



StampA5D36

Fact Sheet

1. StampA5D36 Technical Characteristics

1.1. CPU

Atmel AT91SAMA5D3x Embedded Processor featuring an Cortex-A5™ ARM® core with ARM v7-A Thumb2® instruction set.

- CPU Frequency 528 MHz
- 32KB Instruction Cache
- 32KB Data Cache
- Memory Management Unit (MMU)
- Floating Point Unit (VFPv4)
- 3.3V Supply Voltage, 1.8V Memory Bus Voltage, 1.25V Core Voltage

1.2. Memory

- 256 MB NAND Flash Memory (optional up to 1GB)
- 256 MB Low Power Mobile DDRRAM (optional up to 512 MB)
- 64 MB NOR Flash Memory (optional)
- 1 MB Serial Dataflash
- 128 KB SRAM
- Onboard Micro-SD Card Slot

1.3. Interfaces and external signals

- 2x 100-pin Fine-pitch Low-profile Connectors (Hirose FX8)
- Ethernet 10/100 Mbit MAC
- Ethernet 10/100/1000 GMAC (RGMII)
- 3x USB 2.0 High Speed Host
- USB 2.0 High Speed Device
- 4x USART
- 2x UART
- 2x Synchronous Serial Controller (SSC, I²S)
- 2x Serial Peripheral Interface (SPI)

- 3x Two Wire Interface (TWI, I²C)
- High Speed MultiMedia Card Interface
- 2x CAN Controller
- Soft Modem
- 4x PWM
- Touch Screen Analog-to-Digital Converter ADC
- LCD/TFT Controller (2048 x 2048 pixels)
- JTAG Debug Port
- Digital Ports - up to 150 available
- Control Signals: IRQs, BMS, SHDN, WKUP
- 3x Programmable Clocks
- Image Sensor Interface

Some of the various functions are realized by multiplexing connector pins; therefore not all functions may be used at the same time

1.4. Security

- taskit Vaultsec - Unreadable Key Storage
- ECC Public/Private and SHA-256 Encryption Chip
- Atmel Secure Boot Solution
- AES, TDES Encryption Engine
- True Random Number Generator
- Unique Hardware Serial Number

1.5. Energy Efficiency

- Shut Down Controller
- Battery Backed Registers
- Programmable Clocks
- Power Management Controller
- Very Slow Clock Operating Mode
- Low Power DDRAM

1.6. Miscellaneous

- 2x Three-channel 32-Bit Timer/Counter
- RTC Battery Backed
- Periodic Interval Timer (PIT)
- Watchdog Timer (WDT)
- Temperature Sensor

1.7. Power Supply

- 3.3V Power Supply
- 3V Backup Power Supply, e.g. from a Lithium Battery

1.8. Dimensions

- Dimensions: 53.6x42x6 mmm (WxDxH)