

piA-AM3354

Item number:: 91120007



Linux IPC for Edge Computing

Overview

The piA-AM3354 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-AM3354 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.

Use cases

- › industrial automation
- › process visualization
- › security technology
- › research
- › device control
- › location-independent software updates
- › remote diagnosis

In addition to Ethernet, RS485 and USB, the piA-AM3354 allows data exchange via CAN/CANOpen and GPRS/UMTS. The communication of multiple modules can be carried out by a CAN-based DIN rail (CH20M DIN rail bus), which replaces the traditional wiring by an uninterrupted and flexible system solution.

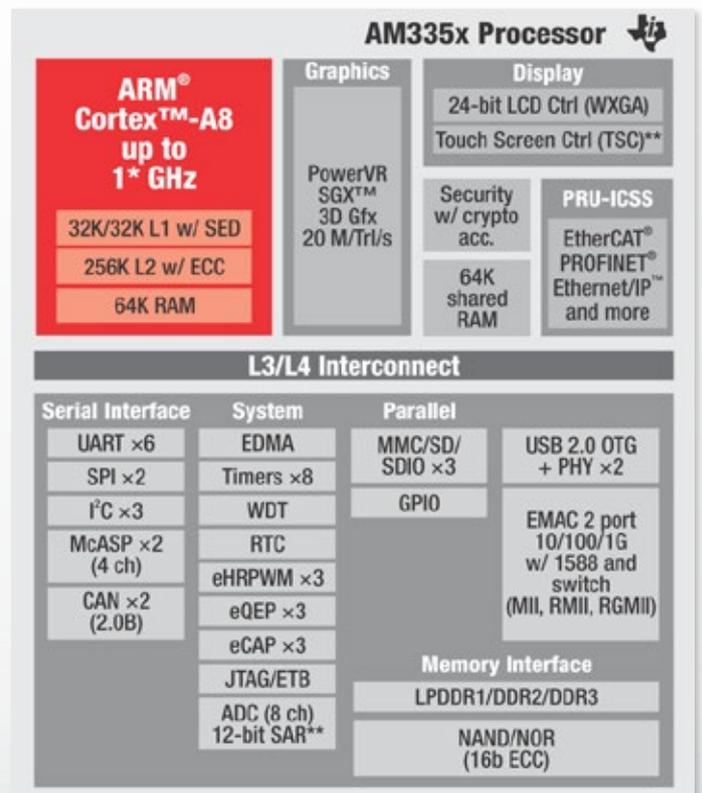
The sustainability of the system is underlined through the usage of Linux as an operating system. As an alternative to preconfigured Ångström based system, any Linux distribution that supports ARMv7 (f.g. Debian, Poky) can be used.

For the development of customized applications a cross compiler SDK (C/C++, QT, diverse libraries) is

available.

Since the piA-AM3354 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.





Data sheet

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Technical specifications

Basics

Supply voltage	DC 12-24V 2 A max.
Processor	OMAP AM3354 Sitara™ Micro-processor (MPU) up to 800 MHz Cortex™-A8 Core NEON™ SIMD Coprocessor
Dimensions	119.2 x 113.6 x 22.5 mm, 1u
Housing	DIN rail housing, IP20
Energy consumption	< 3W

Interfaces

Ethernet	) 10 / 100 Mbps Ethernet with RJ-45 connector
μSD	) bootable
CAN	) transceiver, isolated
RS232 RS485	
Debug Terminal	) virtual COM-Port via miniUSB
HS USB 2.0	) USB A

Other properties

RAM	) 2 Gbit LPDDR3 (256 MByte LPDDR3)
eMMC	) 8 GByte
Flash	) 128 Mbit NOR-Flash (optional FRAM)
EEPROM	) 2 Kbit EUI48 EEPROM
Sensors	) Sensors Acceleration sensor 3 axes up to ± 8g) Temperature sensor
Battery	lithium polymer battery 2 x 3000 mAh 18650
RTC	) real-time clock) including battery
IO interfaces	Expandable GPIOs (isolated)
Watchdog	1 x Watchdog Timer 1 x Power Supervisor
Debug	1 x JTAG 1 x virtual COM-Port via miniUSB
GSM/UMTS (2G/3G)	) 1 x Dual-Band HSPA+/WCDMA: 900/2100 MHz) 1 x Quad-Band GSM/GPRS/EDGE: 850/900/1800/1900 MHz
LTE (4G)	) 1 x Five-Band FDD-LTE B1/B3/B7/B8/B20) 1 x Dual-Band TDD-LTE B38/B40) 1 x Dual-Band UMTS/HSDPA/HSPA+ B1/B8) 1 x Dual-Band GSM/GPRS/EDGE 900/1800 MHz