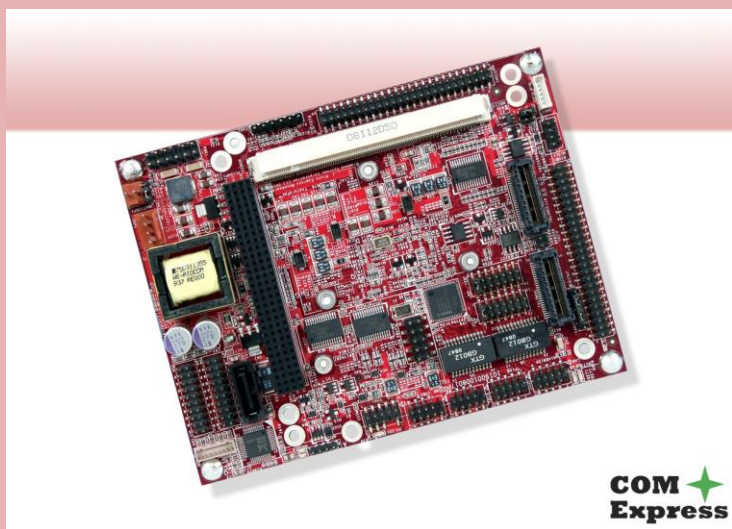


# MAGELLAN

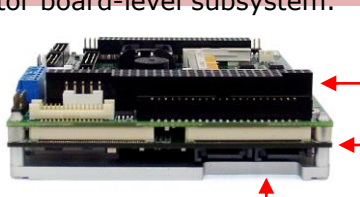


## COM Express form-factor Embedded-Ready Subsystem with SUMIT, PCI-104, and FeaturePak expansion and configurable COM CPU



### 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

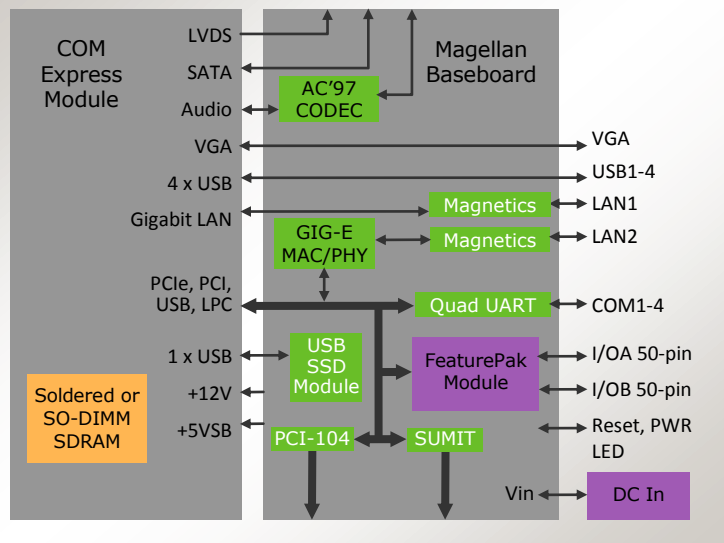
Magellan's COM-based design provides you with access to the latest CPU and I/O technology while protecting your investment from CPU obsolescence via plug compatible COM Express CPU modules.

### 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 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

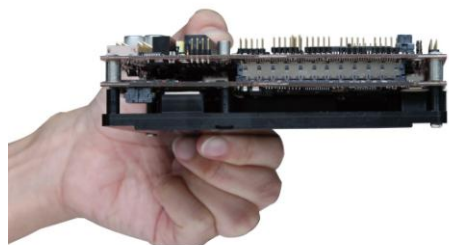


# Magellan: COM Express ERS



## Specifications

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

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