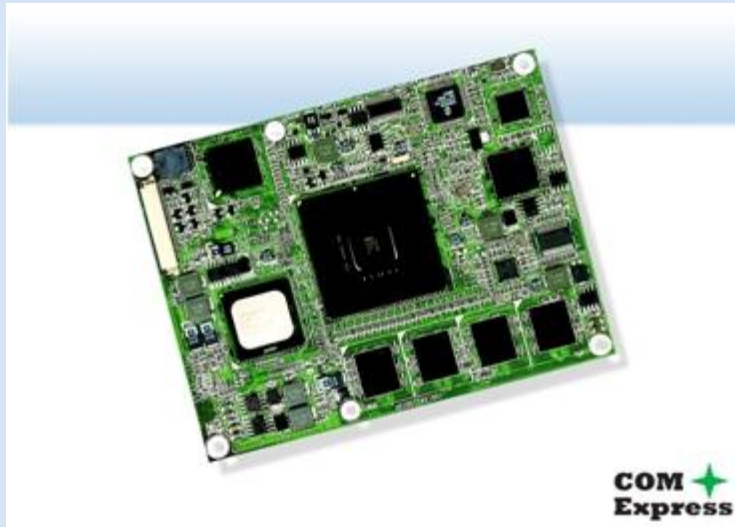


CME-Atom COMs



Low-power, high-performance, wide-temperature COM Express Computer-on-Modules featuring the Intel Atom Z510PT CPU



- ◆ COM Express Type II compliant
- ◆ Low-power, high-performance, rugged
- ◆ Based on the Intel Atom Z510PT processor
- ◆ 1GB soldered-on DDR2 SDRAM
- ◆ VGA, single-channel 24-bit LVDS, SDVO video
- ◆ SATA mass storage interface
- ◆ 8 USB 2.0 ports, AC'97 audio link, I²C, SMBus
- ◆ 8-bit programmable digital I/O
- ◆ 10/100/1000Mbps Ethernet LAN
- ◆ PCI Express, PCI, and LPC expansion buses
- ◆ -40°C to +85°C operating temperature

Ideal for Embedded Applications

Diamond's CME-Atom computer-on-modules (COMs) are compact, low-power, and powerful embedded computing cores suitable for powering a wide range of embedded applications. To support real-world applications subject to temperature extremes, the modules are rated for operation over an enhanced temperature range.

Reduced Development Costs

By plugging these powerful, plug-and-play COMs into standard or custom application baseboards, OEMs can reduce development costs, minimize design risks, and shorten time-to-revenue while benefiting from the latest embedded technologies. The CME-Atom also comes pre-integrated in our Magellan Embedded-Ready Subsystem.

