

Company Profile



This archive provides a general understanding of ICOP global marketing directions and objectives. ICOP, in assisting clients on the design of new product, offers complete engineering consulting with the business-oriented development solutions, which consist of ICOP'S very own software support library such as DSOck, BSP for Windows CE.NET, BSP for Windows XP Embedded and BSP for xLinux; these over-the-top features make strong incentive for customer to select our SoC design in DM&P M6117D, Vortex86 and Vega86 as their hardware technology option.



ICOP is the leading global provider of x86 System-On-Chip (SoC) & embedded processor module for OEM/ODM applications. ICOP's technologies are focused on embedded, small footprint, low-power-consumption, low-heat-dissipation and able to operate in extended temperature range. ICOP existing x86 technology has proven track record and mature manufacturing & engineering resources to shorten product development schedule and minimize product development cost & risk.

ICOP provides engineering, manufacturing and technology outsourcing service to electronic equipment suppliers. To enhance the completeness of technical support, ICOP develops Board-Support-Package (BSP) for Windows CE and Image for Embedded Linux operating system. With these BSPs, electronic equipment suppliers can develop Proof-of-Concept quickly using ICOP's standard Vortex86 products. ICOP corporate service networks spread over the world offering proper engineering support in understanding the requirement of our customers as well as end-users. ICOP is committed to provide innovative engineering, quality manufacturing and responsive customer support.

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→ **Green Policy (RoHS/WEEE)**

Sensing the significance of environmental protection in future business development, ICOP initiated its Green Policy in accordance with the RoHS Directive and WEEE Directive environmental management system standard in Q4 2004.

With positioning environmental protection as the top priority, ICOP endeavors to encourage suppliers to support these dramatic changes. By switching the Lead Free process, the affect of components and raw materials on the environment will be reduced. Only components and raw materials that meet environmental protection guidelines will be purchased ensuring the parts ICOP uses do not contain environmentally hazardous substances.

Without sacrificing the current high levels of performance, quality and reliability, ICOP is committed to fulfill its social responsibility caring the global environmental preservation through converting all our products and manufacturing process to be compliant with RoHS and WEEE requirements by June 2006.

→ **SoC (System-on-Chip)**

SoC (System on Chip) is a major revolution taking place in the design of integrated circuits responding to the unprecedented levels of integration demand. In the past 10 years, SoC has emerged and accepted as one of the most efficient approaches in PC applications design. Based on the trend and demand of market, ICOP adopts SoC concept as the basic design foundation since 1995. SoC is the technology, which allows CPU, South Bridge and North Bridge to be implemented into a single silicon chip. It cuts development cycle and increases product functionality, performance, and quality. With this advantage in hand, ICOP is confident to provide top quality embedded products to address requirements in terms of splendid performance, low power consumption, mini size, wide working temperature range, highly integration, etc.

→ **Product Life-Cycle Guarantee**

ICOP recognizes the importance concern of product Life-Cycle. The product Life-Cycle and its related longevity is a key factor in controlling the product quality and market development cost for electronic equipment suppliers. In addition to addressing the performance, the quality and the cost of the product, we offer the key ability to maintain 5+ years Life-Cycle of our CPU and product key components in extending new products development. ICOP products are designed with components that are proven reliable and offer extended availability. ICOP implements a solid composition of product roadmap, version control, End-of-Life (EOL), last buy announcements, product upgrade path for stability and continuation of electronic equipment suppliers' product design.

→ **Extended Temperature Support**

Recognizing the need for industrial products to operate in extended temperature range, ICOP includes design consideration for many of its products to operate in extended temperature range. For Single-Board-Computer series product, the standard product design is targeted to operate in temperature range from -20°C to +70°C. Within this temperature range, M6117D, Vortex86 and Vega86 SoC can operate at its peak performance 40MHz, 166MHz and 533MHz respectively. For application that needs to operate in temperature range from -40°C to +85°C, ICOP can provide vital design to warrant the performance within this extended temperature range.

products sales and service center for China's market.

→ **Microsoft Windows Embedded**

The Windows Embedded family, including Windows CE 5.0, Windows XP Embedded with Service Pack 2 and Windows Embedded for Point of Service, provides the complete time-to-market advantage, with the best set of technology, tools and resources to accelerate development of your next-generation intelligent device.

Recognizing the advantage Windows Embedded might inspire, ICOP is committed to provide customers with the abundant supports in using Windows Embedded Technologies. With more than 15 years of embedded hardware design/manufacturing experience, flexible business model, along with unmatched commitment to support Windows Embedded Technologies, ICOP is your best Windows Embedded Hardware Partner.

→ **ICOP's Commitment in 2006**

To keep providing customers with ultimate edge in expanding business development, ICOP promises:

- **Fully compliance with RoHS and WEEE**

While satisfying client's need, ICOP never ignores the significance of environment protection. ICOP is committed to conform to RoHS and WEEE Directives with fully preparation.

- **Offering M6117D, Vortex86 and Vega86 series products**

In addition to refining existing M6117D and Vortex86 series based products, ICOP makes the introduction of Vega86 Series design expanding the range of product combinations for clients in different applications.

- **Offering embedded operating system support, including Windows XP embedded, Windows CE, WEPOS and Linux**

To shorten the develop time and risk, the trend in adopting the variant Operating Systems for hardware applications is unstoppable. ICOP recognizes the significance and enhance the operating systems supports by covering Windows XP Embedded, Windows CE, WEPOS and Linux.

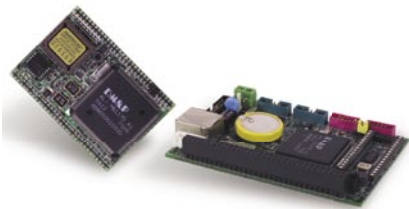
- **Providing customers with the abundant supports of Windows Embedded Technologies**

As the Microsoft's 2005 Windows Embedded Partner of the Year in the Independent Hardware Vendor Category, ICOP will carry on to spare no effort offering the abundant experience for the application of Windows Embedded Technology.

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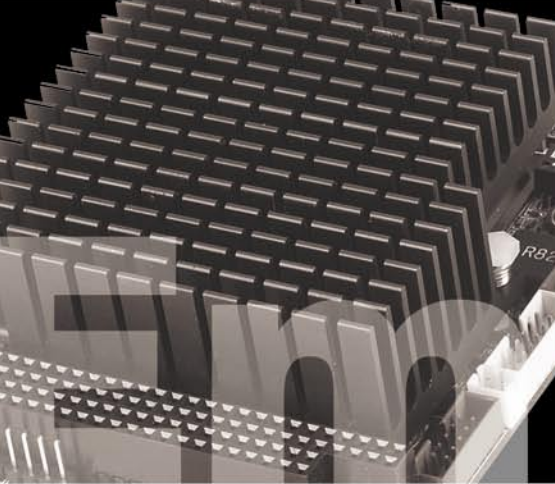
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Embedded Vega86 SBC Series



The powerful embedded x86 platform

for Windows XP Embedded, WEPOS, and embedded Linux application.



The Vega86 Single-Board-Computer series (powered by VIA Mark CoreFusion processor) offers high performance, cost-effective and energy efficient processor with integrated ProSavage4 SA graphics controller.

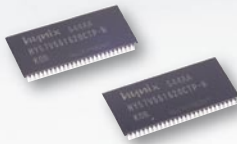
The complete board consists of the Mark CoreFusion processor and the VT82C686B PCI-ISA South Bridge, Realtek RTL8100B 10/100 Fast Ethernet Controller, etc. The processor integrates VIA's high-performance ProSavage4 3D/2D graphics controller, LCD and Flat Panel display interfaces, with further superior performance between the CPU, DRAM and PCI bus with pipelined, burst, and concurrent operation. The South Bridge is PC98 / PC99 compliant with integrated UltraDMA-66 / 33 IDE, 2 (or 3) USB (1.1) ports, a complete power management feature set, Super-I/O functions (floppy disk drive interface and serial / parallel ports), and AC-97 link supporting digital audio functions.



Overview of Vega86 Single-Board-Computer Board



Providing 533/800MHz CPU speed grade, the Vega86 SBC is also equipped with a deep In-Order Queue and SSE instructions support, which is suitable to enhance video, audio and faster 3D graphics performance.



The Vega86 SBC supports onboard system memory up to 256MB. As to the DRAM controller, it meets the standard PC133 Synchronous DRAM (SDRAM). The Synchronous DRAM interface allows zero wait state bursting between the DRAM and the data buffers at 133MHz.



The Vega86 SBC integrates S3 Graphics and 128-bit ProSavage4 graphics accelerators that bring mainstream graphics performance to the Value PC with leading-edge 2D, 3D and DVD video acceleration into a cost effective package. Vega86 SBC also combines the industry's first integrated AGP 4X solution with Microsoft Direct-X texture compression and massive 2Kx2K textures to deliver unprecedented 3D performance and image quality for the Value PC mobile market.

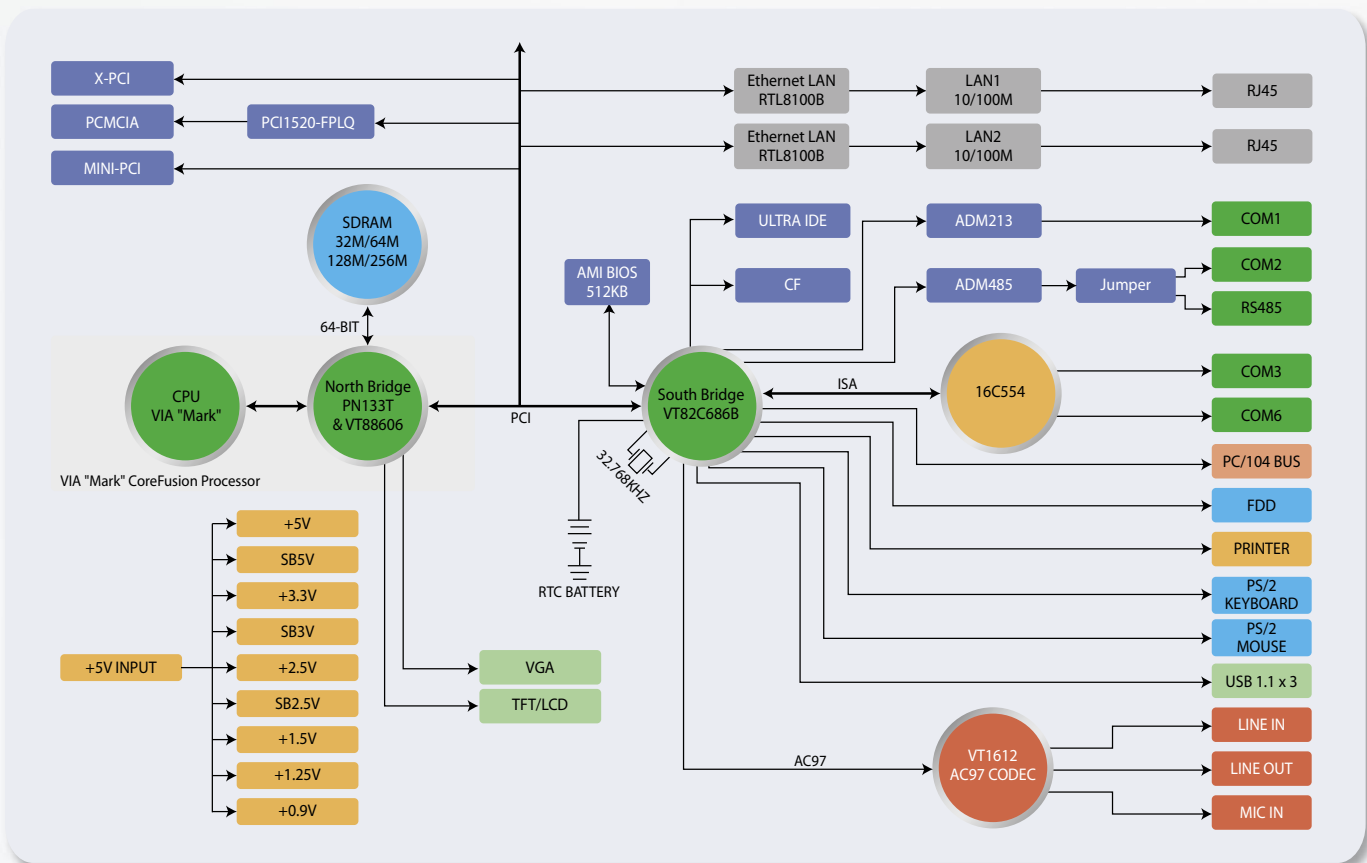


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Vega86 SBC's South Bridge supports four levels (doubleword) of line buffers, type F DMA transfers and delay transaction to allow efficient PCI bus utilization and (PCI-2.2 compliant). The VT82C686B also includes an integrated Super I/O, integrated DS12885 style real time clock with extended 256 byte CMOS RAM, integrated master mode enhanced IDE controller with full scatter / gather capability, integrated two (or three) USB (1.1) interface with root hub and two function ports with built-in physical layer transceivers, Distributed DMA support, integrated AC-97 link for basic audio functions and integrated OnNow / ACPI compliant advanced configuration.

Regarding the network architecture application, Vega86 SBC equips with the Realtek RTL8100B, which is a highly integrated, cost-effective single-chip Fast Ethernet controller able to provide 32-bit performance, PCI bus master capability, and full compliance with IEEE 802.3u 10/100Base-T specifications and IEEE 802.3x Full Duplex Flow Control.

→ Vega86 Block Diagram



Embedded DM&P Vortex86™ Technology



- The best single-chip x86 platform for Windows CE, DOS and embedded Linux application.
- High integration, x86 SoC architecture, low power, low heat, fanless, wide operating temperature range, guarantee for long life cycle support since 2002.



Vortex86 family offers high performance, low cost SoC (System-on-Chip) solution with the integration of x86 compatible processor, high performance North Bridge, advanced hardware GUI engine and Super-South Bridge. In addition, the Vortex86 family SoC complies with Easy PC Initiative that supports Instantly Available On-Now PC technology, USB, Legacy Removal, CIR, Smart Card and Slot less Design for a variety of IA (Information Appliance) applications. The Vortex86 SoC technology is a proven matured product for embedded computing application.

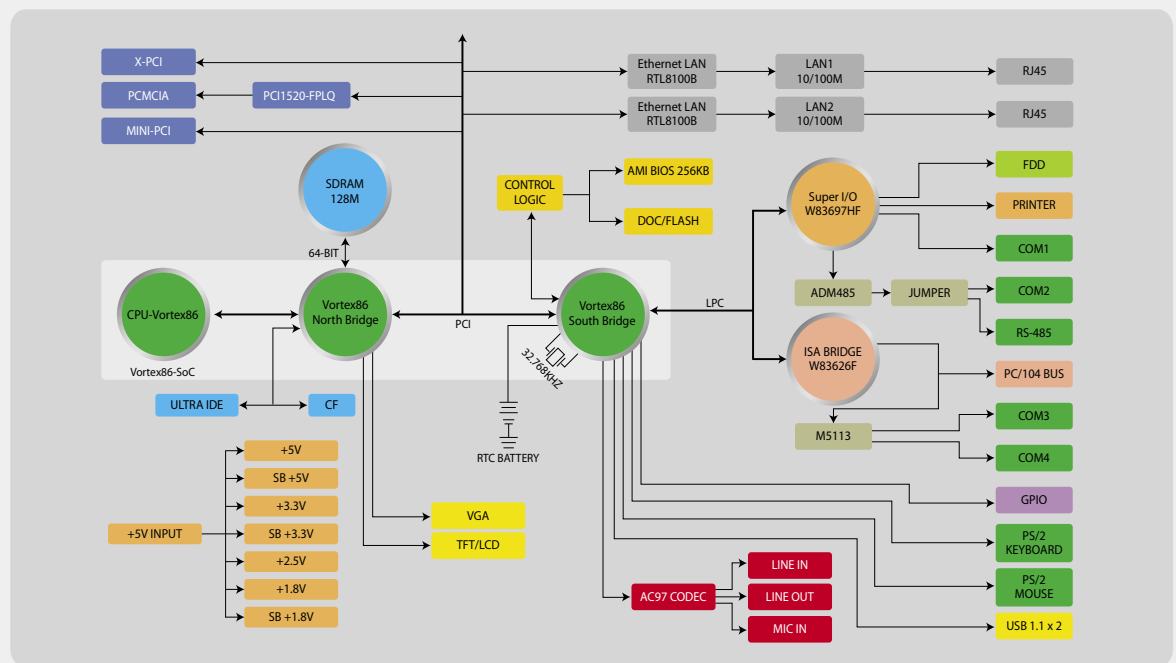
With the charisma of x86 design expertise, ICOP provides the development of Vortex86 technology design in the embedded SBC and the processor module that ensures low power consumption, low heat dissipation and wide temperature range from -20°C to +70°C. To lower development risk & cost, ICOP assists our client by the commitment of Board-Support-Package on popular Embedded OS for Windows CE and Windows XP Embedded.

Vortex86 family integrates a high-performance processor that supports x86 instruction set with 3 integer units, 3-way superscalar architecture, and a fully pipelined floating point unit. In addition, the processor is a power-efficient design that optimizes the power consumption for information appliance applications.

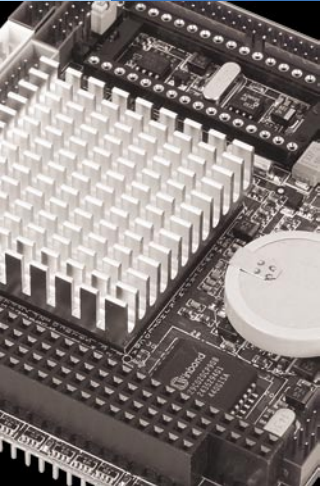
By integrating the Ultra-AGP™ technology, Vortex86 family delivers high performance GUI-memory bandwidth. Furthermore, Vortex86 family provides powerful slice layer decoding DVD accelerator to improve the DVD playback performance. In addition to providing the standard interface for CRT monitors, Vortex86 family also provides the Digital Flat Panel Port (DFP) for a standard interface between a personal computer and a digital flat panel monitor. To extend functionality and flexibility, DM&P also provides the Video Bridge (SiS301) to support the NTSC/PAL Video Output and Digital LCD Monitor, which reduces the external Panel Link transmitter and TV-Out encoder for cost effected solution. Vortex86 family also adopts Share System Memory Architecture that can flexibly utilize the frame buffer size up to 128MB.

Vortex86 SOC offers high performance Embedded System-On-Chip (SOC), with an equivalent performance of a Pentium processor with integrated support for CRT/LCD, IDE, Floppy and I/O peripherals.

Block Diagram of Vortex86 SoC



www.vortex86.com



This website contains the complete solution for engineers, who are working their applications on DM&P vortex86 SoC processor, to lower their risk on development and to shorten time to market.

→ The website mainly contains 9 categories, such as

1. Vortex86 Family Overview

This section contains general information of Vortex86 SoC.

2. System Block Diagram

This section shows up function block of SoC and interface.

3. Datasheet

This section contains Data Sheet file for free download.

4. Design Guide

This section contains document for the hardware design engineer on Vortex86 SoC.

5. Illustrations of Vortex86 Single Board Computers

This section contains the web link of various kind of standard, OEM board which they all design by Vortex86 SoC.

6. Development Kit

This section introduces a tool kit “DMP-1032” for hardware engineer which it is helpful for engineering work to lower risk in development.

7. Operating Systems

This section contains various resource and library for software engineer who need to work with Vortex86 under Windows CE, Windows XP Embedded, WEPOS, Windows 98, Linux and DOS, etc.

8. FAQ

This section contains nearly 30 documents for engineer may question about CPU, BIOS, CMOS, Disk, Video, etc. under their work with SoC.

9. Technical Support

This section contains the contact information for whom need further support of SoC.



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Embedded DM&P M6117D SoC Processor



- The best entry level x86 platform for DOS and embedded Linux application.
- Efficient, x86 SoC architecture, low power, low heat, fanless, wide operating temperature range, guarantee for long life cycle support since 1998.

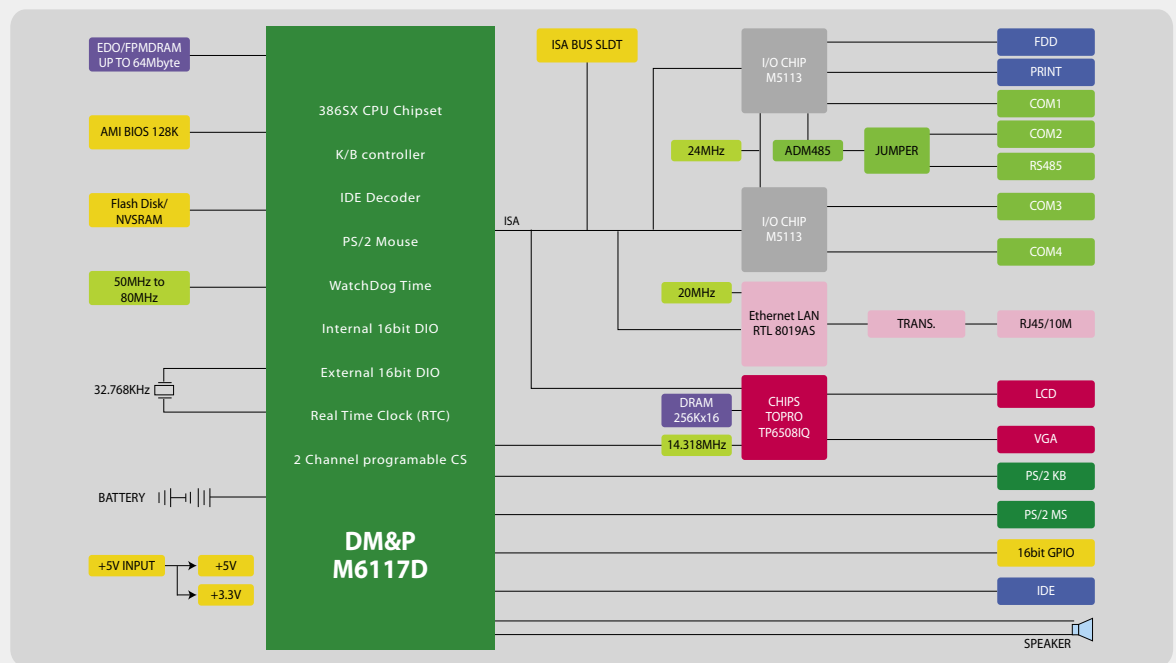


For entry-level and cost-efficient x86 embedded solution, ICOP delivers DM&P M6117D, an embedded x86 System-on-Chip solution using 386SX-core (40MHz). To lower peripherals & components requirements for the finished processor board, DM&P M6117D's design incorporates many common I/O functions required by industrial & commercial applications such as DIO, RTC, Keyboard & Mouse controller, IDE controller, Memory controller, Watchdog timer, etc.

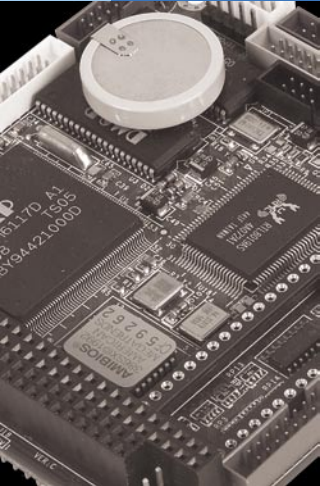
1. Fully 386SX core (40MHz) compatible
2. Supports EDO DRAM controller including FP mode
3. Coprocessor Interface

4. ISA interface
5. Peripheral Interface (includes two cascaded 8237 DMA controllers, a 74612 memory mapper, 2 cascaded 8259 interrupt controller, and a 8254 programmer counter)
6. Built-in RTC
7. Programmable 2 channels chip select
8. Built-in PS2 Keyboard Controller and Mouse
9. Built-in WATCHDOG timer
10. 16-bits GPI/O via SD bus and 16-bits independent GPIO
11. IDE interface
12. 208-pin PQFP package

Block Diagram of DM&P M6117D SoC



www.m6117d.com



This website contains the complete solution for engineers, who are working their applications on DM&P M6117D SoC processor, to lower their risk on development and to shorten time to market.

→ The website mainly contains 8 categories, such as

1. About M6117D SoC

This section contains general information of SoC.

2. Features and Functions

This section contains detail information of each unit inside SoC.

3. System Block Diagram

This section shows up function block of SoC and interface.

4. Development Kit

This section introduces a tool kit “DMP-1032” for hardware engineer which it is helpful for engineering work to lower risk in development.

5. Hardware Reference

This section contains several documents, such as data sheet of SoC, I/O chip, VGA chip, network chip, EDO-RAM chip, etc., for your free download.

6. Software Resource

This section contains several source code and library for your free download. Such as –

- Free embedded xLinux
- Free xDOS
- DOS Socket Library for C software to TCP/IP under DOS
- DOS XMS Library is for software to access the DOS memory above 1Mbyte.

7. Reference Technical Documents

This section contains nearly 30 documents for engineer may question about CPU, BIOS, CMOS, Disk, Video, etc. under their work with SoC.

8. Technical Support

This section contains the contact information for whom need further support of SoC.



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X-DOS & DM&P DOS Libraries



The complete OS support

for x86 architecture with the TCP/IP, XMS, Graphic LCM libraries, etc



The evolution of various Operating Systems emerges continuously with many new and exciting smart devices and systems. Since DOS is the viable, reliable and efficient Operating System, it is still chosen by programmers as the one of best options for system development. To assist the motivation of our clients in using our embedded technology, we developed a family of software utilities and application development resources for DOS. The DOS based on software resources enables our clients to continue expanding their DOS for the solutions using our x86 embedded technology.

With our M6117D series SBC, you can use our free x-DOS. You can also find in our url: <http://www.dmp.com.tw/tech/>, for x-DOS User's Manual and below DM&P DOS Libraries.

→ DSocket TCP/IP Library for DOS



DSock is a complete TCP/IP library for DOS in real mode. DSocket library provides simple C functions for programmer to write Internet/Intranet application. Dsock enables DOS based solution to access Internet and Intranet using TCP/ IP.

Sample codes using DSocket to implement BOOTP/DHCP, FTP server, SMTP client/server, HTTP server, TELNET server, Talk client/server are available for free download on our website.

This library supports Realtek 8019AS 10Mbps (ISA), ASIX AX88796L 10/100Mbps (ISA) and Realtek 8100B 10/100Mbps (PCI) network controller chips currently.

For more information, check: <http://www.dmp.com.tw/dsock>

→ RSIP Serial Server



RSIP serial server is designed to provide network access to legacy systems with RS-232, and RS-485 interface. RSIP convert protocol between RS-232/285 and TCP/IP. RSIP serial server can be managed and configured remotely via TCP/IP link using Web Browser.

For more information, check: <http://www.dmp.com.tw/rsip>



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→ **Graphic LCM Library**

Graphic LCM library provides simple C functions call for programmer to add graphic LCD feature to their applications using low cost GPIO or Parallel interface. Graphic LCM library provides support for 122x32, 128x64, 128x128, 240x128, 240x64 and 320x240, graphic LCD.

For more information, check:
<http://www.dmp.com.tw/lcm>

→ **Serial Port DOS Library**

SerPort DOS library is from the kernel of our RSIP that supports 4 serial ports and interrupt-driven communication. It provides simple C functions and saves a lot of development time for programmer. SerPort is for DM&P products with M6117D/Vortex86 CPU. It is a DOS real mode and large memory model library

For more information, check:
<http://www.dmp.com.tw/tech/dmp-lib/serport>

→ **DOS XMS Library**

Running DOS in real mode, programmer only can access RAM less than 1MB. Usable memories are 640KB. The other 384KB are reserved for ROM BIOS and other system resources. XMS library provides an easy way for the programmer to access RAM above 1MB.

For more information, check:
<http://www.dmp.com.tw/xdos/xms>

→ **DOS AccTimer Library**

DOS AccTimer library is for the programmer who wants to use precise mini-second timer. It will set 8254 to rate generator mode. This mode will create a short periodic output pulse with 1.1932MHz that user can use it to measure time less than 1ms.

→ **Note:**

- 1 Those software libraries can be used with DM&P and ICOP product with free royalty.
- 2 We recommend programmer to use Borland C++/Turbo C++ to build their DOS programs. Download Turbo C++ 1.01 from <http://community.borland.com/article/images/21751/tcpp101.zip>

DM&P xLinux



Open Source Operating System Option & Small Embedded Footprint



As one of the most popular open source operating systems, Linux is widely accepted by a large community of programmers and application developers. To assist clients embrace the advantage that the open source may bring, ICOP offers xLinux for embedded processor boards and modules. xLinux is a refined Linux package with tiny, fast boot kernel, which makes it suitable for clients to inspect and develop their applications in the shortest period of time. In this Embedded Operating System, ICOP adds varied features into xLinux, such as: PPP server, serial console, read only root file system etc. For more information, please visit <http://www.dmp.com.tw/tech/os-xLinux/.embedded> Linux projects/products on the website. This will be helpful to reduce risk and development time for clients.

Embedded solution requires operating system with small footprint and minimal memory demand. To address this challenge, ICOP creates xLinux based on kernel version 2.4.31. The complete xLinux solution requires less than 6MB. ICOP also provides MDM/DOC with pre-installed xLinux for programmers who want to operate their applications under Linux. With writing and debugging the programs on PC, programmers are able to upload it to any of ICOP's products easily. And within 10 seconds and 20 seconds, xLinux can be booted on Vortex86 , M6117D and Vega86 series.

Since there are so much existing resources about Linux, programmers may take much time to find proper source constructing their embedded Linux applications. To counter with that task, ICOP has added information about the application of embedded Linux projects/products on the website. This will be helpful to reduce risk and development time for clients.

→ xLinux Feature List

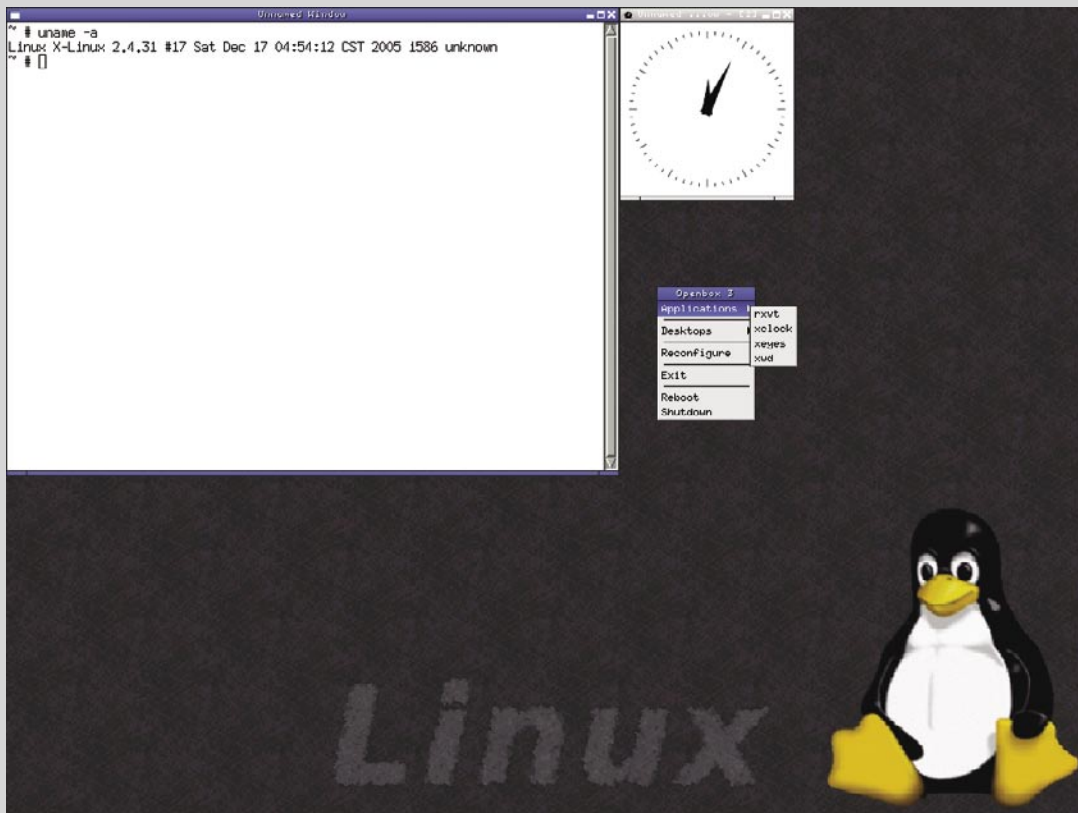
- Able to run on M6117D (386), Vortex86 and Vega86 series with 4MB memory.
- Only needing 6M bytes storage space.
- Only needing 10 (or less) seconds to boot on Vortex86 series from power on.
- Only needing 20 (or less) seconds to boot on M6117D series from power on.
- Support MSTI Embeddisk.
- Support EXT2 filesystem.
- Working with read-only filesystem (using tmpfs to reduce writing Flash storage).
- Support serial console for device without VGA.
- Support Ethernet on M6117D, Vortex86 and Vega86 series.
- Including FTP, TELNET and WWW server.
- Support DHCP.
- Support PPP dial-up and access PPP dial in.
- Support NFS.
- Support Vortex86 and Vega86 audio.
- Support USB mass storage and keyboard/mouse.
- Support CD-ROM.



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→ X-Window Demo

ICOP provides xLinux with X-Window demo image as well. It can be a reference or start for developers to build Linux graphic applications on ICOP boards. Only 32~64 MB storage space is needed to run this demo. If you are interested in this demo, please refer your contact window.



→ Download and Installation

ICOP has constructed pre-built image for clients' application and system startup command. ICOP recommends users to use 16 MB or above Flash Disk (xLinux does not support M-Systems DOC) to install ICOP's Linux ghost image.

For more information, please visit <http://www.dmp.com.tw/tech/os-xLinux/>

Windows Embedded



Windows Embedded platforms offer the advantage to shorten the development time and risk for intelligent device



The Windows Embedded family provides the complete time-to-market advantage, with the best set of technology, tools and resources to accelerate development of your next-generation intelligent device. This comprehensive software platform provides embedded developers with a rich set of integrated technologies that not only increases developer productivity, but also reduces development costs and risks.

Windows Embedded platforms, including Windows CE 5.0, Windows XP Embedded with Service Pack 2 and Windows Embedded for Point of Service, enable rich applications and services while offering flexible solutions for a wide range of needs. From small, battery-operated consumer devices to mission-critical enterprise devices, the Windows Embedded Family can be used to scale to a broad range of intelligent devices. These powerful platforms allow you to:

- Quickly build intelligent devices and get to market faster
- Increase developer productivity and reduce development costs
- Design devices that integrate seamlessly with existing systems

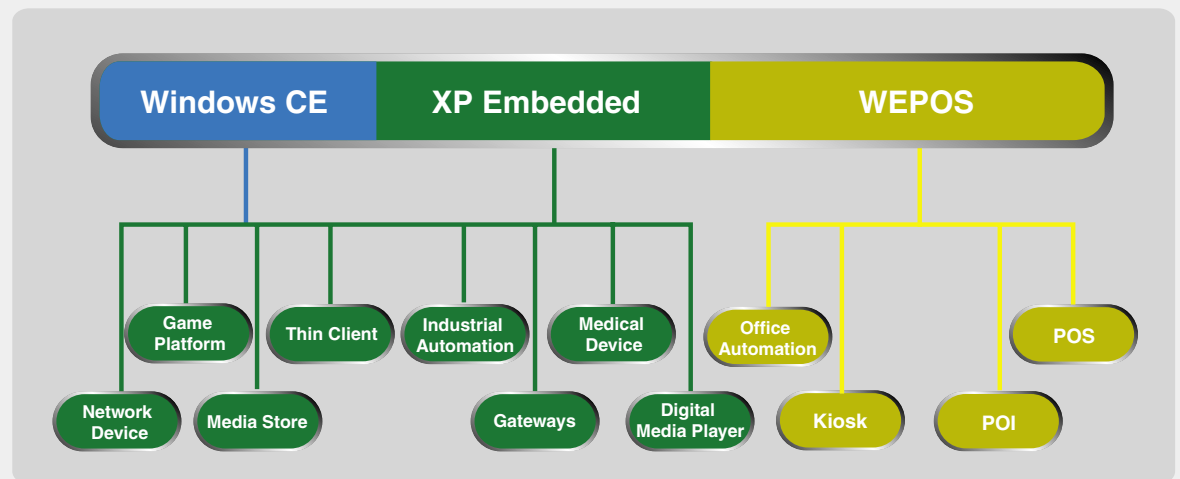
→ ICOP Advantage with Windows Embedded Technologies

Combining ICOP's focused business target to provide the best embedded x86 processor module solution along with Windows Embedded Technologies, ICOP is able to provide complete application development platforms, using familiar C/C++, Visual C++, Visual C# and Visual Basic application development environment, to our OEM/ODM customers. This "proven hardware" and "proven embedded OS" combination help our customer to deliver their next generation of smart, network-enabled & multi-media products with minimum cost, risk while gaining strong time-to-market advantage.

