Linux-ready Cortex-A5 Industrial IoT Gateway
Matrix-700

Features

- ATMEL ATSAMA5D35 536MHz Cortex-A5 CPU
- Linux kernel 5.4.x with file system
- Toolchain gcc 9.3.x + glibc 2.31
- 512MB LPDDR2 SDRAM
- 16GB eMMC Flash and 8MB DataFlash for system backup
- 1 x USB 2.0, 1 x MicroSD card slot (Inside)
- 1 x Gigabit Ethernet and 1 x 10/100Mbps Ethernet
- 4 x RS-232 / 485 serial ports
- Ultra-low power consumption, less than 3 Watts

■ H/W Specifications

CPU / Memory
- CPU: ATMEL ATSAMA5D35 536MHz w/MMU
- SDRAM: 512MB, LPDDR2
- Flash: 16GB, eMMC
- DataFlash: 8MB, for system backup

Network Interface
- Type: 1 x Gigabit and 1 x 10/100Mbps Ethernet
- Connector Type: RJ45

TTY (Serial) Ports
- RS-232 or RS-485, software select
- RS-232 Signals: TX, RX, RTC, CTS
- RS-485 Signals: Data+, Data-
- RS-485 Automatic Flow Control: Yes

TTY (Serial) Port Parameters
- Baud Rate: up to 921.6Kbps
- Parity: None, Even, Odd, Mark, Space
- Data Bits: 5, 6, 7, 8
- Stop Bits: 1, 1.5, 2
- Flow Control: RTS / CTS, XON / XOFF, None

Console / Debug Ports
- Support microUSB console port
- Serial console port (inside the box)

USB 2.0 Host Interface
- Supports 480Mbps hi-speed mode
- Host Ports: 2

SD Slot
- 1 x Micro-SD socket
- SD 2.0 Compliant, support SDHC
- Storage capacity: support up to 128G

General
- Watchdog: Yes
- Real-Time Clock (RTC): YES
- Buzzer: Yes
- Supports microUSB power source
- Power Input: +9V~+48Vdc (terminal block)
- Typical Consumption: 12VDC@200mA
- Dimensions (W x H x D): 78 x 108 x 24mm (3.0x4.25x0.94in)
- Operating Temperature: 0~70°C (32~158°F)
- Regulation: CE Class A, FCC Class A

■ S/W Specifications

Operation System
- Linux kernel 5.4.x
- Supports bootup from eMMC or SD card
- Supports backup from SD card or USB device
- Boot Loader : BareBox
- File System : EXT4/ETX3/ETX2, VFAT/FAT, NFS

Software Development
- Toolchain: gcc 9.3.0 + glibc 2.31
- Supports in-place C/C++ code compilation

Package Management
- Package repository: Artila self-maintained repository
- Command: Using standard apt-get command

Popular Packages
- Web server: Apache/Nginx/Lighttpd
- Database: MySQL/SQLite3/PostgreSQL
- Script Language: PHP/Python/Perl/NodeJS
- Text editor: vim/nano/sed
- Administration: Webmin

■ Ordering Information

Matrix-700
- Linux-ready Cortex-A5 536MHz Industrial IoT Gateway with 512MB SDRAM, 16GB eMMC Flash

CB-RJ45F9-150 (91-R45F9-150)
- Serial Cable (RJ45 to DB9 Female, 150cm)

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

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