

# COMX-CORE Series

## COM Express Modules

■ Embedded Computing for Business-Critical Continuity™

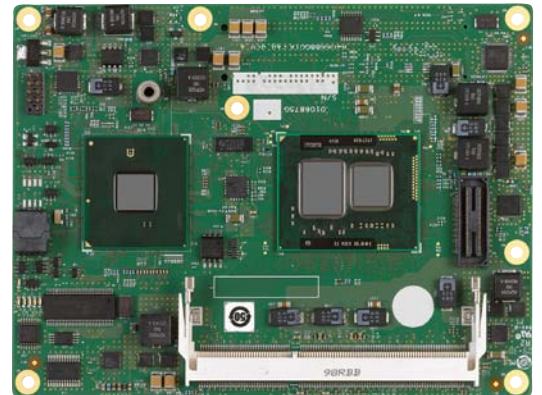
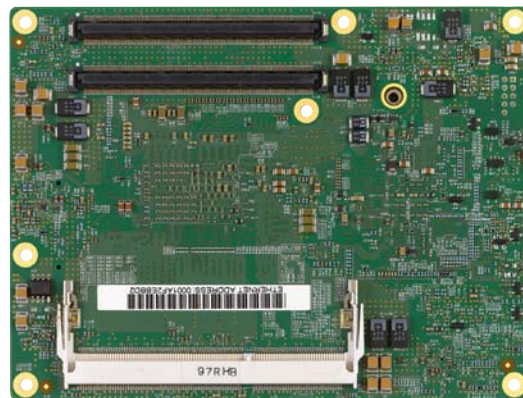
### Type 6 COM Express modules are designed to provide standard PC processing functionality for high performance applications

- Intel® Core™ i5 and i7 processors at up to 2.4 GHz
- Intel® Celeron® P4505 processor at 1.86 GHz
- Up to 8GB DDR3 memory, with ECC option
- Gigabit Ethernet, SATA and USB ports
- Dual graphics outputs
- Multiple PCI Express lanes for high speed expansion

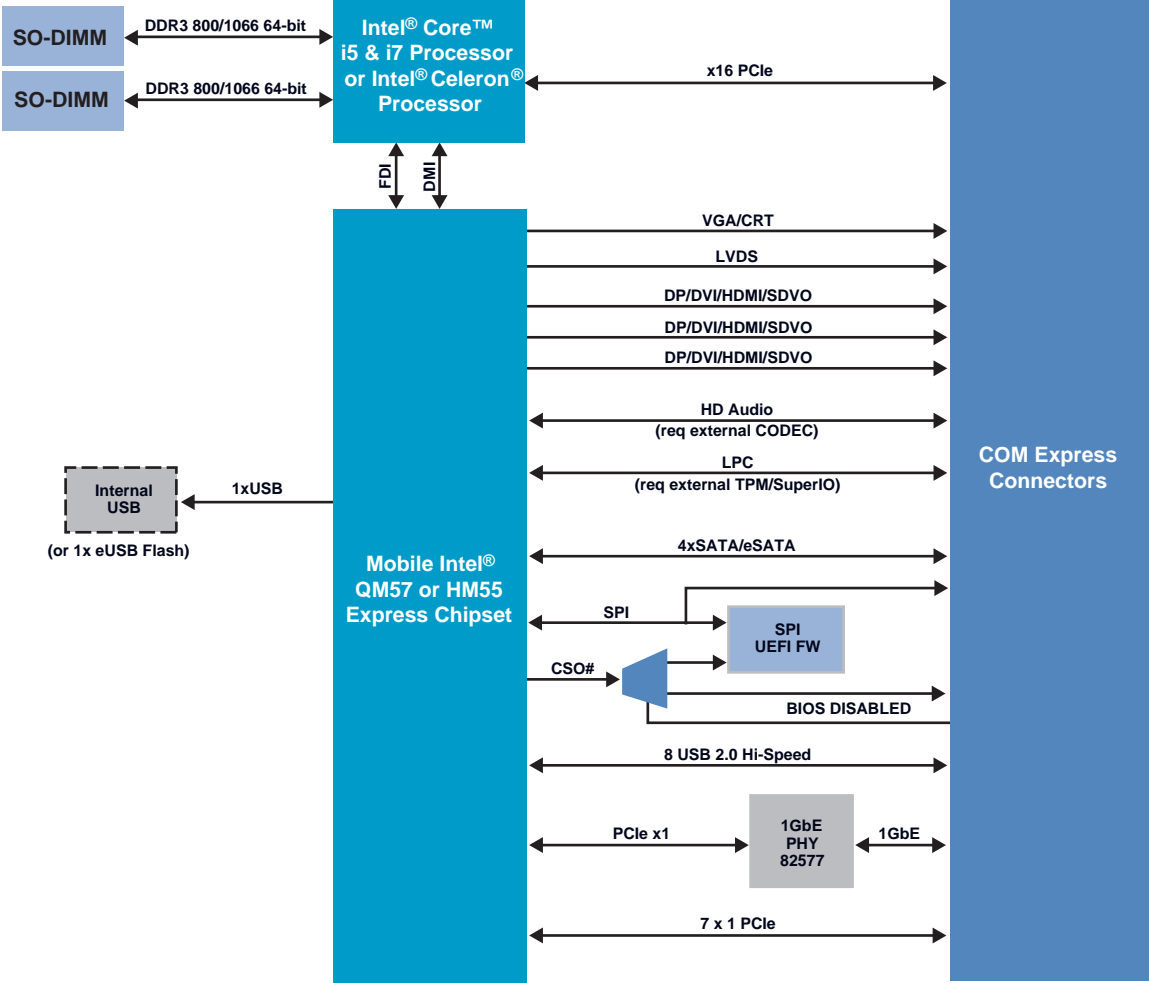
The COMX-CORE series of COM Express® modules are based on the new Intel® Core™ i5 and i7 mobile processors for high performance applications. These new processors are especially suitable for embedded applications due to their improved performance/power ratio and small form factor. This Type 6 COM Express module provides state-of-the-art PC functionality and is designed to be plugged onto a custom carrier board to create an application-specific solution. Already widely adopted in the industrial automation and medical markets, this latest COM Express module incorporates new functionality for improved security and management.

The COMX-CORE modules use 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
- Intel® Celeron® P4505 @ 1.86 GHz

### CHIPSET

- Mobile Intel® QM57 Express
- Mobile Intel® HM55 Express

### MEMORY

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

### 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,
- Microsoft Windows Vista®
- Fedora Core 12

## Package Contents

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

Ordering Information	
Part Number	Description
COMX-CORE-750	COM Express module with Intel Core i7 processor @ 2.0 GHz
COMX-CORE-710	COM Express module with Intel Core i7 processor @ 1.066 GHz
COMX-CORE-512	COM Express module with Intel Core i5 processor @ 2.4 GHz, supports ECC memory
COMX-CORE-510	COM Express module with Intel Core i5 processor @ 2.4 GHz
COMX-CORE-312	COM Express module with Intel Celeron P4505 processor @ 1.86 GHz, supports ECC memory
COMX-CORE-310	COM Express module with Intel Celeron P4505 processor @ 1.86 GHz
Accessories	
COMX-CORE-HP	Heat spreading plate
COMX-CORE-HTSNK	Active heatsink
COMX-CORE-510-KIT	Developers kit containing 510, heatsink, memory and carrier board

## SOLUTION SERVICES

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