→ ICOP Hardware and Windows Embedded OS

The combination of ICOP embedded hardware along with Windows Embedded OS provides the ideal platform for developers and device makers to deliver the following class of devices and solutions:

- Windows-based thin clients
- Point-of-Sale & Point-of-Service Systems
- Information appliances
- Network appliances
- Kiosks and ATMs
- Instrumentation and industrial automation
- Building control & home automation
- Human-Machine-Interface terminal
- Mobile/Vehicle tracking & management systems
- Multi-media device
- Security & Access control systems



Our Commitment



Recognizing the advantage and needs, ICOP is committed to support Windows Embedded Technologies, and implemented Global Windows Embedded Business Unit to provide support to our customers using Windows Embedded Technologies.

In addition to the commercial focus, ICOP is also actively involved with the Academic & user group community to motivate the usage of Windows Embedded Technologies. ICOP is actively engaging in Academic and user group community in North America and Asia, another strong indication of ICOP's willingness and commitment to support Windows Embedded Technologies.

ICOP provides Windows CE and Windows XP Embedded Board-Support-Packages for our Vortex86 and Vega86 product families. In addition, ICOP launched multiple technical resource and information web sites providing references & learning information related to Windows Embedded Technologies. ICOP's Windows CE 5.0 BSP is included in the 3rd Party Solution CD shipped along with the Windows CE development tool, Windows CE 5.0 Platform Builder.

In addition to Board-Support-Packages and device driver, ICOP releases "Technology Learning Kit" targeting different release of Windows CE .NET 4.2, Windows CE 5.0, Windows XP Embedded with Service Pack 2 and WEPOS.

→ ICOP – Your Best Windows Embedded Hardware Partner

With 15+ years of embedded hardware design/manufacturing experience, flexible business model, along with unmatched commitment to support Windows Embedded Technologies, ICOP is your BEST Windows Embedded Hardware Partner.

- Gold-Level Partner in Microsoft's Windows Embedded Partner program
- Recognized by Microsoft as 2005 Partner-of-the-year in the Independent Hardware Vendor (IHV) category
- Windows CE .NET 4.2 BSP for eBox-II & Vortex86 product family.
- Windows CE 5.0 BSP for eBox-II & Vortex86 product family.
- Windows XP Embedded with Service Pack 1 support for eBox-II & Vortex86 products.
- Windows XP Embedded with Service Pack 2 support for eBox-II, eBox-III, Vortex86 products and Vega86 products.
- Windows CE .NET 4.2 Learning Kit.
- eBox-II Windows CE 5.0 JumpStart Kit.
- Windows CE 5.0 Learning Kit.
- eBox-III Windows XP Embedded with Service Pack 2 Learning Kit.

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Windows CE 5.0



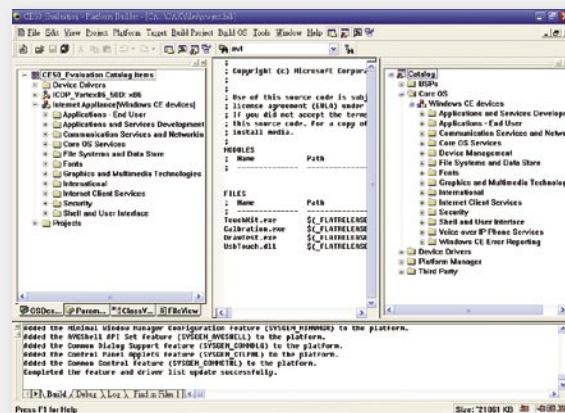
Windows CE integrates reliable, real time capabilities with advanced Windows technologies to rapidly build a wide range of innovative, small-footprint devices.



With core operating system components and powerful development and testing tools, Windows CE provides embedded developers with a unified set of tools to build, debug, and deploy customized Windows CE-based devices. This fully integrated development environment (IDE) also includes emulation technology to enable simultaneous hardware and software development.

For developers who create Web services and applications for Windows CE-based devices, it supports both familiar development tools: Microsoft eMbedded Visual C++® and Microsoft Visual Studio® .NET. These tools provide a familiar development environment so developers can rapidly build next-generation XML Web services and applications on the latest hardware.

Discover the technologies that are supported in Windows CE 5.0 and let Windows CE help you create the future.



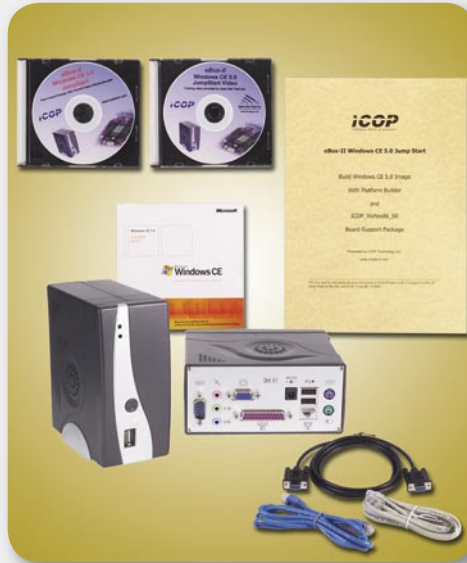
ICOP provide device drivers and Board-Support-Packages to support Windows CE .NET 4.2 and Windows CE 5.0. Our general BSPs can be found on Third-Party-Solutions CD, shipped along with Platform-Builder. Updated & customized BSPs are available for download from our technical information sites.

To assist our customers new to the Windows CE development environment, we make the following technical resources available on our technical Web sites.

- Step-by-step guide showing how to build working Windows CE image using Platform-Builder.
- SDK for eBox-II, Vortex86 products & Vega86 products.
- Writing managed code for Windows CE using Visual Basic .NET 2005 using .NET Compact Framework.
- Writing managed code for Windows CE using Visual C# .NET 2005 using with .NET Compact Framework.
- Writing native code for Windows CE using Embedded Visual C++ 4.0
- Home-Automation application sample
- Windows CE JumpStart learning video (provided in conjunction with our Windows Embedded training partner – Apex Info Tech.)

For more information about Windows CE, visit the following URL.
<http://msdn.microsoft.com/embedded/windowsce/default.aspx>

Windows CE JumpStart Kit



This kit includes all necessary components to help jumpstart Windows CE learning:

- eBox-II with 128MB RAM, 64MB bootable IDE flash storage, power supply and all necessary cables for debug.
- 120 days fully functional version of Windows CE 5.0 Platform Builder.
- BSP for eBox-II and pre-built Windows CE image.
- Step-by-step guide & video showing how to build Windows CE 5.0 image using Platform Builder.
- Step-by-step guide to write and debug Visual Basic & Visual C# managed code for Windows CE.
- Covering boot loader usage with sample with boot loader to launch Windows CE image.
- Covering required steps to deploy Windows CE device using boot loader, custom Windows CE image and custom application as shell.

→ Windows CE 5.0 Development Kit with LCD Display & Touch Screen

This development kit provides all of the necessary components to evaluate and develop Windows CE applications on x86 hardware, provides a cost efficient option to produce prototype units or proof-of-concept.

This kit includes all necessary components to jumpstart your project using Windows CE:

- Vortex86-6047 processor board with 128MB RAM, 64MB bootable IDE flash storage, Video, AC'97 Audio, Ethernet, USB, 4 Serial ports, Parallel, Keyboard, Mouse, Power supply & etc...
- TFT LCD display (6.4", 8.4" or 10.4" LCD)
- Touch screen and USB touch screen controller
- Straight thru RJ-45 Ethernet cable
- Cross-over RJ-45 Ethernet cable
- Null RS-232 serial cable
- 120 days fully function version of Windows CE 5.0 Platform Builder
- BSP for Vortex86-6047 with support for touch screen interface and pre-built Windows CE image
- Step-by-step guide showing how to build Windows CE 5.0 image using Platform Builder



- Step-by-step guide showing native & managed application development using Visual Basic .NET 2003, Visual C# .NET 2003 and Visual Studio 2005.
- Sample codes
- Boot-loader

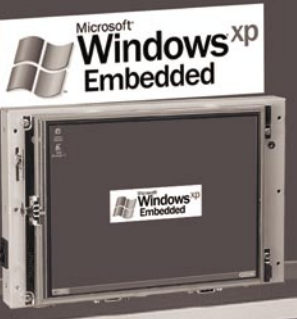
Note: In addition to the Windows CE SDKs, we provide Windows CE BSP for the Vortex86 and Vega86 family of products. Please contact our support team for additional Windows CE support resources.

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Windows XP Embedded



Windows XP Embedded is the operating system and development platform in componentized form to rapidly build reliable and advanced embedded devices.



Based on the same binaries as Windows XP Professional, Microsoft® Windows® XP Embedded allows developers to choose from over 10,000 individual feature components to achieve optimum functionality in a reduced footprint. Windows XP Embedded also allows you to reduce time-to-market by taking advantage of a familiar programming model and a powerful set of tools. In addition, Windows XP Embedded delivers industry-leading reliability, performance, and security along with the latest multimedia, Web browsing, power management, and device support.

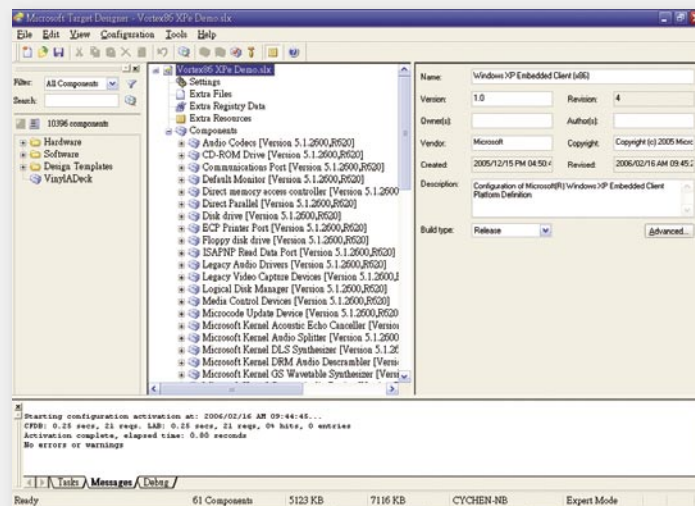
To assist customers new to the Windows Embedded development environment, ICOP provide device drivers and pre-configured Windows XP Embedded components available thru our Windows Embedded technical resources sites.

To help our customers take advantage of the Windows XP Embedded technology, with minimized effort & investment, ICOP makes available eBox-III Windows XP Embedded JumpStart kit.

In addition, we make available technical libraries, application notes & sample codes related to ICOP hardware to ease many of our customer's engineering effort throughout their development cycle.

For more information about Windows XP Embedded, visit the following URL.

<http://msdn.microsoft.com/embedded/windowsxpembedded/default.aspx>



Windows XP Embedded JumpStart Kit



This kit includes all necessary components to help jumpstart Windows XP Embedded learning:

- **eBox-III with 256MB RAM, 256MB bootable IDE flash storage, power supply and all necessary cables for debug.**
- **512MB USB flash drive (used to transport image from development station to target device)**
- **120 days fully functional version of Windows XP Embedded with Service Pack 2 toolkit.**
- **Windows XP Embedded device driver components for eBox-III.**
- **Step-by-step guide showing how to build and configure Windows XP Embedded image using Target Designer.**
- **Step-by-step guide showing how to deploy Windows XP Embedded using SDI.**

→ Windows XP Embedded device driver components

We invested strong effort to establish device driver conform to Windows XP Embedded component library for our board and system. When possible, we provide BSP with support for all of the integrated functions and features available on our processor board and system.

→ We support Windows XP Embedded



Vega86-6270
PC104 CPU Module
3.54 x 3.77 inches
(90x96mm)



Vega86-6247
3.5" size AIO SBC
7.24 x 4.80 inches
(133x111mm)



Vega86-6242
Half-size ISA Bus SBC
7.24 x 4.80 inches
(184x122mm)



Vega86-6240
EBX size AIO SBC
5.75 x 8 inches
(146x203mm)

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Windows Embedded for Point of Service



Windows Embedded for Point of Service is an easy-to-use platform based on Microsoft Windows technologies now optimized for the retail industry

About Windows Embedded for Point of Service

Windows Embedded for Point of Service (WEPOS) is a version of Windows XP with Service Pack 2 platform that has been optimized for retail point-of-service (POS) device. Point of Service delivers improved customer service through the use of flexible devices such as self-checkout stations, self-service kiosks, information kiosks, food ordering kiosks, and more.

→ Advantages for Point-of-Service Devices

As the first Microsoft operating system designed specially for point-of-service systems used by retail and hospitality organizations, Windows Embedded for Point of Service (WEPOS) will deliver at the point of sale and beyond.

As a core component of the Microsoft Smarter Retailing Initiative, WEPOS offers the following advantages to retail and hospitality organizations:

- **Easier.** Windows Embedded for Point of Service is the first POS operating system platform to provide plug-n-play peripheral support. Extending standard desktop PC plug-n-play support to retail device peripherals, this will enable retailers to quickly install and integrate current and legacy retail device peripherals into a point-of-service system. WEPOS also offer a standard platform optimized for retail and hospitality applications and familiar device management technologies.
- **Empowering.** Windows Embedded for Point of Service also empowers retailers to create the most compelling customer interactions by providing a standard, retail-optimized platform that includes the required retail-specific technologies, and full support for standard retail applications and device peripherals.
- **Lower Life-cycle-Costs.** Windows Embedded for Point of Service also provides low retail point-of-service life-cycle costs by decreasing OS and application development costs, deployment costs, servicing and maintenance costs, and POS hardware costs while providing the longest published product support life cycle for point-of-service systems.

For more information about WEPOS, visit the following URL.
<http://www.microsoft.com/windows/embedded/wepos/default.mspx>





→ Windows Embedded Technical Resources from ICOP

To assist customers new to Windows Embedded technologies with ICOP hardware, we make Windows Embedded Technical resources available from the following sources.

- www.vortex86.com
- www.windowsembedded.com.tw (English)
- www.windowsembedded.com.cn (Simplified Chinese)
- www.windowsembedded.jp (Japanese)

→ JumpStart your Windows Embedded Projects with our Vortex86 and Vega86 Series of Windows Embedded Development Kits.

We provide Windows CE 5.0 and Windows XP Embedded development kits for each of our Vortex86 and Vega86 series of boards.

→ Windows CE 5.0 Development Kits

The following components are included as part of our Windows CE 5.0 development kits.

- Vortex86-xxxx or Vega86-xxxx board with 64MB IDE bootable flash storage, power supply and all necessary cables for testing and debug
- Board-support-package for Windows CE 5.0
- Pre-build Windows CE 5.0 image
- Step-by-step guide showing the process of configuring, building and debugging Windows CE 5.0 image using Platform Builder
- SDK with support for native and managed code application using embedded Visual C++ 4.0, Visual Basic .NET 2003, Visual C# .NET 2003 and Visual Studio 2005
- Sample native and managed code application with instruction showing how to connect target Windows CE device with development station, download and debug application on the device using embedded Visual C++ 4.0 and Visual Studio

→ Windows XP Embedded with Service Pack 2 Development Kits

The following components are included as part of our Windows XP Embedded development kits.

- Vortex86-xxxx or Vega86-xxxx board with 256MB IDE bootable flash storage, power supply and all necessary cables for testing and debug
- 512MB USB flash drive
- Windows XP Embedded driver components & necessary support & sample files
- Step-by-step guide showing the process of capturing hardware device information, import captured hardware device information into Windows XP Embedded project, configure and build Windows XP Embedded image
- Step-by-step guide showing the process to transfer Windows XP Embedded image onto IDE bootable flash storage with SDI using the provided USB flash drive

ODM & OEM Design Service



Custom Engineering Design and Manufacturing Service



ICOP Technology Inc. offers custom engineering design and manufacturing service for x86 embedded technology. Having years of accumulative experiences, ICOP exhibits the expertise to design electronic equipment and to produce x86 Embedded solutions that maximize performance at a minimal cost. With the ownership of the DMP M6117D SoC and the proficient of the Vortex86 SoC, ICOP have the advantage in the consolidation of design and manufacturing services for various OEM/ODM demands. Our business model provides the best environment to meet target project cost and desired schedule. ICOP's x86 core technology offers the best environment to control and maintain Product-Life-Cycle.

→ A Full Service Engineering and Manufacturing Company



ICOP is a full-service engineering developer for custom product. With the dedication of a strong Research & Development and customer service teams, ICOP achieves the customer satisfaction with solid engineering and manufacturing service.

Aside from being an embedded SBC manufacturer, ICOP is also devoted to the development of processor kernel design.

→ Software Support Based on Hardware Application



Being a CPU designer, ICOP knows how to integrate an embedded application that other SBC manufacturers cannot deliver. With x86 CPU know-how, ICOP combines the advantage of CPU kernel modification with the necessary software support. Most of all, to overcome the dimension limitation for most embedded systems, ICOP has a team of engineers devoted to the work of CMOS and BIOS programming, and they are willing to share those experience with our customers.



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→ **Multi-Operation Systems Support**



ICOP's embedded systems have been tested under Window CE, Embedded XP, Embedded NT, Embedded Linux, and DOS. Our hardware is made to be compatible with these operation systems. We also have the OS driver database to support customer's OS inquiry.

→ **Free BSP and Free Download**



ICOP provides BSP package for our CPU module. We also supply x86 main design circuit and accompanying drivers in the website. Please feel free to examine the system design with the use of our developing tool.



ICOP assists the customers in their project by cutting down time consumption and by dropping their expenses. ICOP offers the customers with prototype samples in 5 weeks after the confirmation of the final specification. And it takes less than 4 weeks to put the prototype sample into mass production once we receive customer's approval.

→ **Complete Support**



We accept custom design for production, EMI/Safety test, mechanical encasing, power supply, and cables for chassis with full testing, inspection and packing.

→ **Ultimate Services**

If you hope to work with the manufacturer who can provide you all basic engineering services, ICOP is the one that you choose to work with. We offer the following Engineering Services:

- PCB layout and circuit design
- Off-the-shelf products depopulation or redesign
- Prototype samples manufacturing
- Making cables for LCD/CRT to connect to ICOP controllers
- BIOS modification
- Drivers and Operation Systems support

For more understanding of our ODM development examples, please check our ODM SHOWCASE at our URL: http://www.icop.com.tw/oem_toc.asp

For complimentary engineering consulting, please contact ICOP Technology Inc.

LCD Display Support



ICOP offers LCD display solutions for different applications



→ ICOP Offers

LCD display solution for our x86 Embedded CPU modules. In many applications, the needs to monitor and to collect data are necessary; in other explicit occasions, special purpose transactions are also in due process for viewing. With DM&P M6117D series, our products support Mono / TFT / DSTN and EL Flat Panels. With Vortex86 series, our product support TFT and LVDS Flat Panels.

→ LCD Kits

In order to provide the well-suited LCD solution for customers, ICOP provides 6.4", 8.4", 10.4", 12.1" and 15.1" panel respectively for the LVDS and TFT LCD kits of Vortex86 series. LCD display panel covers the resolutions 640x480, 800x600 and 1024 x 768. The complete LCD Kit includes LCD panel, LCD signal cable, backlight inverter and LVDS converter (ICOP-0096, optional). Our LCD Kit also comes with resistive touch screen from 6.4", 8.4", 10.4", 12.1" to 15.1". The touch screen controller interface selection can be RS/232 or USB connection.

→ Custom Service

Custom service for lighting a custom LCD Display Panel other than of our existing list is attended according to the necessary pre-confirmation and agreement. ICOP reserves the rights to waive and to discontinue the agreement under the conditions that are without the complete data sheet, a sample of LCD display panel, the corresponding cable/cabling with protruding wires. We suggest that you select our off-the-shelf LCD display solution for quick customization service.

→ Thin Frame Panel PC

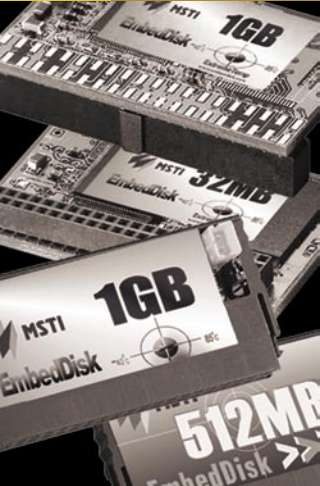
The design concept of ICOP Open Frame fixture is made with simple, clear and universal attribution for quick installation with your intended desired mounting space. This frame includes standard pattern of hole for mounting purpose with the embedded SBC and LCD display panel. There is also the consideration for unique power adaptors.

→ Configuration and Integration

There is no standard design for OFPC, due to many different embedded SBC board other than to specify inputs and outputs. Our preference is a mother-daughter board design concept, and some features can be made available through PC-CARD devices. Most cases, the embedded CPU module accommodates the following inputs and outputs: Serial ports, Keyboard & Mouse, Wireless/Wired Ethernet, Audio Line In/Out and USB. The main purpose of OFPC is to incorporate the LCD display panel, touchscreen, inverter and embedded CPU card. Consideration of standard I/O connectors, it makes easier to integrate a working computer in one piece of hard metal for various applications particularly.

EmbedDisk

Industrial IDE Flash Storage



Hard Disk Driver is known for its storage capacity and data transfer speed. However, HDD finds its limitation when it comes to the dramatic demands for stability, endurance, and wide working temperature range. Accordingly, flash based storage stands out as the proper solution for embedded applications and devices in commercial, industrial and military fields.

Since the embedded flash based storage devices come in IDE interface and present themselves to an O/S in the same way as regular Hard Disk Driver, they are extremely attractive to application developers. While they leverage existing software and hardware development skills and speed up new application development, they also provide exceptional ruggedness and wide operating temperature range suitable for environments where temperature fluctuations, shock, vibration, dust, moisture and magnetic fields are present.

Therefore, MSIT, in light with the flash based storage designing concept, develops EmbedDisk, which is able to be operated in the wide temperature range (-40 to +85). Beyond that, EmbedDisk is implemented with write protection and advanced PIO modes. EmbedDisk offers not only the greater computing performance but also a better condition in counter with different applications.

→ Features

- Extreme temperature
- Shock resistant
- Supreme reliability
- Dependable and secure
- Highest performance

→ Product Highlight

- 16MB to 2 GB uncompressed capacity
- Pure -40°C to +85°C Industrial Grade Temperature range
- 3.3 / 5.0 volt, low power operation
- Unitized 40/44 pin IDE
- 22-bit ECC for exceptional data reliability
- Complete solid state with no moving parts
- RoHS ready
- Entirely bootable for current embedded OS
- 1000G operating shock
- 15G operating vibration
- 16.6 MB/s burst R/W rate
- 10 year data integrity



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Introduction of Embedded Family



→ Vega86 Family



ICOP, in 2006, makes the introduction of Vega86, the x86 SoC architecture for CPU Module. With VIA Mark CoreFusion processor built by 0.13 micron process and the VT82C686B PCI-ISA South Bridge, Vega86 is outstanding in power efficient performance for All-in-One solution with Single Voltage +5V. Vega86 is equipped with the advanced BIOS design enable it to be booted within 4.5 sec in an -20°C to +60°C environment. Furthermore, with Fanless design, Vega86 is adequate for the fields where temperature fluctuations, shock, vibration are present. To address the booming demand for Microsoft Embedded OS, Vega86 is particularly suitable for the application of Windows XP Embedded. As to the other current existing OS (Windows 2000, Windows CE, LINUX, etc.), they are all included in the Vega86's support list. Vega86, with the different types of CPU modules, such as PC/104, Hal-Size, 3.5", EBX, and so forth, will surely satisfy the client's need.

→ Vortex86™ Family



Using our latest design of 586 technology with Vortex86 System On Chip design, ICOP offers the processor with lower power consumption that fulfills many embedded applications. A full line of standard embedded x86 products in different form factors embedded CPU modules ranges from the Tiny 2.5", PC/104, 3.5", Half-size CPU Card and Embedded ATX. Vortex86 SoC is a mature 5x86 core with performance 4 times as compare to the typical 486DX. Available speeds are 166MHz/200MHz. Vortex86 has the features covering low power, low heat and wide temperature (-20°C to +70°C) with fanless design. In order to shorten the develop time risk, ICOP develops Board-Support-Package (BSP) of Windows CE.NET and Windows® XP Embedded operating system for Vortex86.



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→ **DM&P M6117D Family**



The creativity of DM&P M6117D SoC is designed to suit many single task application requiring simple architecture and repetition of job. This innovative concept makes the possibility of building the 386 technology with the fulfillment on the requirement of different embedded applications. ICOP also develops our own O/S with X-DOS and the accompanying X-BIOS; thus enabling many end users with the benefit in completing their system integration with lower cost and shorter development time. ICOP offers free X-DOS as well as TCP/IP utilities with our DSocket for internet/intranet application.



Free download of these amazing software are also available in our website, visit <http://www.dmp.com.tw> now. The DM&P M6117D SoC offers 5-year Product Life cycle.

→ **PC/104 CPU & Peripheral Modules**



ICOP offers over 30 kinds of PC/104 modules for wide range of embedded applications, which includes M6117D, Vortex86 and Vega86 CPU modules. Peripherals are also available for LAN, I/O, SSD, Power Supply, Audio, DIO, and many more. Our PC/104 modules was designed and manufactured with high-density component placement and at an economical cost. It is well condensed and best suited for space conscious environment.

→ **Mity-SoC/Mity-Mite/Tiny CPU Module**



The ASPIRING CREATION of the Mity-SoC CPU Module is to assist many product developers in the 386 markets for making their own product design using the DM&P M6117D SoC. With an accompanying base board in Mity-SoC ISA bus development board, the extended I/Os covering serial, printer, GPIO, keyboard, IDE and DOC interfaces can be activated for usage. The development board also includes a diagnostic circuit for P.O.S.T testing during debug. Video development can also be accounted for this design platform by just placing the Mity-Mite VGA/LCD Development Kit on the same base board.

Tiny modules are designed with unique PC-based specification bundled with the proper BIOS, OS, and Software into one single chip. With tiny embedded solution, ICOP is the only designer in Taiwan to support this special kind of technology with honorable feat.

→ **3.5"/5.25" Embedded CPU Modules**



Meeting the market needs, ICOP developed a series of 3.5" and 5.25" size embedded CPU boards for OEM/ODM project consideration.

→ **ISA Bus Half-Size SBCs**



ICOP offers a complete range of half-size ISA single board computers in supporting M6117D, Vortex86 and Vega86 CPUs. All ICOP SBCs are All-in-One industrial grade design with operation under temperature within -20°C to +60°C (optional -40°C to +80°C).

Outstanding Features of ICOP Embedded Technology



Embedded



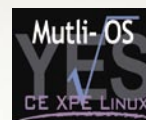
With strong know-how and experience in designing embedded boards, ICOP's products are able to be operated between -20°C to $+70^{\circ}\text{C}$. For some specific boards, such as 6050M, they are able to be worked in an environment where the temperature is in the range from -40°C to $+80^{\circ}\text{C}$.



With the intelligence PCB layout design and the lowest power consumption components, ICOP provides customers with solutions of Fanless and Heatsink-free design.



With military-grade component, DALLAS 1811, it is allowed to delay generating the signal of POWER GOOD to the CPU, when the operating temperature is below 0°C . ICOP's embedded boards can sustain a cold boot with -20°C (optional -40°C).



For multi-OS concerns, ICOP products are in support of DSock(DOS TCP/IP) Windows CE, Windows XP Embedded and Linux.



The manufacture's default Quick Boot BIOS allows the system to be booted (Power-On-Self-Test) within 3 seconds. This hassle free design has made the system more efficient than ever.



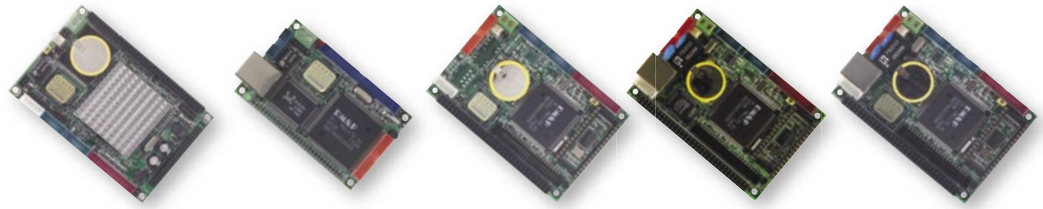
There are 21 bytes in CMOS RAM and 2K bytes in BIOS ROM reserved for all M6117D boards. For Vortex86 boards, there are 48 bytes in CMOS RAM and 256 bytes in BIOS ROM. Users can easily apply the space for their own use.



For the harsh industrial application, power consumption plays a critical part. ICOP provides the lowest consumption solution in all serial embedded boards, which could be as low as $+5\text{ V @ }400\text{ mA}$.

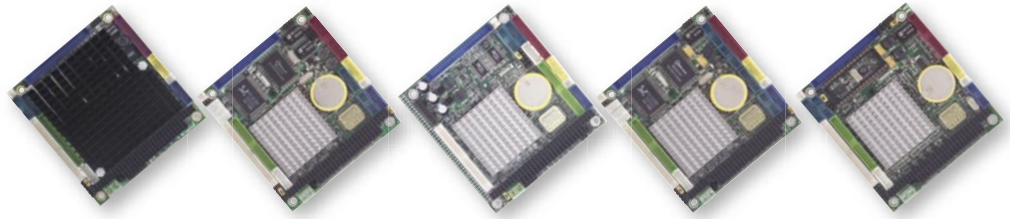


According to the request from numerous customers, ICOP develops the Mity-Mite modules equipped with CPU, RAM, Flash, IDE, serial, Ethernet, and GPIO on only $65\times 45\text{mm}$ design.

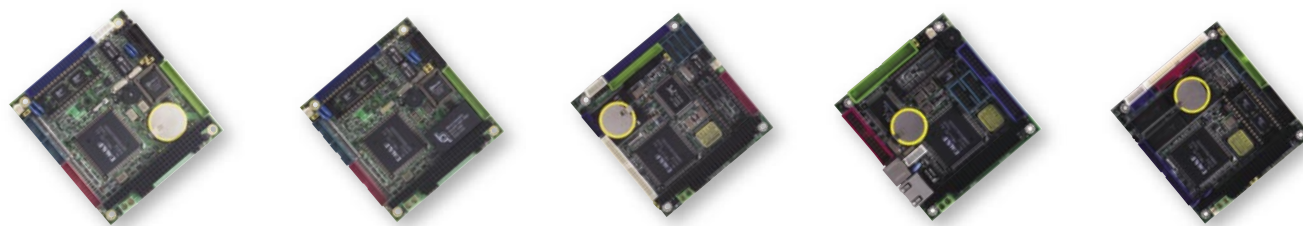


Specification		Vortex86-6082	Mity-Mite	ICOP-6016	ICOP-6015	ICOP-6015H	
Model Name							
System Information	Form Factor	Tiny	Mity	Tiny	Tiny	Tiny	
	CPU Frequency	166 MHz	40 MHz	40 MHz	40 MHz	40 MHz	
	CPU Vendor	SiS	DM&P (ALi)	DM&P (ALi)	DM&P (ALi)	DM&P (ALi)	
	System Chipset	Vortex86	M6117D	M6117D	M6117D	M6117D	
	System Memory	128 MB SDRAM	4 MB EDO RAM	4 MB/8 MB EDO RAM	4 MB/8 MB EDO RAM	8 MB EDO RAM	
	BIOS	AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	
	Watchdog Timer	4 ms to 1 hour	30.5us to 512sec	30.5us to 512sec	30.5us to 512sec	30.5us to 512sec	
I/O	VGA	VGA	Yes	N/A	N/A	N/A	N/A
		LCD	N/A	N/A	N/A	N/A	N/A
	AUDIO	N/A	N/A	N/A	N/A	N/A	
	IDE	1	1	1	1	1	
	FDD	N/A	N/A	N/A	N/A	N/A	
	Serial	RS-232	1	1	1	1	1
		RS-232/485	1	N/A	1	1	1
		RS485 Auto Direction	N/A	N/A	N/A	N/A	N/A
	Parallel	1	N/A	1	1	1	
	USB (Ver. 1.1)	2	N/A	N/A	N/A	N/A	
	Ethernet port	1 X 10/100 Mbps Realtek 8100B	1 X 10 Mbps Realtek 8019AS	N/A	1 X 10 Mbps Realtek 8019AS	1 X 10/100Mbps ASIX AX88796L	
	Flash Disk Support	EmbedDisk	Yes	Yes	Yes	Yes	Yes
		DiskOnChip	N/A	N/A	Yes	Yes	Yes
	Expansion Bus	x-PCI	x-ISA	x-ISA	x-ISA	x-ISA	
GPIO	N/A	16-bit GPIO	16-bit GPIO	16-bit GPIO	16-bit GPIO		
Others	Power Consumption	+5 V @ 960 mA	+5 V @ 420 mA	+5 V @ 430 mA	+5 V @ 460 mA	+5 V @ 460 mA	
	Operating Temperature	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	
	Dimensions (mm)	100 X 66 mm	80 X 50 mm	100 X 66 mm	100 X 66 mm	100 X 66 mm	
	Page	38	43	44	45	46	

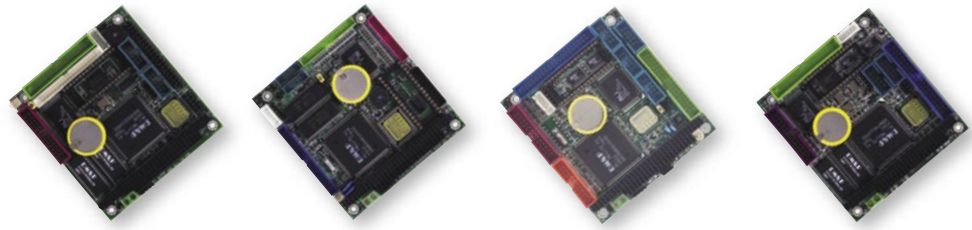
PC/104 Module



Specification		Model Name	Vega86-6270	Vortex86-6074L2	Vortex86-6072	Vortex86-6071	Vortex86-6070
System Information	Form Factor		PC/104	PC/104	PC/104	PC/104	PC/104
	CPU Frequency		533 MHz	166 MHz	133 MHz	166 MHz	166 MHz
	CPU Vendor		VIA	SiS	SiS	SiS	SiS
	System Chipset		VT82C686B	Vortex86	Vortex86	Vortex86	Vortex86
	System Memory		128 MB SDRAM	128 MB SDRAM	64 MB/128 MB SDRAM	128 MB SDRAM	128 MB SDRAM
	BIOS		AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS
	Watchdog Timer		N/A	4 ms to 1 hour	4 ms to 1 hour	4 ms to 1 hour	4 ms to 1 hour
I/O	VGA	VGA	Yes	Yes	Yes	Yes	Yes
		LCD	Yes	Yes	Yes	Yes	Yes
	AUDIO		AC97	AC97	N/A	AC97	N/A
	IDE		1	1	1	1	1
	FDD		1	1	1	1	1
	Serial	RS-232	1	1	1	3	1
		RS-232/485	1	1	1	1	1
		RS485 Auto Direction	Yes	Yes	N/A	N/A	N/A
	Parallel		1	1	1	1	1
	USB (Ver. 1.1)		2	2	2	2	2
	Ethernet port		1 X 10/100 Mbps Realtek 8100B	1 X 10/100 Mbps Realtek 8100B	N/A	1 X 10/100 Mbps Realtek 8100B	1 X 10/100 Mbps Realtek 8100B
	Flash Disk Support	EmbedDisk	Yes	Yes	Yes	Yes	Yes
		DiskOnChip	N/A	N/A	N/A	N/A	Yes
	Expansion Bus		PC/104	PC/104	PC/104	PC/104	PC/104
GPIO		N/A	N/A	12-bit GPIO	N/A	N/A	
Others	Power Consumption		+5 V @ 2.2 A	+5 V @ 940 mA	+5 V @ 760 mA	+5 V @ 1.11A	+5 V @ 960 mA
	Operating Temperature		-20 °C ~ +60 °C	-20°C ~ +70°C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C
	Dimensions (mm)		90 X 96 mm	90 X 96 mm	90 X 96 mm	90 X 96 mm	90 X 96 mm
	Page		50	51	52	53	54

