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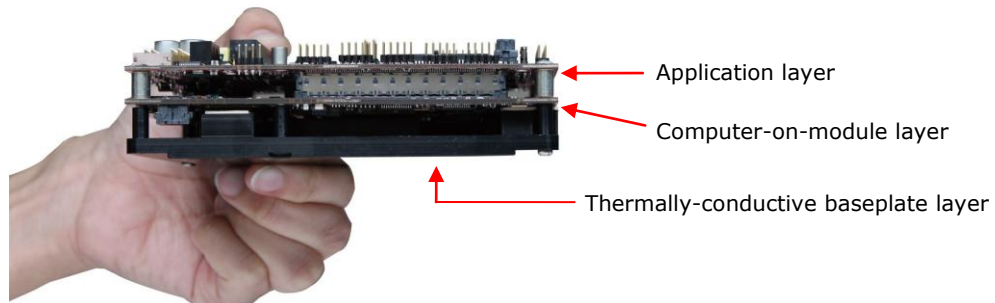
Boardset Merges COM Express Cores with Triple-Play I/O

*COM Express-sized Magellan boardset offers the advantages of both COMs and SBCs,
and provides "triple-play expansion" via PCI-104, SUMIT, and FeaturePak modules*

March 3, 2010; Nuremberg, GERMANY -- Diamond Systems Corp., a leading supplier of ruggedized single-board computers (SBCs) and I/O expansion modules targeting real-world applications, today unveiled Magellan, a board-level "embedded-ready subsystem" (ERS) that combines the benefits of computer-on-modules (COMs) with those of stackable single-board computers (SBCs). This announcement means system manufacturers no longer need to design a custom carrier to deploy COM Express modules.
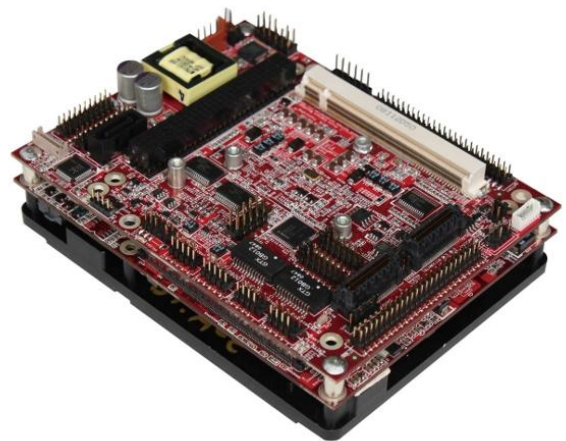
Magellan's CPU core consists of a COM Express CPU module and heatspreader mounted on its bottom side, resulting in optimal thermal management and increased space for I/O functions and connectors.

Application layer
Computer-on-module layer
Thermally-conductive baseplate layer

This innovative design makes it possible for Magellan to integrate dual gigabit Ethernet LAN ports, a 7-30V DC/DC power supply, a full set of peripheral interface header connectors, stackable PCI-104 or SUMIT expansion, and a FeaturePak I/O module socket, in addition to a complete embedded-PC core -- all within the 95 x 125 mm COM Express footprint. Stacking boards in one direction greatly simplifies the thermal design of embedded systems based on high-end CPUs, avoiding costly custom heat pipes and milled aluminum thermal-transfer blocks.

Magellan is offered in a range of models that vary according to the choice of COM Express CPU module and SDRAM capacity (socketed or soldered-on). It can be used either as a highly integrated embedded component, or as a platform for application development and reference designs.

The Magellan baseboard includes connectors and interfaces for USB, serial, gigabit Ethernet, audio, and SATA mass storage devices. It also supports the connection of a wide variety of displays, including CRTs, LVDS-interfaced flat panels, and televisions..

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Magellan ERS Pricing and Availability

Small quantities of the Magellan embedded-ready subsystem are available in 30 days in several models, priced as indicated below. Development kits that include the Magellan models shown below plus a cable kit and utility software are also available.

Model	Description	Qty. 1 Price
MAG-Z510-1G	Magellan ERS with 1.1GHz Atom Z510 CPU, 1GB soldered-on SDRAM, and heatspreader	$675
MAG-965-1G	Magellan ERS with 1.6GHz Core 2 Duo LV CPU, 1GB SO-DIMM SDRAM, and heatspreader	$1445
MAG-965-4G	Magellan ERS with 1.6GHz Core 2 Duo LV CPU, 4GB SO-DIMM SDRAM, and heatspreader	$1595

About the FeaturePak I/O Modules Standard

The FeaturePak specification defines tiny, application-oriented personality modules – three-fifths the size of a credit card – that snap into low-cost, low-profile sockets on single board computers (SBCs), computer-on-module (COM) baseboards, and full-custom electronic circuit boards. FeaturePak modules interface to the host system via a single low-cost, high-density, 230-pin connector, which carries PCI Express, USB, I^2C, and several other host-interface signals, plus up to 100 points of application I/O per module. The FeaturePak host interface is CPU agnostic and is compatible with both Intel- and RISC-architecture systems. Additionally, the modules can easily be integrated into embedded designs along with Qseven, COM Express, SUMIT, PCI/104-Express, EBX, and EPIC. For more information, visit www.featurepak.org.

About Diamond Systems

Founded in 1989, Diamond Systems Corporation is a leading supplier of compact, rugged, wide-temperature embedded computing solutions for a wide range of applications in fixed and mobile environments. The company is the originator of the FeaturePak I/O modules standard, was an early adopter of PC/104 technology and today is one of the leading worldwide suppliers of embedded I/O modules and highly integrated single board computers combining CPU and data acquisition on a single board. Diamond's extensive product line includes A/D, D/A, digital I/O, serial communications, wired and wireless networking, and power supply modules as well as single-board computers and enclosures. Diamond also offers a full range of system solutions, including the capability to customize boards or systems to meet the needs of a particular application. The privately held company is based in Mountain View, California, in the heart of Silicon Valley. For more information, visit www.diamondsystems.com or call 1-800-36-PC104.

MAGELLAN ERS MEDIA RESOURCES

- Magellan web page
- Magellan data sheet (pdf)
- Magellan in hand photo (jpg)
- Magellan top view photo (jpg)
- Magellan bottom view photo (jpg)
- Magellan angled photo view (jpg)
- Embedded-Ready Subsystems whitepaper (pdf)

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2

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