

# Linux-ready Cortex-A7 Industrial IoT Gateway

## Matrix-752



### Features

- NXP i.MX6ULL Cortex-A7 CPU, Up to 800MHz
- Linux kernel 5.4.x with boot loader & file system
- Toolchain: gcc 9.3.0 + glibc 2.31
- 512MB LvDDR3 SDRAM, 16GB eMMC
- 2 x 10/100Mbps Ethernet interface
- 1 x USB OTG port
- 1 x RS-485 / RS232 serial port, and 1 x RS-232 serial port
- 1 x CAN port
- 2 x Digital Input, 2 x Relay out
- 1 x full size miniPCle socket inside
- 1 x Micro-SIM slot reserved, Two Antenna holes reserved
- 1 x Micro-SD slot reserved
- Ultra-low power consumption

### ■ H/W Specifications

#### CPU / Memory

- CPU: NXP i.MX6ULL Cortex-A7 MPCore, Up to 800MHz
- SDRAM: 512MB, LvDDR3
- Flash: 16GB, eMMC

#### Network Interface

- Type: 2 x 10/100Mbps Ethernet
- Connector Type: RJ45 (with LED indicator)

#### USB Interface

- 1 x USB OTG Port
- microUSB connector

#### TTY (Serial) Port

- Two Serial port
- Port 1: 1 x RS-485 or RS-232
- Port 2: 1 x RS-232
- Connector: Terminal block
- RS-485 Signal: Data+, Data-
- Direction Control: Auto, by software
- RS-232 Signal: TX1, RX1 and TX2 , RX2

#### CAN Bus Ports

- Type: 1 x CAN bus 2.0 A/B compliant ports
- Speed: Up to 1Mbps
- Isolation: 2500Vrms

#### Console / Debug Ports

- Serial console port (inside the box)

#### Digital Input

- 2 x Digital Input channels
- Isolation Protection: 2500Vrms (Photo-Coupler)
- Logical High: 5-24VDC
- Logical Low: 0-1.5VDC

#### Relay Output

- 2 x Digital Output channels (Solid state Relay)
- Solid State Relay, Normal Open (NO) Type
- Contact Rating: 80VDC@1.5A

#### SD Slot

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

#### Expansion

- 1 x miniPCle Full-size socket
- 1 x micro-SIM card socket , USB interface reserved
- 2 x SMA-type Antenna hole reserved

#### General

- Watchdog: Yes
- Real-Time Clock (RTC): Yes, backup by super capacitor
- Power Input Voltage: +9~+48VDC (terminal block)
- Typical Consumption: 12VDC@250mA
- Dimensions (W x L x H): 89 x 112 x 30mm ( 3.5 x 4.4 x 1.18in)
- Net Weight: 350g (0.77lb)
- Operating Temperature: 0~70°C (32~158°F)
- Typical Consumption: 12VDC@250mA
- Regulation: CE Class A, FCC Class A
- Installation: Wall mounting, DIN-rail mounting (with optional kit)

### ■ 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

#### 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-752

- Linux-ready Cortex-A7 800MHz Industrial IoT Gateway with 512MB SDRAM, 16G eMMC

#### CB-PHDF9-050 (91-PHDF9-050)

- Console Cable (Wafer Box to DB9 Female, 50cm)

#### DK-35A (36-DK35A-000)

- DIN RAIL Mounting Kit

#### PWR-12V-1A (31-62100-000)

- 110-240VAC to 12VDC 1A Power Adapter

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