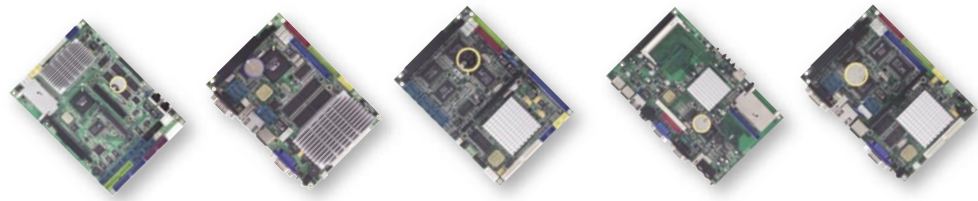


ICOP-6056E2	ICOP-6056E2-DA	ICOP-6054VE	ICOP-6053	ICOP-6052VF
PC/104	PC/104	PC/104	PC/104	PC/104
40 MHz	40 MHz	40 MHz	40 MHz	40 MHz
DM&P (ALi)	DM&P (ALi)	DM&P (ALi)	DM&P (ALi)	DM&P (ALi)
M6117D	M6117D	M6117D	M6117D	M6117D
8 MB EDO RAM	8 MB EDO RAM	4 MB EDO RAM	4 MB EDO RAM	8 MB EDO RAM
AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS
30.5us to 512sec	30.5us to 512sec	30.5us to 512sec	30.5us to 512sec	30.5us to 512sec
N/A	N/A	Yes	N/A	Yes
N/A	N/A	Yes	N/A	Yes
N/A	N/A	N/A	N/A	N/A
1	1	1	1	1
1	1	1	1	1
1	1	3	1	1
1	1	1	1	1
N/A	N/A	N/A	N/A	N/A
1	1	1	1	1
N/A	N/A	N/A	N/A	N/A
2 X 10 Mbps Realtek 8019AS	2 X 10 Mbps Realtek 8019AS	1 X 10 Mbps Realtek 8019AS	1 X 10 Mbps Realtek 8019AS	N/A
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
PC/104	PC/104	PC/104	PC/104	PC/104
16-bit GPIO	16-bit GPIO	16-bit GPIO	N/A	16-bit GPIO
+5 V @ 450 mA	+5 V @ 450 mA	+5 V @ 710 mA	+5 V @ 400 mA	+5 V @ 630 mA
-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C
90 X 96 mm	90 X 96 mm	90 X 96 mm	90 X 96 mm	90 X 96 mm
55	55	56	57	58



Model Name		ICOP-6052V	ICOP-6050F	ICOP-6050M	ICOP-6050	
Specification						
System Information	Form Factor	PC/104	PC/104	PC/104	PC/104	
	CPU Frequency	40 MHz	40 MHz	40 MHz	40 MHz	
	CPU Vendor	DM&P (ALi)	DM&P (ALi)	DM&P (ALi)	DM&P (ALi)	
	System Chipset	M6117D	M6117D	M6117D	M6117D	
	System Memory	4 MB EDO RAM	8 MB EDO RAM	8 MB EDO RAM	4 MB EDO RAM	
	BIOS	AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	
	Watchdog Timer	30.5us to 512sec	30.5us to 512sec	30.5us to 512sec	30.5us to 512sec	
I/O	VGA	VGA	Yes	N/A	N/A	N/A
		LCD	Yes	N/A	N/A	N/A
	AUDIO		N/A	N/A	N/A	N/A
	IDE		1	1	1	1
	FDD		1	1	1	1
	Serial	RS-232	1	1	3	2
		RS-232/485	1	1	1	N/A
		RS485 Auto Direction	N/A	N/A	N/A	N/A
	Parallel		1	1	1	1
	USB (Ver. 1.1)		N/A	N/A	N/A	N/A
	Ethernet port		N/A	N/A	N/A	N/A
	Flash Disk Support	EmbedDisk	Yes	Yes	Yes	Yes
		DiskOnChip	Yes	Yes	Yes	Yes
	Expansion Bus		PC/104	PC/104	PC/104	PC/104
	GPIO		N/A	16-bit GPIO	16-bit GPIO	N/A
Others	Power Consumption		+5 V @ 680 mA	+5 V @ 420 mA	+5 V @ 420 mA	+5 V @ 380 mA
	Operating Temperature		-20 °C ~ +70 °C	-20 °C ~ +70 °C	-40 °C ~ +80 °C	-20 °C ~ +70 °C
	Dimensions (mm)		90 X 96 mm	90 X 96 mm	90 X 96 mm	90 X 96 mm
	Page		59	60	61	62

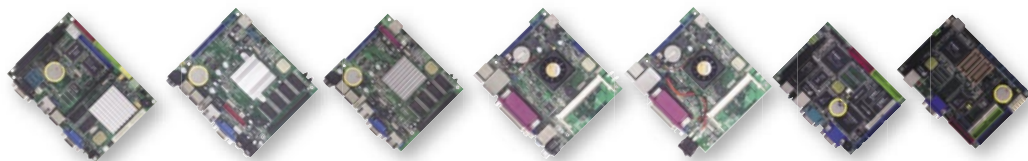
3.5"/ATX/EBX Module



Specification		Model Name	Vega86-6240	Vega86-6247	Vortex86-6049-L26S	Vortex86-6048	Vortex86-6047-6S
System Information	Form Factor		EBX	3.5"	3.5"	ATX	3.5"
	CPU Frequency		533 MHz	533 MHz	166 MHz	200 MHz	166 MHz
	CPU Vendor		VIA	VIA	SiS	SiS	SiS
	System Chipset		VT82C686B	VT82C686B	Vortex86	Vortex86	Vortex86
	System Memory		256 MB SDRAM	256 MB SDRAM	128 MB SDRAM	128 MB SDRAM	128 MB SDRAM
	BIOS		AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS
	Watchdog Timer		N/A	N/A	4 ms to 1 hour	4 ms to 1 hour	4 ms to 1 hour
I/O	VGA	VGA	Yes	Yes	Yes	Yes	Yes
		LCD	Yes	Yes	Yes	Yes	Yes
	AUDIO		AC97	AC97	AC97	AC97	AC97
	IDE		1	1	1	1	1
	FDD		1	1	1	N/A	1
	CF Socket		1	1	1	1	1
	Serial	RS-232	4	5	5	2	5
		RS-232/485	2	1	1	N/A	1
		RS485 Auto Direction	Yes	N/A	Yes	N/A	Yes
	Parallel		1	1	1	1	1
	USB (Ver. 1.1)		2	3	2	3	3
	Ethernet port		2 X 10/100 Mbps Realtek 8100B	1 X 10/100 Mbps Realtek 8100B	1 X 10/100 Mbps Realtek 8100B	1 X 10/100 Mbps Realtek 8100B	1 X 10/100 Mbps Realtek 8100B
	Flash Disk Support	EmbedDisk	Yes	Yes	Yes	Yes	Yes
		DiskOnChip	N/A	N/A	N/A	N/A	N/A
	Expansion Bus		PC/104, PCI-104	PC/104	PC/104, x-PCI	PC/104, x-PCI	PC/104, x-PCI
GPIO		16-bit GPIO	N/A	N/A	N/A	16-bit GPIO	
Others	Power Consumption		+5 V @ 2.5 A	+5 V @ 2.25 A	+5 V @ 980 mA	+5 V @ 1 A	+5 V @ 1.06A
	Operating Temperature		-20 °C ~ +60 °C	-20 °C ~ +60 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C
	Dimensions (mm)		146 X 203 mm	102 X 144 mm	102 X 144 mm	197 X 1250 mm	102 X 144 mm
	Page		64	66	67	68	70

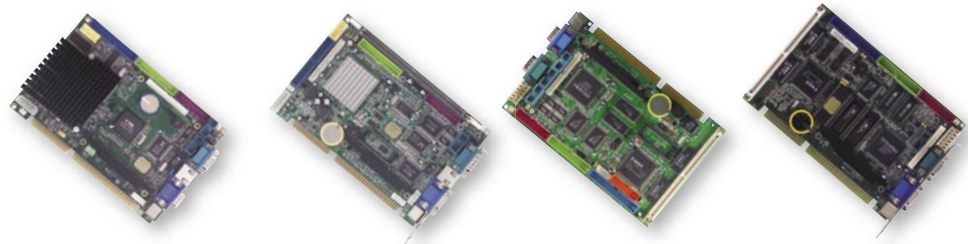
*The CF Socket only support the CF flash memory card, not for I/O card.

3.5"/ATX/EBX Module

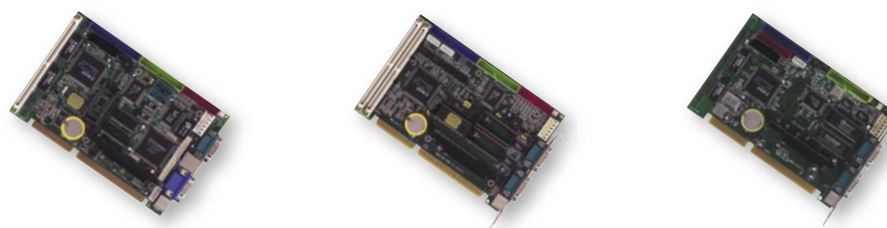


Specification		Model Name	Vortex86-6047-4S	Vortex86-6076	Vortex86-6076L2	Vortex86-6075	Vortex86-6075L2	ICOP-6027VE	ICOP-6026VE	
System Information	Form Factor		3.5"	ATX	ATX	ATX	ATX	3.5"	3.5"	
	CPU Frequency		166 MHz	200 MHz	200 MHz	166 MHz	166 MHz	40 MHz	40 MHz	
	CPU Vendor		SiS	SiS	SiS	SiS	SiS	DM&P (Ali)	DM&P (Ali)	
	System Chipset		Vortex86	Vortex86	Vortex86	Vortex86	Vortex86	M6117D	M6117D	
	System Memory		128 MB SDRAM	128 MB SDRAM	128 MB SDRAM	SODIMM	SODIMM	4 MB/8 MB EDO RAM	4 MB/8 MB EDO RAM	
	BIOS		AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS	
	Watchdog Timer		4 ms to 1 hour	4 ms to 1 hour	4 ms to 1 hour	4 ms to 1 hour	4 ms to 1 hour	30.5us to 512sec	30.5us to 512sec	
I/O	VGA	VGA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
		LCD	Yes	N/A	N/A	N/A	N/A	Yes	Yes	
	AUDIO		AC97	AC97	N/A	AC97	N/A	N/A	N/A	
	IDE		1	1	1	1	1	1	1	
	FDD		1	N/A	N/A	N/A	N/A	1	1	
	CF Socket		1	N/A	N/A	N/A	N/A	N/A	N/A	
	Serial	RS-232		3	2	N/A	1	1	1	3
		RS-232/485		1	N/A	N/A	N/A	N/A	1	1
		RS485 Auto Direction		Yes	N/A	N/A	N/A	N/A	N/A	N/A
	Parallel		1	1	1	1	1	1	1	
	USB (Ver. 1.1)		2	2	2	3	3	N/A	N/A	
	Ethernet port		1 X 10/100 Mbps Realtek 8100B	1 X 10/100 Mbps Realtek 8100B	2 X 10/100 Mbps Realtek 8100B	1 X 10/100 Mbps Realtek 8100B	2 X 10/100 Mbps Realtek 8100B	1 X 10 Mbps Realtek 8019AS	1 X 10 Mbps Realtek 8019AS	
	Flash Disk Support	EmbedDisk		Yes	Yes	Yes	Yes	Yes	Yes	Yes
		DiskOnChip		N/A	N/A	N/A	N/A	N/A	Yes	Yes
	Expansion Bus		PC/104, x-PCI	x-PCI	x-PCI	N/A	N/A	PC/104	PC/104	
GPIO		16-bit GPIO	N/A	N/A	N/A	N/A	16-bit GPIO	16-bit GPIO		
Others	Power Consumption		+5 V @ 1.06A	+5 V @ 1.2 A	+5 V @ 1.28 A	+5 V @ 1.2 A	+5 V @ 1 A	+5 V @ 680 mA	+5 V @ 700 mA	
	Operating Temperature		-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	
	Dimensions (mm)		102 X 144mm	133 X 111mm	133 X 111mm	133 X 111mm	133 X 111mm	102 X 144mm	102 X 144 mm	
	Page		71	73	74	75	76	77	78	

*The CF Socket only support the CF flash memory card, not for I/O card.

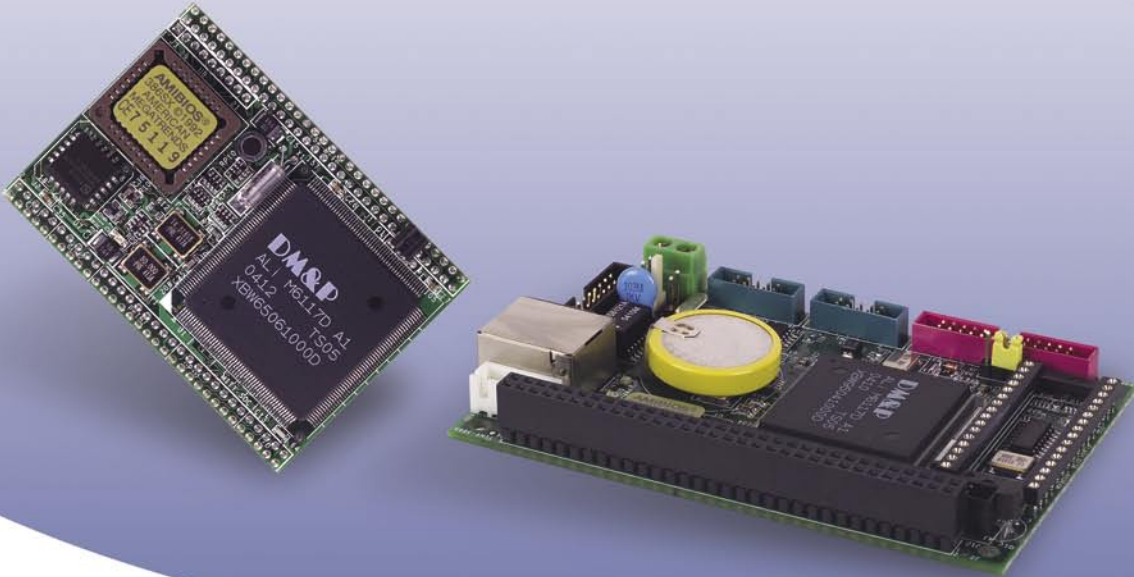


Specification		Model Name	Vega86-6242	Vortex86-6042	ICOP-6025V	ICOP-6024V
System Information	Form Factor		Half-Size	Half-Size	Half-Size	Half-Size
	CPU Frequency		533 MHz	166 MHz	40 MHz	40 MHz
	CPU Vendor		VIA	SiS	DM&P (ALi)	DM&P (ALi)
	System Chipset		VT82C686B	Vortex86	M6117D	M6117D
	System Memory		128/256 MB SDRAM	168-pin DIMM x 1 Up to 128MB SDRAM	4 MB EDO RAM Up to 20MB	4 MB EDO RAM Up to 20MB
	BIOS		AMI BIOS	AMI BIOS	AMI BIOS	AMI BIOS
	Watchdog Timer		N/A	4ms to 1 hour	30.5us to 512sec	30.5us to 512sec
I/O	VGA	VGA	Yes	Yes	Yes	Yes
		LCD	Yes	Yes	Yes	Yes
	AUDIO		N/A	N/A	N/A	N/A
	IDE		1	1	1	1
	FDD		1	1	1	1
	Serial	RS-232	1	1	3	1
		RS-232/485	1	1	1	1
		RS485 Auto Direction	Yes	N/A	N/A	N/A
	Parallel		1	1	1	1
	USB (Ver. 1.1)		2	2	N/A	N/A
	Ethernet port		1 X 10/100 Mbps Realtek 8100B	1 X 10/100 Mbps Realtek 8100B	N/A	N/A
	Flash Disk Support	EmbedDisk	Yes	Yes	Yes	Yes
		DiskOnChip	N/A	N/A	Yes	Yes
	Expansion Bus		PC/104, ISA	PC/104, ISA	PC/104, ISA	PC/104, ISA
GPIO		N/A	N/A	16-bit GPIO	N/A	
Others	Power Consumption		+5 V @ 2.05 A	+5 V @ 880 mA	+5 V @ 770 mA	+5 V @ 920 mA
	Operating Temperature		-20 °C ~ +60 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C
	Dimensions (mm)		184 X 122 mm	184 X 122 mm	184 X 122 mm	184 X 122 mm
	Page		80	81	82	83



Specification		Model Name	ICOP-6023VE	ICOP-6022	ICOP-6021	
System Information	Form Factor		Half-Size	Half-Size	Half-Size	
	CPU Frequency		40 MHz	40 MHz	40 MHz	
	CPU Vendor		DM&P (ALi)	DM&P (ALi)	DM&P (ALi)	
	System Chipset		M6117D	M6117D	M6117D	
	System Memory		4 MB EDO RAM Up to 20MB	72-pin SIMM x 2 Up to 32MB EDO RAM	4 MB EDO RAM	
	BIOS		AMI BIOS	AMI BIOS	AMI BIOS	
	Watchdog Timer		30.5us to 512sec	30.5us to 512sec	30.5us to 512sec	
I/O	VGA	VGA	Yes	N/A	N/A	
		LCD	Yes	N/A	N/A	
	AUDIO		N/A	N/A	N/A	
	IDE		1	1	1	
	FDD		1	1	1	
	Serial	RS-232		1	1	1
		RS-232/485		1	1	1
		RS485 Auto Direction		N/A	N/A	N/A
	Parallel		1	1	1	
	USB (Ver. 1.1)		N/A	N/A	N/A	
	Ethernet port		1 X 10 Mbps Realtek 8019AS	N/A	N/A	
	Flash Disk Support	EmbedDisk		Yes	Yes	Yes
		DiskOnChip		Yes	Yes	Yes
	Expansion Bus		PC/104, ISA	PC/104, ISA	PC/104, ISA	
GPIO		16-bit GPIO	N/A	16-bit GPIO		
Others	Power Consumption		+5 V @ 670 mA	+5 V @ 540 mA	+5 V @ 450 mA	
	Operating Temperature		-20 °C ~ +70 °C	-20 °C ~ +70 °C	-20 °C ~ +70 °C	
	Dimensions (mm)		184 X 122 mm	184 X 122 mm	184 X 122 mm	
	Page		84	85	86	

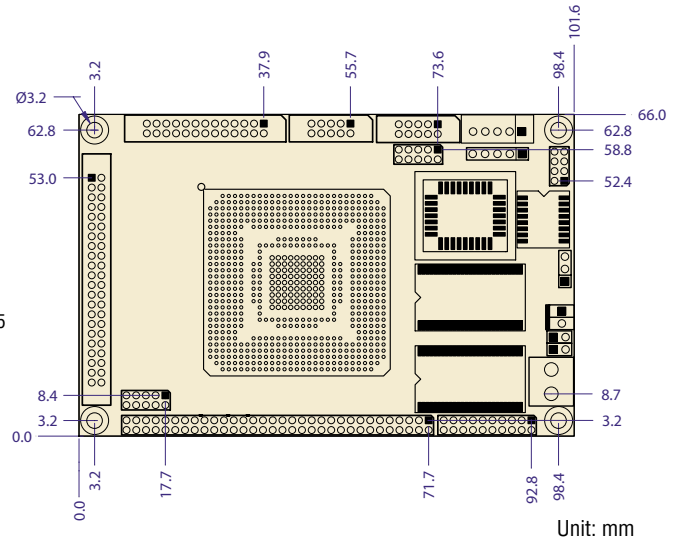
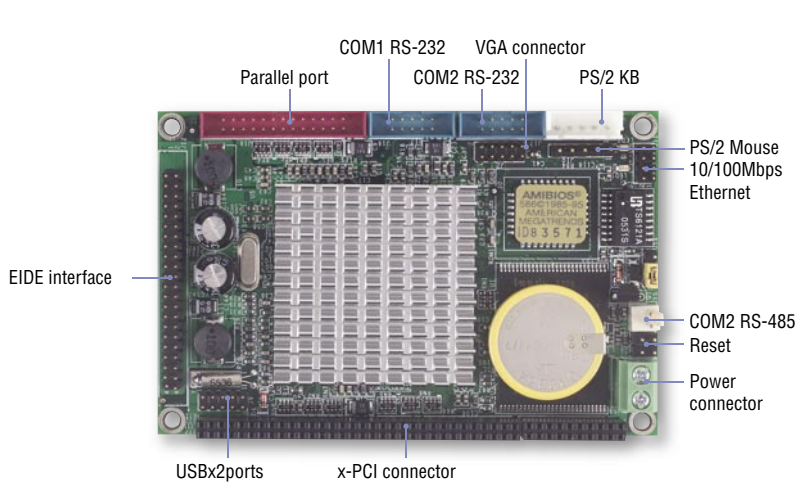
Mity & Tiny CPU Module



Vortex86-6082	Vortex86 Tiny CPU Module with 128MB/2S/2USB/IDE/VGA/LAN	38
Vortex86-6083	Tiny x-PCI Dual LAN Module	39
Vortex86-6083-Mini-PCI	Tiny x-PCI Mini PCI Module	39
Mini-PCI Wireless LAN Card	Mini PCI IEEE 802.11b/g Mini-PCI Wireless LAN Card	40
Vortex86-6084AV	Tiny x-PCI Video Captured & Audio I/O Module	40
Mity-SoC CPU Module (8)	Mity-SoC Module 2MB/2S/GPIO	41
Mity-SoC Development Board		42
Mity-SoC VGA/LCD Development Kit		42
Mity-Mite Module	M6117D Mity-Mite CPU Module with 4MB/1S/IDE/LAN/GPIO	43
ICOP-6016	M6117D Tiny CPU Module with 8MB/2S/GPIO/DOC	44
ICOP-6015	M6117D Tiny CPU Module with 8MB/2S/GPIO/LAN/DOC	45
ICOP-6015-H	M6117D Tiny CPU Module with 8MB/2S/GPIO/100Mbps LAN/DOC	46
ICOP-2820	Mity-Mite VGA/LCD Development Kit	47
ICOP-2720	Tiny VGA/LCD Development Kit	47
Development Tool Kit for Tiny/Mity Series		48

Vortex86-6082

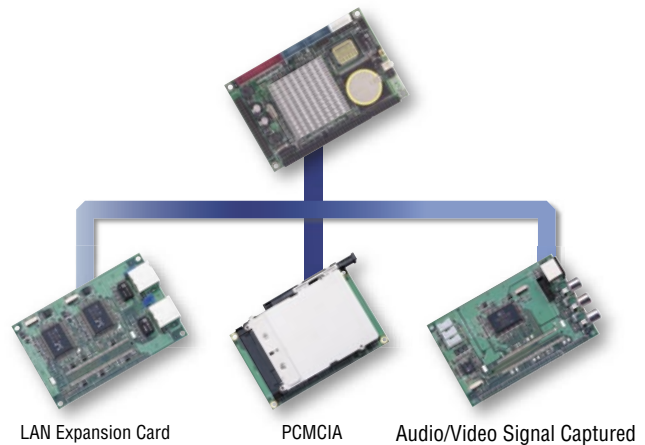
128MB/2S/2USB/IDE/VGA/LAN



Specifications

SoC	DM&P(SiS) Vortex86 System-on-Chip CPU-166MHz Real Time Clock with Lithium Battery Backup
Bus	32-bit x-PCI interface, compatible with PCI Rev.2.2, PC 98/99
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA interface support
LAN	Realtek 8100B 32-bit PCI Full Duplex Ethernet Controller Throughput 10/100Mbps
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver. 1.1) 10/100Mbps Ethernet port x1
Connectors	2.0mm 44-pin header for IDE x1 2.0mm 26-pin box header for Printer x1 2.0mm 20-pin socket for LPC connection x1 2.0mm 10-pin box header for RS-232 x2 2.0mm 10-pin box header for USB x1 2.0mm 10-pin box header for VGA x1 2.0mm 8-pin header for Ethernet x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5 V @ 960 mA
Weight	82g
Board Size	100 X 66mm (3.93 x 2.59 inches)
Operating Temperature	-20°C ~ +70°C

Expansion Module Selection



Packing List

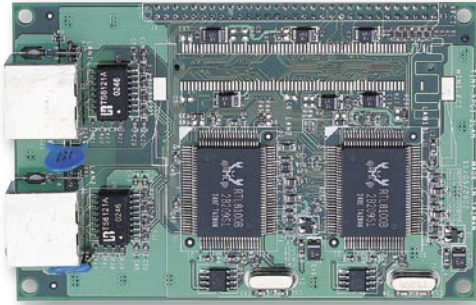
- Vortex86-6082 x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232(2.Q) x2
 - VGA (2.Q) x1
 - NET 4x2(2.Q) x1
 - USB (2.Q) x1
 - PS2 KB White x1
 - PS2 KB (TEST) Black x1

Ordering Information

- **Vortex86-6082** Vortex86 Tiny CPU Module
- **Vortex86-6083** Tiny x-PCI Dual LAN Module
- **Vortex86-6083L1** Tiny x-PCI Single LAN Module
- **Vortex86-6083-Mini-PCI** Tiny Mini-PCI to x-PCI Module
- **Mini PCI Wireless LAN Card** Wireless module for Mini-PCI interface
- **Vortex86-6084AV** Tiny x-PCI Video Captured & Audio I/O Module
- **Vortex86-6084A** Tiny x-PCI Audio I/O Module
- **Vortex86-6084V** Tiny x-PCI Video Capture Module
- **Vortex86-6085** Tiny x-PCI PCMCIA I/O Module

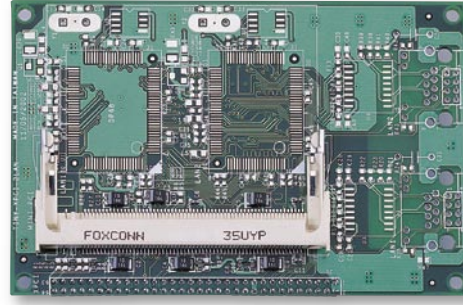
Vortex86-6083

Tiny x-PCI Dual LAN Module



Vortex86-6083-Mini-PCI

Tiny x-PCI to Mini-PCI Module



Specifications

Chipset	Realtek 8100B single chip x2 Full-duplex transfer mode, doubles effective bandwidth Throughput 10/100Mbps
Bus	32-bit x-PCI interface, compatible with PCI Rev.2.2, PC 98/99
Connectors	External RJ-45 connector for Ethernet x2
Power Requirement	Single Voltage +5V @125mA
Weight	45g
Board Size	100 X 66mm (3.93 x 2.59 inches)
Operating Temperature	0°C ~ +70°C

Packing List

- Vortex86-6083x1

Ordering Information

- **Vortex86-6083** Tiny x-PCI Dual LAN Module
- **Vortex86-6083L1** Tiny x-PCI Single LAN Module

Specifications

Function	Mini-PCI resolves the mechanical constraint of Standard PCI, Type III Mini-PCI is a 124-pin connector interface uses the card edge type connector similar to the SODIMM
Bus	32-bit x-PCI interface, compatible with PCI Rev.2.2, PC 98/99
Connectors	0.8mm 124-pin Mini-PCI card connector x1
Weight	32g
Board Size	100 X 66mm (3.93 x 2.59 inches)
Operating Temperature	0°C ~ +70°C

Packing List

- Vortex86-6083-Mini-PCI x1



1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX
Module

4

Half-Size Module

5

Peripheral
Module

6

Accessories

Mini-PCI Wireless LAN Card

IEEE802.11b/g Mini-PCI Wireless LAN card



Vortex86-6084AV

Tiny x-PCI Video Captured & Audio I/O Module



Specifications

Chipset	VIA + Fairchild
Antenna	Two ceramic antennas
Host interface	32-bit CardBus
Data Rate	1/2/5.5/6/9/11/12/18/24/36/48/54 Mbps
RF Output Power	15dBm ± 1dBm
Power Consumption	Tx (350mA) ; Rx (250mA)
Voltage	3.3V±5%
Modulation	OFDM with BPSK, QPSK, 16QAM, 64QAM (11g) DBPSK, DQPSK, CCK (11b)
Operating Channels	CH1~CH11 (2.412GHz~2.462GHz) FCCC H1~CH13 (2.412GHz~2.472GHz) ETSI CH1~CH14 (2.412GHz~2.483GHz) TELECOM
Sensitivity	11g; PER < 10% 54 Mbps -68 dBm, 48 Mbps -72 dBm 36 Mbps -75 dBm, 24 Mbps -79 dBm 18 Mbps -82 dBm, 12 Mbps -84 dBm 9 Mbps -87 dBm, 6 Mbps -88 dBm 11b; PER < 8% 11 Mbps -80 dBm, 5.5 Mbps -83 dBm 2 Mbps -88 dBm, 1 Mbps -91 dBm
Coverage	Indoor: Data Rate (In open environment) * Environmental factors may adversely affect range Indoors: UP TO 100 meters (328 feet) Outdoor: Data Rate (In open environment) * Environmental factors may adversely affect range Outdoors: UP TO 400 meters (1,312 feet)
Operating Temperature	0~55°C
Storage Temperature	0~55°C
Humidity (Non-condensing)	20~80%
Interoperability	802.11b / 802.11g
Support OS	Windows 98SE/ME/2000/XP/CE Linux
Security	WEP 64/128 bit / WPA (TKIP,AES) Encryption
Weight	50g
Dimension	59.7mm (L) * 44.5mm (w) * 4.8mm (H)

Packing List

- Mini-PCI Wireless LAN Card x1
- WIRELESS-ANTENNA x1
- WIRELESS-CABLE-120MM x1

Specifications

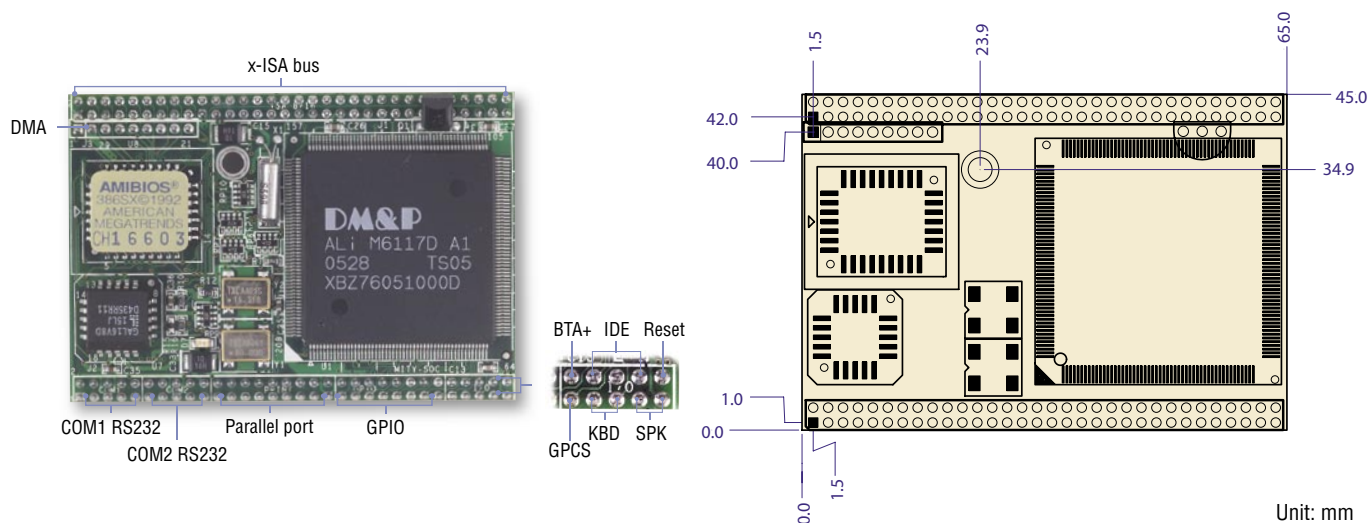
Function	Tiny x-PCI Video/Audio Capturer and I/O Module
Chipset	Video Decoder-Conexant Fusion 878A Audio CODEC-Analog Devices AD1881A, AC97 compatible
Bus	32-bit x-PCI interface, compatible with PCI Rev.2.2, PC 98/99
I/O Interface	Video-in (Video Capture) port x5 Line-in/Line-out/MIC-in port x3
Driver	Windows 9X/2000/XP/NT Linux/ FreeBSD Driver
Connectors	2.0mm 10-pin box header for Video-in x1 2.0mm 4-pin wafer for Line-in/Line-out/MIC-in x3 RCA connector for composite signal input x3 External 4-pin Mini Din connector for composite signal input x1
Power Requirement	Single Voltage +5V @150mA
Weight	45g
Board Size	100 X 66mm (3.93 x 2.59 inches)
Operating Temperature	0°C ~ +70°C

Packing List

- Vortex86-6084AV x1
- Cable
Audio Line x3

Ordering Information

- Vortex86-6084AV** Tiny x-PCI Video Captured & Audio I/O Module
- Vortex86-6084A** Tiny x-PCI Audio I/O Module
- Vortex86-6084V** Tiny x-PCI Video Captured Module



1
Mity/Tiny Module

2
PC/104 Module

3
3.5"/ATX/EBX Module

4
Half-Size Module

5
Peripheral Module

6
Accessories

Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz
Bus	16-bit x-ISA interface
BIOS	AMI BIOS
System Memory	Onboard 2MB EDO RAM
Onboard Flash	512KB onboard flash with X-DOS pre-install (optional)
Watchdog Timer	Software programmable from 30.5us to 512 seconds
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x2 Parallel port x1 16-bit GPIO port x1
Connectors	2.0mm 64-pin header for 16-bit x-ISA interface x1 2.0mm 64-pin header for I/O interface x1 2.0mm 9-pin header for DMA x1
Power Requirement	Single Voltage +5V @360mA
Weight	30g
Board Size	65 X 45mm (2.56 x 1.77 inches)
Operating Temperature	-20°C ~ +70°C

Mity-SoC Module

Mity-SoC Module (65x45mm) is designed as the kernel of your own application, which integrates the DM&P 6117D CPU, onboard DRAM (2/4MB), BIOS and multi I/O. The I/O interface of Mity-SoC are 64pin (2x32, pitch 2.0mm) connector x2; one is for x-ISA bus, another is for all I/O functions which including COM, PRN, IDE, and GPIO.

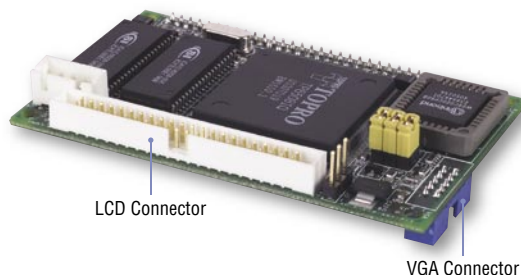
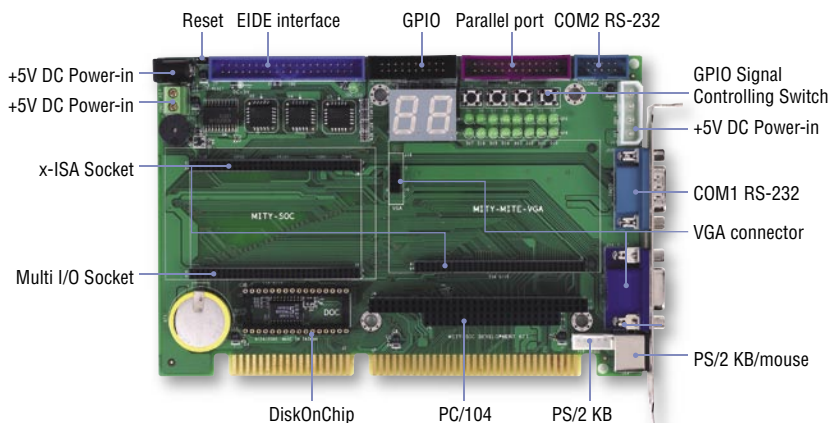
For assisting users easily use our Mity-SoC Module, ICOP provides complete development kit of Mity-SoC Development Board and Mity-SoC VGA/LCD Development Kit for Mity-SoC module.

We also supply our customers with referential circuit diagram for easing user's effort during development process. Meanwhile, you can design your own based board which only equips I/O functions you need.

