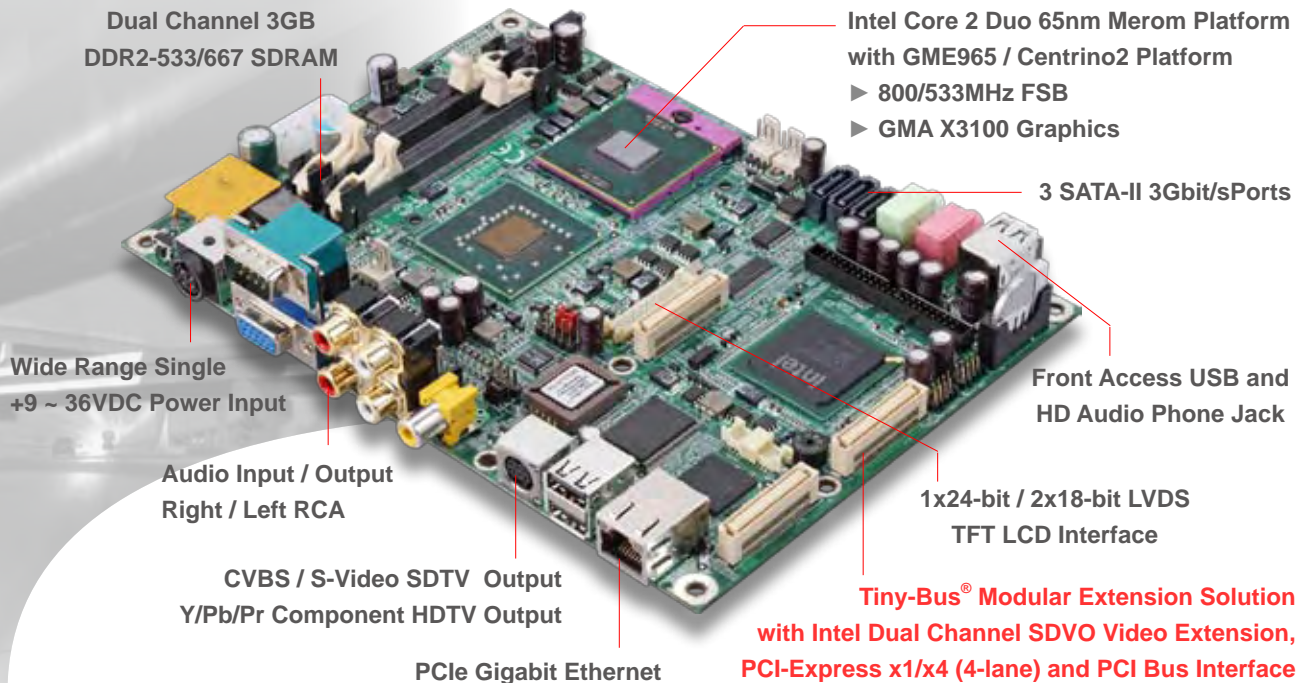


# EMB-5930

## 5.25" Intel Core2 Duo Express Multimedia EmBoard with Tiny-Bus® Modular Extension Solution



### Overview

The EMB-5930 is an industrial x86-based multimedia computing solution based on the 5.25-inch drive size form factor, Intel GME965 Express Core 2 Duo Merom (Santa Rosa) mobile computing platform, and features the embedded Tiny-Bus® Modular Extension Solution. With the Intel powerful mobile processing capacity of Santa Rosa Core2 Duo mobile Merom platform, onboard LVDS, TV-out, HD audio, Gbit Ethernet, SATA-II 3Gbit/s interfaces, and the Tiny-Bus® modular Extension solution, the EMB-5930 EmBoard meets the demand of the industrial embedded Small Form Factor (SFF) x86 PC-based multimedia computing applications with flexible modular Extension solution.

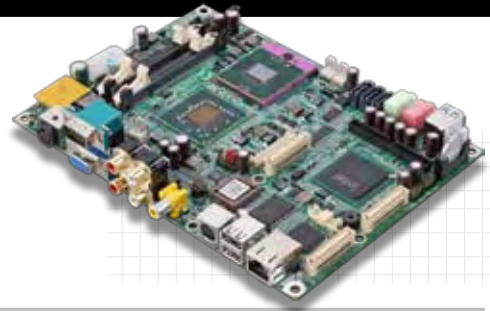
### Key Features

- Intel GME965 Express Core2 Duo (Santa Rosa) mobile computing platform with 800/533MHz FSB, DDR2 SDRAM and GMA X3100 graphics core.
- Optional Intel L7500 / U7500 low power processor for fanless operating.
- 1x24-bit / 2x18-bit LVDS, Gigabit Ethernet, SATA-II 3Gbit/s ports.
- Onboard HD audio interface with RCA and phone jack connectors.
- Tiny-Bus® Modular Extension Solution with Intel SDVO video extension, PCI and PCI Express (4-lane configurable as four x1 or one x4 PCI Express) bus interface.
  - ▶ TBM-16SDVO series Intel SDVO-based video extension modules.
  - ▶ TBM-12xx series PCI-based extension modules.
  - ▶ TBM-14xx series PCI Express based extension modules.
- Four external and 4 internal USB 2.0, 8-bit GPIO ports.
- IDE-based bootable / driver-free CompactFlash socket.
- Single wide range +9 to 36VDC (continued) power operating with external power jack.
- Compact, slim type and fanless barebone solutions are available.



