

MATXM-CORE-411-WR

Embedded Development Kit for MicroATX Motherboard

■ Embedded Computing for
Business-Critical Continuity™

PRELIMINARY DATA SHEET

MicroATX motherboard offers significant performance and power-saving options

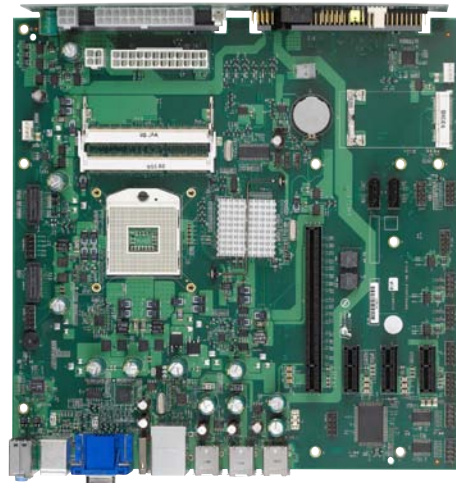
- rPGA989 socket (Socket G) with Intel® Core™ i7 processor at 2.66 GHz
- One 2GB DDR SO-DIMM
- One PCI Express x16 and three PCI Express x1 expansion sockets
- PCI Express Mini Card socket for WiFi/WiMAX
- Start evaluating out-of-the-box in minutes
- Management technology for remote diagnostics and repair

The Embedded Development Kit (MATXM-CORE-411-WR) from Emerson Network Power combines Emerson's innovative MicroATX motherboard based on the Intel® Core™ i7 processor with optimized trial versions of Wind River's operating systems, tools, embedded hypervisor and graphics software. This enables design engineers to begin developing their application in a fraction of the time traditionally required. You can boot directly from the included LiveUSB flash drive and have access to the entire development environment within one to three minutes, eliminating the installation process.

Included in the Embedded Development Kit is a LiveUSB flash drive containing a host image and a configurable target image. Each kit also includes all needed cables, a comprehensive startup guide, sample projects and tutorial videos to ensure that even those customers new to Wind River's products will be able to start development right away.


Using the specially configured evaluation environment provided in this Embedded Development Kit, developers will quickly be able to use Wind River's market-leading development tools on the latest dual-core mobile Intel Core i7 CPU running at 2.66 GHz. Customers can evaluate and develop using a limited time demonstration of Wind River Hypervisor 1.1 embedded virtualization software, VxWorks 6.8 RTOS, Wind River Linux 3.0.2 and the shared development suite Workbench 3.2.

By working closely together, Emerson and Wind River are making development access easier, faster and more affordable than ever by putting all the tools in one box for customer evaluation.