Please visit our website for getting further information you need:
<http://www.dmp.com.tw/tech/m6117d/mitysoc/>
 You also can contact us for getting referential circuit drawing:
info@icop.com.tw

Mity-SoC CPU Module Ordering Selection

Ordering Type No.	RAM		BIOS		ALi M5113	
	2MB	4MB	EPROM	EPROM+Flash	TTL	RS-232
Mity-SoC 1	V		V			
Mity-SoC 2	V			V		
Mity-SoC 3		V	V			
Mity-SoC 4		V		V		
Mity-SoC 5	V		V		V	
Mity-SoC 6	V		V			V
Mity-SoC 7	V			V	V	
Mity-SoC 8	V			V		V
Mity-SoC 9		V	V		V	
Mity-SoC 10		V	V			V
Mity-SoC 11		V		V	V	
Mity-SoC 12		V		V		V



Specifications

Bus	16-bit x-ISA interface PC/104 standard compliant
Status Indicator	Digit Type 7-Segment LED Display for POST Code x2 GPIO LED x16 IDE LED x1
Connectors	2.54mm 40-pin box header for IDE x1 32-pin DIP socket for DOG x1 2.54mm 26-pin box header for Printer x1 2.54mm 20-pin box header for 16-bit GPIO x1 2.54mm 10-pin box header for RS-232 x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin header for Reset x1 External 15-pin D-Sub female connector for VGA External 9-pin D-Sub male connector for RS-232 x1 External Mini DIN connector for Keyboard/Mouse x1 4-pin Molex connector for Power input x1 2-pin Terminal strip for Power input x1 DC Jack for Power input x1
Power Requirement	Single Voltage +5V @150mA
Dimension	185 x 122mm (7.28 x 4.8 inches)
Weight	172g
Operating Temperature	-20°C ~ +70°C

Packing List

- ICOP-6019-1
- CD for User's Manual & Driver x1
- Cable
HDD x1
RS-232 x1
Printer x1
YKB x1

Specifications

Chipset	TOPRO TP6508IQ VGA and Mono/STN/DSTN/TFT Flat Panel interface support
Bus	16-bit x-ISA interface
VGA Memory	Onboard 1MB EDO RAM, support resolution up to 1024x768, 256 colors
Connectors	2.0mm 44-pin box header for LCD x1 2.0mm 10-pin box header for VGA x1 2.54mm 4-pin wafer for +12V, -12V, -5V DC-in x1
Power Requirement	Single Voltage +5V @200mA
Weight	32g
Board Size	80 x 50mm (3.14 x 1.96 inches)
Operating Temperature	-20°C ~ +60°C

Packing List

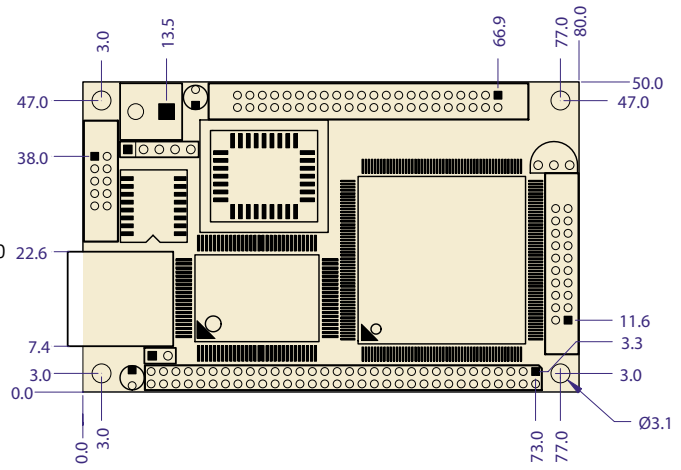
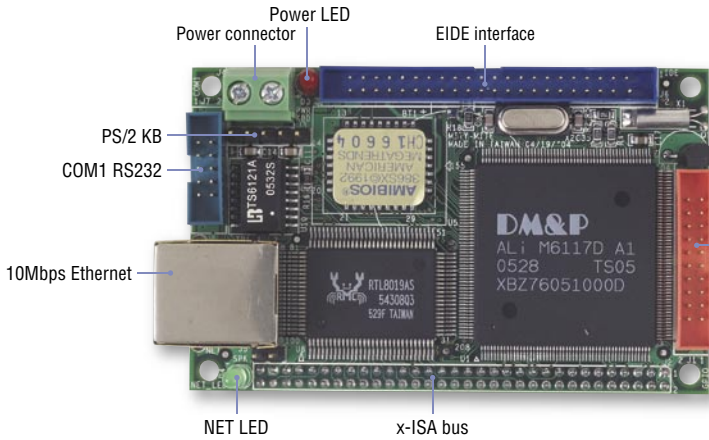
- ICOP-6019-VGA x1

Ordering Information

- **ICOP-6019-1** Mity-SoC Development Board
- **ICOP-6019-VGA** Mity-SoC VGA/LCD Development Kit

Mity-SoC Development Kit



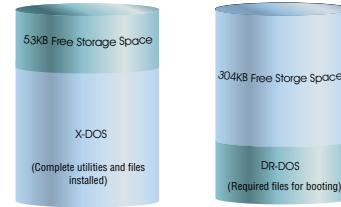


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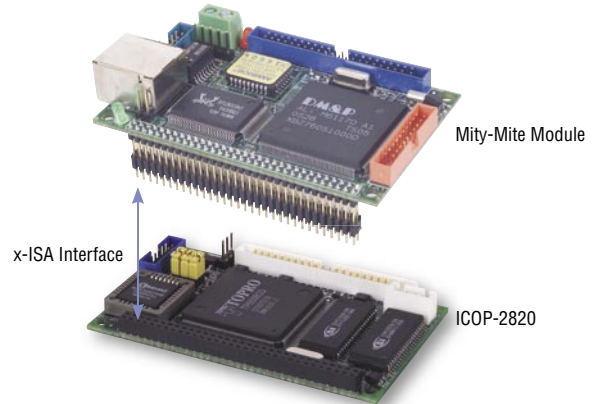
- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories

Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	16-bit x-ISA interface
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM
Onboard Flash	512KB onboard flash with X-DOS pre-install
Watchdog Timer	Software programmable from 30.5us to 512 seconds
LAN	Realtek 8019AS 16-bit ISA Full-Duplex Ethernet Controller NE2000 compatible with built-in 16KB RAM buffer Throughput 10Mbps
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 RS-232 port x1 16-bit GPIO port x1 10Mbps Ethernet port x1
Connectors	2.0mm 64-pin header for 16-bit x-ISA interface 2.0mm 44-pin box header for IDE x1 2.0mm 10-pin box header for RS-232 x1 2.0mm 20-pin box header for 16-bit GPIO x1 2.54mm 5-pin header for Keyboard x1 External RJ-45 connector for Ethernet x1
Power Requirement	Single Voltage +5V @420mA
Weight	56g
Board Size	80 X 50mm (3.14 x 1.96 inches)
Operating Temperature	-20°C ~ +70°C



512KB Onboard Flash reserves free storage space of 53KB (X-DOS) or 304KB (DR-DOS)



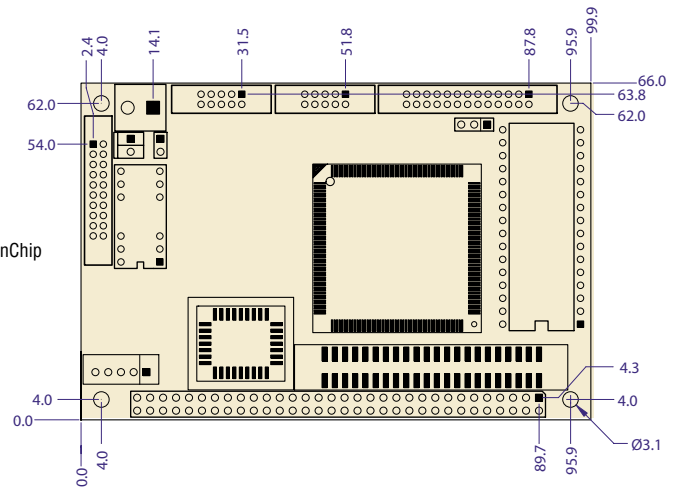
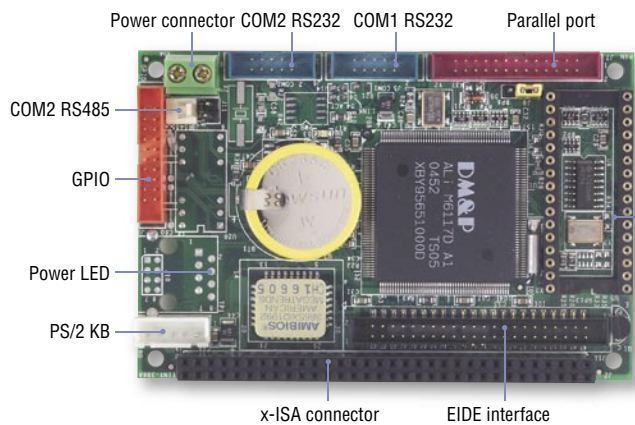
VGA function support via x-PCI interface

Packing List

- Mity-Mite CPU Module x1
- Cable
HDD 44P (2.Q) x1
RS-232 (2.Q) x1
GPIO (2.Q) x1
PS/2 KB White x1

Ordering Information

- **ICOP-6017-D** M6117D Mity-Mite CPU Module with DR-DOS pre-install
- **ICOP-6017-X** M6117D Mity-Mite CPU Module with X-DOS pre-install
- **ICOP-2820** Mity-Mite VGA/LCD Development Kit



Unit: mm

Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	16-bit x-ISA interface
BIOS	AMI BIOS
System Memory	On board 4MB/8MB EDO RAM
Watchdog Timer	Software programmable from 30.5us to 512 seconds
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1
Connectors	2.0mm 44-pin box header for IDE x1 32-pin Socket for DOC x1 2.0mm 26-pin box header for Printer x1 2.0mm 20-pin box header for 16-bit GPIO x1 2.0mm 10-pin box header for RS-232 x2 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin header for RS-485 x1
Power Requirement	Single Voltage +5V @430mA
Weight	64g
Board Size	100 X 66mm (3.94 x 2.6 inches)
Operating Temperature	-20°C ~ +70°C



ICOP-2720



ICOP-6016

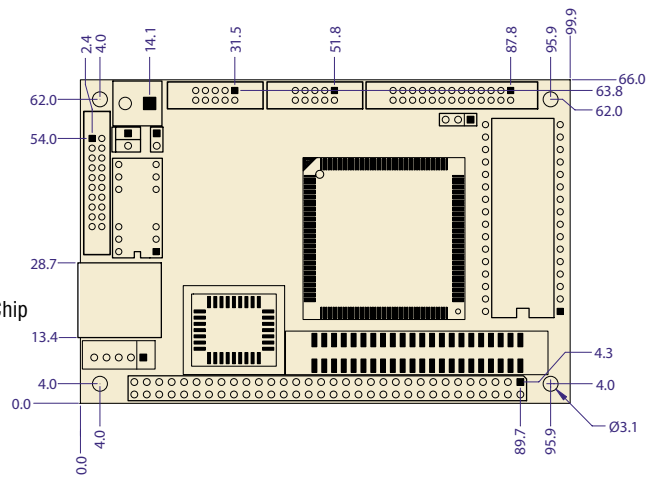
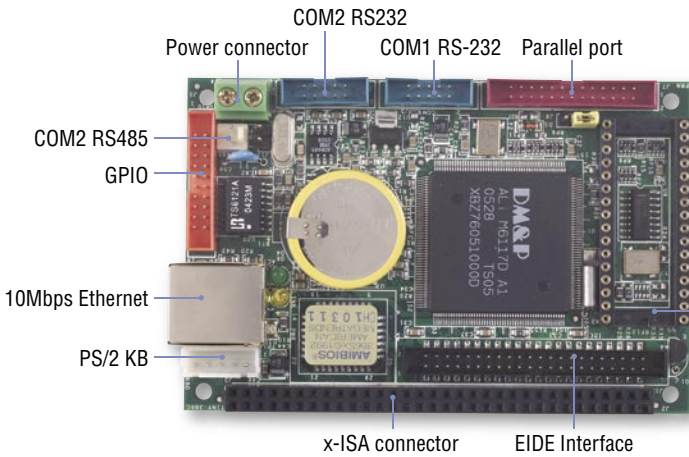
VGA function support via x-ISA interface

Packing List

- ICOP-6016 x1
- Cable
HDD 44P (2.Q) x1
PRINT (2.Q) x1
RS-232 (2.Q) x2
PS2 KB White x1
GPIO (2.Q) x1

Ordering Information

- **ICOP-6016** M6117D Tiny CPU Module with 8MB DRAM
- **ICOP-6016-4MB** M6117D Tiny CPU Module with 4MB DRAM
- **ICOP-2720** Tiny VGA/LCD Development Kit



Unit: mm

1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module

5

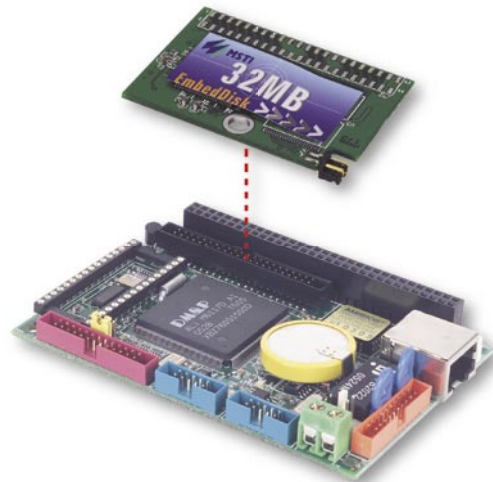
Peripheral Module

6

Accessories

Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	16-bit x-ISA interface
BIOS	AMI BIOS
System Memory	On board 4MB/8MB EDO RAM
Watchdog Timer	Software programmable from 30.5us to 512 seconds
LAN	Realtek 8019AS 16-bit ISA Full-Duplex Ethernet Controller NE2000 compatible with built-in 16KB RAM buffer Throughput 10Mbps
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1 10Mbps Ethernet port x1
Connectors	2.0mm 44-pin box header for IDE x1 32-pin DIP socket for DOC x1 2.0mm 26-pin box header for Printer x1 2.0mm 20-pin box header for 16-bit GPIO x1 2.0mm 10-pin box header for RS-232 x2 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin header for RS-485 x1 External RJ-45 connector for Ethernet x1
Power Requirement	Single Voltage +5V @460mA
Weight	76g
Board Size	100 X 66mm (3.94 x 2.6 inches)
Operating Temperature	-20°C ~ +70°C

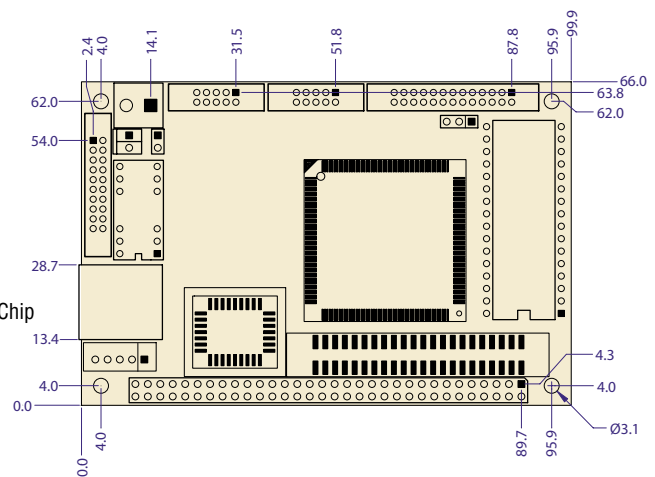
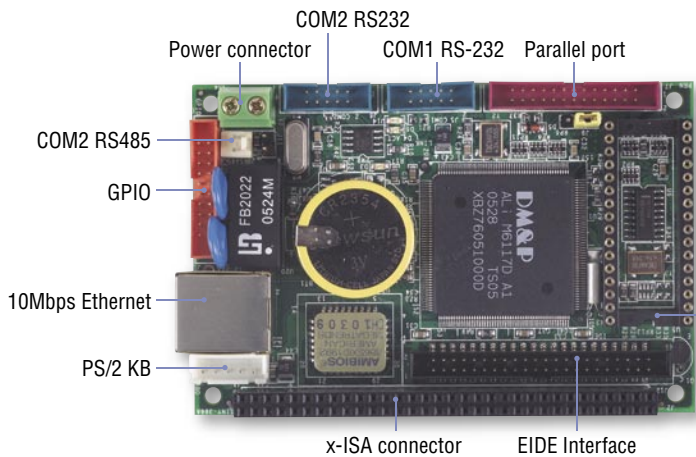


Packing List

- ICOP-6015 x1
- Cable
HDD 44P (2.Q) x1
PRINT (2.Q) x1
RS-232 (2.Q) x2
PS2 KB White x1
GPIO (2.Q) x1

Ordering Information

- ICOP-6015** M6117D Tiny CPU Module with 8MB
- ICOP-6015-4MB** M6117D Tiny CPU Module with 4MB
- ICOP-6015H** M6117D Tiny CPU Module with 10/100Mbps Ethernet Controller
- ICOP-2720** Tiny VGA/LCD Development Kit

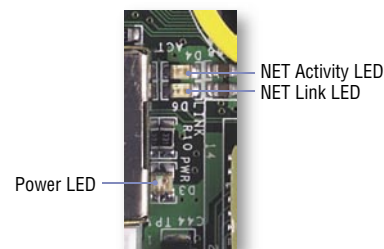


Unit: mm

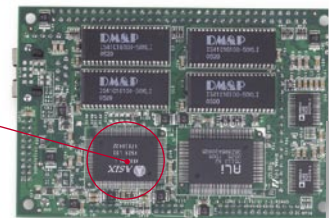
Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	16-bit x-ISA interface
BIOS	AMI BIOS
System Memory	Onboard 8MB EDO RAM
Watchdog Timer	Software programmable from 30.5us to 512 seconds
LAN	ASIX AX88796L Fast Ethernet Controller Full-duplex transfer mode, doubles effective bandwidth NE2000 compatible with built in 16 KB RAM buffer Throughput: 10/100Mbps
Flash Disk	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1 10/100Mbps Ethernet port x1
Connectors	2.0mm 44-pin box header for IDE x1 32-pin DIP socket for DOC x1 2.0mm 26-pin box header for Printer x1 2.0mm 20-pin box header for 16-bit GPIO x1 2.0mm 10-pin box header for RS-232 x2 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin header for RS-485 x1 External RJ-45 connector for Ethernet x1
Power Requirement	Single Voltage +5V @480mA
Weight	76g
Board Size	100 X 66mm (3.94 x 2.6 inches)
Operating Temperature	-20°C ~ +70°C

Status Indicator



NEW! ICOP-6015H equips with ASIX which is a Fast Ethernet Controller delivering excellent transfer rate of 10/100Mbps on 386 structures.



Packing List

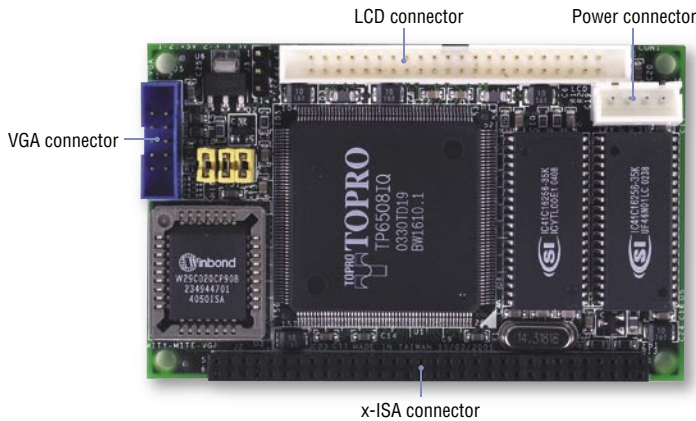
- ICOP-6015Hx1
- Cable
- HDD 44P (2.Q) x1
- PRINT (2.Q) x1
- RS-232 (2.Q) x2
- PS2 KB White x1
- GPIO (2.Q) x1

Order information

- ICOP-6015H** M6117D Tiny CPU Module with 10/100Mbps Ethernet Controller
- ICOP-2720** Tiny VGA/LCD Development Kit

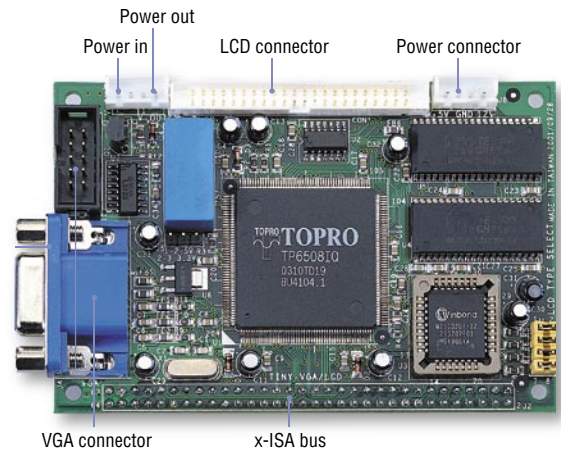
ICOP-2820

Mity-Mite VGA/LCD Development Kit



ICOP-2720

Tiny VGA/LCD Development Kit



Specifications

Chipset	TOPRO TP6508IQ VGA and Mono/STN/DSTN/TFT Flat Panel interface support
Bus	16-bit x-ISA interface
VGA Memory	Onboard 1MB EDO RAM, support resolution up to 1024x768, 256 colors
Connectors	2.0mm 64-pin socket for 16-bit x-ISA interface x1 2.0mm 44-pin box header for LCD x1 2.0mm 10-pin box header for VGA x1 2.54mm 4-pin wafer for +12V, -12V, -5V DC-in x1
Power Requirement	Single Voltage +5V @ 200mA
Weight	32g
Board Size	80 x 50mm (3.14 x 1.96 inches)
Storage Temperature	-20°C ~ +60°C

Packing List

- ICOP-2820 x1
- Cable
VGA (2.Q) x1

Specifications

Chipset	TOPRO TP6508IQ VGA and Mono/STN/DSTN/TFT Flat Panel interface support
Bus	16-bit x-ISA interface
VGA Memory	Onboard 1MB EDO RAM, support resolution up to 1024x768, 256 colors
Connectors	2.0mm 44-pin box header for LCD x1 2.54mm 10-pin box header for VGA x1 2.54mm 4-pin wafer for +12V, -12V, -5V DC-in x1 2.54mm 4-pin wafer for internal relay x1 External 15-pin D-Sub Female connector for VGA x1
Power Requirement	Single Voltage +5V @ 200mA
Weight	32g
Board Size	100 X 66mm (3.94 x 2.6 inches)
Operating Temperature	20°C ~ +60°C

Packing List

- ICOP-2720 x1

1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module

5

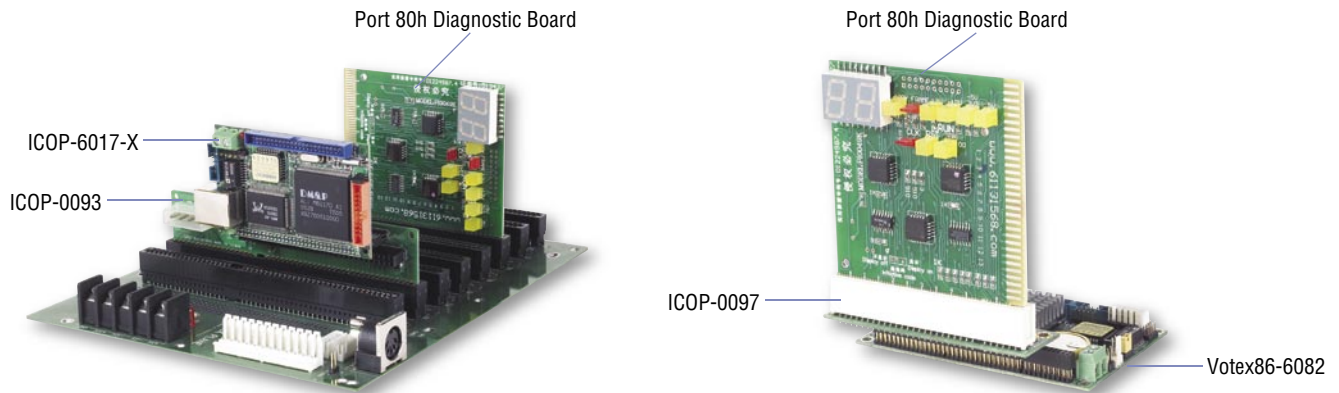
Peripheral Module

6

Accessories

Development Tool Kit for Tiny/Mity Series

To assist clients in using Tiny/Mity Series for their own system developments, ICOP has released the complete development tool kit. Please refer the following table for the initiatory application guide.



	Vortex86-6082	ICOP-6015	ICOP-6015H	ICOP-6016	Mity-Mite
	Tiny	Tiny	Tiny	Tiny	Mity
On Board VGA	V				
On Board LAN	10/100Mbps	10Mbps	10/100Mbps		10Mbps
VX86-6083	V				
VX86-6083L1	V				
VX86-6083-Mini-PCI	V				
Mini-PCI-Wireless-Lan-Card	V				
VX86-6084AV	V				
ICOP-2720 (VGA for x-ISA) (2.54mm)		V	V	V	
ICOP-2820 (VGA for x-ISA) (2.0mm)					V
ICOP-0093 (x-ISA to ISA Bus)		V	V	V	V
ICOP-0094 (IDE Exchanger Kit)	V	V	V	V	V
HDD/CD/DVD ROM	V	V	V	V	V
CF-1915 (IDE to CF)	V	V	V	V	V
ICOP-0097 (x-PCI to PCI Bus)	V				
ISA/PCI Port 80h Diagnostic Board	V	V	V	V	V
ISA Back Plane		V	V	V	V

Note 1: If you like to use VX86-6082 with PCI Port 80h Diagnostic Board, please prepare ICOP-0097 (x-PCI to PCI Bus).

Note 2: If you like to use ICOP-6015 with PCI Port 80h Diagnostic Board, please prepare ICOP-0093 (x-ISA to ISA Bus) and ISA Back Plane.

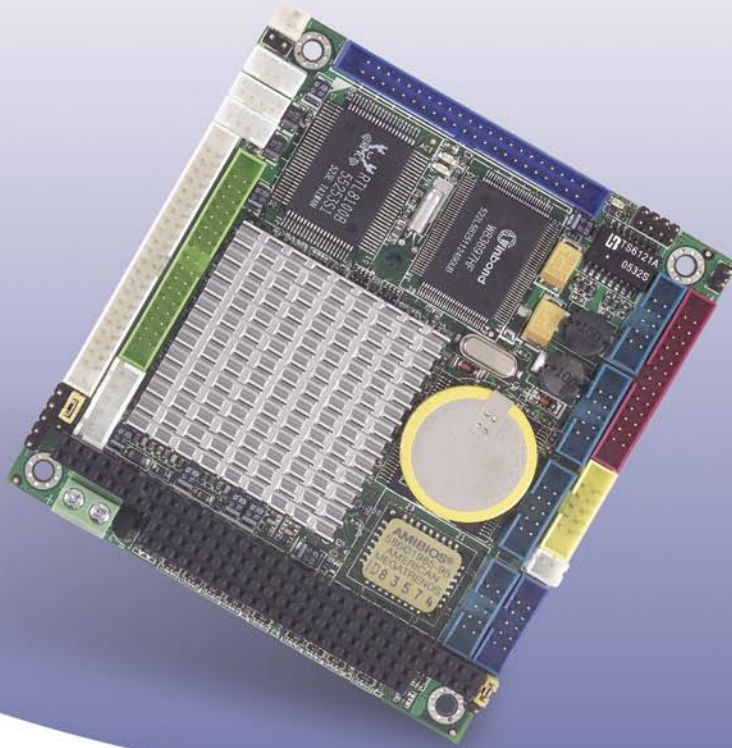
Note 3: If you like to use ICOP-6015H with PCI Port 80h Diagnostic Board, please prepare ICOP-0093 (x-ISA to ISA Bus) and ISA Back Plane.

Note 4: If you like to use ICOP-6016 with PCI Port 80h Diagnostic Board, please prepare ICOP-0093 (x-ISA to ISA Bus) and ISA Back Plane.

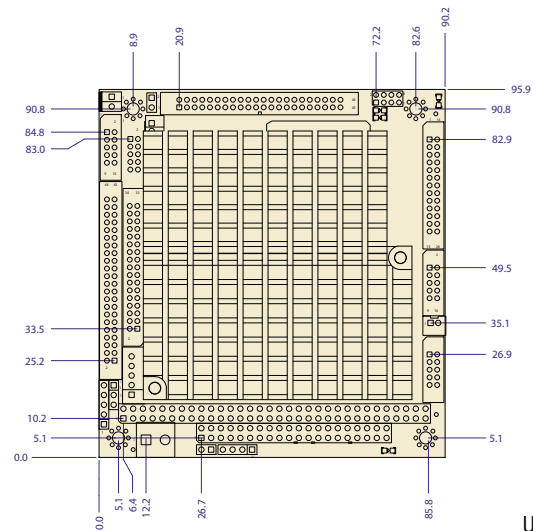
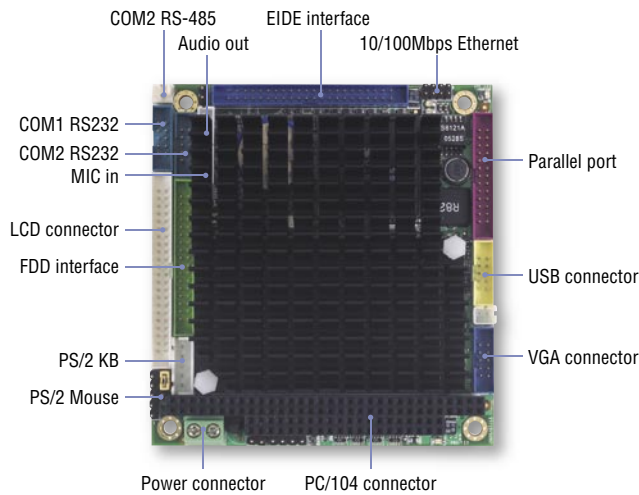
Note 5: If you like to use Mity-Mite with PCI Port 80h Diagnostic Board, please prepare ICOP-0093 (x-ISA to ISA Bus) and ISA Back Plane.

PC/104 CPU Module

2

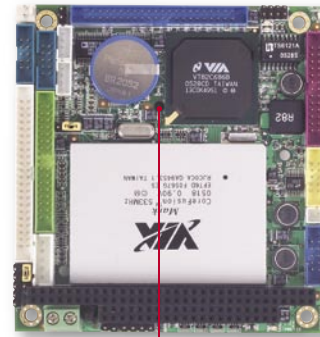


Vega86-6270	Vega86 CPU Module with 128MB/2S/2USB/VGA/LCD/AUDIO/LAN	50
Vortex86-6074	Vortex86 CPU Module with 128MB/2S/2USB/VGA/LCD/2LAN	51
Vortex86-6072	Vortex86 CPU Module with 64MB/2S/2USB/VGA/LCD/GPIO	52
Vortex86-6071	Vortex86 CPU Module with 128MB/4S/2USB/VGA/LCD/AUDIO/LAN	53
Vortex86-6070	Vortex86 CPU Module with 128MB/2S/2USB/VGA/LCD/LAN/DOC	54
ICOP-6056E2	M6117D CPU Module with 8MB/2S/2LAN/GPIO/DOC	55
ICOP-6054VE	M6117D CPU Module with 4MB/4S/VGA/LCD/GPIO/LAN/DOC	56
ICOP-6053	M6117D CPU Module with 4MB/2S/LAN/DOC	57
ICOP-6052VF	M6117D CPU Module with 8MB/2S/VGA/LCD/GPIO/DOC	58
ICOP-6052V	M6117D CPU Module with 4MB/2S/VGA/LCD/DOC	59
ICOP-6050F	M6117D CPU Module with 8MB/2S/GPIO/DOC	60
ICOP-6050M	M6117D CPU Module with 8MB/4S/GPIO/DOC	61
ICOP-6050	M6117D CPU Module with 4MB/2S/DOC	62

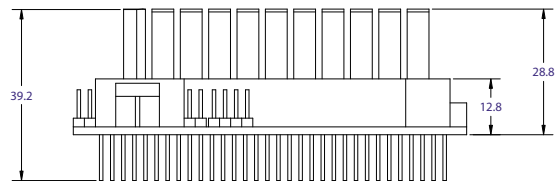


Specifications

SoC	VIA Mark CoreFusion 533MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Cache	L1:64K L2:64K
VGA	Integrated 2D/3D AGP4X graphics with MPEG2 Accelerator Shared system memory 8M/16M/32M VGA ,SVGA, XGA, SXGA and DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	Fully compliant with AC97 V2.0 Hardware Direct Sound accelerator
Flash Disk Support	MST1 EmbedDisk Module (16MB and above)
I/O Interface	Enhanced IDE port (UltraDMA-100 / 66/ 33) x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver 1.1) 10/100Mbps Ethernet port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.0mm 34-pin box header for FDD x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x2 2.0mm 10-pin box header for USB x1 2.0mm 10-pin box header for VGA x1 2.0mm 8-pin header for Ethernet x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.0mm 4-pin wafer for Line-out/MIC-in x2 2.54mm 4-pin header for +12V, -12V, -5V DC-in x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @ 2.2A
Weight	210g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +60°C



Fixed hole for Flash Disk

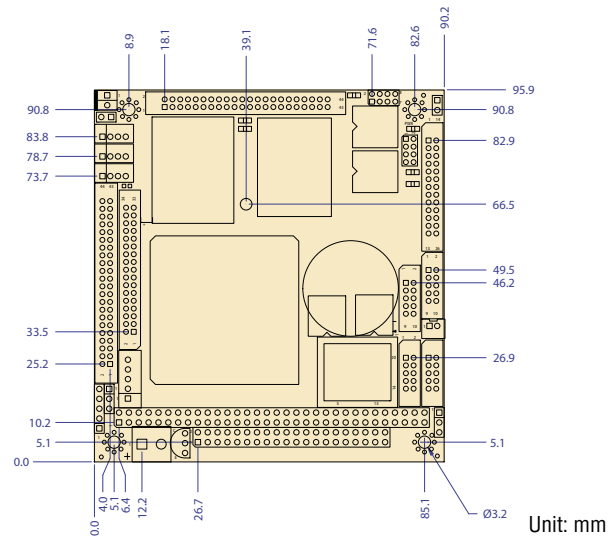
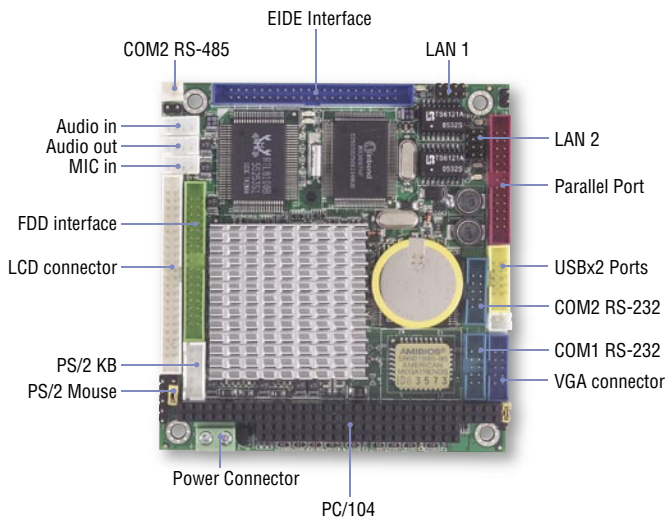


Packing List

- Vega86-6270 x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x2
 - VGA (2.Q) x1
 - NET 4x2 (2.Q) x1
 - USB (2.Q) x1
 - Audio Line x1
 - PS2 KB White x1
 - PS2 KB (TEST) Black x1
- Screw Kit x1

Ordering Information

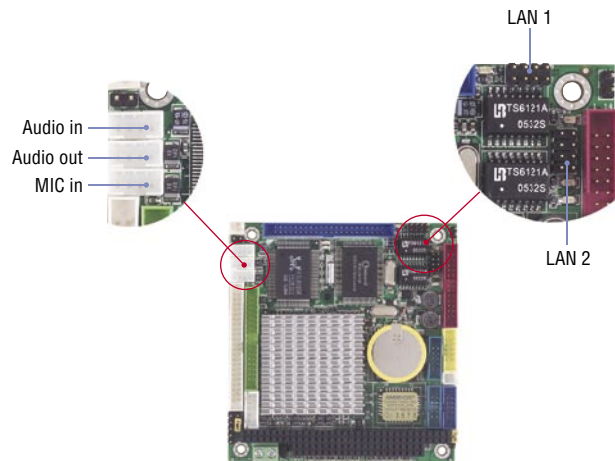
- **Vega86-6270** Vega86 PC/104 CPU Module with 128MB SDRAM



- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories

Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-166MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1, 280 x 1, 024 true colors VGA and /STN/DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	Fully compliant with AC97 V2.1 Hardware DirectSound accelerator
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver 1.1) 10/100Mbps Ethernet port x2
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.0mm 34-pin box header for FDD x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x2 2.0mm 10-pin box header for USB x1 2.0mm 10-pin box header for VGA x1 2.0mm 8-pin header for Ethernet x2 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.0mm 4-pin wafer for Line-in/Line-out/MIC-in x3 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V@940mA
Weight	140g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C