# EMB-5930

**5.25" Intel GME965 Express Multimedia EmBoard  
Intel Santa Rosa Core2 Duo Mobile Express Platform  
with VGA, LVDS, HD Video / Audio, Gbit Ethernet  
and Tiny-Bus® Modular Extension Solution**



Industrial  
Mini-ITX EmBoard

Embedded Single  
Board Computer

Tiny-Bus  
Expansion Module

Fanless  
Computing Platform

Industrial  
Computing Platform

Industrial  
Embedded Peripheral

## Form Factor

5.25-inch drive size EBX form factor at 203 x 146 mm

## CPU

Intel Santa Rosa mobile computing platform with Intel Core 2 Duo SV / LV / ULV and Celeron M Merom CPU at uFC-PGA478 / socket P package or uFC-BGA Supports Intel Core 2 Duo CPU with 800 / 533 MHz FSB Customized onboard-mounted Intel uFC-BGA479 mobile Core 2 Duo LV / ULV CPU for fanless operating OEM project.

## Memory

Two vertical type DDR2 SO-DIMM sockets Supports up to 3GB DDR2-800 non-ECC/registered SDRAM

## Chipset

Intel embedded GME965 GMCH and ICH8M

## Watchdog Timer

Programmable system reset watchdog timer

## Serial ATA (SATA) and IDE (PATA) Port

One 44-pin UltraATA100/133 IDE port Three SATA-II (SATA-300) 3Gbits / 300MBps ports

## CompactFlash Interface

CompactFlash socket supports CompactFlash Card (CFC) Supports PIO mode 4 / Multi-Word mode 2 Bootable, driver-free IDE-based solid state flash disk

## Extension Bus Interface (Tiny-Bus)

Embedded Tiny-Bus® Modular Extension Solution with Intel SDVO, 4-lane PCI Express and dual PCI bus interfaces

## Video Interface (VGA, LVDS, TV-out)

Intel GME965 GMCH built-in GMA X3100 graphics core with 2x18-/1x24-bit LVDS transmitter, SDTV / HDTV encoder External DB15 female connector for VGA on rear panel External CVBS RCA, S-video / YPbPr connector on rear panel Onboard 40-pin Hirose DF13-40DP-1.25V LVDS connector

## Audio Interface

Intel ICH8M with onboard ALC888S HD audio codec External right / left audio input / output RCA on rear panel External line-out and mic-in phone jacks on front panel

## Ethernet Interface

Onboard PCIe Intel 82573L/82574L Gigabit Ethernet controller External RJ45 connector with link / active LED on rear panel

## High-Speed USB 2.0, COM and GPIO Port

4 external (2 front and 2 rear) and 4 internal USB 2.0 ports 1 external RS-232C DB9 male COM port 1 8-bit GPIO with 4-bit digital input and 4-bit digital output

## External I/O Port and Indicated LED

### Rear I/O Panel

Power switch, DC power jack, VGA/COM, dual audio RCA, CVBS AV / S-Video / YPbPr TV-out, dual USB, RJ45 Ethernet

### Front I/O Panel

Line-out / Mic-in audio phone jack, 2 USB ports Power / access LED

## Environment

Power Input: single +9 ~ 36V DC (continued) power operating Board Dimension: 203 x 146 mm (L x W) Operation Temperature: 0 ~ 60°C (32 ~ 140°F)

## Tiny-Bus® Modular Extension Solution

The EMB-5930 EmBoard supports the embedded Tiny-Bus® Modular Extension Solution with Intel SDVO video extension, PCIe and PCI bus interfaces including (but not only) :

- ▶ **TBM-16SDVOD**: Intel SDVO 2 \* DVI and Mini-PCI Module
- ▶ **TBM-16SDVOX**: Intel SDVO 2 \* LVDS and Mini-PCI Module
- ▶ **TBM-1400**: PCIe Dual PCIe MiniCard Wi-Fi Module
- ▶ **TBM-1420**: PCIe PCIe 4-CH 120fps Video Capture Module
- ▶ **TBM-1430**: PCIe 4-Port Gbit Switch and mini-PCI Module
- ▶ **TBM-1440**: PCIe 4-Port Intel 82573L Gbit Ethernet Module
- ▶ **TBM-1441**: PCIe 4-Port Intel 82574L Gbit Ethernet Module
- ▶ **TBM-1442**: PCIe Dual Bypass Gbit Ethernet Module
- ▶ **TBM-1450**: PCIe IEEE1394b 800Mbps Firewire Module
- ▶ **TBM-1460**: PCIe eSATA / SATA-II Multiplier RAID Module
- ▶ **TBM-1200**: Dual Mini-PCI Type-III A/B Module
- ▶ **TBM-1210**: Dual PCMCIA CardBus and Mini-PCI Module
- ▶ **TBM-1230**: 4-Port Switch Hub and Mini-PCI Module
- ▶ **TBM-1240**: 4-Port Gbit Ethernet and Mini-PCI Module
- ▶ **TBM-1260**: IEEE1394 Firewire and Mini-PCI Module
- ▶ All Liantec standard PCI-based Tiny-Bus extension modules

Other customized compatible Tiny-Bus® modules for ODM / OEM projects. For the further information about Tiny-Bus® modules, please visit the website at <http://www.liantec.com>.

## Ordering Code

### EMB-5930S

5.25" Drive-size Intel GME965 Multimedia EmBoard Intel 65nm Merom Core 2 Duo Mobile Express Platform with VGA, LVDS, TV-out, HD Audio, Gbit Ethernet and Tiny-Bus® Modular Extension Solution

### EMB-5930U7500 (with Intel Core 2 Duo ULV U7500 CPU)

Same as above but with Intel U7500 1.06 GHz CPU (fanless)

## Customized ODM/OEM Service

Customized ODM/OEM service based on the EMB-5930 EmBoard with onboard Intel compatible uFC-BGA LV / ULV CPU, optional function configuration and embedded Tiny-Bus® Extension modules.

For the further information, please visit the website of <http://www.liantec.com>.