

COMX-CORE Series

COM Express Modules

■ Embedded Computing for Business-Critical Continuity™

PRELIMINARY DATA SHEET

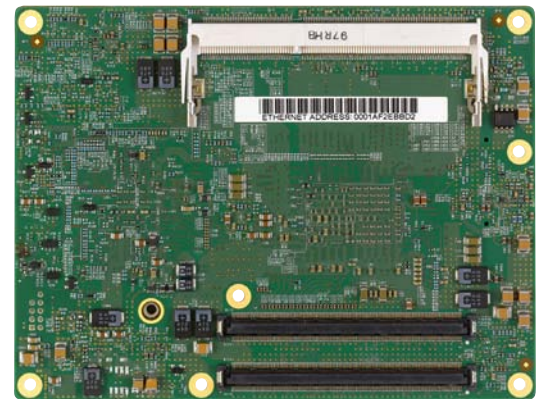
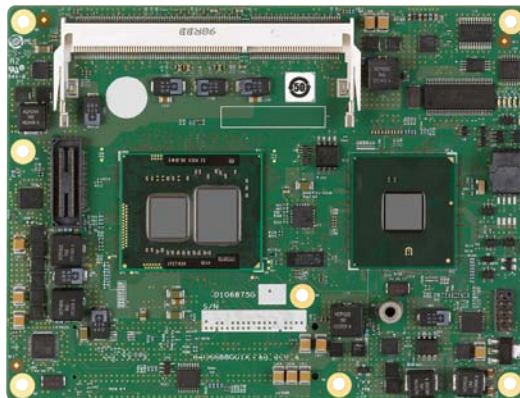
COM Express modules are designed to provide standard PC processing functionality for high performance applications

- Intel® Core™ i5 and i7 mobile platform based COM Express module
- Basic size 125 mm x 95 mm
- New Type 6 (based on Type 2) for improved graphics
- Up to 8GB DDR3 memory, on-board USB flash
- Gigabit Ethernet, SATA and USB ports
- Dual graphics outputs
- Multiple PCI Express lanes for high speed expansion

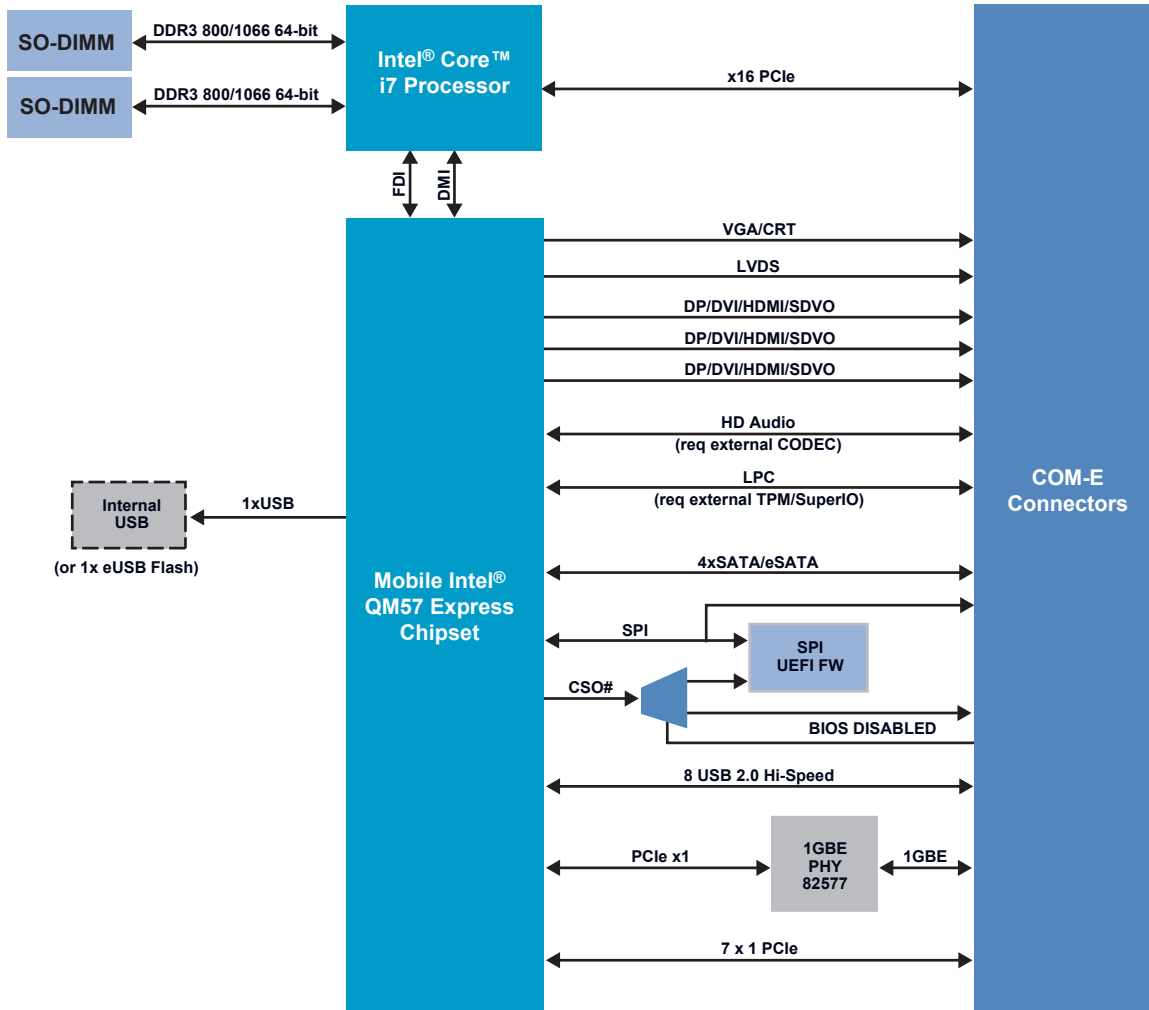
The COMX-CORE series from Emerson Network Power are Type 6 COM Express® modules based on the Intel® Core™ i5 and i7 mobile platform for high performance applications. COM Express modules are designed to be plugged onto carrier boards and to provide PC processing functionality in a standard way. They have become widely adopted for industrial automation and medical markets where the user wants or needs to retain some custom I/O. Most COM Express users have utilized Type 2 modules, as they are by far the most common variant from the vendors. However the Type 2 format includes some legacy interfaces that are becoming scarce and do not support some of the current and future capability that is required. This has caused the PCI Industrial Computer Manufacturers Group (PICMG®) standards organization to evolve a new module definition, Type 6, as part of PICMG COM.0 R2 which drops some of the legacy I/O and replaces it with improved display support as well as future proof the USB interfaces for the upcoming USB 3 standard.

