

# Matrix-710

Linux-ready Cortex-A5 Industrial Box Computer



## Features

- ATMEL ATSAMA5D35 536MHz Cortex-A5 CPU
- Linux kernel 4.9.x with file system
- 512MB LPDDR2 SDRAM
- 8GB eMMC Flash and 8MB DataFlash for system backup
- 1 x Gigabit Ethernet and 1 x 10/100Mbps Ethernet
- 4 x USB host ports
- 4 x isolation RS-485 serial ports and 4 x RS-485 serial ports
- 2 x CAN ports
- 1 x full size miniPCIe socket inside
- Ultra-low power consumption, less than 3 Watts

## H/W Specifications

### CPU / Memory

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

### CAN Bus Ports

- Type: 2 x CAN bus 2.0 A/B compliant ports
- Speed: Up to 1Mbps
- Isolation: 2500Vrms
- CAN 1: 1~2 pin, CAN 2: 3~4 pin, GND: 5 pin

### Console / Debug Ports

- Support microUSB console port
- Serial console port (inside the box)

### USB 2.0 Host Interface

- Host Ports: 4
- Supports 480Mbps hi-speed mode

### SD Slot

- SD 2.0 compliant, supports SDHC
- 1 x microSD socket
- Storage capacity : Support Up to 64G

### Power Requirement

- Input Voltage : 9~48Vdc ( terminal block)
- Typical Consumption : 230mA@12VDC

### Expansion Slot

- 1 x miniPCIe socket
- Supports Full-size / half-size

## General

- Realtime Clock: Yes, backup by super capacitor
- Buzzer: Yes
- Watchdog: Yes
- Input Voltage: +9~+48Vdc (terminal block)
- Typical Consumption: 500mA@12VDC
- Dimensions (W x L x H): 166 x 108 x 35mm (6.57 x 4.25 x 1.37in)
- Weight: 340g (0.75lb)
- Operating Temperature: 0~70°C (32~158°F)
- Regulation: CE Class A, FCC Class A
- Installation: Wall mounting, DIN-rail mounting (with optional kit)

## S/W Specifications

### Operation System

- Linux kernel 4.9.x
- Supports bootup from eMMC or SD card
- Boot Loader : Barebox
- File System : EXT4

### Software Development

- Toolchain: gcc 6.2.0xx + glibc 2.24xx
- 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-710

Linux-ready Cortex-A5 536MHz Industrial Box Computer with 512MB SDRAM, 8GB eMMC Flash

### • DK-35A (36-DK35A-000)

DIN RAIL Mounting Kit

### • PWR-12V-1A (31-62100-000)

110~240VAC to 12VDC 1A Power Adapter

## Assured Systems

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### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508  
Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050  
Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28  
Business Registration Number: 07699660