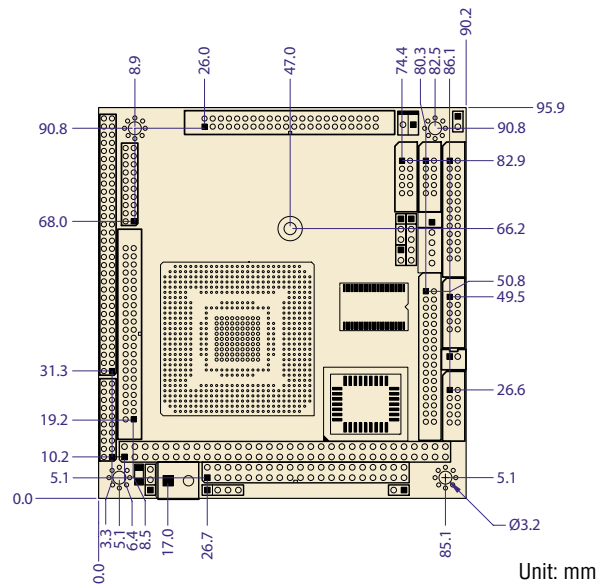
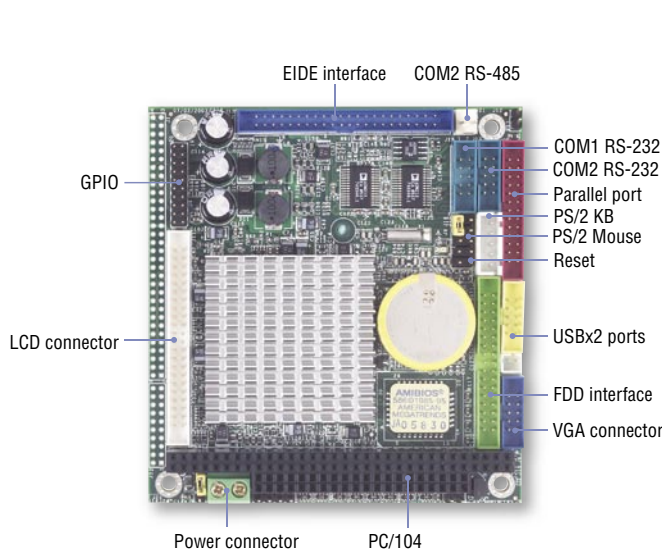


Packing List

- Vortex86-6074 x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x2
 - VGA (2.Q) x1
 - NET 4x2 (2.Q) x2
 - USB (2.Q)x1
 - PS2 KB White x1
 - PS2 KB (TEST) Black x1
- Screw Kit x1

Ordering Information

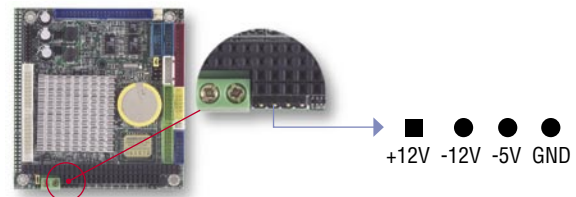
- **Vortex86-6074** Vortex86 PC/104 CPU Module with 128MB
- **Vortex86-6074-64MB** Vortex86 PC/104 CPU Module with 64MB



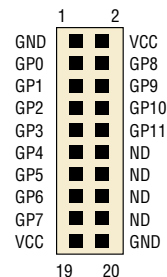
Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip 133MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 64MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1 hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA and STN/DSTN/TFT Flat Panel interface support
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver 1.1) 12-bit GPIO port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.0mm 34-pin box header for FDD x1 2.0mm 26-pin box header for Printer x1 2.0mm 20-pin header for 12-bit GPIO x1 2.0mm 10-pin box header for RS-232 x2 2.0mm 10-pin box header for USB x1 2.0mm 10-pin box header for VGA x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @760mA
Weight	112g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C

Flexible DC Power Connector Interconnect to PC/104



12-bit GPIO Port Support



Packing List

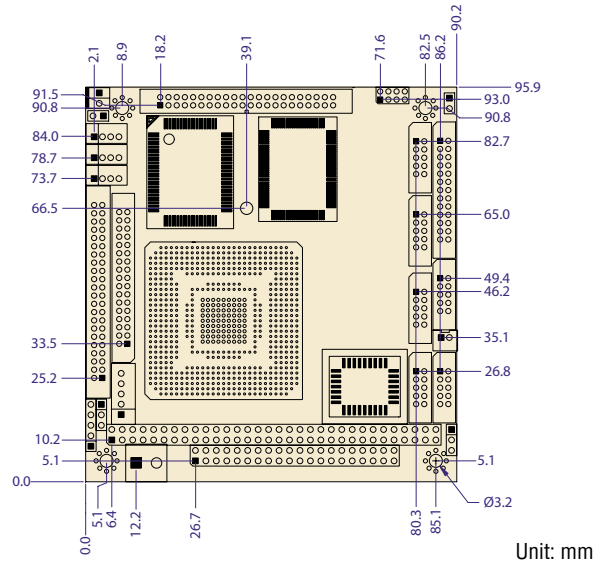
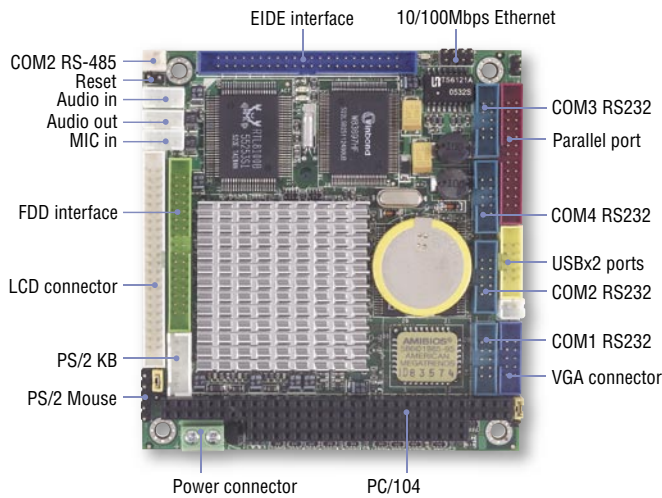
- Vortex86-6072 x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x2
 - VGA (2.Q) x1
 - USB (2.Q) x1
 - GPIO (2.Q) x1
 - PS2 KB White x1
 - PS2 KB (TEST) Black x1
- Screw Kit x1

Ordering Information

- Vortex86-6072** Vortex86 PC/104 CPU Module with 64MB
- Vortex86-6072-128MB** Vortex86 PC/104 CPU Module with 128MB
- LCD-064/084/104-SET** 6.4"/8.4"/10.4" LCD Kit
- VOX-064-TS** 6.4" Open Frame Panel PC/with Touch Screen (optional)

Vortex86-6071

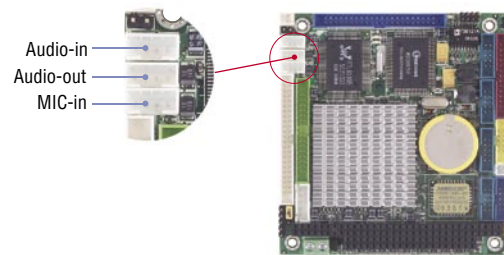
128MB/4S/2USB/VGA/LCD/AUDIO/LAN



Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-166MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1 hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA and STN/DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	Fully compliant with AC97 V2.1 Hardware DirectSound accelerator
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x3 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver. 1.1) 10/100Mbps Ethernet port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.0mm 34-pin box header for FDD x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x4 2.0mm 10-pin box header for USB x1 2.0mm 10-pin box header for VGA x1 2.0mm 8-pin header for Ethernet x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.0mm 4-pin wafer for Line-in/Line-out/MIC-in x3 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @1.11A
Weight	112g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C

Audio-in/Audio-out/MIC-in Function Support



Realtek ALC202 for Audio function

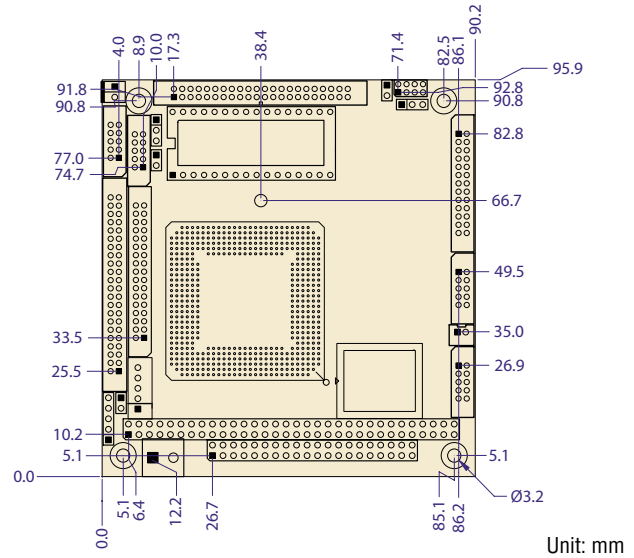
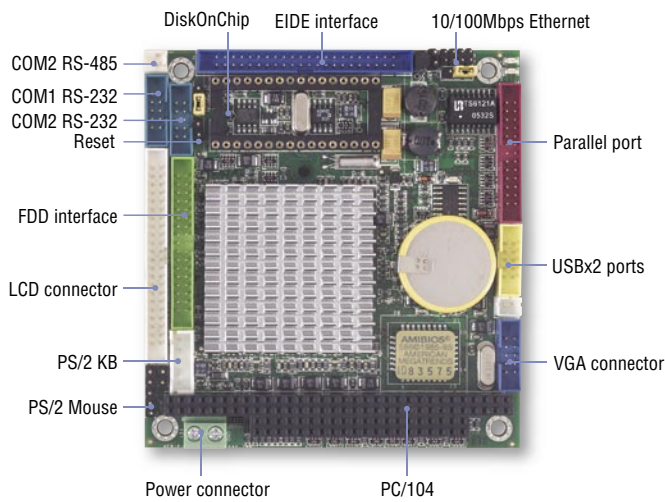
Packing List

- Vortex86-6071x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x4
 - VGA (2.Q) x1
 - NET 4x2 (2.Q) x1
 - USB (2.Q) x1
 - Audio Line x1
 - PS2 KB White x1
 - PS2 KB (TEST) Black x1
- Screw Kit x1

Ordering Information

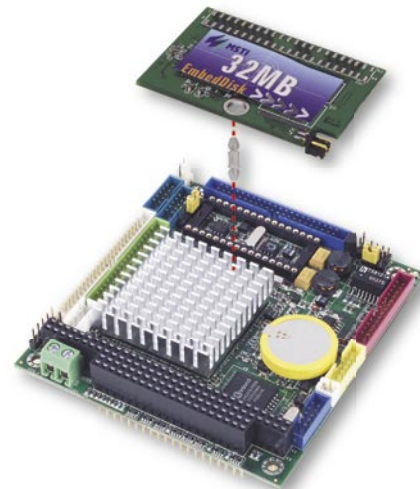
- **Vortex86-6071** Vortex86 PC/104 CPU Module
- **LCD-064/084/104-SET** 6.4"/8.4"/10.4" LCD Kit
- **VOX-064-TS** 6.4" Open Frame Panel PC/with Touch Screen (optional)

- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories



Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip 166MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1 hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA and STN/DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver. 1.1) 10/100Mbps Ethernet port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.0mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x2 2.0mm 10-pin box header for USB x1 2.0mm 10-pin box header for VGA x1 2.0mm 8-pin header for Ethernet x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @960mA
Weight	112g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C



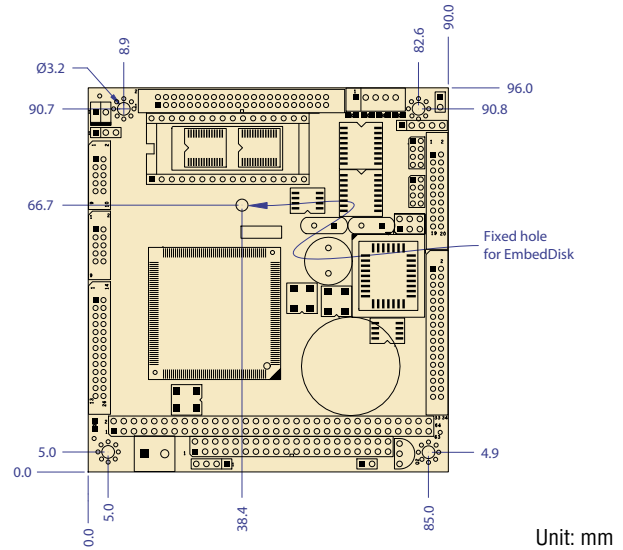
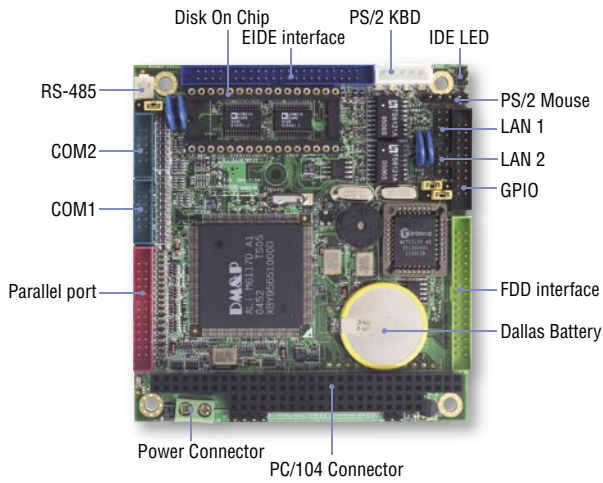
Fixed hole for Flash Disk

Packing List

- Vortex86-6070 x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x2
 - VGA (2.Q) x1
 - NET 4x2 (2.Q) x1
 - USB (2.Q)x1
 - PS2 KB White x1
 - PS2 KB (TEST) Black x1
- Screw Kit x1

Ordering Information

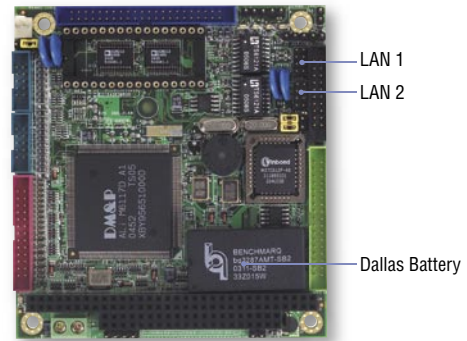
- **Vortex86-6070** Vortex86 PC/104 CPU Module with 128MB
- **Vortex86-6070-64MB** Vortex86 PC/104 CPU Module with 64MB
- **LCD-064/084/104-SET** 6.4"/8.4"/10.4" LCD Kit
- **VOX-064-TS** 6.4" Open Frame Panel PC/with Touch Screen (optional)



- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories

Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium / Dallas Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 8MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
LAN	Realtek 8019AS 16-bit ISA Full-Duplex Ethernet Controller NE2000 compatible with built-in 16KB RAM buffer Throughput 10Mbps
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip 2000 (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1 10Mbps Ethernet port x2
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x2 2.0mm 20-pin box header for 16-bit GPIO x1 2.0mm 8-pin header for Ethernet x2 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 2-pin header for IDE LED x1 2.54mm 4-pin header for +12V, -12V, -5V DC-in x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @ 420mA
Weight	105g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C



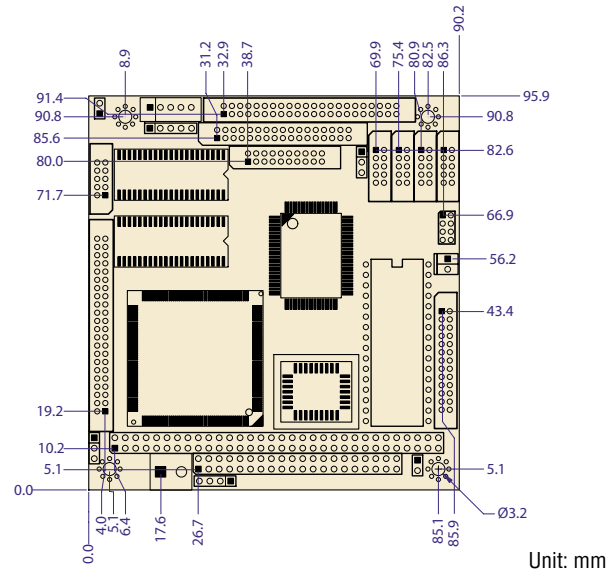
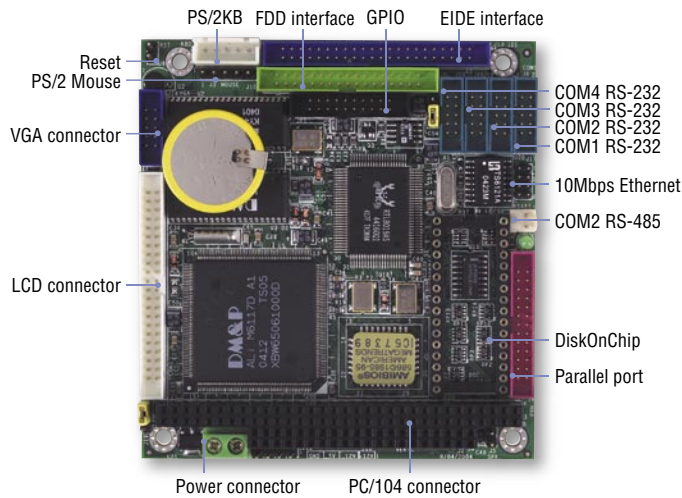
ICOP-6056E2-DA

Packing List

- ICOP-6056E2-DA
- CD for User's Manual & Driver x 1
- Cable
 - HDD 44P(2.0) x 1
 - RS232(2.0) x 2
 - PRINT(2.0) x 1
 - FDD(2.0) x 1
 - NET 4x2(2.0) x2
 - PS2 KB White x1

Ordering Information

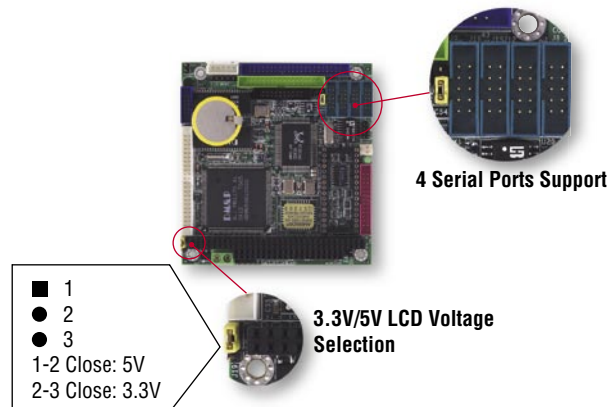
- **ICOP-6056E2** M6117D PC/104 CPU Module with 8MB
- **ICOP-6056E2-4MB** M6117D PC/104 CPU Module with 4MB
- **ICOP-6056E2-DA** M6117D PC/104 CPU Module with 8MB
- **ICOP-6056E2-DA-4M** M6117D PC/104 CPU Module with 8MB



Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
VGA	TOPRO TP6508IQ Chipset VGA and Mono/STN/DSTN/TFT Flat Panel interface support Onboard 1MB VGA Memory, support resolution up to 1024x768, 256 colors
LAN	Realtek 8019AS 16-bit ISA Full-Duplex Ethernet Controller NE2000 compatible with built-in 16KB RAM buffer Throughput 10Mbps
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x3 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1 10Mbps Ethernet port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.0mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.0mm 26-pin box header for Printer x1 2.0mm 20-pin box header for 16-bit GPIO x1 2.0mm 10-pin box header for RS-232 x4 2.0mm 10-pin box header for VGA x1 2.0mm 8-pin header for Ethernet x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 4-pin header for +12V, -12V, -5V DC-in x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @710mA

Weight	76g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C

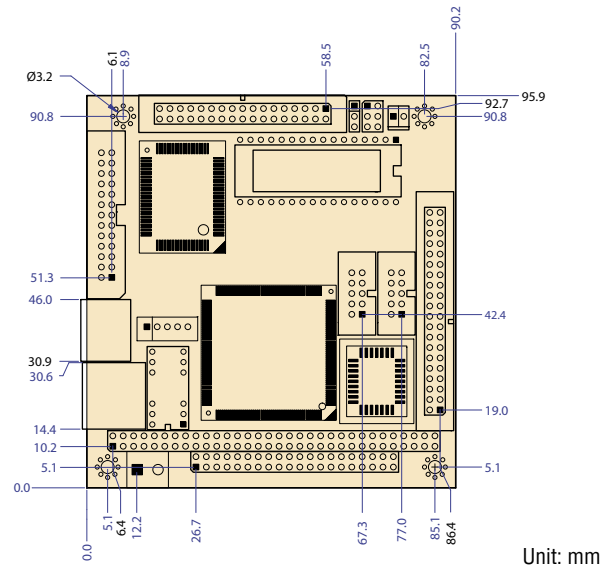
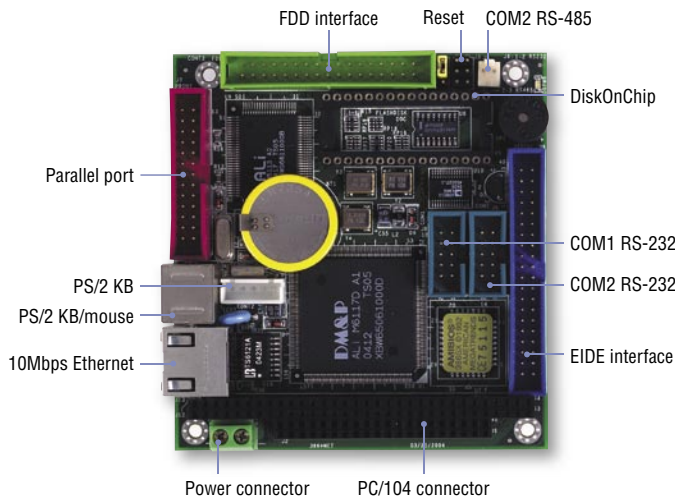


Packing List

- ICOP-6054VE x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x4
 - VGA (2.Q) x1
 - NET 4x2 (2.Q) x1
 - GPIO (2.Q) x1
 - PS2 KB White x1
- Screw Kit x1

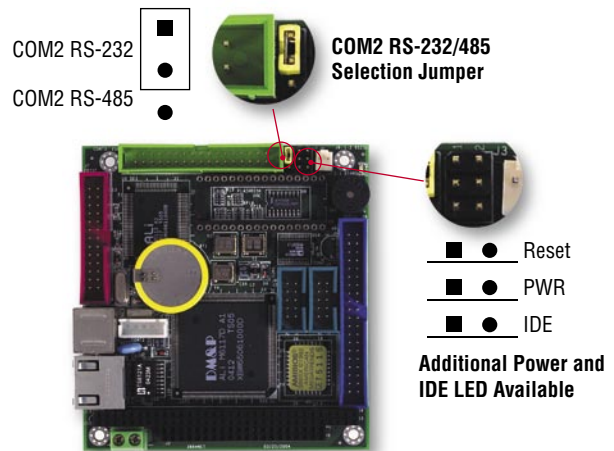
Ordering Information

- **ICOP-6054VE-4I** M6117D PC/104 CPU Module
- **LCD-064-SET** 6.4" LCD Kit



Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
LAN	Realtek 8019AS 16-bit ISA Full-Duplex Ethernet Controller NE2000 compatible with built-in 16KB RAM buffer Throughput 10Mbps
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 10Mbps Ethernet port x1
Connectors	2.54mm 40-pin box header for IDE x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.54mm 26-pin box header for Printer x1 2.54mm 10-pin box header for RS-232 x2 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 External RJ-45 connector for LAN x1 External Mini DIN connector for Mouse x1
Power Requirement	Single Voltage +5V @400mA
Weight	76g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C



Packing List

- ICOP-6053 x1
- CD for User's Manual & Driver x1
- Cable
AT BUS x1
PRINT x1
RS-232 x2
YKB x1
- Screw Kit x1

Ordering Information

- ICOP-6053** M6117D PC/104 CPU Module

1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

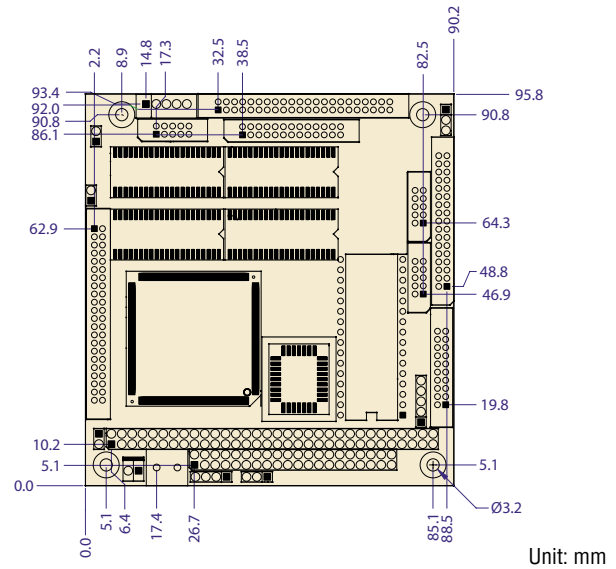
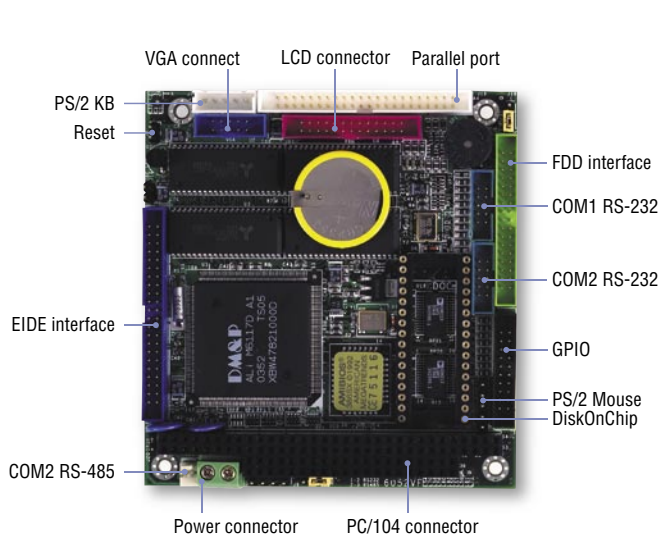
Half-Size Module

5

Peripheral Module

6

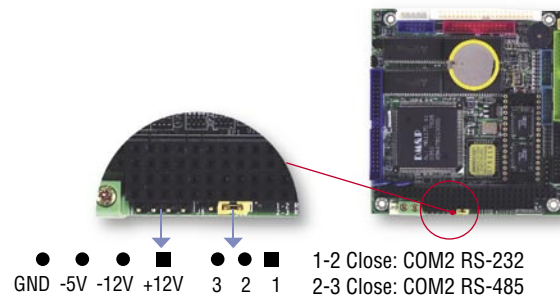
Accessories



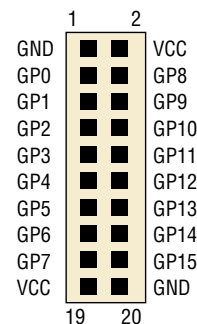
Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 8MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
VGA	TOPRO TP65081Q Chipset VGA and Mono/STN/DSTN/TFT Flat Panel interface support Onboard 1MB VGA Memory, support resolution up to 1024x768, 256 colors
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.0mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.0mm 26-pin box header for Printer x1 2.0mm 20-pin box header for 16-bit GPIO x1 2.0mm 10-pin box header for RS-232 x2 2.0mm 10-pin box header for VGA x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @630mA
Weight	76g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C

Flexible DC Power Connector Interconnect to PC/104



16-bit GPIO Port Support

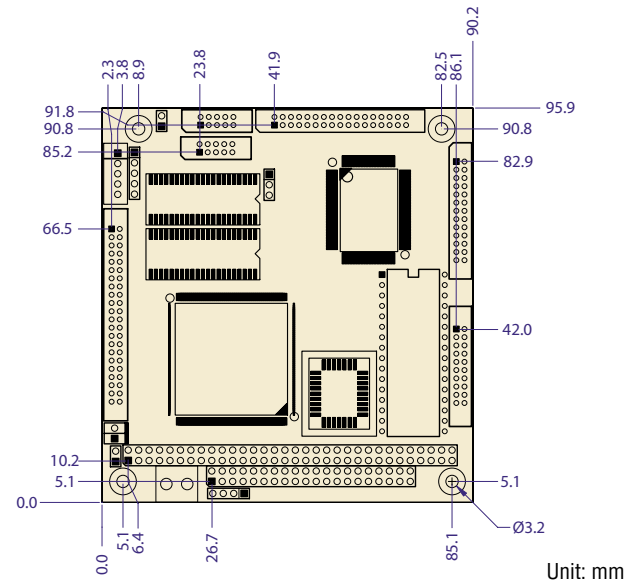
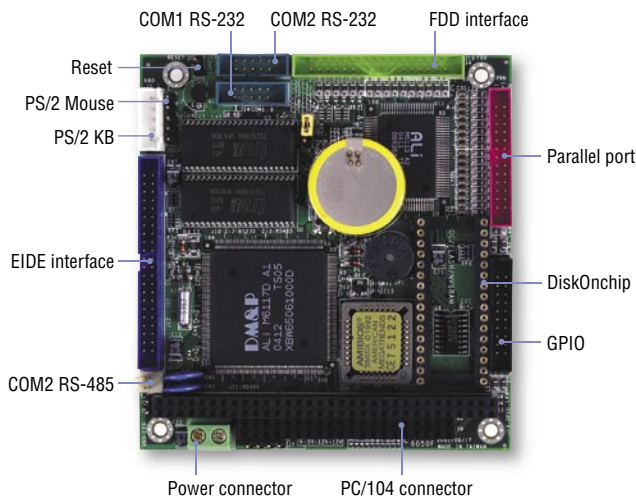


Packing List

- ICOP-6052VF x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x2
 - VGA (2.Q) x1
 - GPIO (2.Q) x1
 - PS2 KB White x1
- Screw Kit x1

Ordering Information

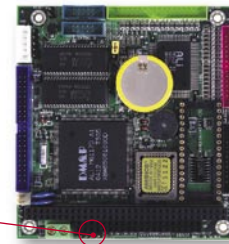
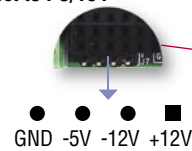
- ICOP-6052VF M6117D PC/104 CPU Module
- LCD-064-SET 6.4" LCD Kit



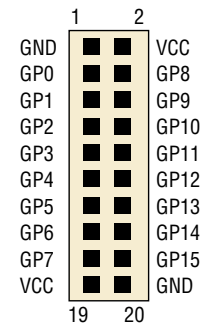
Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 8MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.0mm 26-pin box header for Printer x1 2.0mm 20-pin box header for 16-bit GPIO x1 2.0mm 10-pin box header for RS-232 x2 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @420mA
Weight	76g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C

Flexible DC Power Connector Interconnect to PC/104



16-bit GPIO Port Support

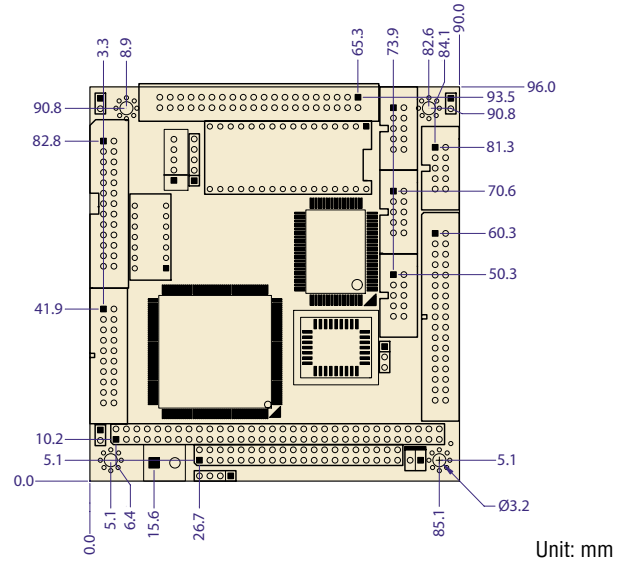
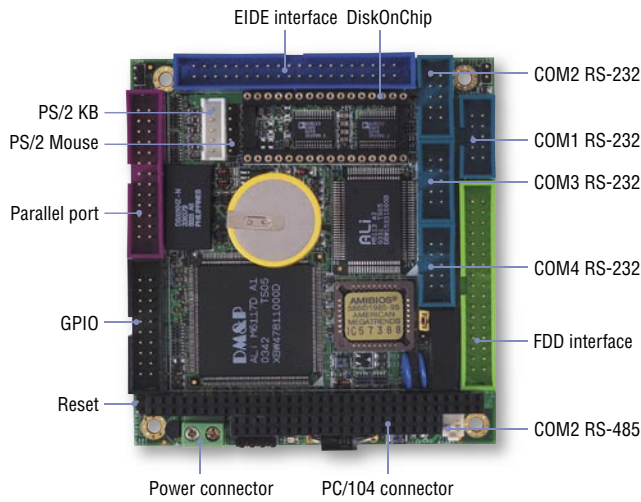


Packing List

- ICOP-6050F x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x2
 - GPIO (2.Q) x1
 - PS2 KB White x1
- Screw Kit x1

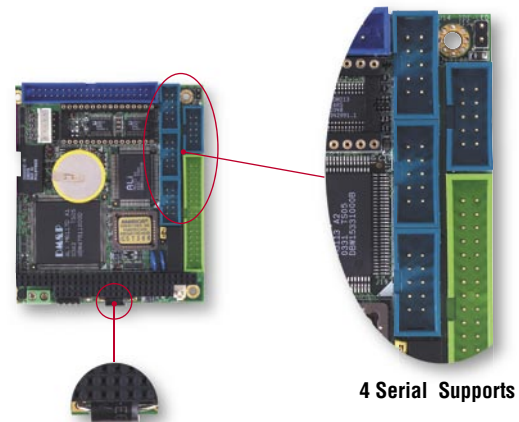
Ordering Information

- ICOP-6050F M6117D PC/104 CPU Module



Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x3 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1
Connectors	2.54mm 40-pin box header for IDE x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.54mm 26-pin box header for Printer x1 2.54mm 20-pin box header for 16-bit GPIO x1 2.54mm 10-pin box header for RS-232 x4 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @420mA
Weight	100g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-40°C ~ +80°C



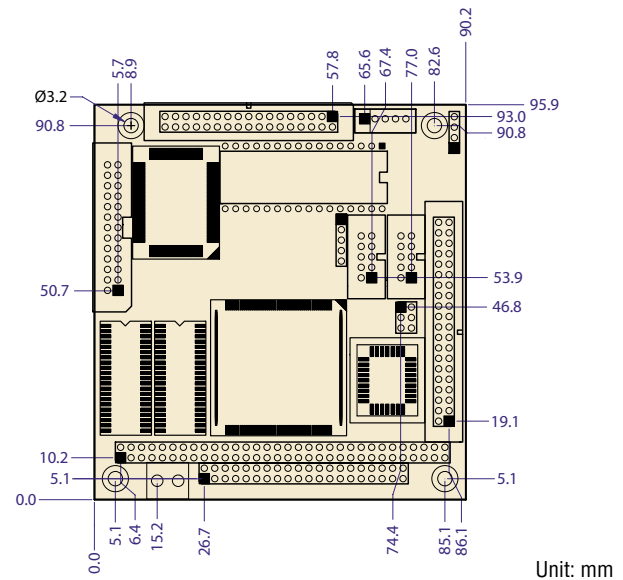
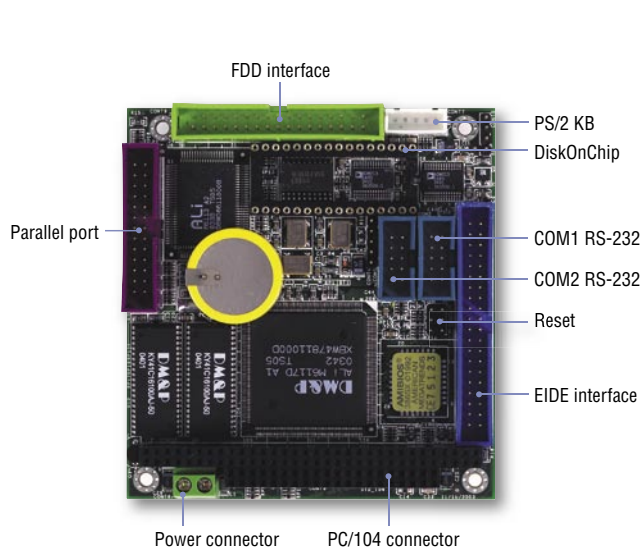
Packing List

- ICOP-6050M x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x4
 - GPIO (2.Q) x1
 - PS2 KB White x1
- Screw Kit x1

Ordering Information

- ICOP-6050M** M6117D PC/104 CPU Module

- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories



Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x2 Parallel port x1
Connectors	2.54mm 40-pin box header for IDE x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.54mm 26-pin box header for Printer x1 2.54mm 10-pin box header for RS-232 x2 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 2-pin box header for Buzzer x1 2.54mm 2-pin header for Reset x1
Power Requirement	Single Voltage +5V @380mA
Weight	76g
Board Size	90 X 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +70°C

