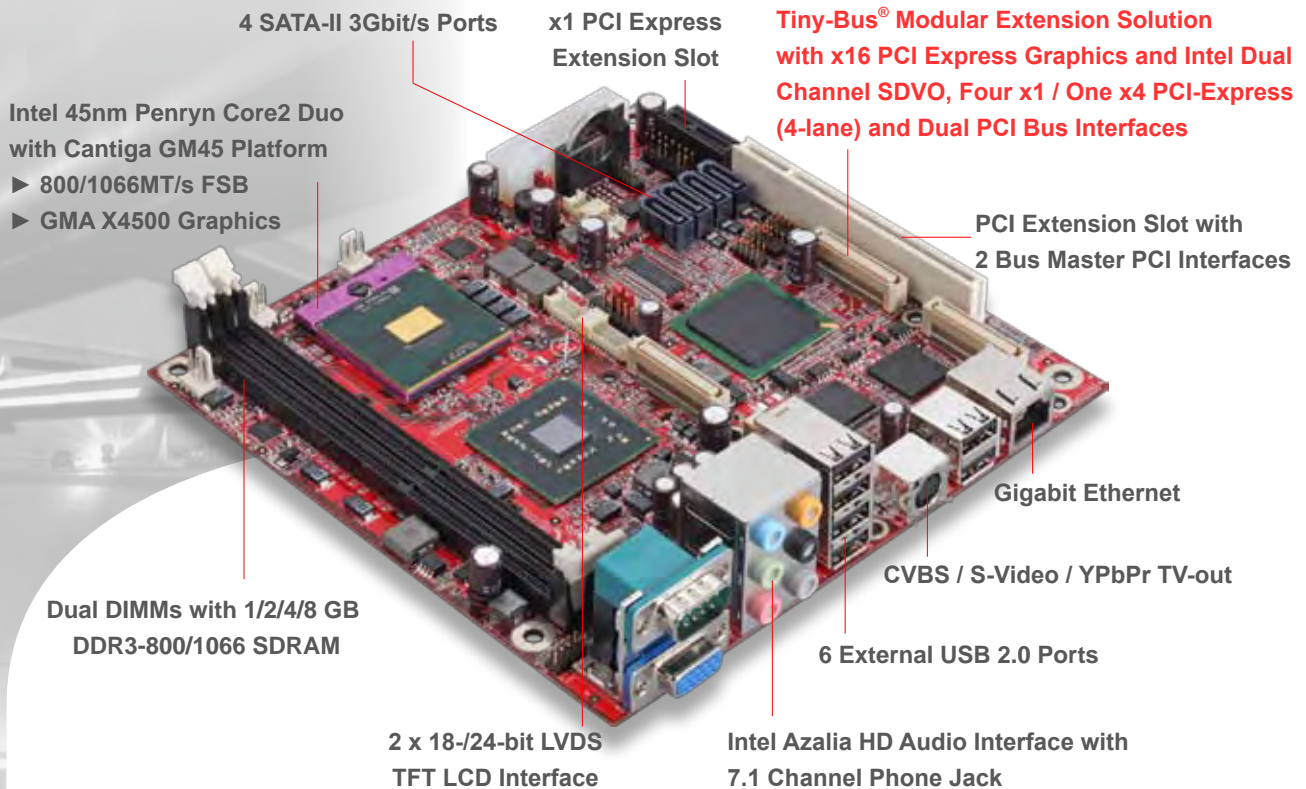


ITX-6M45

Mini-ITX Intel GM45 Core 2 Duo / Quad Mobile Express EmBoard with Embedded Tiny-Bus® Modular Extension Solution



Overview

The Liantec ITX-6M45 is an all-in-one industrial embedded motherboard based on the mini-ITX form factor, Intel Montevina mobile platform with Intel embedded mobile Penryn 45nm Core2 Duo / Quad mobile processor at 1066 / 800 MT/s of FSB, Intel Cantiga GM45 Express chipset, and the Liantec Tiny-Bus® Modular Extension Solution. With the features of the Intel latest computing technology and the embedded Tiny-Bus® Modular Extension Solution, the ITX-6M45 EmBoard offers the advanced digital processing capacity on the industrial Small Form Factor (SFF) embedded x86-based computing solution with embedded and flexible modular expansibility with multiple bus interfaces.

