



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

Network Interface

- Type: 2 x 10/100Mbps Ethernet, 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

- 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
- Storage Capacity: Up to 32GB

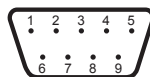
General

- Power Input: 9~48VDC
- Power Consumption: 500mA@12VDC, max.
- Dimensions (W x H x D): 175 x 103 x 43mm
- Operating Temperature: 0~70°C
- Regulations: CE Class A, FCC Class A

TTY Pin Assignment

PIN	RS-232	RS-422	RS-485
1	DCD*	Tx-	---
2	Rx	Tx+	---
3	Tx	Rx+	Data+
4	DTR*	Rx-	Data-
5	GND	GND	GND
6	DSR*	---	---
7	RTS	---	---
8	CTS	---	---
9	---	---	---

*: Port 2 only



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 Box Computer
(Note: miniPCIe card, antenna and pigtail antenna cable are **NOT** included)
- **CBL-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-CAR00-004)**
802.11b/g/n USB Half-size miniPCIe Card, Ralink RT5390U, 1T2R
- **M-9011 (CM5000)**
Full-size miniPCIe 2G / 3G Card, with SIM Socket
- **PWR-12V-1A (31-62100-000)**
110~240VAC to 12VDC 1A Power Adapter