Accessory Cables



AT Bus



PRINT



PS2 KB White



RS-232



RS-232-2Q

Packing List

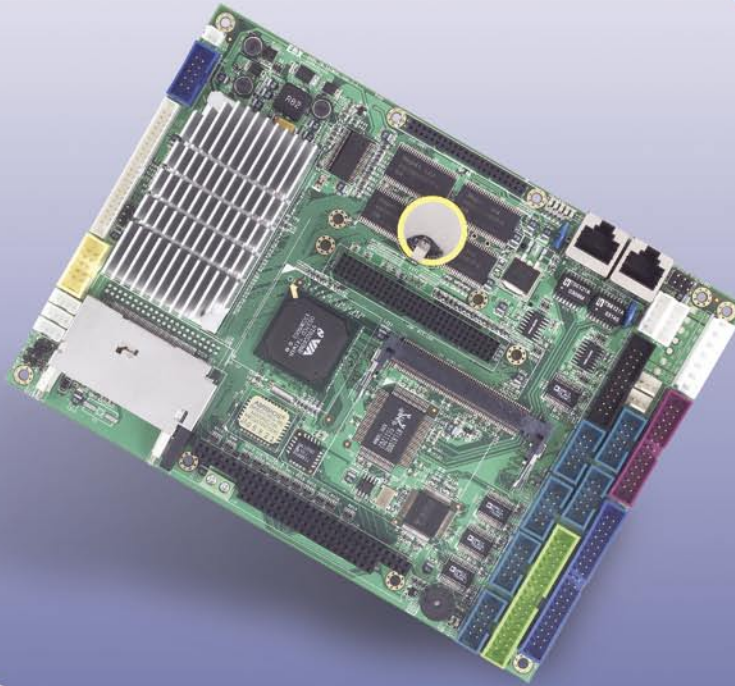
- ICOP-6050 x1
- CD for User's Manual & Driver x1
- Cable
 - AT BUS x1
 - PRINT x1
 - RS-232 x2
 - PS2 KB White x1
- Screw Kit x1

Ordering Information

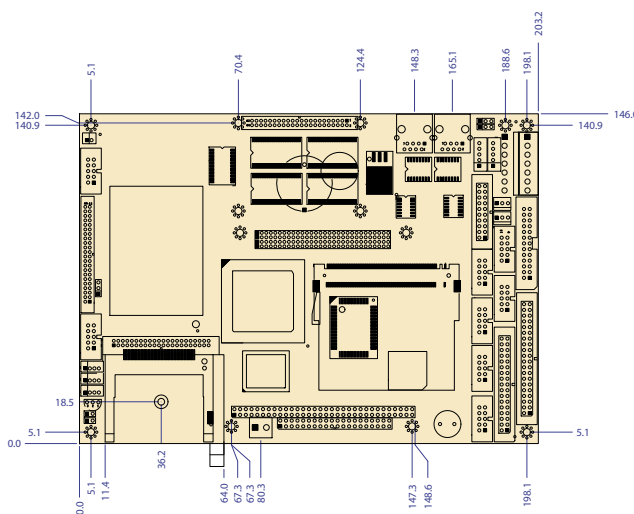
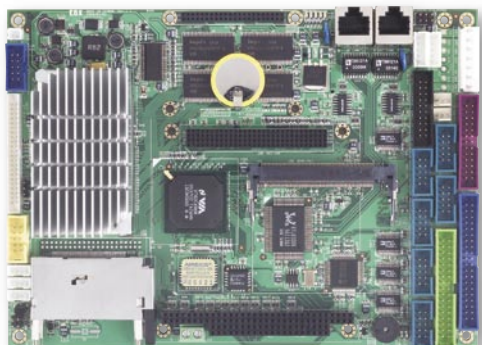
- ICOP-6050** M6117D PC/104 CPU Module with 4MB
- ICOP-6050-2MB** M6117D PC/104 CPU Module with 2MB

3.5"/ATX/EBX CPU Module

3



Vega86-6240	Vega86 CPU Module with 256MB/6S/2USB/GPIO/ VGA/LCD/AUDIO/2LAN/CF	64, 65
Vega86-6247	Vega86 CPU Module with 256MB/6S/3USB/VGA/ AUDIO/LCD/LAN/CF	66
Vortex86-6049-L26S	Vortex86 CPU Module with 128MB/6S/2USB/VGA/ LCD/AUDIO/2 LAN/CF	67
Vortex86-6048	Vortex86 CPU Module with 128MB/4S/2USB/VGA/ LCD/AUDIO/LAN/CF/DOC/CF	68, 69
Vortex86-6047-6S	Vortex86 CPU Module with 128MB/6S/3USB/VGA/ LCD/GPIO/AUDIO/LAN/CF	70
Vortex86-6047-4S	Vortex86 CPU Module with 128MB/4S/2USB/VGA/ LCD/AUDIO/LAN/GPIO/CF	71, 72
Vortex86-6076	Vortex86 CPU Module with 128MB/2S/2USB/VGA/ AUDIO/LAN	73
Vortex86-6076L2	Vortex86 CPU Module with 128MB/3USB/VGA/2LAN	74
Vortex86-6075	Vortex86 CPU Module with 1S/3USB/2VGA/Video-in/ TV-out/AUDIO/LAN	75
Vortex86-6075L2	Vortex86 CPU Module with 1S/3USB/VGA/2LAN	76
ICOP-6027VE	M6117D CPU Module with 4MB/2S/VGA/LCD/GPIO/ LAN/DOC	77
ICOP-6026VE	M6117D CPU Module with 4MB/4S/VGA/LCD/GPIO/ LAN/DOC	78



Unit: mm

Specifications

CPU Chipset	VIA Mark CoreFusion 533MHz VIA VT82C686B
Bus	PC/104, PCI-104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 256 SDRAM
Cache	L1:64KB L2:64KB
VGA	Integrated 2D/3D AGP2X graphics with MPEG2 Accelerator Shared system memory 8M/16M/32MVGA, SVGA, XGA, SXGA and DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	VIA VT1612A AC97 CodecFull compatible with AC97 2.2 version
Flash Disk Support	MSTI EmbedDisk Module (16MB and above)
I/O Interface	Enhanced IDE port (UltraDMA-100 / 66 / 33) x1 FDD port x1RS-232 port x4 RS-232/485 port x2 Parallel port x1 16-bit GPIO port x1 USB port x2 (Ver 1.1) 10/100Mbps Ethernet port x2
Connectors	2.54mm 40-pin box header for IDE x1 2.0mm 44-pin box header for LCD connector x1 2.54mm 34-pin box header for FDD x1 2.54mm 26-pin box header for Printer x1 2.54mm 10-pin box header for RS-232 x6 2.54mm 10-pin box header for USB x2 2.0mm 4-pin wafer for Line-in/Line-out/MIC-in x3 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin box header for Mouse x1 2.54mm 3-pin header for RS-485 x2 2.54mm 20-pin box header for 16-bit GPIO x1 2.54mm 2-pin header for Reset x1 2.54mm 4-pin header for +12V, +5V, +5VDC-in x1 Type I/II Compact Flash slot x1
Power Requirements	Single Voltage +5V@2.5A
Weight	310 g
Board Size	146 X 203mm (5.75 x 8 inches)
Operating Temperature	-20°C ~ +60°C



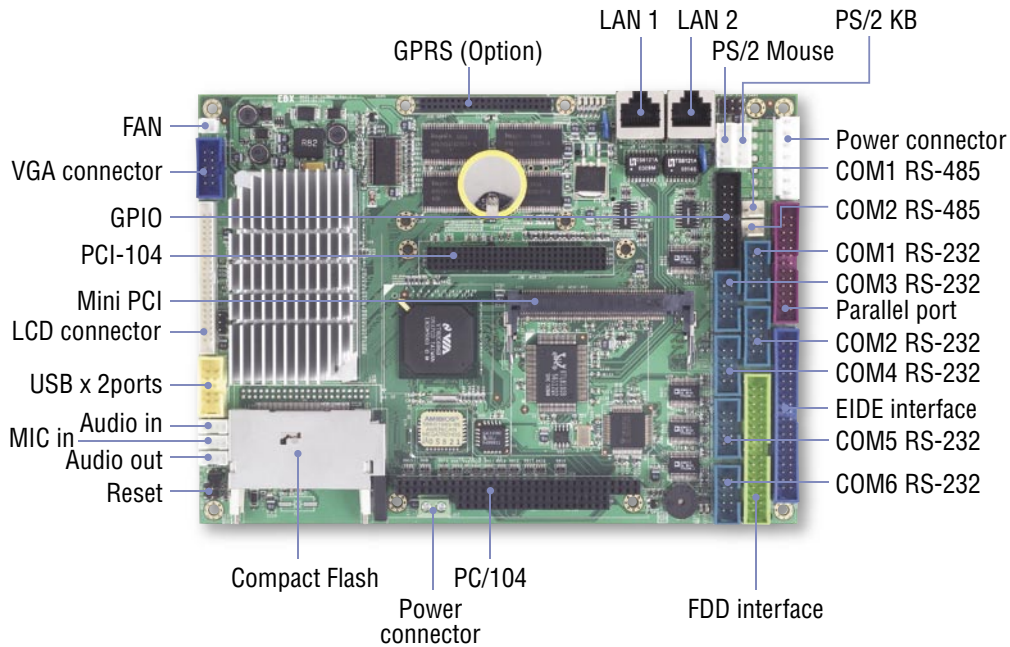
Vega86-6240 with x-PCI Wireless LAN kit

Packing List

- Vega86-6240
- CD for User's Manual & Driver x1
- Cable
 - RS-232 (2.54) X 6
 - VGA (2.54) X 1
 - USB (2.54) X 1
 - AT BUS X1
 - PRINT (2.54) X1
 - AUDIO LINE X 3
 - PS2 KB White X 1
 - PS2 KB (TEST) Black X1

Ordering information

- **Vega86-6240** Vega86 EBX CPU Module with 256MB SDRAM



1
Mity/Tiny Module

2
PC/104 Module

3
3.5"/ATX/EBX Module

4
Half-Size Module

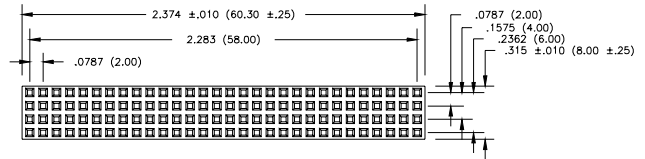
5
Peripheral Module

6
Accessories

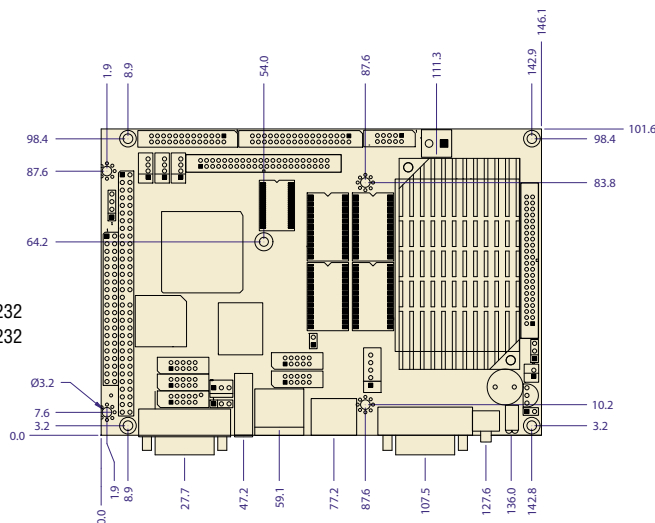
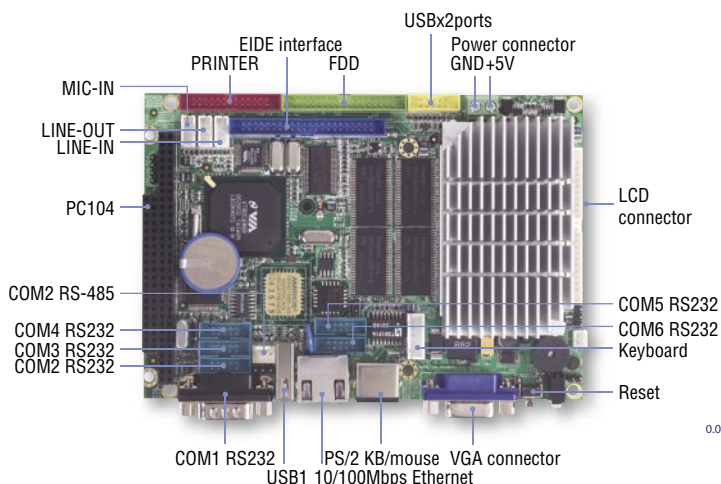
Default Setting of IRQ Mapping

IRQ#	Description
IRQ0	System Timer
IRQ1	Keyboard Controller
IRQ2	Cascade for IRQ8 - 15
IRQ3	Serial Port 2
IRQ3	Serial Port 6
IRQ4	Serial Port 1
IRQ4	Serial Port 5
IRQ5	Unassigned
IRQ6	Floppy Disk Controller
IRQ7	Parallel Port 1
IRQ8	Real Time Clock
IRQ9	USB
IRQ9	Ethernet 10/100M LAN #1
IRQ9	Ethernet 10/100M LAN #2
IRQ9	Audio
IRQ10	Serial Port 3
IRQ11	Serial Port 4
IRQ12	PS/2 Mouse
IRQ13	Math Coprocessor
IRQ14	Hard Disk Controller
IRQ15	Unassigned

PCI 104 Bus Signal Assignments



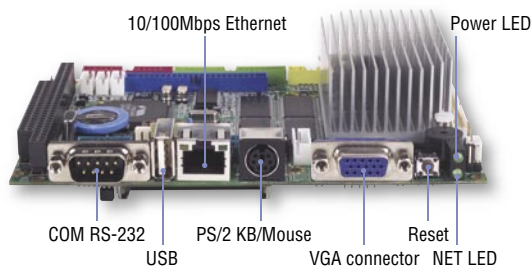
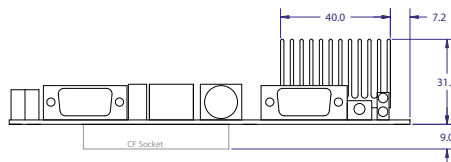
Pin	A	B	C	D
1	GND	NC	+5V	AD00
2	+5V	AD02	AD01	+5V
3	AD05	GND	AD04	AD03
4	C/BE0	AD07	GND	AD06
5	GND	AD09	AD08	GND
6	AD11	+5V	AD10	GND
7	AD14	AD13	GND	AD12
8	+3.3V	C/BE1	AD15	+3.3V
9	SERR	GND	SBO	PAR
10	GND	PERR	+3.3V	NC
11	STOP	+3.3V	LOCK	GND
12	+3.3V	TRDY	GND	DEVSEL
13	FRAME	GND	IRDY	+3.3V
14	GND	AD16	+3.3V	C/BE2
15	AD18	+3.3V	AD17	GND
16	AD21	AD20	GND	AD19
17	+3.3V	AD23	AD22	+3.3V
18	IDSEL0	GND	IDSEL1	IDSEL2
19	AD24	C/BE3	+5V	IDSEL3
20	GND	AD26	AD25	GND
21	AD29	+5V	AD28	AD27
22	+5V	AD30	GND	AD31
23	REQ0	GND	REQ1	+5V
24	GND	REQ2	+5V	GNT0
25	GNT1	+5V	GNT2	GND
26	+5V	CLK0	GND	CLK1
27	CLK2	+5V	CLK3	GND
28	GND	INTD	+5V	PCIRST
29	+12V	INTA	INTB	INTC
30	-12V	NC	NC	GND



Unit: mm

Specifications

Soc Chipset	VIA Mark CoreFusion 533MHz Real Time Clock with Lithium Battery Backup VIA VT82C686B
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 256MB SDRAM
Cache	L1:64KB L2:64KB
VGA	Integrated 2D/3D AGP4X graphics with MPEG2 Accelerator Shared system memory 8M/16M/32M VGA, SVGA, XGA, SXGA and DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Flash Disk Support	MST1 EmbedDisk Module (16MB and above)
I/O Interface	Enhanced IDE port (UltraDMA-100 / 66 / 33) x1 FDD port x1 RS-232 port x5 RS-232/485 port x1 Parallel port x1 USB port x3 (Ver 1.1) 10/100Mbps Ethernet port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD connector x1 2.0mm 34-pin box header for FDD x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x5 2.0mm 10-pin box header for USB x1 2.0mm 4-pin wafer for Line-in/Line-out/MIC-in x3 2.54mm 5-pin box header for Keyboard x1 2.54mm 3-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 2.54mm 4-pin header for +12V, -12V, -5V x1 External 15-pin D-Sub female connector for VGA x1 External 9-pin D-Sub male connector for RS-232 x1 External RJ-45 connector for Ethernet x1 External USB connector for x1 External Mini DIN socket for Keyboard/Mouse x1 Type I/II Compact Flash slot x1
Power Requirements	Single Voltage +5V@2.25A
Weight	290g
Board Size	102 X 144mm (4.01 x 5.67 inches)
Operating Temperature	-20°C ~ +60°C

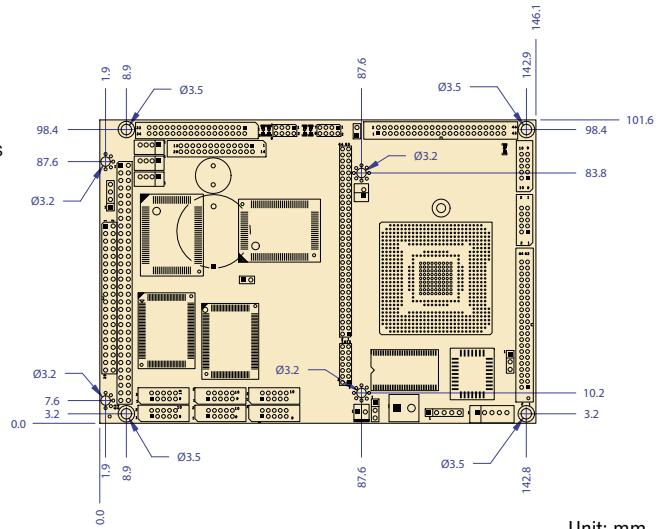
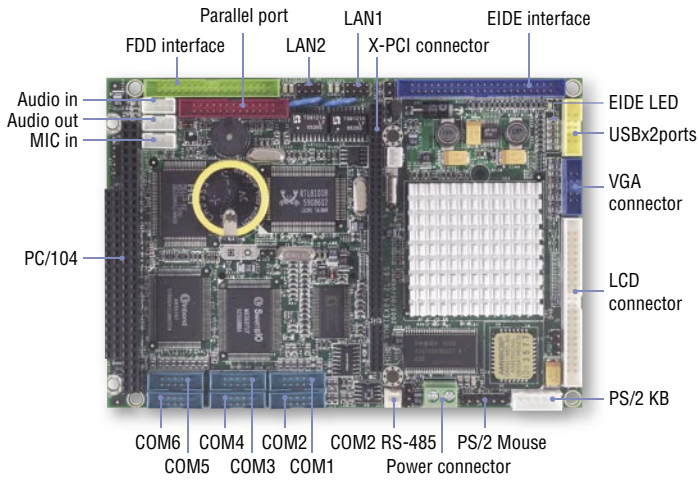


Packing List

- Vega86-6247-6S x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x3
 - USB (2.Q) x1
 - Audio Line x1
 - YKB x1

Ordering Information

- **Vega86-6247-6S** Vega86 3.5" CPU Module with 256MB SDRAM



Unit: mm

Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-166MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant 32-bit x-PCI interface, compatible with PCI Rev.2.2, PC 98/99
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA and /STN/DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	Fully compliant with AC97 V2.1 Hardware DirectSound accelerator
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x5 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver 1.1) 210/100Mbps Ethernet port x2
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD connector x1 2.0mm 34-pin box header for FDD x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x6 2.0mm 10-pin box header for USB x1 2.0mm 10-pin box header for VGA x1 2.0mm 4-pin wafer for Line-in/Line-out/MIC-in x3 2.0mm 8-pin header for Ethernet x2 2.54mm 4-pin header for +12V, -12V, -5V DC-in x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin header for Mouse x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 Type I/II Compact Flash slot x1
Power Requirement	Single Voltage +5V@1.06A
Weight	170g
Board Size	102 X 144mm (4.01 x 5.67 inches)
Operating Temperature	-20°C ~ +70°C

Default Setting of IRQ Mapping

IRQ#	Description
IRQ0	System Timer
IRQ1	Keyboard Controller
IRQ2	Cascade for IRQ8 - 15
IRQ3	Serial Port 2
IRQ3	Serial Port 6
IRQ4	Serial Port 1
IRQ4	Serial Port 5
IRQ5	Ethernet 10/100M LAN # 1
IRQ5	Ethernet 10/100M LAN # 2
IRQ6	Floppy Disk Controller
IRQ7	Parallel Port 1
IRQ8	Real Time Clock
IRQ9	USB
IRQ10	Serial Port 3
IRQ11	Serial Port 4
IRQ12	PS/2 Mouse
IRQ13	Math Coprocessor
IRQ14	Hard Disk Controller
IRQ15	Unassigned

Packing List

- Vortex86-6049-L26S x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x6
 - USB (2.Q) x1
 - Audio Line x1
 - YKB x1
 - NET 4x2 (2.Q) x2

Ordering Information

- **Vortex86-6049-L26S** Vortex86 3.5" CPU Module

1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

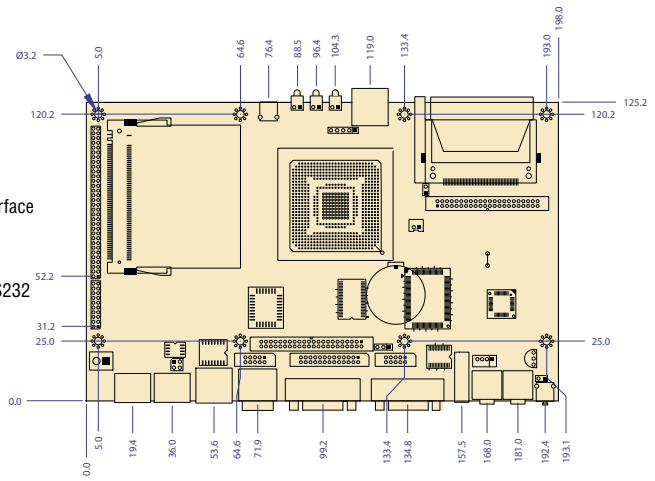
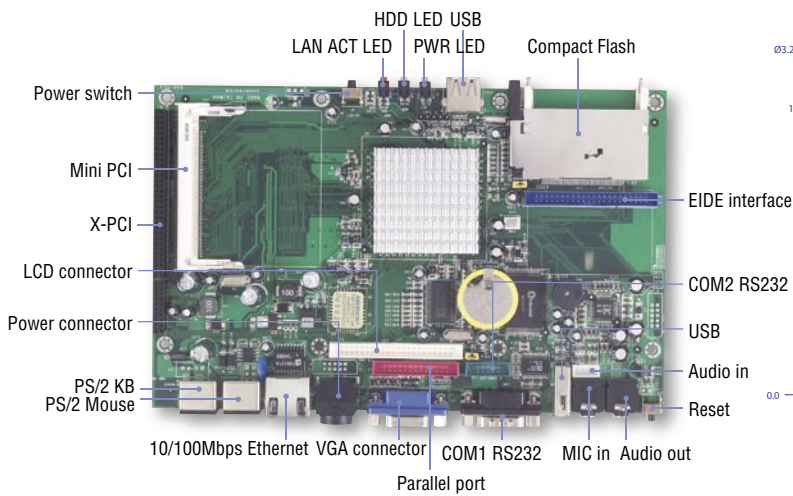
Half-Size Module

5

Peripheral Module

6

Accessories



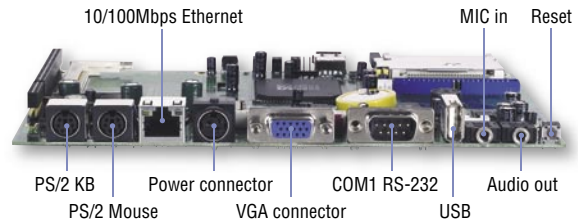
Unit: mm

Specifications

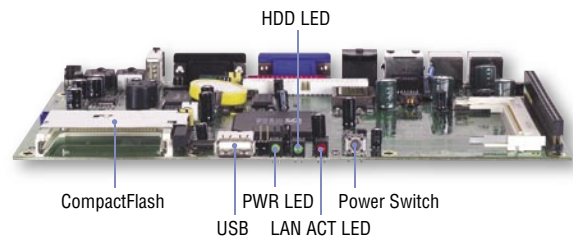
SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-200MHz (Low Voltage) Real Time Clock with Lithium Battery Backup
Bus	32-bit x-PCI interface, compatible with PCI Rev.2.2, PC 98/99
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA and Mono/STN/DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	Fully compliant with AC97 V2.1 Hardware DirectSound accelerator Flash Disk Support: MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 RS-232 port x2 Parallel port x1 USB port x3 (Ver 1.1) 10/100Mbps Ethernet port x1
Connectors	0.8mm 124-pin Mini-PCI card connector x1 2.0mm 64-pin socket for 32-bit x-PCI interface 2.0mm 20-pin socket for LPC connection x1 2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD connector x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x1 2.54mm 5-pin header for USB x1 2.0mm 4-pin wafer for Line-in x1 2.54mm 2-pin header for Reset x1 External 15-pin D-Sub female connector for VGA x1 External 9-pin D-Sub male connector for RS-232 x1 External RJ-45 connector for Ethernet x1 External USB connector x2 External 6-pin Mini DIN connector for Keyboard/Mouse x2 PhoneJack-S for Line-out/MIC-in x2 Type I/II Compact Flash slot x1
Power Requirement	Single Voltage +5V @1A
Weight	208g

Board Size	197 X 125mm (7.76 x 4.92inches)
Operating Temperature	-20°C ~ +70°C

Front View



Back View



Packing List

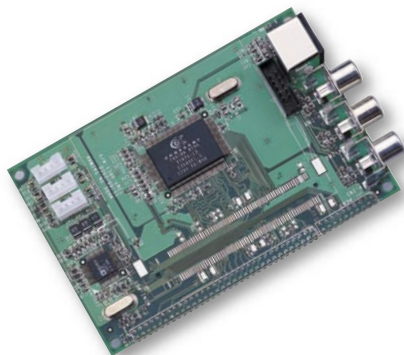
- Vortex86-6048LV x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - RS-232 (2.Q) x1
 - PRINT (2.Q) x1
 - Audio Line x1
 - YKB x1

Ordering information:

- Vortex86-6048** Vortex86 ATX CPU Module
- LCD-064/084/104-SET** 6.4"/8.4"/10.4" LCD Kit

x-PCI Expansion Modules Support

Vortex86-6084 Series



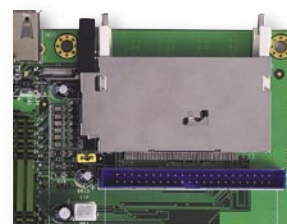
Vortex86-6083 Series



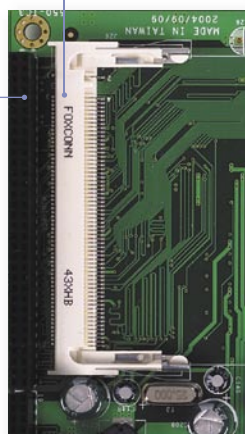
Mini-PCI wireless card



Compact Flash Card Support



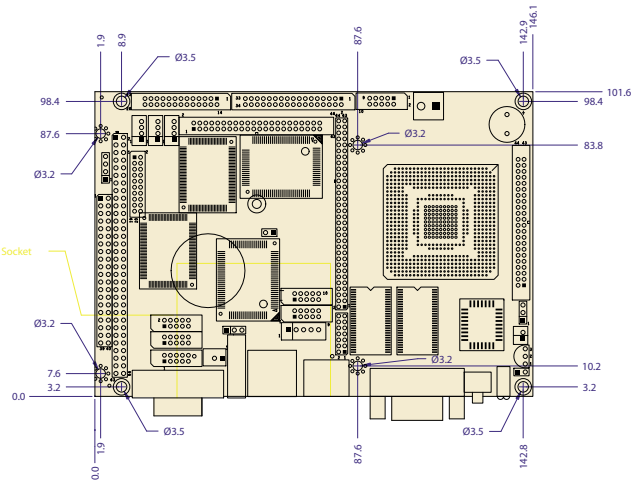
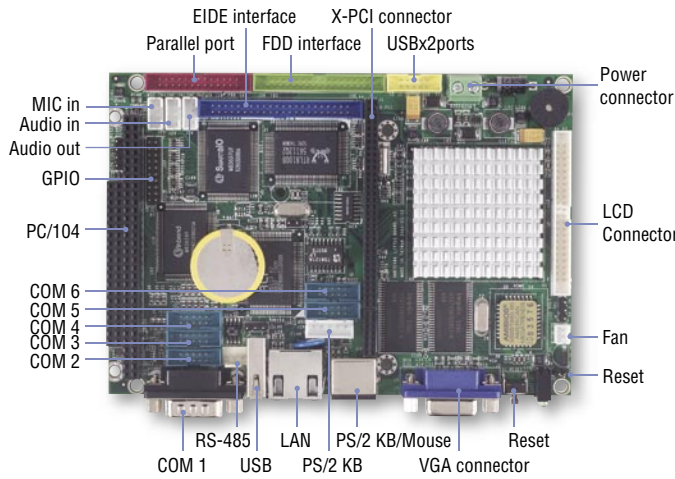
x-PCI Interface Mini-PCI Slot



3-pin Power Adapter (optional)



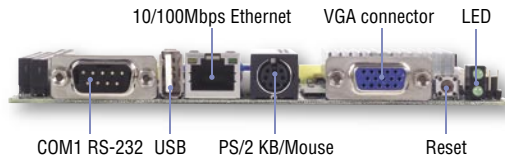
- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories



Unit: mm

Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-166MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant 32-bit x-PCI interface, compatible with PCI Rev.2.2, PC PC 98/99
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA and STN/DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	Fully compliant with AC97 V2.1 Hardware DirectSound accelerator
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x5 RS-232/485 port x1 Parallel port x1 USB port x3 (Ver 1.1) 16-bit GPIO port x1 10/100Mbps Ethernet port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD connector x1 2.0mm 34-pin box header for FDD x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x5 2.0mm 10-pin box header for USB x1 2.0mm 4-pin wafer for Line-in/Line-out/MIC-in x3 2.54mm 3-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 2.54mm 4-pin header for +12V, -12V, -5V DC-in x1 External 15-pin D-Sub female connector for VGA x1 External 9-pin D-Sub male connector for RS-232 x1 External RJ-45 connector for Ethernet x1 External Mini DIN socket for Keyboard/Mouse x1 External USB connector for x1 Type I/II Compact Flash slot x1
Power Requirement	Single Voltage +5V@1.06A
Weight	195g
Board Size	102 X 144mm (4.01 x 5.67 inches)
Operating Temperature	-20°C ~ +70°C



Default Setting of IRQ Mapping

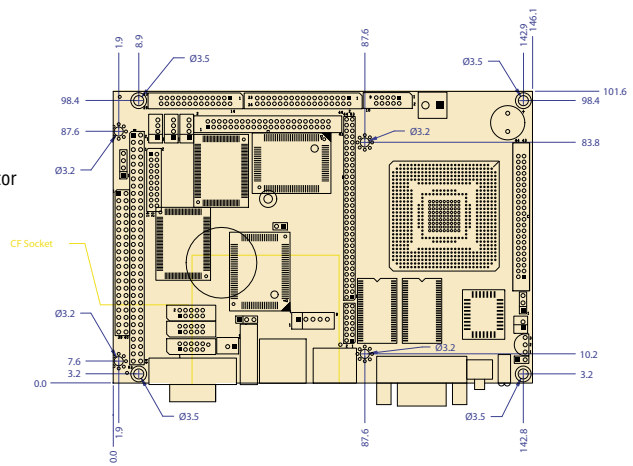
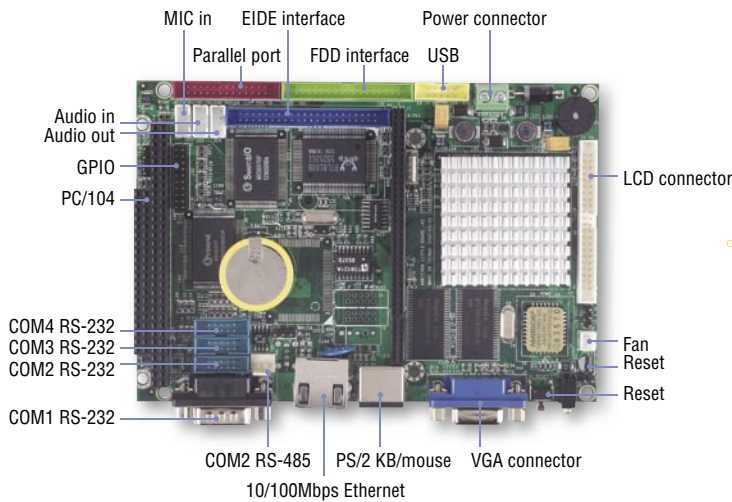
IRQ#	Description
IRQ0	System Timer
IRQ1	Keyboard Controller
IRQ2	Cascade for IRQ8 - 15
IRQ3	Serial Port 2
IRQ3	Serial Port 6
IRQ4	Serial Port 1
IRQ4	Serial Port 5
IRQ5	Unassigned
IRQ6	Floppy Disk Controller
IRQ7	Parallel Port 1
IRQ8	Real Time Clock
IRQ9	USB
IRQ9	Ethernet 10/100M LAN
IRQ10	Serial Port 3
IRQ11	Serial Port 4
IRQ12	PS/2 Mouse
IRQ13	Math Coprocessor
IRQ14	Hard Disk Controller
IRQ15	Unassigned

Packing List

- Vortex86-6047-6S x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x5
 - USB (2.Q) x1
 - Audio Line x1
 - YKB x1

Ordering Information

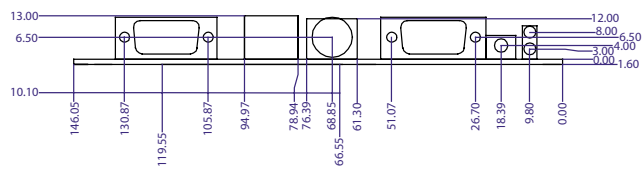
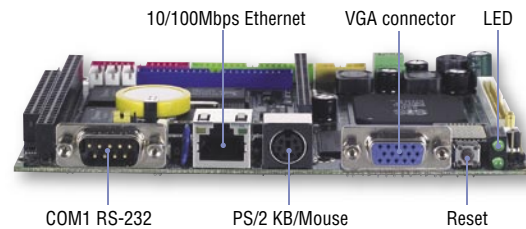
- Vortex86-6047-6S** Vortex86 3.5" CPU Module
- LCD-064/084/104-SET** 6.4"/8.4"/10.4" LCD Kit
- VOX-064-TS** 8.4" Open Frame Panel PC/ with Touch Screen (optional)
- VOX-104-TS** 10.4" Open Frame Panel PC/ with Touch Screen (optional)



Unit: mm

Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-166MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant 32-bit x-PCI interface, compatible with PCI Rev.2.2, PC 98/99
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA and STN/DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	Fully compliant with AC97 V2.1 Hardware DirectSound accelerator
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x3 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver 1.1) 16-bit GPIO port x1 10/100Mbps Ethernet port x1
Connectors	2.0mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD connector x1 2.0mm 34-pin box header for FDD x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x4 2.0mm 10-pin box header for USB x1 2.0mm 4-pin wafer for Line-in/Line-out/MIC-in x3 2.54mm 3-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 2.54mm 4-pin header for +12V, -12V, -5V DC-in x1 External 15-pin D-Sub female connector for VGA x1 External 9-pin D-Sub male connector for RS-232 x1 External RJ-45 connector for Ethernet x1 External Mini DIN socket for Keyboard/Mouse x1 Type I/II Compact Flash slot x1
Power Requirement	Single Voltage +5V @ 1.06A
Weight	190g
Board Size	102 X 144mm (4.01 x 5.67 inches)
Operating Temperature	-20°C ~ +70°C



Packing List

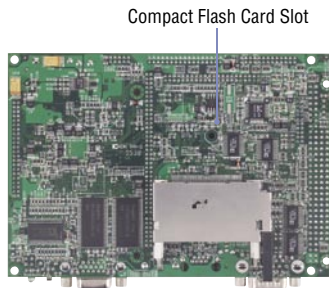
- Vortex86-6047-4S x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - FDD (2.Q) x1
 - PRINT (2.Q) x1
 - RS-232 (2.Q) x3
 - USB (2.Q) x1
 - Audio Line x1
 - YKB x1