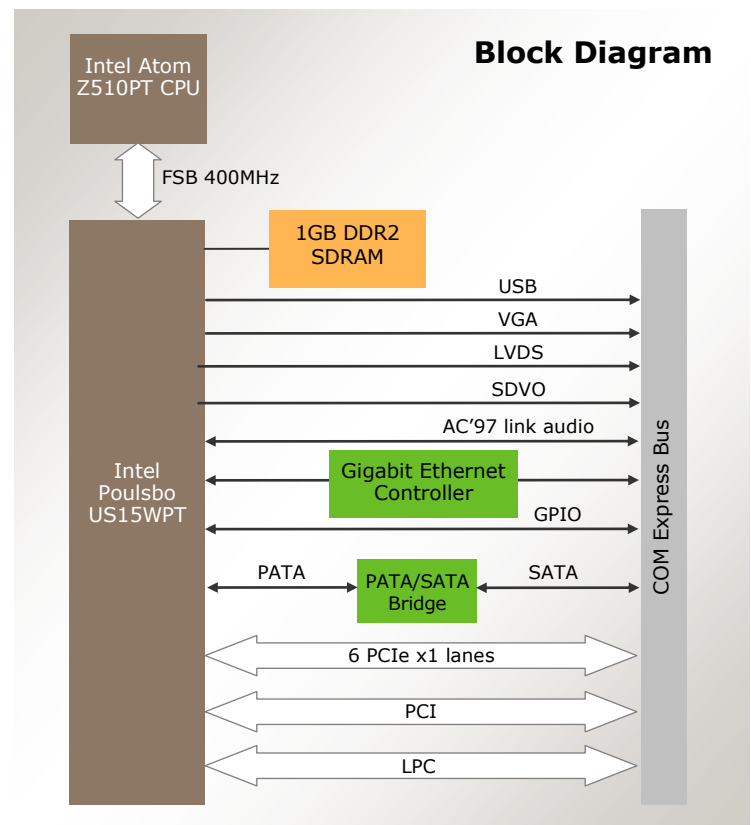
Highly Integrated

Each CME-Atom COM integrates a complete set of PC-compatible functions, including a low-power, high-performance Intel Atom Z510PT processor and 1GB of soldered-on system memory.

In addition, the module provides interface controllers for high-resolution VGA-, LVDS-, or SDVO-interfaced displays, 10/100/1000Mbps Ethernet, and SATA storage devices, as well as multiple USB 2.0, parallel, digital I/O, and audio ports.

Maximum Application Flexibility

For maximum application flexibility, the CME-Atom can be interfaced to application-specific circuitry via a choice of PCI Express, PCI, and LPC expansion buses.



CME-Atom Computer-on-Modules



Specifications

Processor	1.1GHz Intel Atom Z510PTP
Chipset	Intel Poulsobo US15WPT
Front side bus	400MHz
L2 cache	1MB
Memory	1GB DDR2 SDRAM (533MHz) on-board
BIOS	AMI PnP Flash BIOS Based on Intel GMA 500
Graphics	Up to 2048 x 1536 resolution RGB CRT, Single-channel 24-bit LVDS, or SDVO output
Audio	AC'97 link Mic in, line in/out
USB ports	8 USB 2.0
Networking	10/100/1000Base-T Ethernet (Intel 825741T controller)
Mass storage	SATA interface
Digital I/O	8-bit programmable
Keyboard/Mouse	USB keyboard and mouse support
Watchdog timer	255-level reset
Expansion buses	6 PCI Express x1 lanes 4 32-bit PCI masters LPC bus
Dimensions	4.9 x 3.7 in. (125 x 95 mm)
Supply voltage	+12VDC main power; +5VDC standby power
Power consumption	9W idle, 13W loaded (preliminary)
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Humidity	0 to 90% non-condensing
Weight	2.8oz / 79g
RoHS	Compliant

Software Support

The CME-Atom COMs are compatible with Windows XP and Linux 2.6 operating systems. Contact Diamond Systems for information regarding support for other operating systems.

Custom Baseboard Designs

Through more than 20 years of experience producing industry-leading data acquisition I/O on PC/104, PC/104-Plus, SUMIT, and FeaturePak modules and single-board computers, Diamond has developed an extensive library of analog, digital, and I/O interface technology. This expertise is now available in the form of application-specific baseboards tuned to fit precise customer requirements, coupled with COM Express COMs that implement the processing power needed to drive the application.

COM Express Development Systems

In addition to the CME-Atom COMs themselves, Diamond offers pre-integrated development kits based on generic or application-oriented COM Express baseboards. This increases project efficiency and reduces risks by providing a known good environment for rapid application development.

To simplify the development process, these kits' COM Express baseboards each provide I/O connectors for quick and easy access to nearly all system interfaces. They also come with SO-DIMM memory, an extensive set of interface cables, and full documentation and software.

In addition to these features, the COM Express form-factor baseboard adds four serial ports, RS-232/422/485 buffering, an AC'97 audio CODEC, digital I/O, a second gigabit Ethernet LAN interface, and flexible via stackable PCI-104 or SUMIT expansion and an on-board FeaturePak module socket.



COM Express form-factor baseboard

Ordering Information

CME-Z510-1G	CME-Atom COM with Intel 1.1GHz Intel Atom Z510PT CPU, 1GB SDRAM on-board
6884042	Heatspreader for CME-Atom COM
DK-MAG-Z510-1G	CME-Atom Development Kit: includes CME-Z510-1G, 6884042, COM Express form-factor baseboard, cable kit, drivers for Linux and Windows, and documentation