Linux-ready Arm9 Industrial IoT Gateway

Matrix-513

Features

- ATMEL 400MHz Arm9 AT91SAM9G45 CPU
- 128MB DDR2 SDRAM and 256MB NAND Flash
- 2 x 10/100Mbps Ethernet ports
- 2 x high-speed USB hosts, up to 480Mbps
- 1 x full size miniPCIe socket inside (USB signal)
- 1 x half size miniPCIe socket inside (USB signal)
- 4 x RS-232 / 422 / 485 serial ports

■ H/W Specifications

CPU / Memory
- CPU: ATMEL AT91SAM9G45 400MHz w/ MMU
- Memory: 128MB DDR2 SDRAM, 256MB NAND Flash
- DataFlash®: 2MB, for system backup

Network Interface
- Type: 2 x 10/100BaseT, RJ45 connector
- Protection: 1.5KV magnetic isolation

TTY (Serial) Ports
- Type: RS-232 / 422 / 485, software select
- Connector: DB9 male
- Port 1, 3, 4: TX, RX, RTS, CTS, GND
- Port 2: TX, RX, RTS, CTS, DCD, DTR, DSR, GND

USB Ports
- Speed: Supports 480Mbps high-speed mode
- Host Ports: 2
- Client Port: 1

Digital I/Os (GPIO)
- Inputs: 2 x 2500Vrms opto-isolation
- Output: 1 x relay output (30VDC@1A), supports form A or B (by jumper)

SD Socket (Secure Digital Card)
- Type: microSD
- No. of Sockets: 1

General
- Watchdog Timer: Yes, for kernel use
- Real-Time Clock (RTC): YES
- Buzzer: YES
- Power Input: +9V~+48VDC
- Typical Consumption: 12VDC@500mA
- Dimensions (W x H x D): 175 x 103 x 43mm (6.9 x 4.05 x 1.69in)
- Operating Temperature: 0~70°C
- Regulations: CE Class A, FCC Class A

■ S/W Specifications

General
- OS: Linux, kernel 2.6.38
- Boot Loader: U-Boot
- File Systems: UBI, JFFS2, ETX2 / ETX3, VFAT / FAT, NFS, NTFS

Toolchain for Linux
- GCC: C / C++ PC cross compiler
- GLIBC: POSIX Library

Package Management & System Administration
- Supports ipkg to manage the package installation, upgrade and removal
- Supports webmin (use 'ipkg install webmin' to install) for web-based system administration

■ Platform Features

- Web server (lighttpd) with PHP 5, Python 2.6
- MySQL 5, server and client
- SQLite 3
- SNMP V1 / V2 / V3
- Java

■ USB miniPCIe Supports

- Interface: Supports USB signals only
- Full-size Socket: 1, suitable for 2G / 3G card
- Half-size Socket: 1, suitable for WiFi card
- Antenna Mounting Holes: 3, suitable for mounting SMA connectors

■ Ordering Information

Matrix-513
- Linux-ready Arm9 Industrial IoT Gateway
  (Note: miniPCIe card, antenna and pigtail antenna cable are **NOT** included)

CB-F10M9-20 (91-0P9M9-001)
- Console Cable (10Pin Header to DB9 Male, 20cm)

DK-35A (36-DK35A-000)
- DIN RAIL Mounting Kit

Pigtail-WiFi-1001-20 (91-CST16-001)
- IPEX to RP-SMA Female Coaxial Cable, 20cm

Pigtail-3G-1001-20 (91-CST17-001)
- IPEX to SMA Female Coaxial Cable, 20cm

Ant-WiFi-1001 (91-CRF38-001)
- 5dBi External WiFi Antenna

Ant-3G-1001 (91-CRF37-001)
- 5dBi External 2G / 3G Antenna

M-9001 (ZA-CAR00-002)
- 802.11b/g/n USB Half-size miniPCIe Card

M-9011 (ZA-CAR00-001)
- Full-size miniPCIe 2G / 3G Card

PWR-12V-1A (31-62100-000)
- 110~240VAC to 12VDC 1A Power Adapter