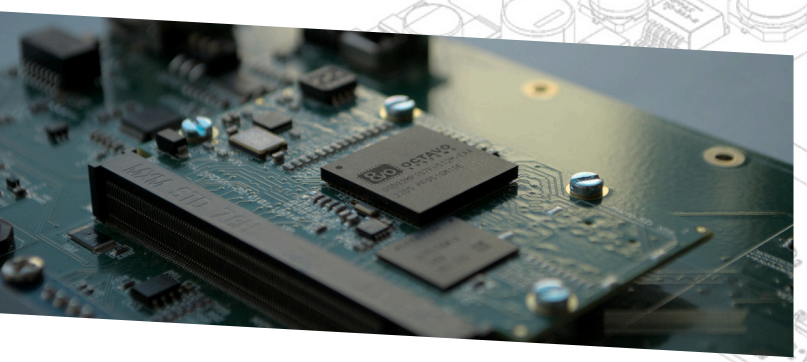
Brief Document

ATRONAX QSeven Development Kit

With ATRONAX µQSeven Computer Module

Featuring **Octavo Systems LLC** System in Package



QSeven Development Board
µQSeven Computer Module

Rev. 1.1. 02/25

COMPACT, POWERFUL, AND VERSATILE EMBEDDED SOLUTION

ATRONAX Development Kit with ATRONAX µQSeven Computer on Module is built around the OSD32MP157C/F System-in-Package (SiP), this custom development kit is designed for high-performance embedded applications while maintaining a compact form factor.

It integrates essential interfaces such as dual Ethernet, USB, CAN bus, UART, SPI, I²C, and GPIO, making it a robust platform for industrial and IoT applications.

At its core, the OSD32MP157C/F combines an STMicroelectronics STM32MP1 processor with dual Cortex-A7 cores for application processing and a Cortex-M4 for real-time control.

The development board also features an STM32F103 microcontroller, providing additional peripherals and I²C-based communication with the main processor.

READY FOR INDUSTRIAL APPLICATIONS

This embedded platform is engineered for flexibility and connectivity, supporting multiple communication protocols:

- Dual Ethernet interfaces for networking and industrial control
- USB connectivity for data transfer and peripheral integration
- RS-232/RS-485 and CAN bus interfaces for industrial automation and vehicle applications
- SPI and I²C interfaces for sensor and peripheral expansion
- GPIO access

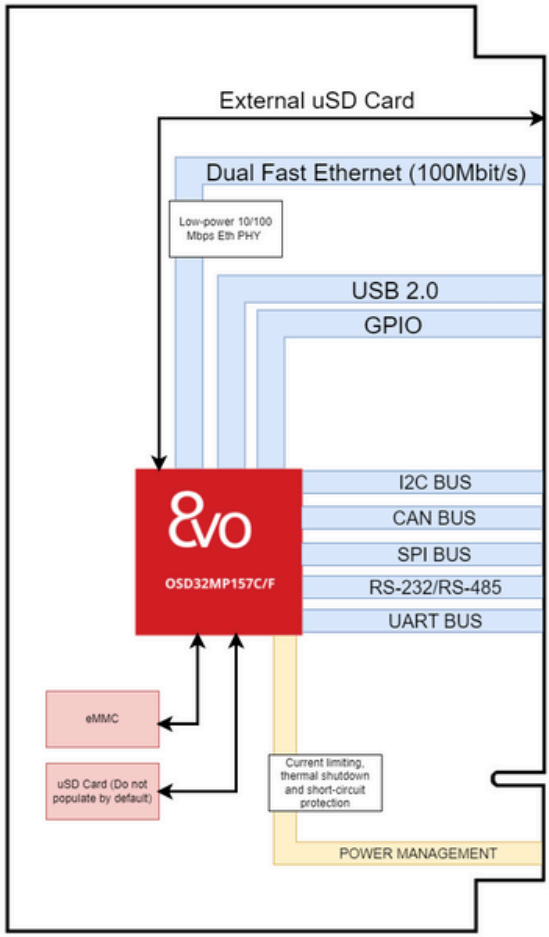
MULTIPLE POWER OPTIONS & DEBUGGING INTERFACES ON DEVELOPMENT BOARD

A flexible power control switch allows selection between different power sources, including a 12V power input and USB-C, which can also function as a serial console port. Debugging and development are streamlined with dual JTAG connectors, allowing programming of the STM32F103 via the µQSeven module or an external debugger.