Ordering Information

- Vortex86-6047-4S** Vortex86 3.5" CPU Module
- EB-207** Chassis of Vortex86-6047-4S
- LCD-064/084/104-SET** 6.4"/8.4"/10.4" LCD Kit
- VOX-084-TS** 8.4" Open Frame Panel PC/ with Touch Screen (optional)
- VOX-104-TS** 10.4" Open Frame Panel PC/ with Touch Screen (optional)

- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories

Compact Flash Card Support



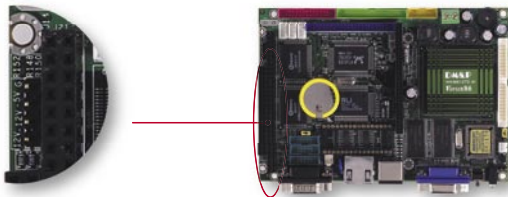
Optional Accessory:

EB-207: Chassis for Vortex86-6047-4S



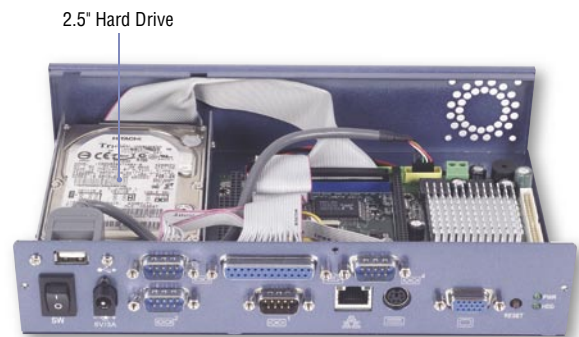
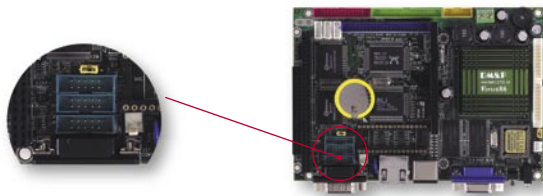
Rear Side

Flexible DC Power Connector interconnect to PC/104

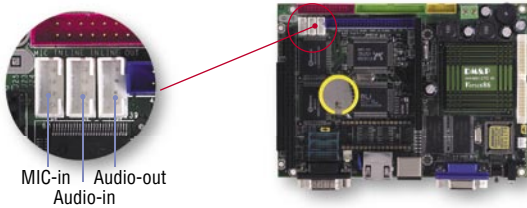


Front Side

4 Serial Ports Support



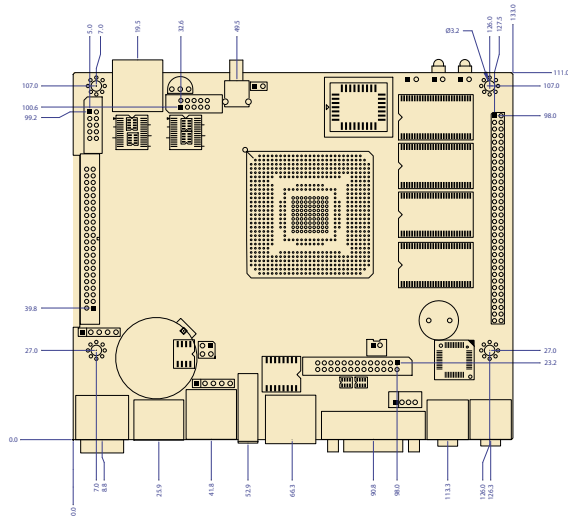
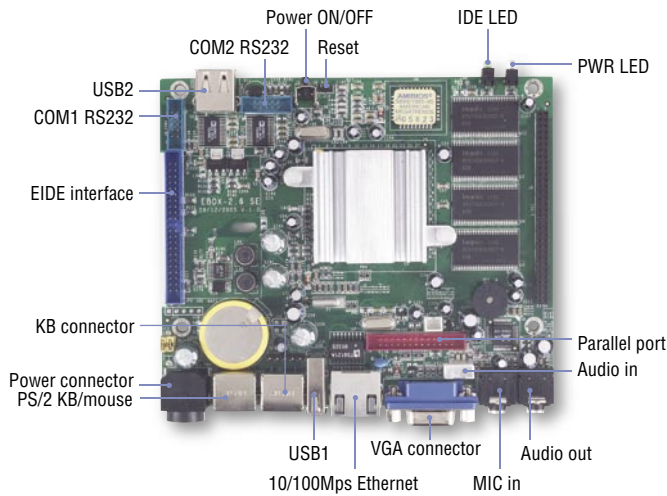
Audio-in/Audio-out/MIC-in Function Support



15W Power Adapter



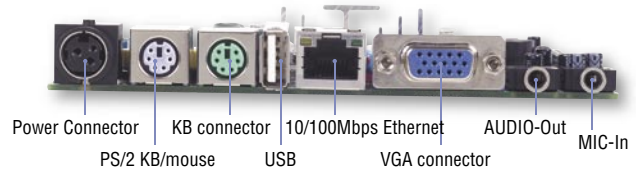
Realtek ALC202 for Audio function



Unit:mm

Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-200MHz (Low Voltage) Real Time Clock with Lithium Battery Backup
Bus	32-bit x-PCI interface, compatible with PCI Rev.2.2, PC 98/99
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	Fully compliant with AC97 V2.1 Hardware DirectSound accelerator
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 RS-232 port x2 Parallel port x1 USB port x2 (Ver 1.1) 10/100Mbps Ethernet port x1
Connectors	2.0mm 64-pin socket for 32-bit x-PCI interface 2.0mm 44-pin box header for IDE x1 2.0mm 26-pin box header for Printer x1 2.0mm 10-pin box header for RS-232 x2 2.0mm 4-pin wafer for Line-in x1 2.54mm 2-pin header for Reset x1 External 15-pin D-Sub female connector for VGA x1 External RJ-45 connector for Ethernet x1 External USB connector x2 External 6-pin Mini DIN connector for Keyboard/ Mouse x1
Power Requirement	Single Voltage +5V @1.2A
Weight	150g
Board Size	133 X 111mm (5.24 x 4.37inches)
Operating Temperature	-20°C ~ +70°C



Optional Accessory:

EB-301: Chassis for Vortex86-6076

EB-302: Chassis for Vortex86-6076



15W Power Adapter



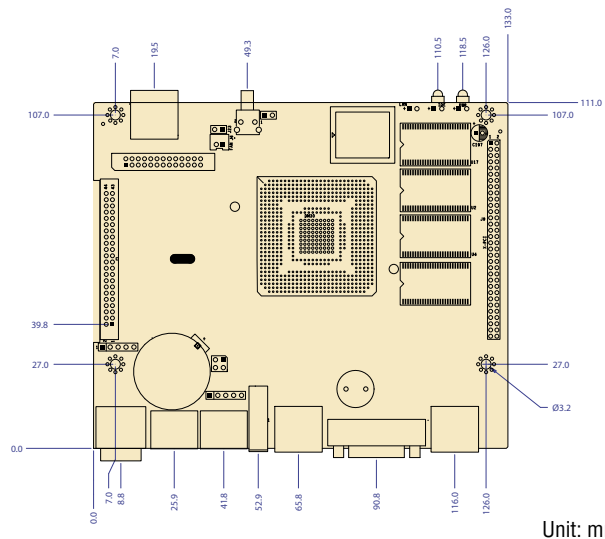
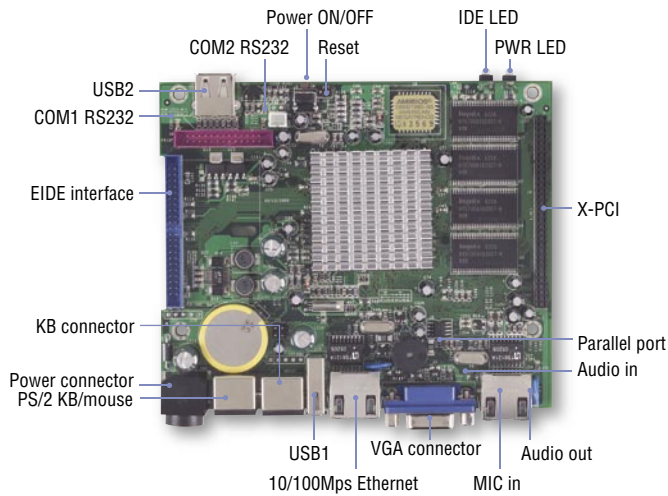
Packing List

- Vortex86-6076LV x1
- CD for User's Manual & Driver x1
- Cable
 - HDD 44P (2.Q) x1
 - RS-232 (2.Q) x1
 - PRINT (2.Q) x1
 - Audio Line x1
 - PS2 KB White x1
 - PS2 KB (TEST) Black x1

Ordering Information

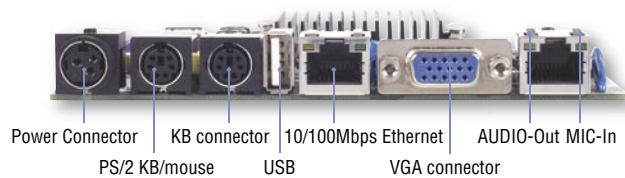
- Vortex86-6076** Vortex86 ATX CPU Module
- Power-15W-3pin-EU/US/EN** Mini Din 3pin 15W Adapter

- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories



Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-200MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant 32-bit x-PCI interface, compatible with PCI Rev.2.2,
BIOS	AMI BIOS
System Memory	Onboard 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1 hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA and STN/DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 Parallel port x1 USB port x3 (Ver 1.1) 10/100Mbps Ethernet port x2
Connectors	2.0mm 64-pin socket for 32-bit x-PCI interface 2.0mm 44-pin box header for IDE x1 2.0mm 26-pin box header for Printer x1 2.54mm 5-pin box header for USB x1 2.54mm 2-pin header for Reset x1 External 15-pin D-Sub female connector for VGA x1 External USB connector x2 External 6-pin Mini DIN connector for Keyboard x1 External 6-pin Mini DIN connector for Mouse x1
Power Requirement	Single Voltage +5V @1.28A
Weight	150g
Board Size	133 X 111mm (5.24 x 4.37inches)
Operating Temperature	-20°C ~ +70°C



Optional Accessory

EB-303: Chassis for Vortex86-6076-L2



15W Power Adapter



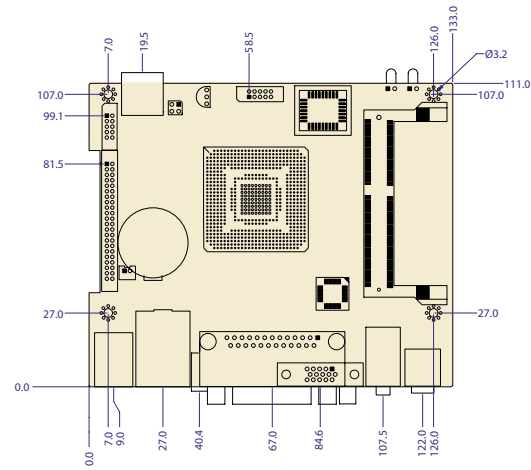
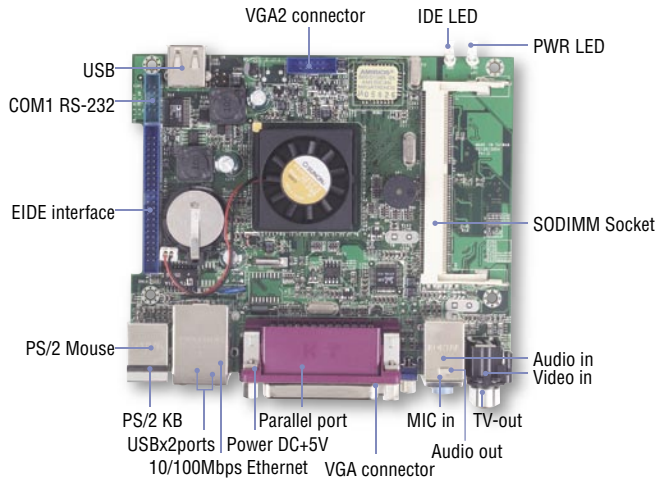
Packing List

- Vortex86-6076L2 x1
- CD for User's Manual & Driver x1
- Cable
- HDD 44P (2.Q) x1
- PRINT (2.Q) x1

Order Information

- **Vortex86-6076L2** Vortex86 ATX CPU Module
- **EB-303** Chassis of Vortex86-6076-L2
- **Power-15W-3pin-EU/US/EN** Mini Din 3pin 15W Adapter

- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories

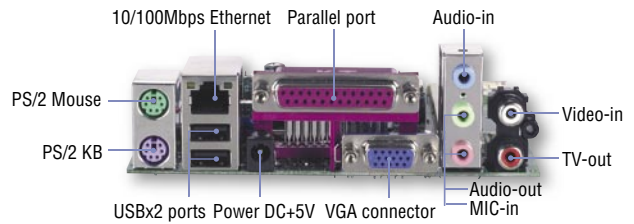


Unit: mm

Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-166MHz Real Time Clock with Lithium Battery Backup
System Bus	32-bit PCI Bus
BIOS	AMI BIOS
System Memory	144-pin SODIMM socket x1, up to 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA interface support
Video Bridge	SiS 301, support Standard VGA Display x2, TV-out x1, Composite signal input x1 NTSC/PAL video encoder with Macrovision Ver.7.1.L1 option for TV display
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Audio	Fully compliant with AC97 V2.1 Hardware DirectSound accelerator
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 RS-232 port x1 Parallel port x1 USB port x3 (Ver 1.1) 10/100Mbps Ethernet port x1
Connectors	144-pin socket for SODIMM x1 2.0mm 44-pin box header for IDE x1 2.0mm 10-pin box header for RS-232 x1 2.0mm 10-pin box header for VGA2 x1 2.54mm 2-pin header for Reset x1 External 25-pin D-Sub female connector for Printer x1 External 15-pin D-Sub female connector for VGA x1 External RJ-45 connector for Ethernet x1 External RCA connector for TV-out x1 External RCA connector for Composite signal input x1 External Audio connector for Line-in/Line-out/MIC-in x3 External USB connector x3 External Mini DIN connector for Keyboard/ Mouse x2 External DC Jack for Power Adapter x1
Power Requirement	Single Voltage +5V @1..2mA

Weight	210g
Board Size	133 X 111mm (5.23 x 4.37 inches)
Operating Temperature	-20°C ~ +70°C



Audio and Video Captured Function Support



Optional Accessory: EB-202: Chassis for Vortex86-6075



Power LED IDE LED

Packing List

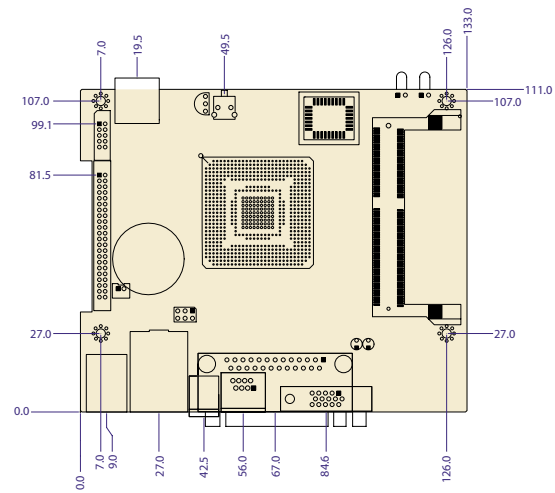
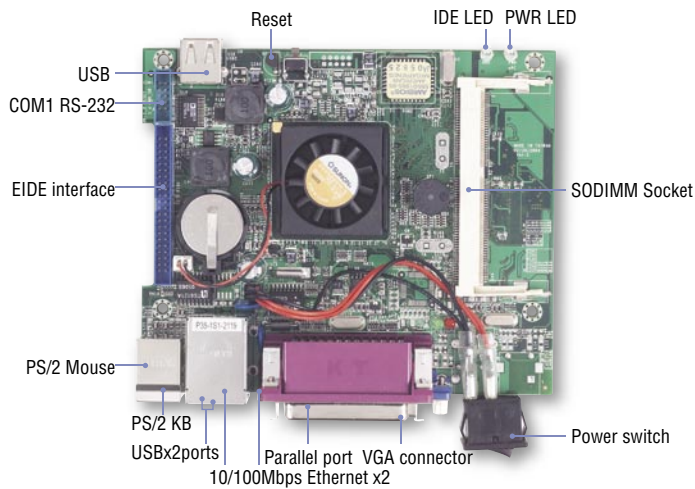
- Vortex86-6075 x1
- CD for User's Manual & Driver x1
- Cable
- HDD 44P (2.Q) x1
- RS-232 (2.Q) x1



15W Power Adapter

Ordering Information

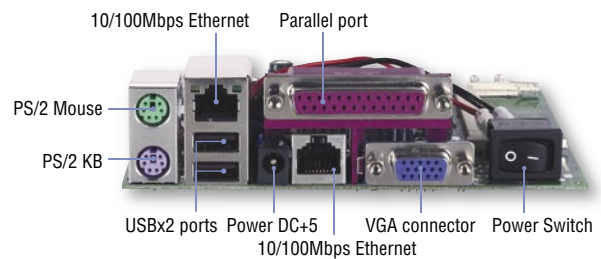
- **Vortex86-6075** Vortex86 ATX CPU Module
- **EB-202** Chassis of Vortex86-6075
- **Power-15W-EU/US/EN** 15W Power Adapter
- **64/128MB 144-pin SODIMM**



Unit: mm

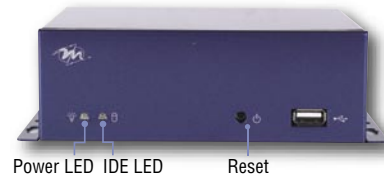
Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-166MHz Real Time Clock with Lithium Battery Backup
System Bus	32-bit PCI Bus
BIOS	AMI BIOS
System Memory	144-pin SODIMM socket x1, up to 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above)
I/O Interface	Enhanced IDE port x1 RS-232 port x1 Parallel port x1 USB port x3 (Ver 1.1) 10/100Mbps Ethernet port x2
Connectors	144-pin socket for SODIMM x1 2.0mm 44-pin box header for IDE x1 2.0mm 10-pin box header for RS-232 x1 External 25-pin D-Sub female connector for Printer x1 External 15-pin D-Sub female connector for VGA x1 External RJ-45 connector for Ethernet x2 External USB connector x3 External Mini DIN connector for Keyboard/Mouse x2 External DC Jack for Power Adapter x1 External Button for Reset x1
Power Requirement	Single Voltage +5V @1A
Weight	210g
Board Size	133 X 111mm (5.23 x 4.37 inches)
Operating Temperature	-20°C ~ +70°C



Optional Accessory

EB-202L2: Chassis for Vortex86-6075L2



Packing List

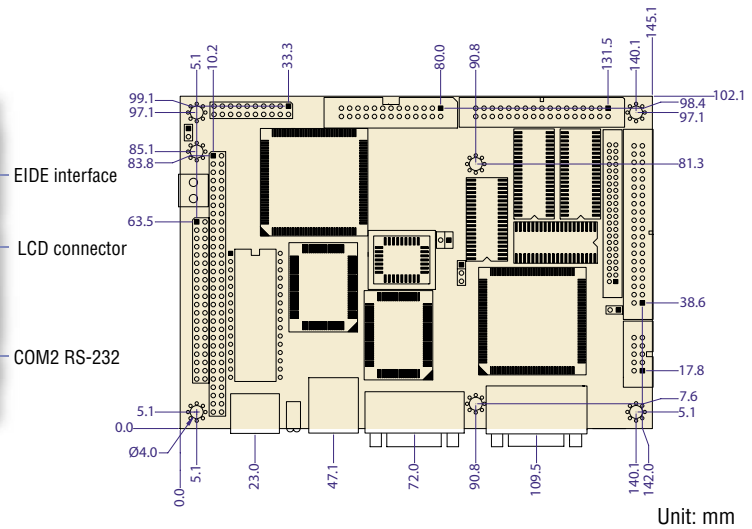
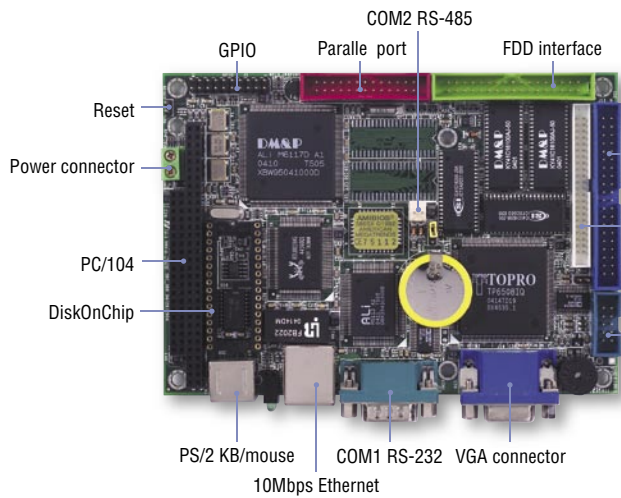
- Vortex86-6075L2 x1
- CD for User's Manual & Driver x1
- HDD 44P (2.Q) x1
- RS-232 (2.Q) x1

15W Power Adapter



Ordering Information

- Vortex86-6075L2
 - EB-202L2
 - Power-15W-EU/US/EN
 - 64/128MB 144-pin SODIMM
- Vortex86 ATX CPU Module
Chassis of Vortex86-6075L2
15W Power Adapter



1 Mity/Tiny Module

2 PC/104 Module

3 3.5"/ATX/EBX Module

4 Half-Size Module

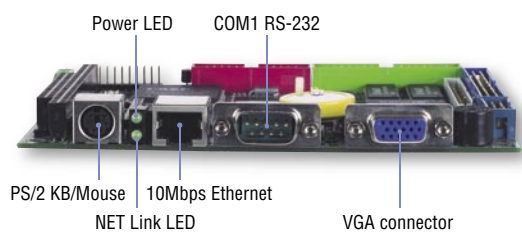
5 Peripheral Module

6 Accessories

Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
VGA	TOPRO TP65081Q Chipset VGA and Mono/STN/DSTN/TFT Flat Panel interface support Onboard 1MB VGA Memory, support resolution up to 1024x768, 256 colors
LAN	Realtek 8019AS 16-bit ISA Full-Duplex Ethernet Controller NE2000 compatible with built-in 16KB RAM buffer Throughput 10Mbps
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip 2000 (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1 10Mbps Ethernet port x1
Connectors	2.54mm 40-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.54mm 26-pin box header for Printer x1 2.54mm 20-pin header for 16-bit GPIO x1 2.54mm 10-pin box header for RS-232 x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 External 15-pin D-Sub female connector for VGA x1 External 9-pin D-Sub male connector for RS-232 x1 External RJ-45 connector for Ethernet x1 External Mini DIN connector for Keyboard/Mouse x1
Power Requiremen	Single Voltage +5V @680mA

Weight	150g
Board Size	102 X 144mm (4.01 x 5.67 inches)
Operating Temperature	-20°C ~ +70°C



Optional Accessory

EB201: Chassis for ICOP-6027 VE



Packing List

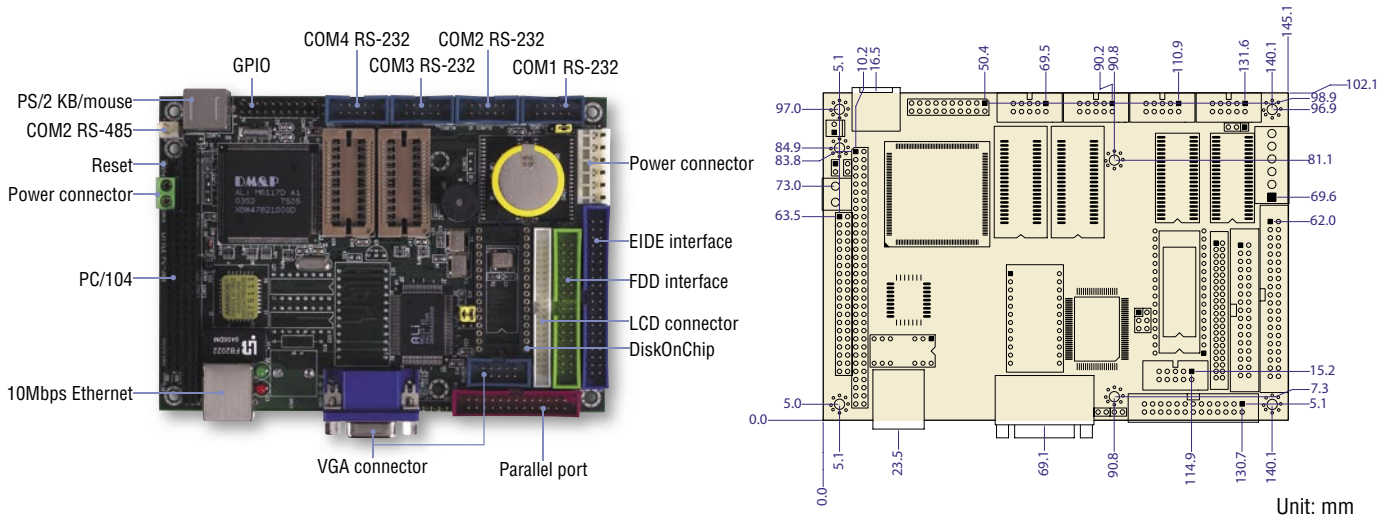
- ICOP-6027VE x1
- CD for User's Manual & Driver x1
- Cable
- AT BUS x1
- PRINT x1
- RS-232 x1
- YKB x1



15W Power Adapter

Ordering Information

- **ICOP-6027VE** M6117D 3.5" CPU Module with 4MB
- **ICOP-6027VE-8MB** M6117D 3.5" CPU Module with 8MB
- **EB-201** Chassis for ICOP-6027VE
- **LCD-064-SET** 6.4" LCD Kit

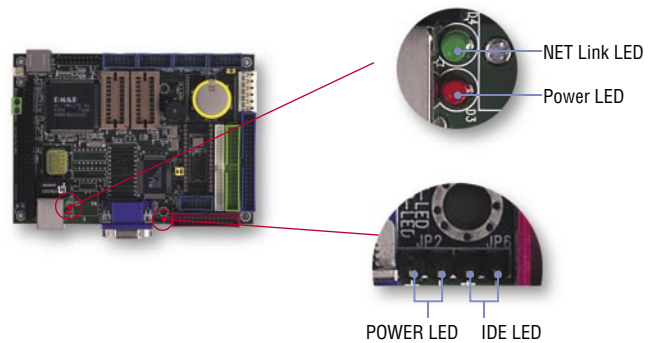


Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
VGA	TOPRO TP6508IQ Chipset VGA and Mono/STN/DSTN/TFT Flat Panel interface support Onboard 1MB VGA Memory, support resolution up to 1024x768, 256 colors
LAN	Realtek 8019AS 16-bit ISA Full-Duplex Ethernet Controller NE2000 compatible with built-in 16KB RAM buffer Throughput 10Mbps
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip 2000 (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x3 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1 10Mbps Ethernet port x1
Connectors	2.54mm 40-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.54mm 34-pin box header for FDD x1 42-pin socket for System Memory Expansion x2 32-pin DIP socket for DOC x1 2.54mm 26-pin box header for Printer x1 2.54mm 20-pin header for 16-bit GPIO x1 2.54mm 10-pin box header for RS-232 x4 2.54mm 10-pin box header for VGA x1 6-pin P8 Power connector for Power Input x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 External 15-pin D-Sub female connector for VGA External RJ-45 connector for Ethernet x1 External Mini DIN connector for Keyboard/Mouse x1

Power Requirement	Single Voltage +5V @700mA
Weight	185g
Board Size	102 X 144mm (4.01 x 5.67 inches)
Operating Temperature	-20°C ~ +70°C

Status Indicator



Reserved Pin Connector for additional Power/IDE LED

Packing List

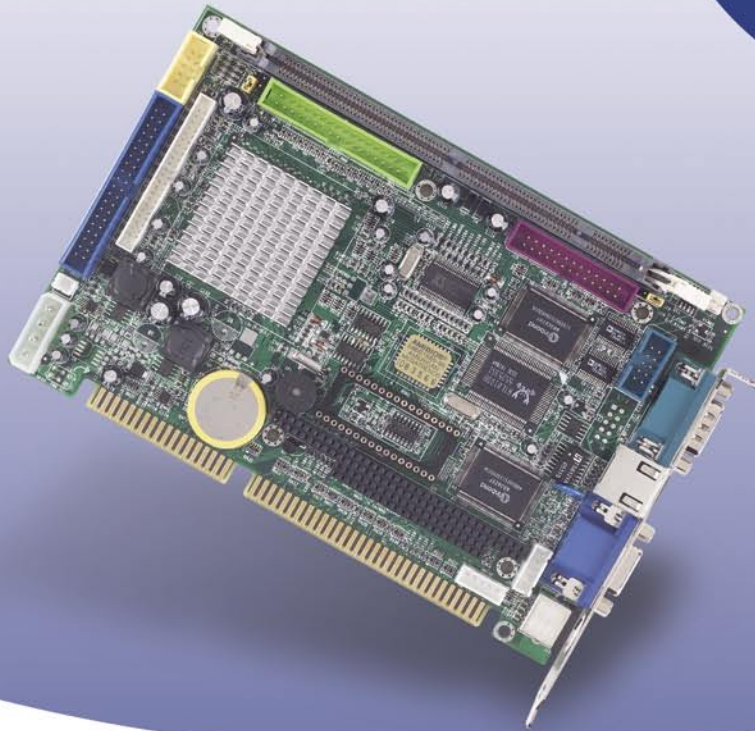
- ICOP-6026VE x1
- CD for User's Manual & Driver x1
- Cable
 - AT BUS x1
 - PRINT x1
 - RS-232 x4
 - VGA x1
 - YKB x1

Ordering Information

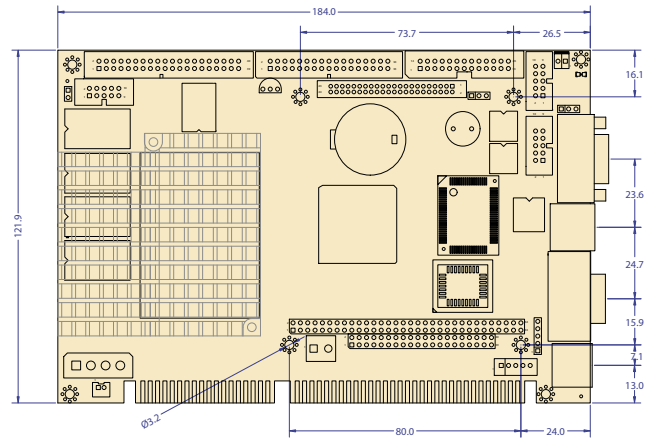
- ICOP-6026VE** M6117D 3.5" CPU Module with 4MB
- ICOP-6026VE-8MB** M6117D 3.5" CPU Module with 8MB
- DM&P 2MB EDO RAM Chip**
- LCD-064-SET** 6.4" LCD Kit

Half-Size CPU Module

4



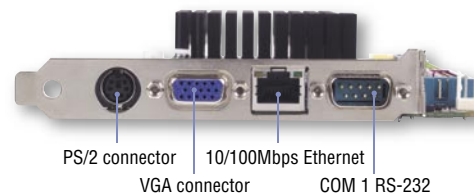
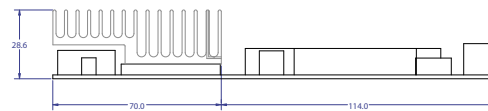
Vega86-6242	Vega86 CPU Module with 256MB/2S/2USB/VGA/LCD/LAN	80
Vortex86-6042	Vortex86 CPU Module with 2S/2USB/VGA/LCD/LAN/DOC	81
ICOP-6025V	M6117D CPU Module with 4MB/4S/VGA/LCD/GPIO/DOC	82
ICOP-6024V	M6117D CPU Module with 4MB/2S/VGA/LCD/DOC	83
ICOP-6023VE	M6117D CPU Module with 4MB/2S/VGA/LCD/LAN/GPIO/DOC	84
ICOP-6022	M6117D CPU Module with 2S/DOC	85
ICOP-6021	M6117D CPU Module with 4MB/2S/GPIO/DOC	86



Unit: mm

Specifications

SoC Chipset	VIA Mark CoreFusion 533MHz Real Time Clock with Lithium Battery Backup VIA VT82C686B
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 128MB / 256MB SDRAM
Cache	L1:64KB L2:64KB
VGA	Integrated 2D/3D AGP4X graphics with MPEG2 Accelerator Shared system memory 8M/16M/32M VGA, SVGA, XGA, SXGA and DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Flash Disk Support	MSTI EmbedDisk Module (16MB and above)
I/O Interface	Enhanced IDE port (UltraDMA-100 / 66 / 33) x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver 1.1) 10/100Mbps Ethernet port x1
Connectors	2.54mm 40-pin box header for IDE x1 2.0mm 44-pin box header for LCD connector x1 2.54mm 34-pin box header for FDD x1 2.54mm 26-pin box header for Printer x1 2.54mm 10-pin box header for RS-232 x2 2.54mm 10-pin box header for USB x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin Header for RS-485 x1 2.54mm 5-pin header for Mouse x1 14-pin Male Power Connector x1 External 15-pin D-Sub female connector for VGA x1 External 9-pin D-Sub male connector for RS-232 x1 External RJ-45 connector for Ethernet x1 External Mini DIN connector for Keyboard/Mouse x1
Power Requirements	Single Voltage +5V @2.05A
Weight	310g
Board Size	184 X 122mm (7.24 x 4.80 inches)

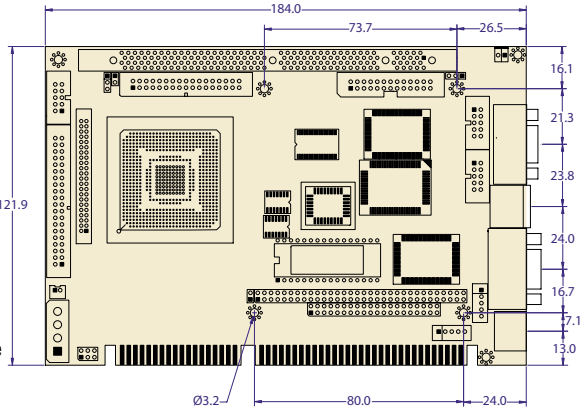
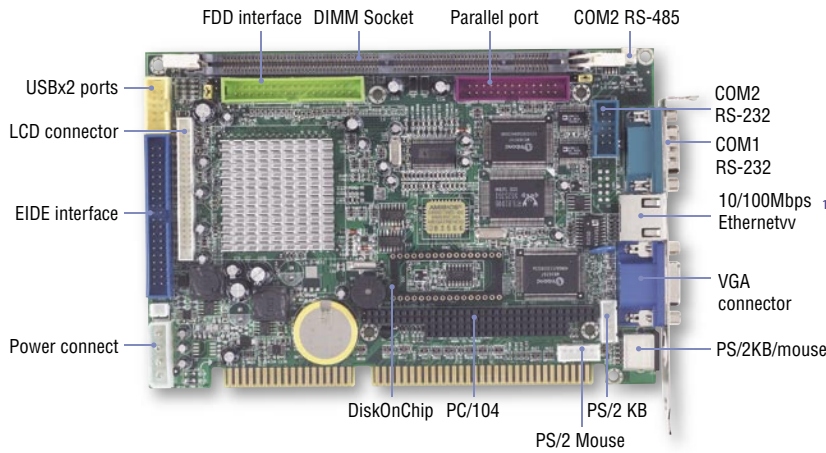


Packing List

- Vega86-6242 x1
- CD for User's Manual & Driver x1
- Cable
 - AT BUS x1
 - PRINT+F x1
 - RS-232 x1
 - USB (2.54) x1
 - YKB x1

Ordering Information

- **Vega86-6242-128MB** Vega86 Half-Size CPU Module with 128MB SDRAM
- **Vega86-6242-256MB** Vega86 Half-Size CPU Module with 256MB SDRAM



