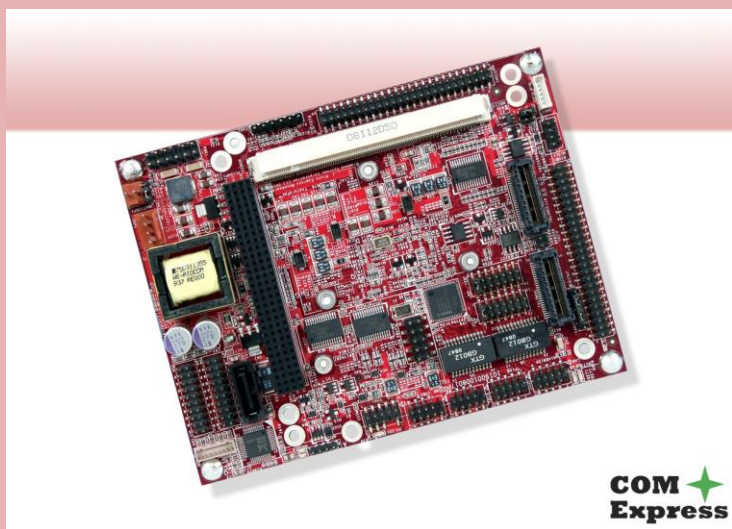


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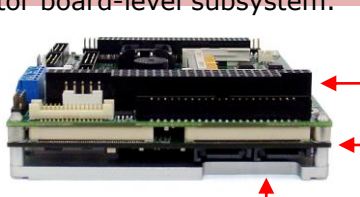


COM Express form-factor Embedded-Ready Subsystem with SUMIT, PCI-104, and FeaturePak expansion and configurable COM CPU



Highly Integrated Embedded-Ready Subsystem (ERS)

Magellan integrates an I/O application layer, COM layer, and thermal layer into a compact, COM Express form-factor board-level subsystem.



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

Price/Performance Advantage

Magellan offers a configurable COM Express CPU so that you can match a Magellan ERS to the price/performance needs of your application.

Access to Latest Technology

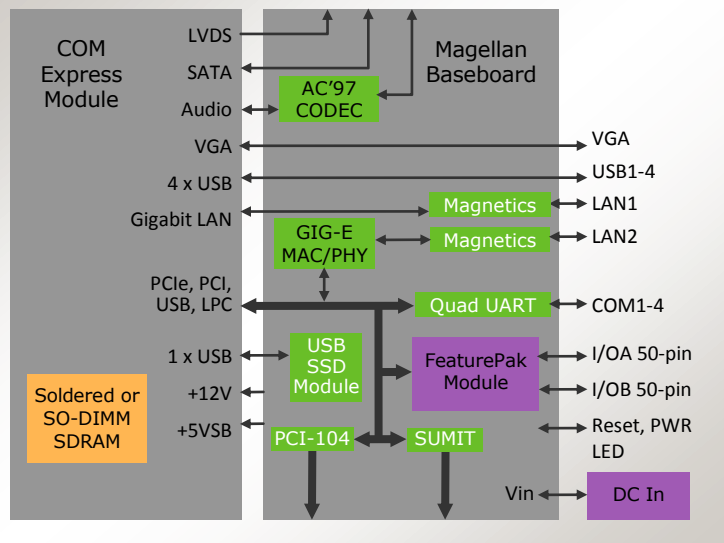
Magellan's COM-based design provides you with access to the latest CPU and I/O technology while protecting your investment from CPU obsolescence via plug compatible COM Express CPU modules.

Fast Time to Market

Magellan is a fully operational, off-the-shelf subsystem ready for deployment in your application. No custom baseboard development is necessary.

- ◆ Interchangeable COM Express CPU module provides price/performance flexibility and protects against product obsolescence
- ◆ Choice of 1.1GHz Intel Atom Z510 or 1.6GHz Intel Core 2 Duo LV CPUs
- ◆ Supports up to 4GB of DDR2 SDRAM (CPU dependent)
- ◆ I/O connectors for a wide range of interfaces:
 - Dual gigabit Ethernet LANs
 - One SATA port
 - Four USB 2.0 ports
 - Two RS-232 serial ports
 - Two RS-232/422/485 serial ports
 - CRT and LVDS video output
- ◆ On-board USB flashdisk socket
- ◆ Triple-play system expansion flexibility:
 - PCI-104 stack
 - SUMIT stack
 - FeaturePak zero height expansion socket
- ◆ Built-in 7-30V DC/DC power supply
- ◆ Extended operating temperature range of -40°C to +85° (-40°F to +185°F)