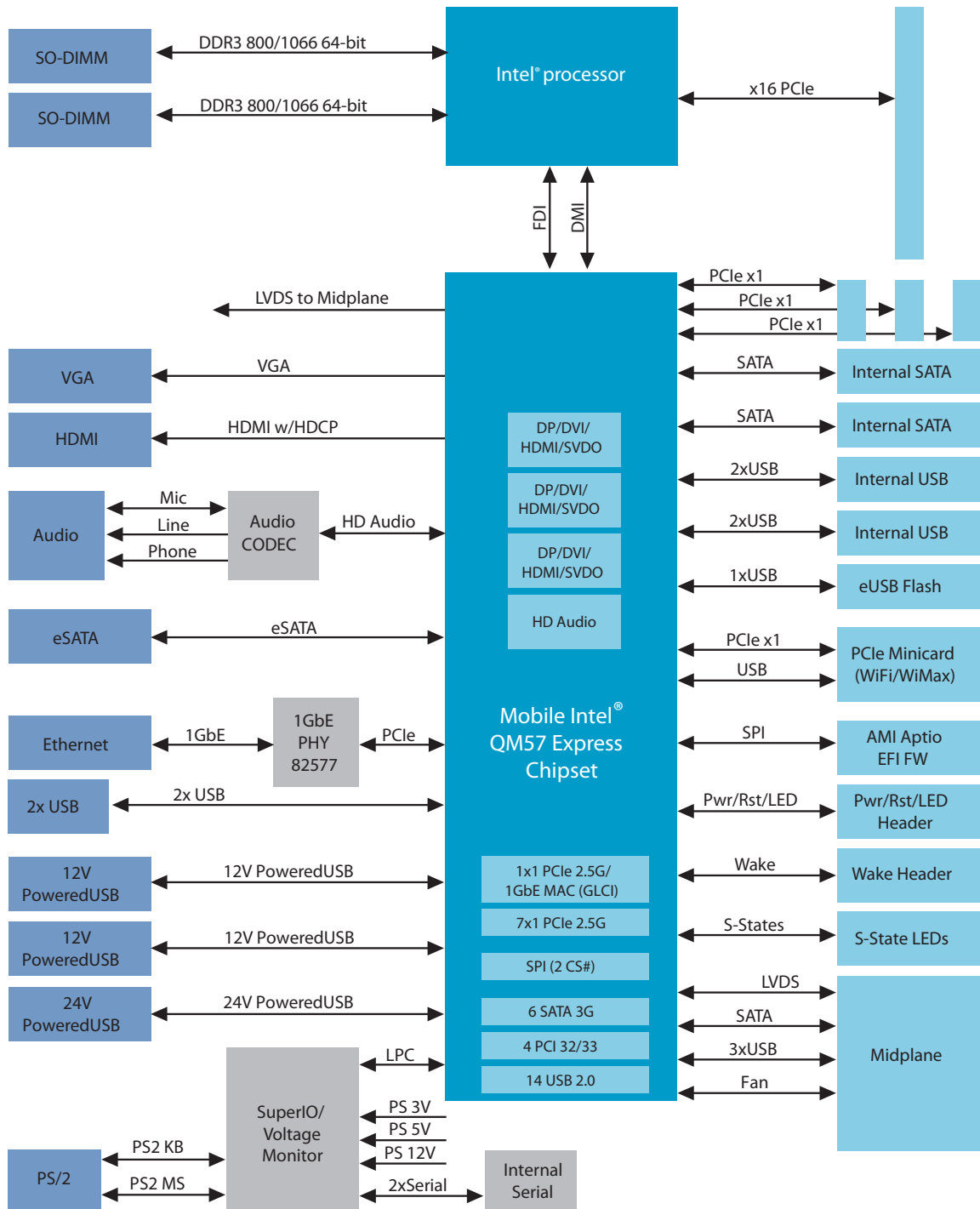


WIND RIVER




EMERSON™
Network Power

Block Diagram



Hardware Specifications

PROCESSOR SOCKET

- rPGA989 socket (Socket G) for Intel® Core™ i7 at 2.6 GHz

CHIPSET

- Mobile Intel® QM57 Express

MEMORY

- 2GB DDR3 SO-DIMM

PCI EXPRESS

- MATXM-CORE-411-B is fitted with one x16 and three x1 PCI Express gen 2 slots

ETHERNET

- MATXM-CORE-411-B has a single RJ-45 connector with integrated link/activity and connection speed LEDs mounted in the back panel I/O region for 10/100/1000 BaseT Ethernet connection provided by the QM57 integrated MAC and Intel® 82577 Hanksville Gigabit Ethernet (GbE) PHY.
- Wake-on-LAN and AMT6 are supported.

WIFI/WIMAX

- Supplied with a PCI Express Mini Card connector supporting the Intel® WiMAX/WiFi Link 5050 and Intel® WiFi Link 5000 Series wireless devices.

STORAGE

- There are a total of three internal SATA interfaces to connect physical or solid state SATA disks. Two of the SATA ports are directly on the MATXM-CORE-411-B motherboard and a third is situated on the midplane.
- One eSATA port is available on the rear I/O panel for external storage.
- In addition, there is a socket for a Z-U130 flash based hard drive that is available in sizes up to 16GB. These flash drives consume very little power, have impressive read/write speed and are extremely robust with a high mean time between failure (MTBF).

USB

- All USB ports, including PoweredUSB, support low-speed, full-speed, and high-speed using the USB 2.0 Enhanced Host Controller Interface (EHCI). There are two standard type A connectors located on the back panel I/O region.
- In addition, there are two 12V PoweredUSB ports and one 24V PoweredUSB port. PoweredUSB uses a standard USB host connector combined with an additional connector that is keyed to carry 5V, 12V, or 24V supplemental power.

ADDITIONAL I/O

- Serial Ports – there are two on-board serial ports for legacy applications implemented on 10-pin dual-row headers.
- Fan Connections – Two 4-wire headers are situated near the CPU socket and two 4-wire headers are built onto the midplane.
- PS2 keyboard and mouse
- Audio – Standard 3.5mm mini-jack connections are provided for line output, microphone and headphone. In addition there is a 2-channel HD audio output as part of the integrated HDMI interface.
- Watchdog timer with programmable timeout

COMPLIANCE AND CERTIFICATION INFORMATION

- EMC Compliance Standards
 - ▲ Motherboard industry standard requirements: Class B (FCC, VCCI, MIC, AS/NZ)
- Safety Standards
 - ▲ Motherboard industry standard requirements (UL, CSA, Ctick)

Firmware and Operating System Support

BIOS

- AMI UEFI-based BIOS
- Bootable USB

OS COMPATIBILITY

- Wind River Hypervisor 1.1
- Wind River VxWorks 6.8
- Wind River Linux 3.0.2
- Wind River Workbench 3.2

Package Contents

- One (1) MicroATX motherboard
- One (1) Rear I/O panel
- One (1) Midplane
- One (1) Drivers CD
- Two (2) SATA cables
- One (1) 16GB USB host memory stick
- One (1) 4GB USB target memory stick
- One (1) Serial port adapter
- One (1) Serial cable
- One (1) Ethernet cable
- One (1) Getting Started with Wind River guide

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