Features
- ATMEL ATSAMA5D35 536MHz Cortex-A5 CPU
- Linux kernel 4.9.x with file system
- Toolchain gcc 6.2.0 + glibc 2.24
- 512MB LPDDR2 SDRAM
- 8GB eMMC Flash and 8MB DataFlash for system backup
- Dual Ethernet interface, 1 x Gigabit and 1 x 10/100Mbps, with on-board PHY
- SPI / I2C / I2S / UART / USB / GPIO / CAN / SD
- Miniature size: 50 x 30 mm only
- Single 5VDC operation, less than 1.0W

H/W Specifications
CPU / Memory
- CPU: ATMEL 536MHz ATMILASAM6D35 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
- PHY: Micrel KSZ8681FRPAUA (10/100Mbps)
- PHY: Micrel KSZ9031FRXCA (Gigabit)

UART Interface
- UART1: TX, RX, RTS, CTS (shared w/ CAN1 RX)
- UART2-4: TX, RX, RTS, CTS
- Signal Level: 3.3V

Common UART Parameters
- Baud Rate: up to 501.04kbps
- Parity: None, Even, Odd, Mark, Space
- Data Bits: 5, 6, 7, 8
- Stop Bits: 1, 1.5, 2
- Flow Control: RTS / CTS

Remote Debug Interface
- x 1 watchdog timer output
- x 1 external watchdog timer input

GPIO (General-purpose I/Os)
- No. of Pins: 21

Power Requirement
- Input Voltage: 5Vdc
- Consumption: 0.75 Watts (typical)

S/W Specifications
Operation System
- Linux kernel 4.9.x with file system
- Supports bootup from MMC or SD card
- Boot Loader: Barebox
- File System: ETX4

Software Development
- Toolchain: gcc 6.2.0 + glibc 2.24
- 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
- M-A5D35
- Linux-ready Cortex-A5 536MHz System on Module with 512MB SDRAM, 8GB eMMC Flash
- M-A5D35 Starterkit

Pin Assignment
- Note: pin also can be used as COM1_TXD

Watchdog Interface
- x 1 external watchdog timer input
- x 1 watchdog timer output

USB Interface
- USB console port
- Serial console port (UART interface)

Power Interface
- Flow Control: RTS / CTS, XON / XOFF, None
- Stop Bits: 1, 1.5, 2
- Data Bits: 5, 6, 7, 8
- Parity: None, Even, Odd, Mark, Space
- Baud Rate: up to 921.6Kbps

Common UART Parameters
- Signal Level: 3.3V
- UART2~4: TX, RX, RTS, CTS
- UART1: TX, RX, RTS, CTS (shared w/ CAN1 TX)

Watchdog Interface
- x 1 external watchdog timer input
- x 1 watchdog timer output

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Watchdog Interface
- x 1 external watchdog timer input
- x 1 watchdog timer output

USB Interface
- USB console port
- Serial console port (UART interface)

Power Interface
- Flow Control: RTS / CTS, XON / XOFF, None
- Stop Bits: 1, 1.5, 2
- Data Bits: 5, 6, 7, 8
- Parity: None, Even, Odd, Mark, Space
- Baud Rate: up to 921.6Kbps

Common UART Parameters
- Signal Level: 3.3V
- UART2~4: TX, RX, RTS, CTS
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CPU / Memory
- CPU: ATMEG ATSAMA5D35 w/ MMU
- SDRAM: 512MB, LPDDR2
- Flash: 8GB, eMMC
- DataFlash: 8MB, for system backup

Network Interface
- Types: 1 x Gigabit and 1 x 10/100Mbps Ethernet
- PHY: Micrel KSZ9031FRNA (10/100Mbps)
- PHY: Micrel KSZ9031FRNIXCA (Gigabit)

UART Interface
- UART1: TX, RX, RTS, CTS (shared w/ CAN1 TX)
- UART2: TX, RX, RTS, CTS
- UART3: TX, RX, RTS, CTS
- UART4: TX, RX, RTS, CTS
- UART5: TX, RX, RTS, CTS
- UART6: TX, RX, RTS, CTS
- UART7: TX, RX, RTS, CTS
- UART8: TX, RX, RTS, CTS

GPIO (General-purpose I/Os)
- No. of Pins: 21

Power Requirement
- Input Voltage: 5Vdc
- Consumption: 0.75 Watts (typical)

Common UART Parameters
- Baud Rate: up to 501,600bps
- 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

General
- Dimensions (W x L): 50 x 30mm
- Pins: Total 50 pins, 1.27mm pitch Female header
- Mounting Hole: x 1, 2.0mm (M2) in diameter

S/W Specifications
Operation System
- Linux kernel 4.9.x with file system
- Supports bootup from eMMC or SD card
- Boot Loader: Barebox
- File System: EXT4

Software Development
- Toolchain: gcc 6.2.0 + glibc 2.24
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