Linux-ready Arm9 Industrial IoT Gateway
Matrix-504

Features

- Linux 2.6.29 compatible computing platform
- 64MB SDRAM and 256MB NAND Flash
- Ultra-low power consumption, less than 3 Watts
- 1 x 10/100Mbps Ethernet port
- 4 x 921.6Kbps high speed TTY (serial) ports
- 2 x USB 2.0 host ports, 12Mbps
- 1 x microSD socket inside
- GNU C / C++ toolchain for Linux / Windows environment
- Extremely compact design, 78 x 108 x 24mm

■ H/W Specifications

CPU / Memory
- CPU: ATMEL AT91SAM9G20 400MHz (Arm9, w/ MMU)
- Memory: 64MB SDRAM, 256MB NAND Flash
- DataFlash®: 2MB, for system backup

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

TTY (Serial) Ports
- Port 1, 2, 3, 4: Isolated RS-485 (2500Vrms isolation)
- Port 5, 6, 7, 8: RS-485
- Direction Control: Auto, by hardware
- Connector: Terminal block

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
- RS-485 Direction Control: Auto, by hardware

USB Ports
- Host Ports: 2
- Client Port: 1, reserved
- Speed: USB 2.0 compliant, supports low-speed (1.5Mbps) and full-speed (12Mbps) data rate

General
- Watchdog Timer: Yes, for kernel use
- Real-Time Clock (RTC): Yes
- Buzzer: Yes
- microSD Socket: Yes
- Power Input: +9V~+48VDC
- Power Consumption: 12VDC@250mA
- Dimensions (W x H x D): 78 x 108 x 24mm (3.0 x 4.25 x 0.94in)
- Operating Temperature: 0~70°C (32~158°F)
- Regulation: CE Class A, FCC Class A

■ S/W Specifications

General
- OS: Linux, kernel 2.6.29
- Boot Loader: U-Boot
- File Systems: UBI, JFFS2, ETX2 / ETX3, VFAT / FAT, NFS

Pre-installed Utilities
- bash, busybox, sysvinit, wget, ipkg, procps (for webmin), psmics, apache2, vsftpd, iptables, ppp, ssh, wireless_tools, util-linux-mount / umount, usbutils, Artila utility

Daemons Started by Default
- ssh (secured shell) with sftp
- syslog / klogd (system and kernel log)
- telnet server (disable root permission in /etc/securetty)
- ftp server (vsftp)
- web server (lighttpd)
- amgrd (Artila broadcast search daemon)

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

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

■ Ordering Information

Matrix-504
- Linux-ready Arm9 Industrial IoT Gateway with 256MB on-board Flash and microSD Socket Inside

Matrix-504T
- Wide-temperature (-20~80°C) Version of the Matrix-504

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

CB-RJ2CON-100 (91-RJCON-100)
- Console Cable (RJ45 to DB9 Female, 100cm)

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

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