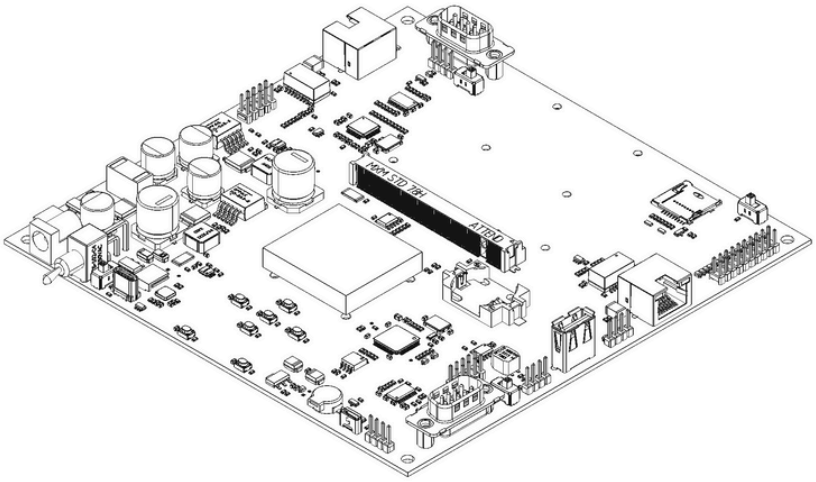
DEVELOPED FOR RELIABILITY AND PERFORMANCE

Designed for embedded developers, this board offers a scalable and secure solution for applications ranging from industrial automation to IoT gateways and real-time data processing. Its high-performance processing, extensive connectivity options, and flexible power management make it a future-proof choice for embedded development.

