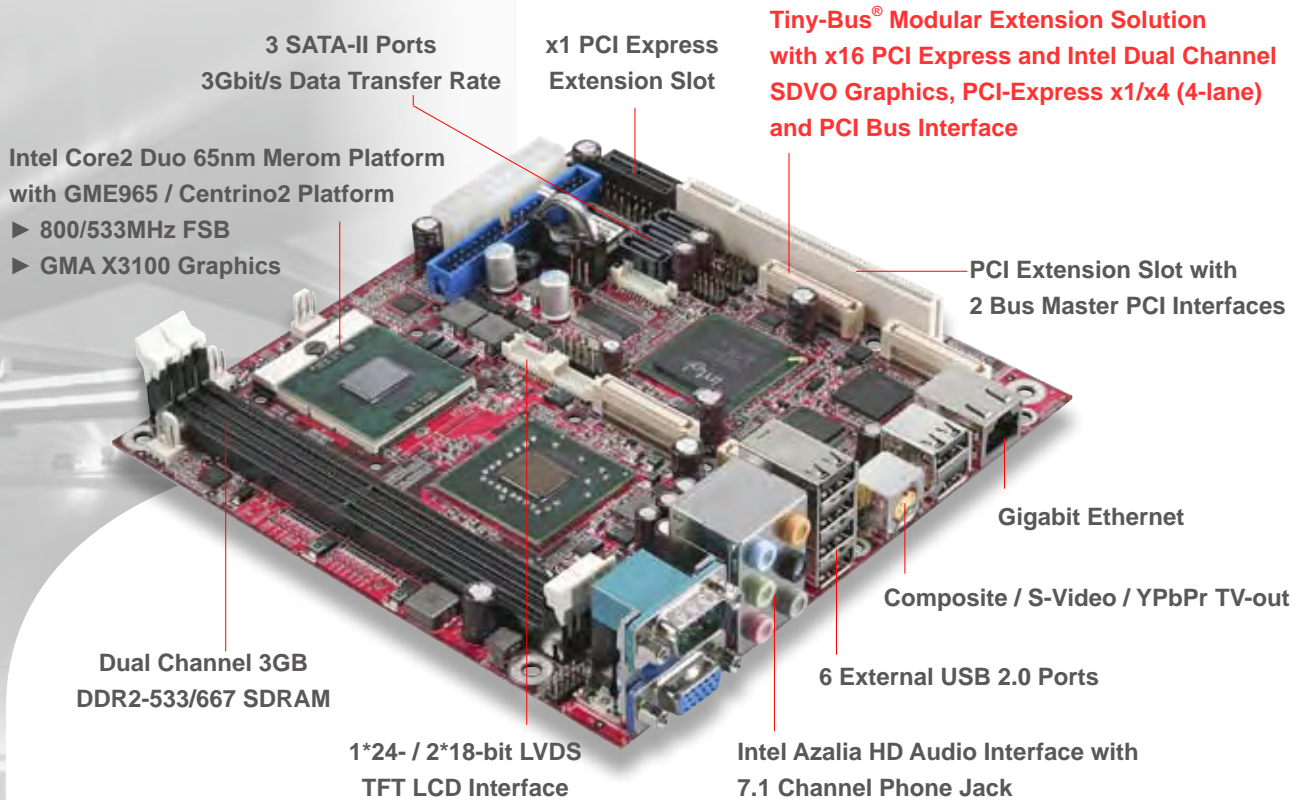


# ITX-6965

Mini-ITX Intel GME965 Core 2 Duo Mobile Express EmBoard  
with Embedded Tiny-Bus® Modular Extension Solution



## Overview

The ITX-6965 is an all-in-one industrial embedded motherboard based on the mini-ITX form factor, Intel mobile Centrino Pro / Duo platform with embedded GME965 Express chipset and Intel mobile Core 2 Duo CPU, and features the Liantec embedded Tiny-Bus® Modular Extension Solution with x16 PCI Express graphics and Intel dual channel SDVO video extension, PCI Express x1 / x4 (4-lane) and PCI bus interface. With the Intel latest mobile computing technology, mini-ITX form factor and Tiny-Bus® Modular Extension Solution, the ITX-6965 offers the advanced processing capacity on the industrial Small Form Factor (SFF) embedded x86-based computing solution with embedded and flexible modular expansibility.

## Key Features

- Intel mobile Centrino Pro / Duo Santa Rosa GME965 Express platform with Intel mobile Core 2 Duo CPU at 800 / 533 MHz FSB, dual channel 3GB DDR2 SDRAM and Microsoft Windows Vista Premium ready Intel GMA X3100 graphic core.
- Optional board-mounted Intel uFC-BGA mobile Core 2 Duo LV / ULV CPU for fanless and low power consumption computing application.
- Intel GME965 GMCH built-in 1\*24- / 2\*18-bit LVDS TFT LCD and TV-out interface.
- Optional Tiny-Bus® Intel SDVO-based DVI, HDTV, and mini-PCI module.
- 7.1-CH Intel Azalia HD audio, Gigabit Ethernet and SATA-II interfaces.
- **Tiny-Bus® Modular Extension Solution with x16 PCI Express and Intel dual channel SDVO Graphics, PCI Express x1 / x4 (4-lane) and PCI bus interface.**
- Dual bus master PCI and x1 PCI Express extension slot.
- Compact, slim type and fanless barebone solutions are available.



