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Datasheet piA-AM3352

piA-AM3352

Features

- Sitara Singleboard-Computer based on processor module piA-AM335x-PM
- ARM® Cortex™-A8
- up to 800MHz
- Top-hat rail housing
- Ethernet, µSD, USB, RS232, RS485, CAN-Bus
- GSM/UMTS/LTE (optional)
- DC 10-24V
- Power consumption <3W
- Ångström Linux (based on the Yocto)
- Kernel 4.4.x
- Open-Source SDK

Overview

The piA-AM3352 is a single board computer based on ARM® Cortex™-A8 architecture enclosed in industry standard top-hat rail housing. Its combination of above-average performance combined with high power efficiency makes the piA-AM3352 a good choice for mobile communication as well as stationary controller applications. Due to its small size it is the ideal solution, when there is not enough space for a full-sized PC system.

In addition to Ethernet, RS485 and USB, the piA-AM3352 allows data exchange via CAN/CANOpen and GPRS/UMTS. The communication of multiple modules can be carried ou by a CAN-based DIN rail (CH20M DIN rail bus), which replaces the traditional wiring by an uninterrupted and flexible system solution.
The sustainability of the system is underlined through the usage of Linux as an operating system. As an alternative to preconfigured Ångström based system, any Linux distribution that supports ARMv7 (f.g. Debian, Poky) can be used. For the development of customized applications a cross compiler SDK (C/C++, QT, diverse libraries) is available.

Since the piA-AM3352 architecture is similar to the wide-spread Beagle-/Craneboard designs, there is a large and actively supporting open-source development community.

A performance upgrade is possible by exchanging the processor module.

Details

Basics

CPU	OMAP AM3352 Sitara™ microprocessor (MPU) up to 800 MHz Cortex™-A8 Core NEON™ SIMD Coprocessor
RAM	2 Gbit LPDDR3 (256 MByte LPDDR3)
eMMC	8 GByte
Flash	128 Mbit NOR-Flash (optional FRAM)
EEPROM	2 Kbit EUI48 EEPROM

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Interfaces

Ethernet	10 / 100 Mbps Ethernet with RJ-45 connector
µSD	bootable
CAN	CAN Transceiver, isolated
RS232	
RS485	
Debug Terminal	virtual COM-Port via miniUSB
HS USB 2.0	USB A
GPIO	1 x Open drain Output, 1 x 24 V Input

Special Functions

Sensors	3D-Acceleration 3 axes ± 8g Temperature
RTC	Real Time Clock incl. rechargeable battery
Watchdog	1 x Watchdog Timer, 1 x Power Supervisor
GSM/UMTS (optional)	Dual-Band HSPA+/WCDMA: 900/2100 MHz Quad-Band GSM/GPRS/EDGE: 850/900/1800/1900 MHz
LTE (optional)	Five-Band FDD-LTE B1/B3/B7/B8/B20 Dual-Band TDD-LTE B38/B40 Dual-Band UMTS/HSDPA/HSPA+ B1/B8 Dual-Band GSM/GPRS/EDGE 900/1800 MHz
Debug	1 x JTAG 1 x virtual COM-Port via miniUSB

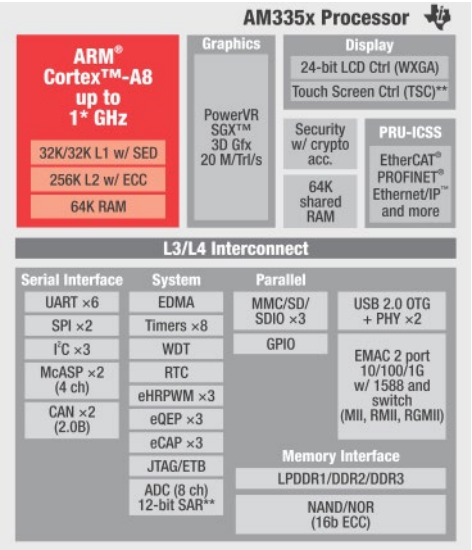
Other Features

Power	+10 V - +24 V DC 2 A max.
Power Consumption	< 3W
Temperature Range	-10 °C - +60 °C
Enclosure	Top-rail housing, IP20 119,2 x 113,6 x 22,5 mm, 1u

Software & Documentation

Ångström Linux Kernel 4.4.x
Open-Source SDK with board-specific libraries
Hardware Documentation

*** Customized development of expansion cards**



Functional Block Diagram for AM3352
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