ATRONAX FLEXIBLE SOLUTION

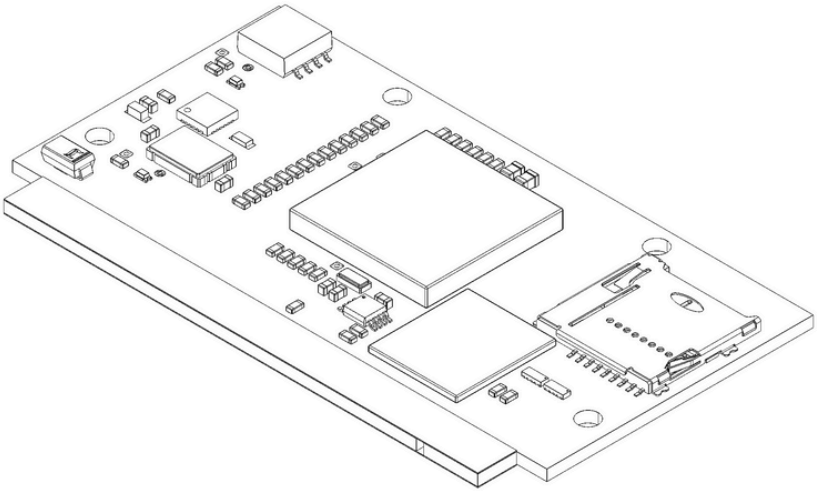


Block scheme of available interfaces fo
µQSeven Computer Module



ATRONAX QSeven Development Board

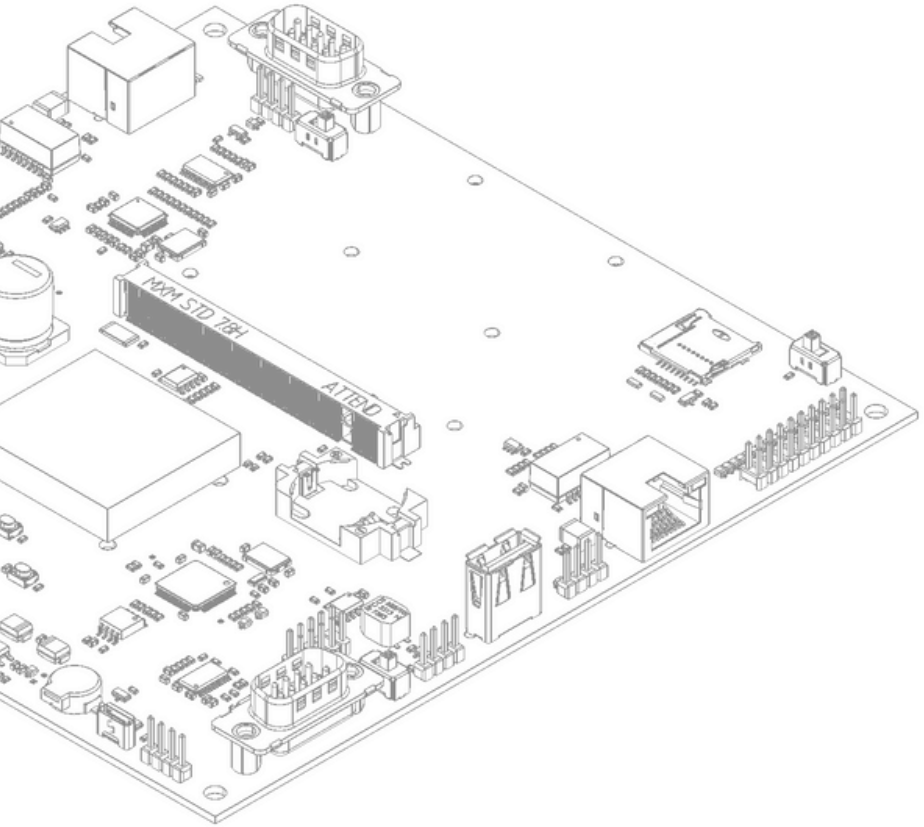
Specification	Details
Form Factor	Mini-ITX
Processor	STM32F103R8T6 ARM Cortex-M3 72 MHz
Memory	64KB
Storage	512 KB EEPROM + 16Mbit Flash
Debugging	JTAG
Connectors	USB 2.0 Type A USB 3.1 Type C USB 2.0 Type microAB 2 x UART (DB9) 2 x RJ45 (Ethernet) DC Power Jack
Peripherals	LCD Display µSD card slot Buzzer Battery Holder Buttons Switches LEDs
Power Supply Sources	12V DC Power Jack 5V DC USB Type C 5V USB type microAB (powers only the development board) 3V CR2032 battery
Dimensions	170 mm x 170 mm(6.7 in × 6.7 in)



ATRONAX µQSeven Computer Module

Specification	Details
Form Factor	µQSeven
Processor	OSD32MP157C/F(Based on ST STM32MP157C/F) Dual-Core ARM Cortex-A7 (up to 800 MHz) ARM Cortex-M4 209MHz GPU 3D OpenGL 533MHz
Memory	DDR3L 512 MB
Storage	Onboard eMMC 8GB + µSD card slot
Ethernet	Dual 10/100 Mbps Ethernet interfaces
USB	USB 2.0
Debugging	JTAG
Interfaces	UART (RS-232/RS-485), SPI, I²C, GPIO
CAN Bus	CAN
Security	Secure Boot supported
Operating System	Yocto based OpenSTLinux
Power Supply	+5V Main Power Supply+3V Backup Supply for the RTC
Dimensions	40 mm x 70 mm(1.58 in x 2.75 in)

ATRONAX FLEXIBLE SOLUTION



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