# ITX-6965

## Mini-ITX Intel GME965 Express EmBoard Intel Santa Rosa Merom Core2 Duo Mobile Platform with 800MHz FSB, DDR2, GMA X3100 Graphics and Tiny-Bus® Modular Extension Solution



Industrial  
Mini-ITX EmBoard

Embedded Single  
Board Computer

Tiny-Bus  
Extension Module

Fanless  
Computing Platform

Industrial  
Computing Platform

Industrial  
Embedded Peripheral

### Form Factor

Mini-ITX form factor at 170 x 170 mm or 6.7 x 6.7 inches

### CPU

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

### Memory

Two DDR2 DIMM support 3GB dual channel DDR2 SDRAM

### Chipset

Intel embedded mobile GME965 GMCH and ICH8-M chipset

### Watchdog Timer

Programmable system reset watchdog timer

### SATA and IDE (PATA) Port

One 40-pin ATA100/133 IDE and 3 SATA-II 300Mbps ports

### Extension Bus Interface

One dual bus master PCI slot and one x1 PCI Express slot  
[Liantec Tiny-Bus® embedded modular extension solution with x16 PCI Express and Intel dual channel SDVO Graphics, PCI Express x1 / x4 \(4-lane\) and PCI bus interface](#)

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

Intel embedded GME965 GMCH built-in GMA X3100 VGA core with 1\*24- / 2\*18-bit LVDS transmitter and TV encoder  
External DB15 female connector for VGA on rear I/O panel  
External AV / S-Video / YPbPr connector on rear I/O panel  
Onboard 40-pin Hirose DF13-40DP-1.25V LVDS connector

### Video Extension Interface (DVI and GPU)

Embedded Tiny-Bus® modular extension solution with x16 PCIe Graphics and Intel SDVO extension interface Supports Tiny-Bus® x16 PCI Express Graphics modules or Intel SDVO-based DVI, TV-out video extension modules

### Audio Interface

Intel Azalia 7.1 / 5.1 channel HD audio with ALC888S codec  
External 6 phone jack and internal pin header connector

### Ethernet Interface

Onboard PCIe Intel 82574L/82573L Gigabit Ethernet controller 10/100/1000BASE auto-switching, IEEE802.3U compliant  
External RJ45 connector with LED on rear I/O panel

### Hi-Speed USB 2.0 and Multi-I/O Port

6 external and 4 internal Hi-Speed USB 2.0 ports  
One external and one internal RS232 COM port

### External Rear I/O Port

DB15 female VGA and DB9 male COM port  
7.1 channel and S/P DIF audio port  
Four USB 2.0 ports  
Composite AV / S-Video / YPbPr TV-out  
Dual USB ports  
RJ45 Gigabit Ethernet port  
Other external ports on add-on Tiny-Bus® module

### Environment

Power Requirement: onboard 20-pin ATX power connector  
Board Dimension: 170 x 170 mm or 6.7 x 6.7 inches (L x W)  
Operation Temperature: 0 ~ 60°C (32 ~ 140°F)

### Tiny-Bus® Modular Extension Solution

The ITX-6965 EmBoard supports the Tiny-Bus® Modular Extension Solution with x16 PCI Express and Intel dual channel SDVO Graphics, PCI Express x1/x4 (4-lane) and PCI bus interface including (but not only) :

- ▶ **TBM-16AM72:** x16 PCIe AMD ATI M72 Graphics Module
- ▶ **TBM-1610:** x16 PCIe MXM Type-II Graphics Module
- ▶ **TBM-16SDVOA:** Intel SDVO DVI, HDTV, Mini-PCI Module
- ▶ **TBM-16SDVOB:** Intel SDVO DVI, HDTV, Mini-PCI Module
- ▶ **TBM-16SDVOD:** Intel Dual SDVO DVI and mPCI Module
- ▶ **TBM-16SDVOX:** Intel Dual SDVO LVDS Module
- ▶ **TBM-1400:** PCIe Dual PCIe MiniCard Wi-Fi Module
- ▶ **TBM-1410:** PCIe PCIe ExpressCard and mini-PCI Module
- ▶ **TBM-1420:** PCIe PCIe 4-CH 120fps Video Capture Module
- ▶ **TBM-1430:** PCIe 4-Port Gbit Switch and mini-PCI Module
- ▶ **TBM-1441:** PCIe 4-Port Intel 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
- ▶ All Liantec standard PCI-based Tiny-Bus extension modules
- ▶ Liantec embedded DC/ATX power converter modules

Other customized compatible x16 PCIe Graphics / Intel SDVO / PCIe / PCI-based Tiny-Bus® modules for ODM / OEM project. For the further information about Liantec Tiny-Bus® modules, please visit the website at <http://www.liantec.com>.

### Ordering Code

**ITX-6965N:** Mini-ITX Intel GME965 Express EmBoard Supports Intel Core2 Duo Mobile Merom CPU with VGA, LVDS, Audio, TV-out, Gbit Ethernet and Tiny-Bus® Modular Extension Solution

### Customized ODM/OEM Service

Customized ODM/OEM service based on the ITX-6965 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>.