Key Features

- Intel Montevina platform with Intel 45nm Penryn Core2 Duo / Quad mobile CPU at 1066/800 MT/s of FSB, 1/2/4/8GB DDR3-800/1066 SDRAM, and GM45 GMCH built-in Intel GMA X4500 graphic core.
- Optional onboard Intel uFC-BGA 45nm Penryn Core2 Duo LV / ULV and Celeron M ULV CPU for fanless and low power computing application.
- Intel GM45 GMCH built-in 2*18-/24-bit LVDS and CVBS / S-Video / YPbPr TV-out.
- Optional Tiny-Bus® Intel SDVO-based single / dual DVI / LVDS video extension.
- Onboard 7.1-CH Intel Azalia HD audio, Gigabit Ethernet and SATA-II 3Gbit/s interfaces.
- **Tiny-Bus® Modular Extension Solution with x16 PCI Express Graphics and dual channel Intel SDVO video extension, four x1 / one x4 PCI Express and dual PCI bus interfaces.**
- Dual bus master PCI and one x1 PCI Express extension slot.
- Compact, slim type and fanless barebone solutions are available.



ITX-6M45

Mini-ITX Intel GM45 Core2 Duo/Quad Mobile EmBoard
Intel Embedded Montevina Cantiga Computing Platform
with 1066MHz FSB, DDR3 SDRAM, GMA X4500 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 embedded mobile Montevina computing platform
Supports 45nm Penryn Core2 Duo / Quad Mobile processor
with 800/1066MT/s FSB at Socket-P package
Supports 65nm Celeron M processor with 667MHz FSB
Customized onboard Intel uFC-BGA479 mobile Core2 Duo LV
/ ULV and Celeron M ULV CPU for fanless operating

Memory

Two 240-pin 1.5V DDR3 DIMM sockets
support 1/2/4/8GB DDR3-800/1066 SDRAM

Chipset

Intel embedded Cantiga GM45 GMCH and ICH9M chipset

Watchdog Timer

Programmable system reset watchdog timer

Serial-ATA (SATA) Port

Four SATA-II 3Gbit/s (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 graphics and dual channel Intel SDVO, four
x1 / one x4 PCI Express and dual PCI bus interfaces.

Video Interface (VGA, LVDS and TV-out)

Intel GM45 GMCH built-in GMA X4500 VGA core
with 2x18-/24-bit LVDS transmitter and SDTV / HDTV encoder
External DB15 female connector for VGA on rear I/O panel
External CVBS / S-Video / YPbPr TV-out 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 2 Intel SDVO extension interfaces
Supports Tiny-Bus® x16 PCIe Graphics modules or Intel SDVO-
based DVI / LVDS / SDTV / HDTV 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 82573L/82574L Gigabit Ethernet controller
External RJ45 connector with LED on rear I/O panel

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

6 external and 6 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
CVBS / S-Video / YPbPr TV-out
Dual USB ports
RJ45 Gigabit Ethernet port
Other external ports on add-on Tiny-Bus® extension 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-6M45 EmBoard supports the Tiny-Bus® Modular
Extension Solution with x16 PCI Express graphics and dual
channel Intel SDVO, four x1 or one x4 (4-lane) PCI Express
and dual PCI bus interfaces including (but not only) :

- ▶ **TBM-16AM72:** x16 PCIe AMD ATI M72 Graphics Module
- ▶ **TBM-1610:** x16 PCIe MXM Type-II Graphics Module
- ▶ **TBM-16SDVOB:** Intel SDVO DVI, HDTV and mPCI 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 Gbit Ethernet 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 3Gbit/s Multiplier 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-6M45N: Mini-ITX Intel GM45 Express EmBoard
Supports Intel Core2 Duo/Quad Mobile 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-6M45
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>.