

ITX-6945

Mini-ITX Intel 945GME Core 2 / Core Mobile Express EmBoard with Embedded Tiny-Bus® Modular Extension Solution

Intel Mobile Core 2 Duo, Core Duo, Core Solo and Core-based Celeron M CPU on Mobile 945 Express Platform with GMA950 Graphic Core

x1 PCI Express Extension Slot

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

PCI Extension Slot with 2 Bus Master PCI

2 SATA-II (SATA-300) Ports

Gigabit Ethernet

Composite / S-Video TV-out

6 External USB 2.0 Ports

Dual Channel 3GB DDR2-533/667 SDRAM

Dual Channel 18-bit LVDS TFT LCD Interface

Intel Azalia HD Audio Interface with 7.1 Channel Phone Jack

Overview

The Liantec ITX-6945 is an all-in-one industrial embedded motherboard based on the Mini-ITX form factor and Intel mobile Core 2 Duo platform with Intel mobile Core 2 Duo, Core Duo, Core Solo and Core-based Celeron M CPU, Intel embedded 945GME Express chip-set, and features 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. With the Intel mobile computing platform technology, Mini-ITX form factor and embedded Tiny-Bus® Modular Extension Solution, the ITX-6945 offers the Small Form Factor (SFF) industrial x86 PC-based computing solution with flexible embedded modular expansibility.

Key Features

- Intel embedded mobile 945 Express platform with Intel mobile Core 2 Duo, Core Duo, Core Solo, and Core-based Celeron M CPU, 3GB DDR2 SDRAM and Intel 945GME GMCH built-in GMA950 graphic core.
- Customized onboard-mounted Intel uFC-BGA mobile Core 2 Duo LV / ULV, Core Duo LV / ULV, Core Solo ULV and Core-based Celeron M ULV CPU for fanless and low power consumption computing application.
- Intel 945GME GMCH built-in 2 x 18-bit LVDS and S-Video 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.**
- Compact, slim type and fanless barebone solutions are available.



ITX-6945

Mini-ITX Intel 945GME Express EmBoard Intel Core2 Duo / Core Duo / Solo Mobile Platform with 667MHz FSB, DDR2, GMA950 Graphics 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

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

CPU

Intel mobile Core 2 Duo, Core Duo, Core-based Celeron M CPU at 667 / 533 MHz FSB at uFC-PGA478 package
[Customized onboard-mounted Intel uFC-BGA mobile Core 2 Duo LV / ULV, Core Duo LV / ULV, Core Solo ULV and Core-based Celeron M ULV CPU fanless operating for OEM project.](#)

Memory

Two DDR2 DIMM support 3GB dual channel DDR2 SDRAM

Chipset

Intel embedded mobile 945GME GMCH and ICH7-M chipset

Watchdog Timer

Programmable system reset watchdog timer

SATA and IDE (PATA) Port

One 40-pin ATA100/133 IDE and 2 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, dual PCI Express x1 \(2-lane\) and dual PCI bus interface](#)

Video Interface (VGA, LVDS and TV-out)

Intel embedded 945GME GMCH built-in GMA950 VGA core with 2x18-bit LVDS transmitter and TV encoder
External DB15 female connector for VGA on rear I/O panel
External AV / S-Video TV-out 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 PCI-Express Intel 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 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-6945 EmBoard supports the Tiny-Bus® Modular Extension Solution with x16 PCI Express and Intel dual channel SDVO Graphics, dual PCI Express x1 and dual 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-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-6945N: Mini-ITX Intel 945GME Express EmBoard
Supports Intel Core2 Duo / Core Duo / Solo 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-6945 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>.