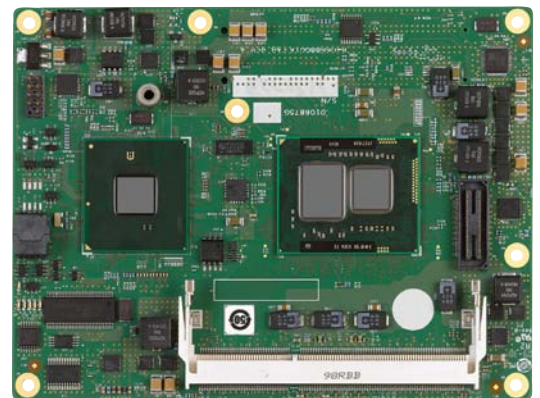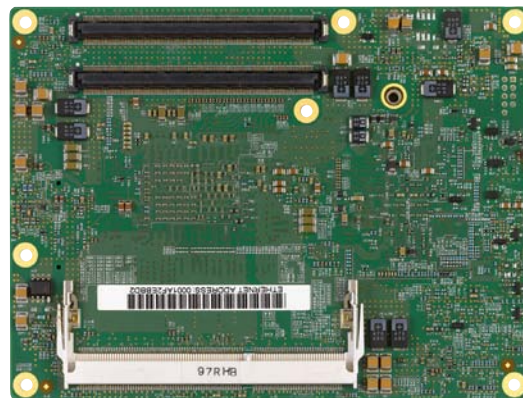# COMX-CORE Series

COM Express Modules

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
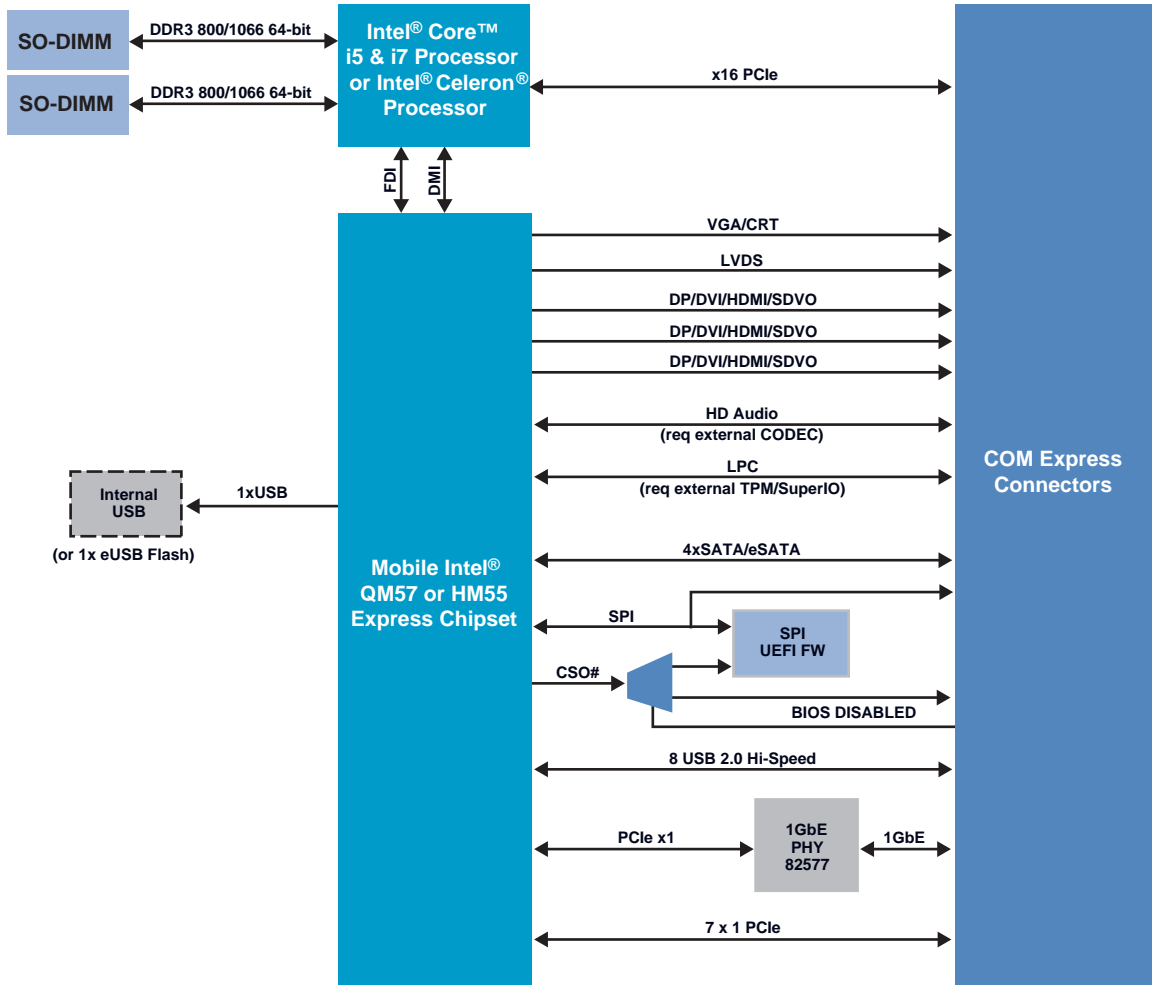- Multiple PCI Express lanes for high speed expansion