Block Diagram

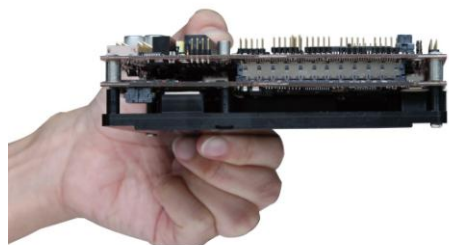


Magellan: COM Express ERS



Specifications

Processor	Choice of 1.1GHz Intel Atom Z510 or 1.6GHz Intel Core 2 Duo LV CPU
Front side bus	Atom Z510: 400MHz Core 2 Duo LV: 800MHz
Memory	Atom Z510: 1GB soldered-on DDR2 SDRAM Core 2 Duo LV: 1GB or 4GB SO-DIMM DDR2 SDRAM
Chipset	Atom Z510: US15WPT Core 2 Duo LV: 965GME with ICH8M
BIOS	AMI PnP Flash BIOS
Mass storage	1 SATA port, supports 1 device USB flashdisk socket
Serial ports	2 RS-232 ports 2 RS-232/422/485 ports
USB ports	4 USB 2.0
Networking	1 gigabit Ethernet from COM CPU 1 gigabit Ethernet from Intel 82574 controller on baseboard
Display	LVDS LCD flat panel interface VGA CRT
Keyboard/Mouse	USB keyboard and mouse
Audio	AC'97 audio CODEC; mic in, line in/out
Watchdog timer	Non-maskable interrupt or reset modes
Other I/O	SMBus, I ² C, LPC interfaces
Expansion buses	PCI-104 or SUMIT stackable expansion FeaturePak™ socket
On-board power supply	7-30V DC/DC power supply
Power input	7-30VDC
Power consumption	MAG-Z510-1G: 10.3W idle, 14.2W loaded MAG-965-xG: 14.2W idle, 23.5W loaded
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Operating humidity	0-90% non-condensing
Dimensions (L x W x H)	MAG-Z510-1G: 4.9 x 3.7 x 1.77 in. (125 x 95 x 45 mm) MAG-965-xG: 4.9 x 3.7 x 2.24 in. (125 x 95 x 57 mm)
Weight	MAG-Z510-1G: 11.7oz (332g) MAG-965-xG: 19.2oz (544g)
RoHS	Compliant



Magellan is a compact, highly-integrated computing subsystem that can be used in a wide variety of embedded computing applications

Key Features

Magellan is a high performance, highly integrated board-level embedded-ready subsystem that matches the footprint of the popular COM Express computer-on-module (COM) standard.

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. 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, modular PCI-104 or SUMIT expansion, and a FeaturePak socket, in addition to a complete embedded-PC core—all within the compact COM Express footprint.

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.

Magellan's baseboard includes connectors and interfaces for USB, serial, gigabit Ethernet, audio, and SATA mass storage devices. It supports the connection of a wide variety of displays, including CRTs, LVDS-interfaced flat panels, and televisions. Power is supplied by means of a robust six-pin terminal block.

Software Support

Magellan runs Linux, Windows XP, Windows Embedded Standard, and Windows Embedded CE. All OS drivers are shipped with the product.

Development Kit

Complete Development Kits are available for Magellan with all the components you need to get started on your embedded design project. Each kit contains a Magellan ERS, cable kit, and software CD.



Ordering Information

MAG-965-4G	Magellan ERS, 1.6GHz Core 2 Duo LV CPU, 4GB SO-DIMM SDRAM, heatspreader
MAG-965-1G	Magellan ERS, 1.6GHz Core 2 Duo LV CPU, 1GB SO-DIMM SDRAM, heatspreader
MAG-Z510-1G	Magellan ERS, 1.1GHz Atom Z510 CPU, 1GB soldered-on SDRAM, heatspreader
DK-MAG965	Magellan 965 Development Kit: MAG-965-1G, cable kit, OS drivers
DK-MAG510	Magellan Z510 Development Kit: MAG-Z510-1G, cable kit, OS drivers
C-MAG-KIT	Magellan Cable Kit for all on-board I/O
PNL-MAG-01	Magellan Panel I/O Board with mounting hw