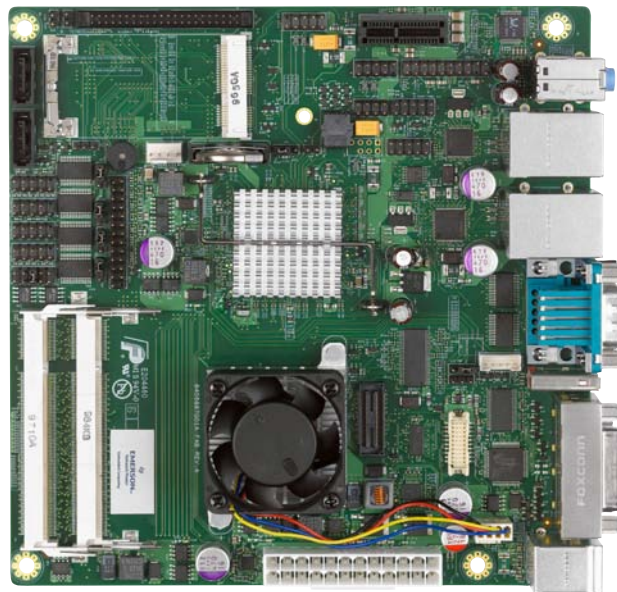# MITX-440
## Mini-ITX Motherboard

**Easy-to-use Mini-ITX motherboard designed for use in POS terminals, intelligent kiosks, ATMs, AV display systems and other applications**

- Intel® Atom™ processor D410 or D510 based Mini-ITX board
- Up to 4GB DDR2 memory, on-board USB flash option
- Gigabit Ethernet, SATA and USB ports
- PCI Express x1 and PCI Express Mini Card socket
- Dual display support
- Six serial ports

The MITX-440 from Emerson Network Power is a Mini-ITX motherboard based on the Intel® Atom™ processor D410 single-core or D510 dual-core that offers improved processing and graphics performance over existing Mini-ITX Intel Atom based products. It is designed for use in a variety of applications such as point-of-sale terminals, intelligent kiosks, ATMs, audio visual display systems, and other applications that require an easy-to-use Mini-ITX motherboard with support for a variety of operating systems.
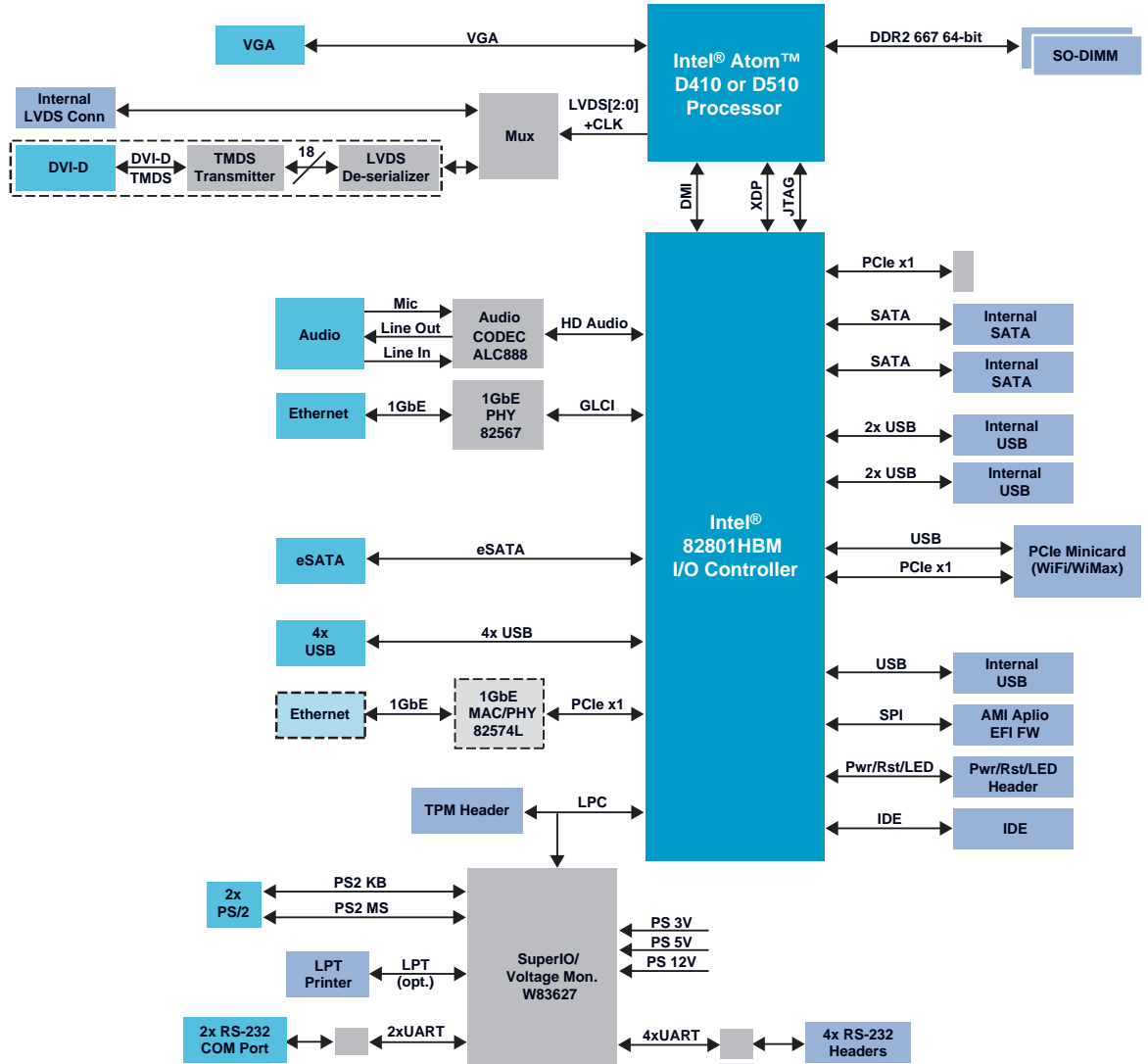
With a size format of 170 mm x 170 mm, Mini-ITX motherboards are ideal for embedded applications by being able to provide the right compromise between cost-effective design and feature-rich products. Two versions of MITX-440 are available, one with a single-core processor for low power consumption and a second with a dual-core processor and some additional features for higher performance while still retaining a low power consumption footprint. MITX-440 uses the latest generation Unified Extensible Firmware Interface (UEFI) BIOS from AMI. This manages the interaction between the low-level hardware interfaces and the OS level in a clean and efficient way that is expected to provide superior reliability, especially considering the flexibility for user I/O.