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.

COM◆Express®

EMERSON™
Network Power

Block Diagram

SO-DIMM	DDR3 800/1066 64-bit
SO-DIMM	DDR3 800/1066 64-bit

Intel® Core™ i5 & i7 Processor or Intel® Celeron® Processor

x16 PCIe

FDI DMI

Mobile Intel® QM57 or HM55 Express Chipset

VGA/CRT

LVDS

DP/DVI/HDMI/SDVO

DP/DVI/HDMI/SDVO

DP/DVI/HDMI/SDVO

HD Audio
(req external CODEC)

LPC
(req external TPM/SuperIO)

COM Express Connectors

1xUSB

Internal USB

(or 1x eUSB Flash)

4xSATA/eSATA

SPI

SPI UEFI FW

CSO#

BIOS DISABLED

8 USB 2.0 Hi-Speed

PCIe x1

1GbE PHY 82577

1GbE

7 x 1 PCIe

2

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

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.

Intel and Core are trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft, Windows and Vista are trademarks of Microsoft Corporation. All other product or service names are the property of their respective owners.

Emerson Network Power.
The global leader in enabling
Business-Critical Continuity™.

■ AC Power	■ Embedded Power	■ Precision Cooling
■ Connectivity	■ Infrastructure Management & Monitoring	■ Racks & Integrated Cabinets
■ DC Power	■ Outside Plant	■ Services
■ **Embedded Computing**	■ Power Switching & Controls	■ Surge Protection

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for System-On-Modules - SOM *category:*

Click to view products by Artesyn Embedded Technologies *manufacturer:*

Other Similar products are found below :

PICOIMX6S10R512NI4GBW 20-101-1067 20-101-1068 PICOIMX6S10R512SD COMX-CORE-310 CC-9P-V513-C Nit6Q_2GB COMX-P4040-4G-ENP2 PICOIMX6U10R1GBNI4G PICOIMX6U10R1GBNI4GBW SOM-5897C7-U8A1E SOM-5897C7-U0A1E NIt6D_SOM_v2 20-101-0079 RM-F6SO1-SMC SOM-RK3399-Q7-2.1-I-4096M-32G-CAN MC27561-TIGER MC27561-LION AM335XBBLK-SYSTEM BD63715AEFV-EVK-001 MC27561-FOX CC-WMX6UL-SMPL CB-52-PUS-110-SX BD63725BEFV-EVK-002 BD63521EFV-EVK-001 BD63525AEFV-EVK-001 BD63511EFV-EVK-001 BD63725BEFV-EVK-001 EDI1.SPON.AL.S 937637 SOM-6898C3Z2-U4A1E MYD-C4378-4E512D-100-I Q7M311-N4200-4GB PICOIMX8MMQ18R40E16 A00150 TE0745-02-81C11-A TE0714-03-35-2I TE0791-01 00151100 100-1215-1 EIC-Q410-200 COMX_P4080 CC-ACC-LCDW-10 20-101-0081 151-0096 SIP-005AYS001 BS2P24 BS2P40 BS2PE RK3188-SOM RK3188-SOM-4GB