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Dragino V2 - IoT Sensor Node

Dragino V2 (MS14-P): Open-hardware Linux IoT node with WiFi, Ethernet, and MCU integration.

SKU	UPDATED	PRICE
102990002	2024-08-09 02:09:41	$45.00(Excl. VAT)



Overview



The Dragino MS14-P is a low-power, open-hardware Linux motherboard for MCU projects, running OpenWrt with full Ethernet and 802.11 b/g/n WiFi capabilities. It features a 400MHz MIPS processor, 64MB RAM, 16MB Flash, and versatile I/O including GPIO, SPI, I2C, UART, and USB host, with remote upgrade support and Arduino Yun compatibility.

Key Features

Dragino MS14-P is the 2nd generation **Dragino mother board**. It lets you embed Linux into your MCU projects. It is a low cost, open hardware Linux motherboard for micro-controllers. It runs open source linux system, has USB host port and has full Ethernet and 802.11 b/g/n WiFi capabilities.

The goal of the Dragino MS14-P is to solve the connectivity problem and greatly enhance micro-controller products such as the Arduino.

Dragino MS14-P support generic OpenWrt linux version or modified OpenWrt version such as Arduino Yun.

Applications for MS14 include remote control of robots, data logging, web applications for data presentation, mesh networking over WiFi and many more.

#1: Power input, DC 5V or 9 ~ 15V

#2: Two Ethernet ports WAN and LAN

#3: Programmable PUSH button

#4: GPIOs, SPI, I2C, SLIC, UART, LED, COLD_RESET, 3.3v/5v/raw_vcc

#5: Sensors I/O, Not available on ms14-p

#6: USB host

#7: JTAG and GPIOs

#8: Processor, MIPS 24K, 400Mhz

#9: LEDs(WiFi, WAN, LAN, SYS, Heart Beat, PWR)

#10: Main antenna, chip antenna or external antenna

#11: Diversity antenna

Features

- OpenWrt Inside. OpenWrt is a reliable Linux distribution for embedded system. It is open source, under well developed and maintained. OpenWrt used package system, lots of powerful utility, software are maintained as packages form. Users can easily install, remove these packages to make a deep customized system.
- Open Hardware Design. Developers have the possibility to improve or do innovation on the hardware and release a new /unique product base on requirement.
- Low Power Consumption. Around 1 watt power consumption in working mode.
- AP, Client or Mesh mode WiFi. Can be configured in different WiFi mode for various applications. AP mode: as what a normal WiFi routers does, so other WiFi client can connect to MS14 and share its internet connection. Client mode: as what a normal PC does to connect to your existent WiFi router for internet connection. Ad-Hoc for mesh network.
- Stable, Flexible WiFi Design. Can be configured in different WiFi mode for various applications. AP mode: as what a normal WiFi routers does, so other WiFi client can connect to MS14 and share its internet connection. Client mode: as what a normal PC does to connect to your existent WiFi router for internet connection. Ad-Hoc for mesh network.

- Modular Design. The most complicate and difficulty parts are built as mother board. Developers focus on the MCU daughter board design only. This helps to reduce the development time, cost, risk, difficulty to release a new product to test/seize the market.
- Production Enclosure. MS14 has a Professional/Industrial enclosure which can be used directly for the market.
- Managed by Web GUI, SSH or Serial. Built-in Web server provides convenient to use/configure/upgrade/monitor or have full control by SSH/Serial.
- Various firmware upgrade methods. Firmware can be upgraded via serial port, SSH access, GUI interface for easy maintaining.
- Safe Mode. Robust software/hardware interface to reduce after-sale support cost.
- Remote upgrade AVR daughter aboard. Daughter board can be upgraded remotely to reduce the maintaining cost and provide central management/ deployment.
- Compatible with Arduino Yun software. Reuse all the source from Arduino Yun to speed up development.

Specifications

- Hardware System
    1. FLASH: 16MB
    2. DDR RAM: 64MB
    3. CPU: AR9331
- Interface
    1. Power input: 9 ~ 12v DC or 5v DC
    2. 10M/100M RJ45 interface
- WiFi Spec
    1. Protocol: 802.11 b/g/n
    2. Frequency: 2,412 - 2,472 GHz
    3. Power: 100mW

Includes

- Dragino v2 mother board
- **NEMA 1-15** type power supply adapter

Documents

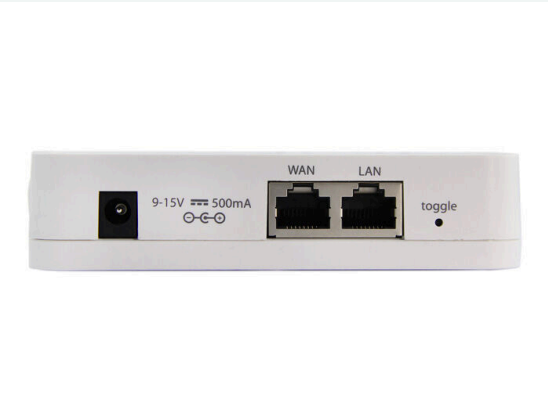
- **Wiki for General Technical Guide**
- **Getting Start with Arduino Yun on MS14**
- **MS14_Schematic_v2.2.pdf**
- **Development Instruction.pdf**
- **1:1 Ratio Component Footprint.pdf**
- **Source Code**

- Firmware

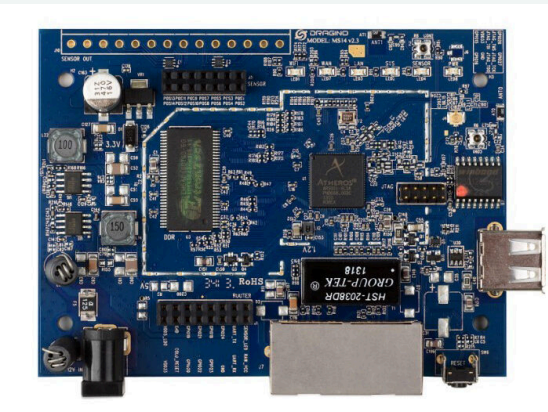
Product Gallery











Resource Links

- https://www.seeedstudio.com/Dragino-V2-IoT-Sensor-Node-p-1630.html

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