggable Terminal block x 2

Console interface

- ▶ Quantity : 1
- ▶ Signal : RS-232 (TxD, RxD, GND)
- ▶ Connector : 3-pin 2.54 mm contact

Wireless network expansion interface

- ▶ Quantity : 1 (need to open the case)
- ▶ Connector : mini-PCIe socket x1, Nano SIM Card x1
- ▶ Function : 4G · Wi-Fi Network communication module

USB

- ▶ Quantity : 1
- ▶ Type : USB 2.0
- ▶ Connector : USB Host Type A x 1

SD expansion interface

- ▶ Quantity : 1 (need to open the case)
- ▶ Connector : Micro SD slot

Dedicated Expansion Slot

- ▶ Function : I2C, USB, SPI, UART, GPIO
- ▶ Connector : 2x10 2.54mm simple box header

Purchasing information

- ▶ **EBox-AIO-009** Dual Ethernet, Dual RS-485 iloT Gateway

Optional Accessories

- ▶ **CD12V** 100~240V AC to 12VDC/1A Power Adapter (US Type)
- ▶ **DK-P02** EBox-AIO-009 Dedicated 3.5 rail conversion fixture

Digital Control (GPIO)

- ▶ Points : 10
- ▶ Signal Type : 3.3V CMOS
- ▶ DIP Switch x 2 GPIO
- ▶ Tack Button x 1 GPIO
- ▶ Beeper x 1 GPIO
- ▶ LED x 2 GPIO
- ▶ Expansion Slot x 4 GPIO

Human Interface

- ▶ Audio : 3.5mm aux input
- ▶ LED indicator : power, network, serial port, user defined
- ▶ Buzzer : 1

Mechanism

- ▶ Size : 102.6 x 130.8 x 40 mm (terminal block excl.)
- ▶ Material : galvanized steel sheet

Power

- ▶ Working Voltage : DC 9-24VDC
- ▶ Power Connector : 5.00mm pluggable terminal block
- ▶ Power Consumption : < 10W (not include USB device)

Others

- ▶ Real Time Clock (RTC) : 1
- ▶ Real Time Clock Battery Holder : CR1220
- ▶ Applicable temperature : -20~70℃
- ▶ Applicable humidity : 20%~80% RHG
- ▶ Certification : CE, FCC

Software

Core

- ▶ OS: Linux kernel 4.14.x

Pre-Installed Services

- ▶ SSH terminal server, Web server, MySQL, PHP, python, gcc, apt-get,