The COMX-CORE series 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 and option ROM on custom baseboards.

COMX-CORE modules have a wide range of interfaces to connect to standard peripherals directly or to carrier mounted I/O. These include LCD and CRT displays, SATA and USB flash disks, PCI Express devices, USB and Gigabit Ethernet networks. Obviously some of the target applications are in locations not well suited to physical disk support and so in addition to SATA disk support, COMX-CORE modules also have the capability to use and boot from an optional eUSB flash disk, available up to 16Gb capacity.



Block Diagram



Hardware Specifications

PROCESSOR

- Intel® Core i7 dual core up to 2.0 GHz
- Intel® Core i5 dual core up to 2.4 GHz

CHIPSET

- Mobile Intel® QM57 Express

MEMORY

- Two DDR3 800/1066 64-bit SO-DIMM sockets. Maximum memory capacity is 8GB.

VIDEO

- 200 MHz graphics engine
- Next-generation graphics core offering superior 3D and video performance
- Includes hardware acceleration for AVC/VC-1/MPEG-2

BUS EXPANSION

- (7) PCI Express x 1
- (1) PCI Express x 16

I/O

- (1) Gigabit Ethernet (Intel® 82577)
- (4) SATA
- (8) USB 2.0
- HD Audio (requires external codec)
- LPC for external TPM
- SPI for external BIOS

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, Windows® Vista®, WEPOS, Fedora Core 11

Package Contents

- (1) COM Express Motherboard
- (1) Drivers CD

Ordering Information	
Part Number	Description
COMX-CORE-750	Type 6 COM Express module with Intel Core i7 processor @ 2.0 GHz
COMX-CORE-712	Type 6 COM Express module with Intel Core i7 processor @ 2.0 GHz, supports ECC memory
COMX-CORE-710	Type 6 COM Express module with Intel Core i7 processor @ 1.066 GHz
COMX-CORE-512	Type 6 COM Express module with Intel Core i5 processor, supports ECC memory
COMX-CORE-510	Type 6 COM Express module with Intel Core i5 processor @ 2.4 GHz
Accessories	
COMX-CORE-HP	Heat spreading plate
COMX-CORE-HTSNK	Active heatsink
COMX-CORE-510-DEVKIT	Developers kit containing 510, heatsink, memory and carrier board

SOLUTION SERVICES

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