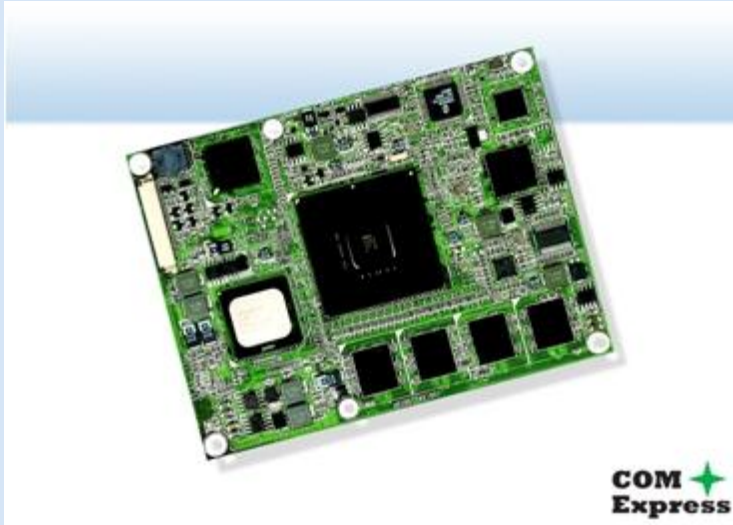


# CME-Atom COMs



## Low-power, high-performance, wide-temperature COM Express Computer-on-Modules featuring the Intel Atom Z510PT/Z530P CPUs



- ◆ COM Express Type II compliant
- ◆ Low-power, high-performance, rugged
- ◆ Based on the Intel Atom Z510PT/Z530P processor
- ◆ Up to 2GB 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, I<sup>2</sup>C, SMBus
- ◆ 8-bit programmable digital I/O
- ◆ 10/100/1000Mbps Ethernet LAN
- ◆ PCI Express, PCI, and LPC expansion buses
- ◆ -40°C to +85°C (for Z510PT CPU) or -20°C to +71°C (for Z530P CPU) 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.

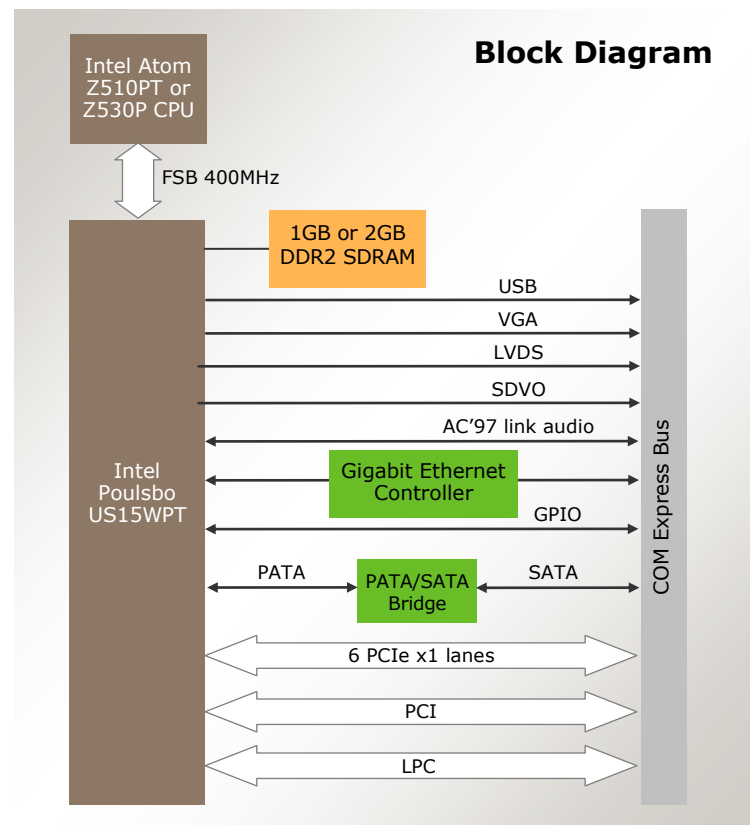
### Highly Integrated

Each CME-Atom COM integrates a complete set of PC-compatible functions, including a low-power, high-performance Intel Atom Z510PT or Z530P processor and 1GB or 2GB 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

<b>Processor</b>	1.1GHz Intel Atom Z510PT or 1.6GHz Intel Atom Z530P
<b>Chipset</b>	Intel Poulso US15WPT
<b>Front side bus</b>	400MHz
<b>L2 cache</b>	1MB
<b>Memory</b>	CME-Z530-2G: 2GB DDR2 SDRAM (533MHz) on-board CME-Z510-1G: 1GB DDR2 SDRAM (533MHz) on-board
<b>BIOS</b>	AMI PnP Flash BIOS
<b>Graphics</b>	Based on Intel GMA 500 Up to 2048 x 1536 resolution RGB CRT, Single-channel 24-bit LVDS, or SDVO output
<b>Audio</b>	AC'97 link Mic in, line in/out
<b>USB ports</b>	8 USB 2.0
<b>Networking</b>	10/100/1000Base-T Ethernet (Intel 825741T controller)
<b>Mass storage</b>	SATA interface
<b>Digital I/O</b>	8-bit programmable
<b>Keyboard/Mouse</b>	USB keyboard and mouse support
<b>Watchdog timer</b>	255-level reset
<b>Expansion buses</b>	6 PCI Express x1 lanes 4 32-bit PCI masters LPC bus
<b>Dimensions</b>	4.9 x 3.7 in. (125 x 95 mm)
<b>Supply voltage</b>	+12VDC main power; +5VDC standby power
<b>Power consumption</b>	9W idle, 13W loaded (preliminary) CME-Z530-2G: -20°C to +71°C (-2°F to +160°F) CME-Z510-1G: -40°C to +85°C (-40°F to +185°F)
<b>Operating temperature</b>	
<b>Humidity</b>	0 to 90% non-condensing
<b>Weight</b>	2.8oz / 79g
<b>RoHS</b>	Compliant

## 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

## 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.

## Ordering Information

<b>CME-Z530-2G</b>	CME-Atom COM with Intel 1.6GHz Atom Z530P CPU, 2GB SDRAM on-board
<b>CME-Z510-1G</b>	CME-Atom COM with Intel 1.1GHz Intel Atom Z510PT CPU, 1GB SDRAM on-board
<b>6884042</b>	Heatspreader for CME-Atom COM
<b>DK-PE530</b>	CME-Atom Development Kit: includes CME-Z530-2G, 6884042, COM Express form-factor baseboard, cable kit, drivers for Linux and Windows, and documentation
<b>DK-PE510</b>	CME-Atom Development Kit: includes CME-Z510-1G, 6884042, COM Express form-factor baseboard, cable kit, drivers for Linux and Windows, and documentation