MITX-440 has a wide range of built-in connectivity including LCD and/or CRT displays; SATA, legacy IDE and USB flash disks; a PCI Express x1 expansion slot and a PCI Express Mini Card socket for Wi-Fi/WiMAX; USB and Gigabit Ethernet networks; TPM header; touch panel interface; audio and multiple serial ports.



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## Block Diagram

## Hardware Specifications

### PROCESSOR

- Intel® Atom™ single-core processor D410 or dual-core D510 up to 1.66 GHz

### CHIPSET

- Intel® 82801HBM I/O controller

### MEMORY

- Two (2) DDR2-667 SO-DIMM sockets. Maximum supported memory capacity is 4GB.

### VIDEO

- 400 MHz graphics engine
- Supports dual display outputs with single-channel LVDS and VGA connectivity. LVDS resolution up to 18bpps, XGA (1024x768) and WXGA (1280x800). VGA resolution up to QXGA 2048x1536 pixels, 32 bits, 60Hz

### STANDARD REAR I/O

- Up to two (2) Gigabit Ethernet
- Nine (9) USB 2.0
- One (1) eSATA
- One (1) VGA
- Two (2) RS-232 Serial
- Line In, Line Out and Microphone
- PS/2 Keyboard and Mouse

### OPTIONAL REAR I/O

- One (1) Additional Gigabit Ethernet (2 total)
- One (1) DVI

### POWER CONSUMPTION

- 29W Typical (for dual-core processor variant with 4GB DRAM driving 12.1" LCD panel)

### COMPLIANCE AND CERTIFICATION INFORMATION

- EMC and Safety
  - ▲ Class B (FCC, VCCI, MIC, AS/NZ)
  - ▲ UL, CSA, Ctick

## Firmware and Operating System Support

### BIOS

- AMI UEFI BIOS

### OS COMPATIBILITY:

- Microsoft® Windows® XP
- SUSE SLES 11 Linux

## Package Contents

- Mini-ITX Motherboard
- Drivers CD
- Cable Pack (SATA power and data, Serial)

## Ordering Information

| Part Number | Description |
|---|---|
| MITX-430 | Single-core Intel Atom based Mini-ITX board with standard I/O |
| MITX-440-DVI-2E | Dual-core Intel Atom based Mini-ITX with standard and optional I/O |

## SOLUTION SERVICES

Emerson Network Power provides a portfolio of solution services optimized to meet your needs throughout the product lifecycle. Design services help speed time-to-market. Deployment services include global 24x7 technical support. Renewal services enable product longevity and technology refresh.

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