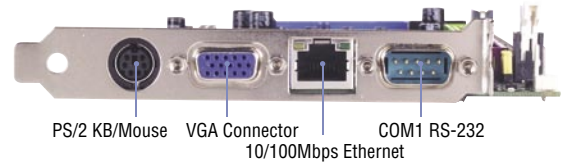
Unit: mm

- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories

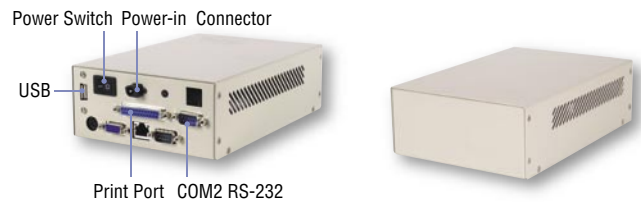
Specifications

SoC	DM&P(SiS) Vortex86™ System-on-Chip CPU-166MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	168-pin DIMM socket x1, up to 128MB SDRAM
Watchdog Timer	Software programmable from 4ms to 1hour
VGA	AGP Rev.2.0 compliant Shared system memory up to 64MB (Default 8 MB) Support resolution up to 1,280x1,024 true colors VGA and STN/DSTN/TFT Flat Panel interface support
LAN	Realtek 8100B 10/100Mbps Ethernet Controller Half/Full duplex capability
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 USB port x2 (Ver 1.1) 10/100Mbps Ethernet port x1
Connectors	168-pin DIMM socket for Memory Expansion x1 2.54mm 40-pin box header for IDE x1 2.0mm 44-pin box header for LCD connector x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.54mm 26-pin box header for Printer x1 2.54mm 10-pin box header for RS-232 x1 2.54mm 10-pin box header for USB x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin box header for Mouse x1 2.54mm 2-pin Header for RS-485 x1 External 15-pin D-Sub female connector for VGA x1 External 9-pin D-Sub male connector for RS-232 x1 External RJ-45 connector for Ethernet x1 External Mini DIN connector for Keyboard/Mouse x1

Power Requirement	Single Voltage +5V @880mA
Weight	225g
Board Size	184 X 122mm (7.24 x 4.80 inches)
Operating Temperature	-20°C ~ +70°C



EB-205: Chassis for Vortex86-6042



Packing List

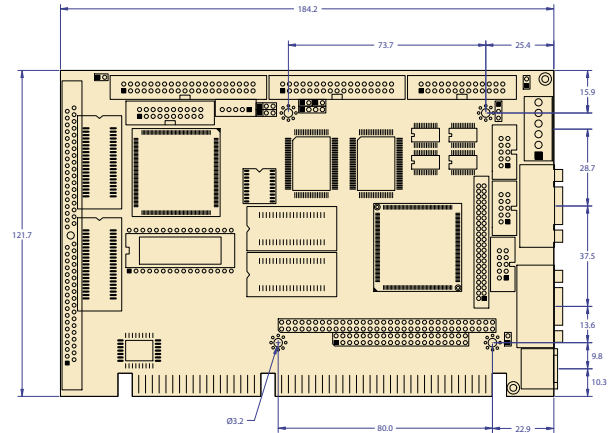
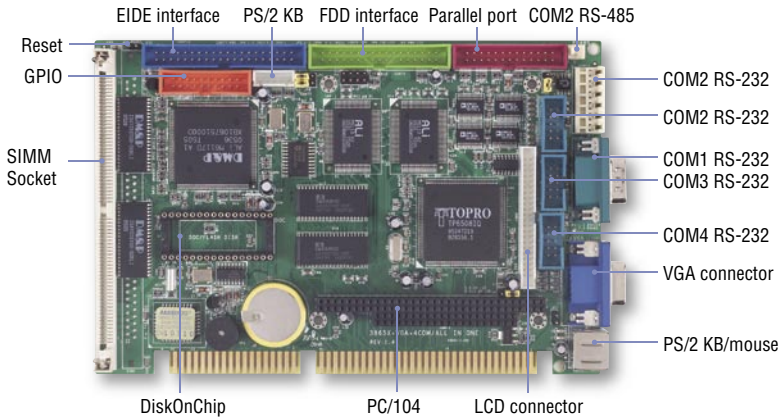
- Vortex86-6042 x1
- CD for User's Manual & Driver x1
- Cable
- AT BUS x1
- PRINT+F x1
- RS-232 x1
- USB (2.54) x1
- YKB x1

15W Power Adapter



Ordering Information

- **Vortex86-6042** Vortex86 Half-Size CPU Module
- **EB-205** Chassis of Vortex86-6042
- **64/128MB 168-pin DIMM**
- **LCD-064/084/104-SET** 6.4"/8.4"/10.4" LCD Kit



Unit: mm

Specifications

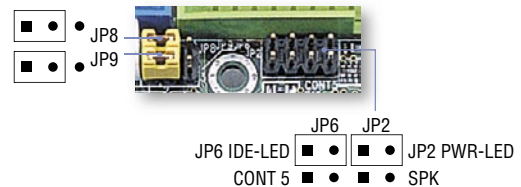
SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM, up to 20MB (optional)
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
VGA	TOPRO TP65081Q Chipset VGA and Mono/STN/DSTN/TFT Flat Panel interface support Onboard 1MB VGA Memory, support resolution up to 1024x768, 256 colors
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x3 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1
Connectors	72-pin socket for SIMM Module x1 2.54mm 44-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.54mm 26-pin box header for Printer x1 2.54mm 20-pin box header for 16-bit GPIO x1 2.54mm 10-pin box header for RS-232 x3 6-pin P8 Power connector for Power Input 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 External 15-pin D-Sub female connector for VGA External 9-pin D-Sub male connector for RS-232 x1 External Mini DIN connector for Keyboard/Mouse x1
Power Requirement	Single Voltage +5V @770mA
Weight	200g

Board Size	184 X 122mm (7.24 x 4.8 inches)
Operating Temperature	-20°C ~ +70°C



	COM1	COM2	COM3	COM4
Shared (default)	JP8 1-2 Close JP9 1-2 Close	IRQ 3 IRQ 4	IRQ 4	IRQ 3
Independent	JP8 2-3 Close JP9 2-3 Close	IRQ 3	IRQ 4 IRQ 10	IRQ 11

ICOP-6025V supports 4 serial ports. User can easily choose Shared/Independent IRQ by setting JP8 and JP9.

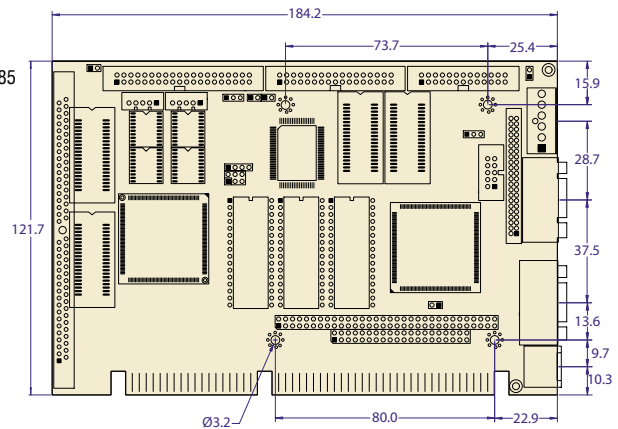
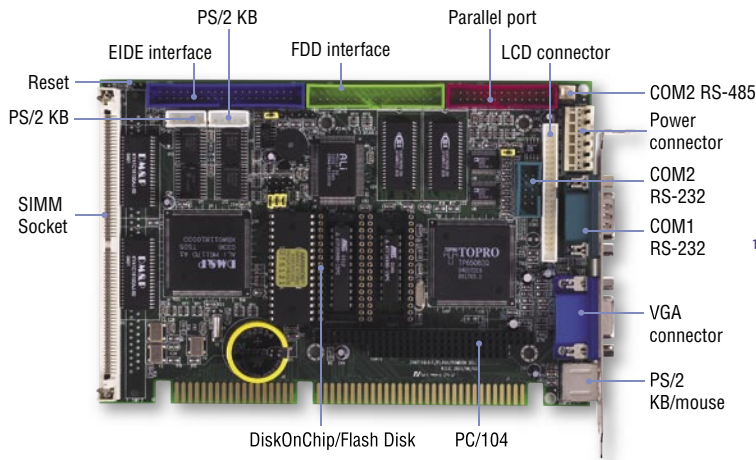


Packing List

- ICOP-6025V x1
- CD for User's Manual & Driver x1
- Cable
AT BUS x1
PRINT+F x1
RS-232 x3
YKB x1

Ordering Information

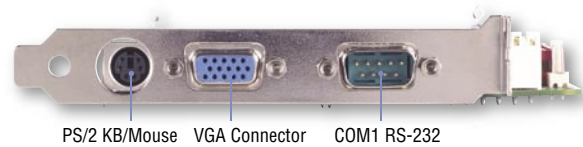
- ICOP-6025V** M6117D Half-Size CPU Module
- DM&P 4/16MB SIMM Module**
- LCD-064-SET** 6.4" LCD Kit



Unit: mm

Specifications

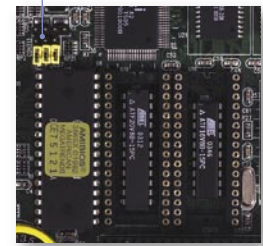
SoC	DM&P(ALI) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM, up to 20MB (optional)
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
VGA	TOPRO TP65081Q Chipset VGA and Mono/STN/DSTN/TFT Flat Panel interface support Onboard 1MB VGA Memory, support resolution up to 1024x768, 256 colors
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1
Connectors	72-pin socket for SIMM Module x1 2.54mm 40-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x3 2.54mm 26-pin box header for Printer x1 2.54mm 10-pin box header for RS-232 x1 6-pin P8 Power connector for Power Input 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin box header for Mouse x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 External 15-pin D-Sub female connector for VGA External 9-pin D-Sub male connector for RS-232 x1 External Mini DIN connector for Keyboard/Mouse x1
Power Requirement	Single Voltage +5V @920mA
Weight	205g
Board Size	184 X 122mm (7.24 x 4.8 inches)
Operating Temperature	-20°C ~ +70°C



Support 32-pin DIP Socket x2 for DOC/DIP Package Flash/EPROM Disk

CONT 13: Address Selection

Address	1-2	3-4	5-6
C800H & CA00H	close	close	close
CA00H & CE00H	close	close	open
D800H & DA00H	close	open	close
DC00H & DE00H	close	open	open
Disabled	open	close	open
Both EPROM	open	open	close
Both Flash	open	open	open



Packing List

- ICOP-6024V x1
- CD for User's Manual & Driver x1
- Cable
 - AT BUS x1
 - PRINT+F x1
 - RS-232 x1
 - YKB x1

Ordering Information

- ICOP-6024V** M6117D Half-Size CPU Module
- DM&P 4/16MB SIMM Module**
- LCD-064-SET** 6.4" LCD Kit

1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

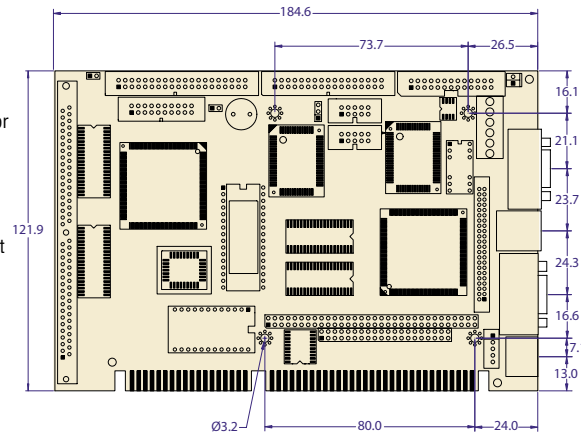
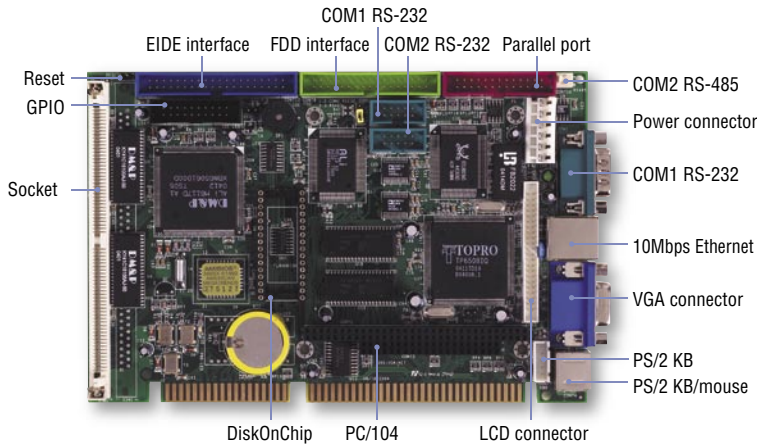
Half-Size Module

5

Peripheral Module

6

Accessories

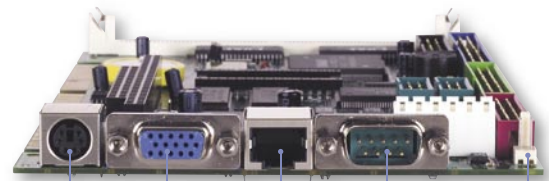


Unit: mm

Specifications

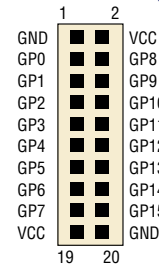
SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM, up to 20MB (optional)
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
VGA	TOPRO TP6508IQ Chipset VGA and Mono/STN/DSTN/TFT Flat Panel interface support Onboard 1MB VGA Memory, support resolution up to 1024x768, 256 colors
LAN	Realtek 8019AS 16-bit ISA Full-Duplex Ethernet Controller NE2000 compatible with built-in 16KB RAM buffer Throughput 10Mbps
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1 10Mbps Ethernet port x1
Connectors	72-pin socket for SIMM Module x1 2.54mm 40-pin box header for IDE x1 2.0mm 44-pin box header for LCD x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x1 2.54mm 26-pin box header for Printer x1 2.54mm 20-pin box header for 16-bit GPIO x1 2.54mm 10-pin box header for RS-232 x2 6-pin P8 Power connector for Power Input 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 External 15-pin D-Sub female connector for VGA x1 External 9-pin D-Sub male connector for RS-232 x1 External RJ-45 connector for Ethernet x1 External Mini DIN connector for Keyboard/Mouse x1

Power Requiremen	Single Voltage +5V @670mA
Weight	195g
Board Size	184 X 122mm (7.24 x 4.8 inches)
Operating Temperature	-20°C ~ +70°C



PS/2 KB/Mouse VGA Connector 10Mbps Ethernet COM1 RS-232 COM2 RS-485

16-bit GPIO Port Support

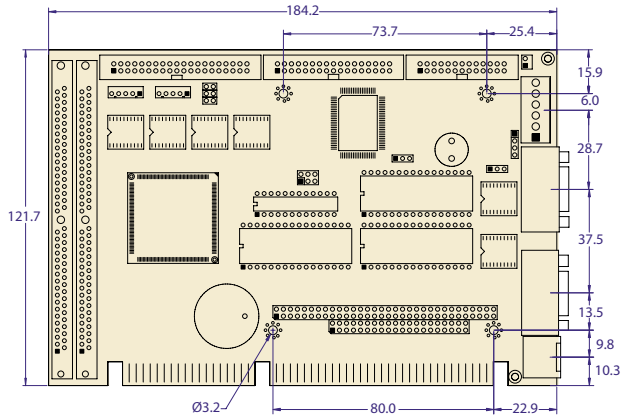
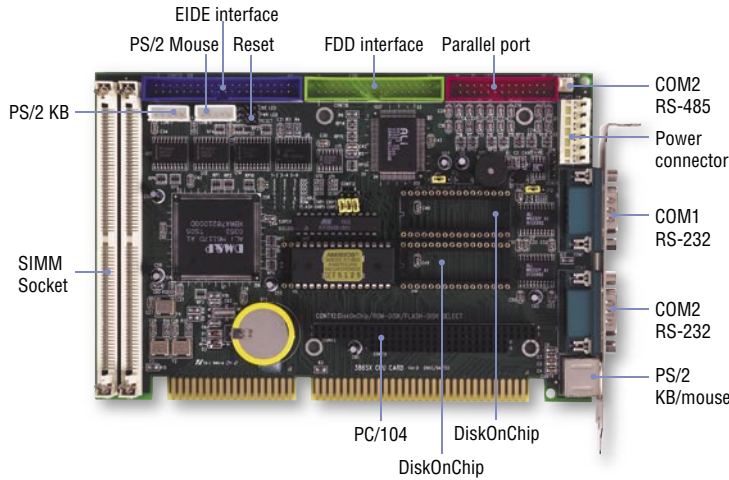


Packing List

- ICOP-6023VE x1
- CD for User's Manual & Driver x1
- Cable
 - AT BUS x1
 - PRINT+F x1
 - RS-232 x2
 - YKB x1

Ordering Information

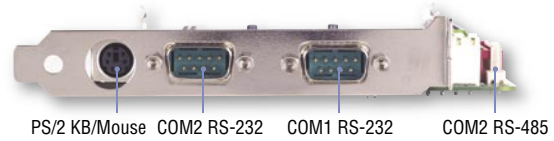
- ICOP-6023VE** M6117D Half-Size CPU Module
- DM&P 4/16MB SIMM Module**
- LCD-064-SET** 6.4" LCD Kit



Unit: mm

Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	72-pin SIMM socket x2, up to 32MB EDO RAM (optional)
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
Flash Disk Support	MSTI EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1
Connectors	72-pin socket for SIMM Module x2 2.54mm 40-pin box header for IDE x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x2 2.54mm 26-pin box header for Printer x1 6-pin P8 Power connector for Power Input x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 5-pin box header for Mouse x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 External 9-pin D-Sub male connector for RS-232 x2 External Mini DIN connector for Keyboard/Mouse x1
Power Requirement	Single Voltage +5V @540mA
Weight	190g
Board Size	184 X 122mm (7.24 x 4.8 inches)
Operating Temperature	-20°C ~ +70°C



Support 32-pin DIP Socket x2 for DOC/DIP Package Flash/EPROM Disk

CONT 12: Address Selection



Address	1-2	3-4	5-6
C800H & CA00H	close	close	close
CA00H & CE00H	close	close	open
D800H & DA00H	close	open	close
DC00H & DE00H	close	open	open
Disabled	open	close	open
Both EPROM	open	open	close
Both Flash	open	open	open

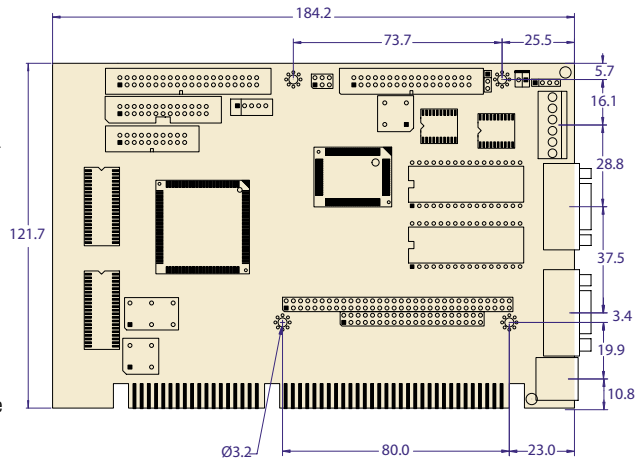
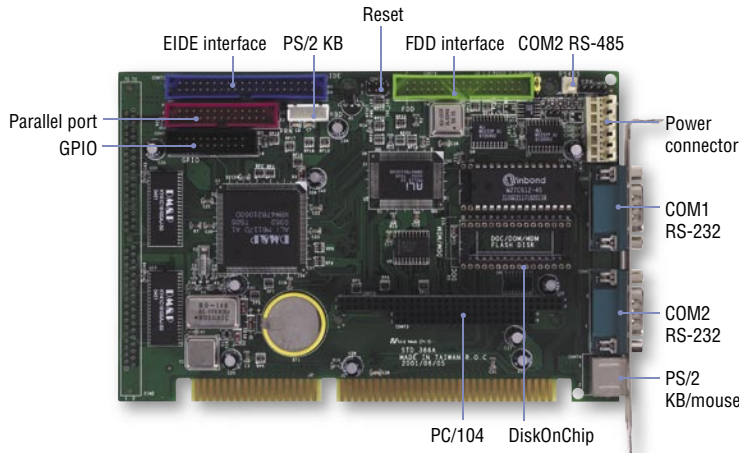
Packing List

- ICOP-6022 x1
- CD for User's Manual & Driver x1
- Cable
AT BUS x1
PRINT+F x1
YKB x1

Ordering Information

- ICOP-6022** M6117D Half-Size CPU Module
- DM&P 4/16MB SIMM Module**

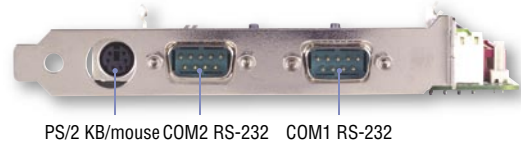
- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories



Unit: mm

Specifications

SoC	DM&P(ALi) M6117D System-on-Chip CPU 386SX-40MHz Real Time Clock with Lithium Battery Backup
Bus	PC/104 standard compliant
BIOS	AMI BIOS
System Memory	Onboard 4MB EDO RAM
Watchdog Timer	Software programmable from 30.5 us to 512 seconds
Flash Disk Support	MST1 EmbedDisk Module (16MB and above) PQI DiskOnModule (16MB and above) M-System DiskOnChip (16MB and above) Winbond DIP Package Flash W29C040 (512KB)
I/O Interface	Enhanced IDE port x1 FDD port x1 RS-232 port x1 RS-232/485 port x1 Parallel port x1 16-bit GPIO port x1
Connectors	2.54mm 40-pin box header for IDE x1 2.54mm 34-pin box header for FDD x1 32-pin DIP socket for DOC x2 2.54mm 26-pin box header for Printer x1 2.54mm 20-pin box header for 16-bit GPIO x1 6-pin P8 Power connector for Power Input x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin header for RS-485 x1 2.54mm 2-pin header for Reset x1 External 9-pin D-Sub male connector for RS-232 x2 External Mini DIN connector for Keyboard/Mouse x1
Power Requirement	Single Voltage +5V @450mA
Weight	185g
Board Size	184 X 122mm (7.24 x 4.8 inches)
Operating Temperature	-20°C ~ +70°C



Accessory Cables

AT BUS



PRINT+F



YKB



Packing List

- ICOP-6021 x1
- CD for User's Manual & Driver x1
- Cable
 - AT BUS x1
 - PRINT+F x1
 - YKB x1

Ordering Information

- ICOP-6021 M6117D Half-Size CPU Module

Peripheral Boards

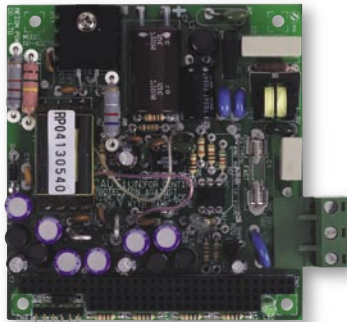
5



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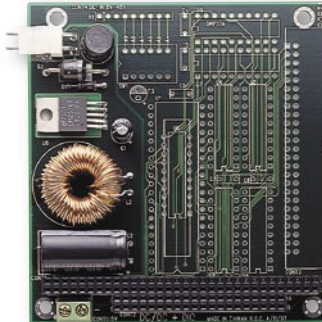
ICOP-0070

Power Supply AC/DC



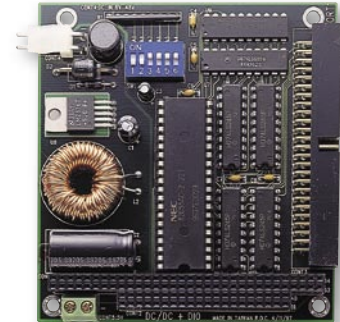
ICOP-0071

Power Supply DC/DC Module



ICOP-0072

Power Supply DC/DC with DIO Module



Specifications

Power	Input voltage range: 90~264VAC Output voltage: +5VDC @ 2A -5VDC @ 0.2A +12VDC @ 1A -12VDC @ 0.3A Inrush frequency: 47~63Hz Inrush current cold: 20A @110VAC, 40A @220VAC Hold-up time: 500ms Rise time: 500ms Overload protection: power limit Short protection: auto-recovery MOSFET design Built-in line filter Meets FCC, CE, TUV, UL478 and CS Fast type FUSE 2A/250V
Bus	PC/104 standard compliant
Connectors	3-pin AC input x1 6-pin DC input x1
Weight	120g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	0°C ~ +60°C

Packing List

- ICOP-0070 x1
- Screw Kit x1

Specifications

Power	Input voltage range: +8V ~ +48VDC Output voltage: 5V @2A Overload protection Overheat protection Converted frequency: 52KHZ Converted effect: Over 80% Suitable for auto/truck system
Bus	PC/104 standard compliant
Connectors	2-pin AC input x1
Weight	85g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +60°C

Packing List

- ICOP-0071 x1
- Screw Kit x1

Specifications

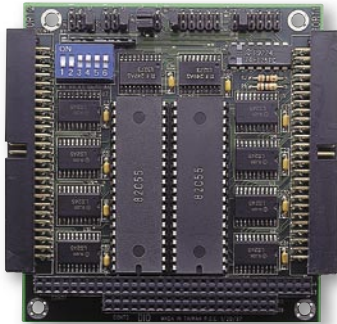
Power	Input voltage range: +8V ~+48VDC Output voltage: 5V @400mA Switch frequency: 52KHZ Efficiency: 80% Overload protection: shutdown when reaching thermal or current limit
Bus	PC/104 standard compliant
Digital I/O	24-bit digital I/O lines (1 group) Group emulates 8225PPI mode 0 Buffered circuits for higher driving capacity more than 8255 Output status read back Pin-compatible with OPTO-22 I/O module racks Transfer rate: 300 KB/sec. (typical) Digital output: Logic level 0: 0.5V max. @24mA sink Logic level 1: 2.0V min. @5mA source Digital input: Logic level 0: 0.8V max. Logic level 1: 2.0V min.
Connectors	2.54mm 50-pin box header for I/O port
Weight	110g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +60°C

Packing List

- ICOP-0072 x1
- Screw Kit x1

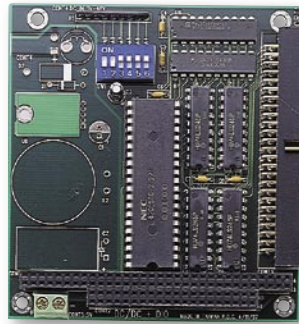
ICOP-0101

48-bit Digital I/O Module



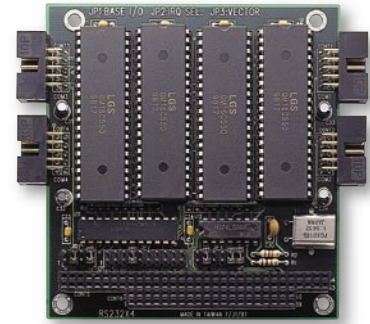
ICOP-0102

24-bit Digital I/O Module



ICOP-1800

Multi RS-232C Module



1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module

5

Peripheral Module

6

Accessories

Specifications

48-bit digital I/O lines (2 groups)
 Group emulates 8225 PPI mode 0
 Buffered circuits for higher driving capacity than 8255
 Bit 0 of port C can generate an interrupt to IRQ 2, 3, 4, 5, 6 or 7
 Interrupt trigger on rising/falling edge
 Output status read back
 Pin compatible with OPT
 0-22 I/O module racks
 Transfer rate: 300 KB/sec. (typical)
 Digital output: Logic level 0: 0.5V max. @24mA
 Logic level 1: 2.0V min. @15mA
 Digital input: Logic level 0: 0.8V max.
 Logic level 1: 2.0V min.

Bus	PC/104 standard compliant
Connectors	2.54mm 50-pin box header for I/O port x2
Power Requirement	Single Voltage +5V @600mA
Weight	95g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +60°C

Packing List

- ICOP-0101 x1
- Screw Kit x1

Specifications

24-bit digital I/O lines (1 group)
 Group emulates 8225 PPI mode 0
 Buffered circuits for higher driving capacity than 8255
 Interrupt trigger on rising/falling edge
 Output status read back
 Pin compatible with OPT 0-22 I/O module racks
 Transfer rate: 300 KB/sec. (typical)
 Digital output: Logic level 0: 0.5V max. @24mA sink
 Logic level 1: 2.0V min. @15mA
 Digital input: Logic level 0: 0.8V max.
 Logic level 1: 2.0V min

Bus	PC/104 standard compliant
Connectors	2.54mm 50-pin box header for I/O port x1
Power Requirement	Single Voltage +5V @600mA
Weight	76g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	0°C ~ +55°C

Packing List

- ICOP-0102 x1
- Screw Kit x1

Specifications

Chipset UART 16C550 x4
 RS-232 asynchronous port x4
 Supports: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
 Interrupt select: 2, 3, 4, 5, 7
 RS-232 modem control signals
 I/O address: 100h to 300h
 Baud rate: up to 115.2Kbps

Bus	PC/104 standard compliant
Connectors	2.54mm 10-pin box header for RS-232 x4
Power Requirement	Single +5V @ 200mA
Weight	100g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +55°C

Packing List

- ICOP-1800 x1
- Cable RS-232 x4
- Screw Kit x1

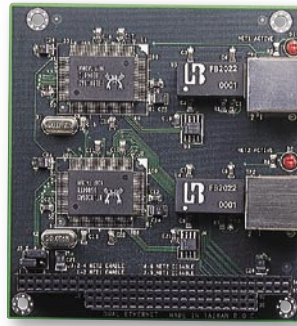
ICOP-1500

Ethernet LAN Module



ICOP-1510

Dual Ethernet LAN Module



ICOP-2811

PC/104 VGA/ LCD Module



Specifications

Chipset	Realtek 8019AS single chip Full-Duplex transfer mode, double effective bandwidth NE2000 compatible with built-in 16KB RAM buffer Jumper Setting for hardware/software mode selection, PnP function enable/disable, BROM size and memory base address, I/O base address, Network medium type, and IRQ Throughput: 10Mbps IRQ: 2 (9), 3, 4, 5, 10, 11, 12 or 15 I/O address: 200h, 220h, 240h, 260h, 280h, 2A0h, 2C0h, 2E0h, 300h, 320h, 340h, 360h, 380h, 3A0h, 3C0h, 3E0h Boot ROM address: CC00 Hex 8/16-bit data bus auto sensing Built-in boot ROM function
Bus	PC/104 standard compliant
Connectors	External RJ-45 connector for 10Base-T x1
Power Requirement	Single +5V @ 200mA
Weight	90g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	0°C ~ +60°C

Packing List

- ICOP-1500 x1
- Screw Kit x1

Specifications

Chipset	Realtek 8019AS single chip Full-Duplex transfer mode, double effective bandwidth NE2000 compatible with built-in 16KB RAM buffer Jumper Setting for NET1/2 enable/disable Throughput: 10Mbps 8/16-bit data bus auto sensing
Bus	PC/104 standard compliant
Connectors	External RJ-45 connector for 10Base-T x2
Power Requirement	Single Voltage +5V @120mA
Weight	90g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	0°C ~ +60°C

Packing List

- ICOP-1510 x1
- Screw Kit x1

Specifications

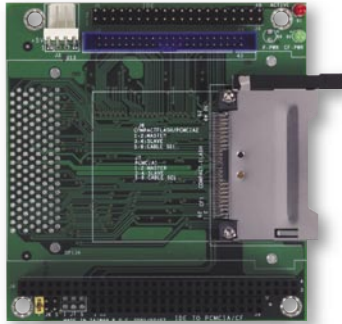
Chipset	TOPRO TP65081Q Chipset 16-bit ISA bus Panel Data bus: 24-bit Display Support: VGA and Flat Panel Display, Mono/TFT/DSTN LCD
BIOS	VGA BIOS
Video Memory	Onboard 512KB, Resolution up to 640x480 @ 256 colors (Optional Onboard 1 MB, 1024 x 768 @256 colors)
Bus	PC/104 standard compliant
LCD Initial Display	Voltage to LCD after H-Sync signal output
Connectors	2.54mm 10-pin box header for VGA x1 2.0mm 44-pin box header for LCD x1 2.54mm 4-pin header for +12V, -12V, -5V DC-in x1 External 15-pin D-Sub female connector for VGA x1
Power Requirement	Single Voltage +5V @500mA
Weight	250g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +60°C

Packing List

- ICOP-2811 x1
- Screw Kit x1

ICOP-1912-CF

One Slot Compact Flash to IDE Module



ICOP-1913

One Slot PCMCIA & one Slot Compact Flash to IDE Module



Specifications

Features	ATA to Standard IDE interface Support one slot for 50-pin CF card
Bus	PC/104 standard compliant
I/O	Comply with PCMCIA v2.10 and JEIDA 4.1 Specification
Status Indicator	POWER LED CF Active LED
Connectors	Type I/II Compact Flash slot x1 2.54mm 40-pin header for IDE x1 2.0mm 44-pin box header for IDE x1 4-pin power connector x1
Power Requirement	Single Voltage +5V @70mA
Weight	55g
Board Size	90 X 96mm (3.54 X 3.77 inches)
Operating Temperature	0°C ~ +70°C

Packing List

- ICOP-1912-CF x1
- Screw Kit x1

Specifications

Features	PCMCIA (ATA) and Compact Flash (ATA) to Standard IDE interface Support one 5V PCMCIA slot and one 50-pin CF card slot Support Type I/II ATA Flash, ATA HDD, and Compact Flash card
Bus	PC/104 standard compliant
I/O	Comply with PCMCIA v2.10 and JEIDA 4.1 Specification
Status Indicators	POWER LED PCMCIA Active LED CF Active LED
Connectors	68-pin slot for Standard PC card of Type I/II x1 Type I/II Compact Flash slot x1 2.54mm 40-pin header for IDE x1 4-pin power connector x1
Power Requirement	Single Voltage +5V @70mA
Weight	79g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	0°C ~ +70°C

Packing List

- ICOP-1913 x1
- Screw Kit x1

1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module

5

Peripheral Module

6

Accessories

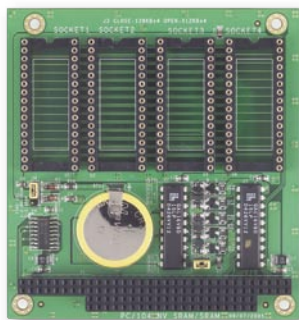
ICOP-4086

PC/104 Solid State Disk Module



ICOP-4087

PC/104 Solid State Disk Module



ICOP-6055A

PC/104 Multi-I/O Module



Specifications

Features	Emulates drive A, B, C or D Bootable from Drive A or Drive C simulation
Flash Disk	Support Flash memory up to 8 Sockets Maximum capacity 512KB x 8 = 4MB by Flash Memory Support SST28040, ATMEL 29C04A
EPROM Disk	Support EPROM memory up to 8 sockets Maximum capacity 1024KB x 8 = 8MB by EPROM Type supported: 27C010, 27C020, 27C040, and 27C080 Memory I/O address, Card ID, and Flash/EPROM selectable by Jumper Maximum stack-up: 4 pcs of ICOP-4086 Compatible with BIOS level, without program modification and driver requirement.
Bus	PC/104 standard compliant
Connectors	DIP socket for Flash Disk/ EPROM x8
Power Requirement	Single Voltage +5V @120mA
Weight	80g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	-20°C ~ +60°C

Packing List

- ICOP-4086 x1
- Screw Kit x1

Specifications

Features	Emulated to 2 Floppy disk drivers (A: / B:) 530 mAH Lithium Battery for SRAM data retention
Flash Disk	Support SRAM / NVSRAM up to 4 Sockets Maximum capacity 512KB SRAM/NVSRAM x 4 = 2MB Compatible with BIOS level, without program modification and driver requirement
Bus	PC/104 8 Bit standard compliant
Connectors	32 Pin DIP socket for SRAM / NVSRAM x4
Power Requirement	Single Voltage +5V@120mA
Weight	80g
Board Size	90 x 96mm (3.54 x 3.77 inches)
Operating Temperature	0°C ~ +60°C

Packing List

- ICOP-4087 x1
- Screw Kit x1

Specifications

Chipset	ALi 5113 Super I/O Controller
Bus Interface	PC/104 standard compliant
Connector	2.54mm 10-pin box header for RS-232 x2 2.54mm 26-pin box header for Printer x1 2.54mm 34-pin box header for FDD x1
Power Requirements	Single +5V @320 mA
Dimensions	90 (L) x 96 (W) mm
Weight	70g
Operating Temperature	-20 ~ +60°C

Packing List

- ICOP-6055A x1
- Cable FDD x1
- PRINT x1
- RS-232 x2
- Screw Kit x1

CF-1915

One Slot Compact Flash to IDE Module



ICOP-0091

PC/104 Interface to ISA Bus



ICOP-0093

x-ISA Interface to ISA Bus



1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module

5

Peripheral Module

6

Accessories

Specifications

Converts compact flash to 40-pin and 44-pin IDE interface

Status Indicators	Power LED IDE Active LED
Connectors	2.0mm 44-pin box header x1 2.0mm 44-pin socket x1 2.54mm 40-pin header x1 2.54mm 4-pin Molex connector for power input x1 Type I/II Compact Flash slot x1
Weight	28g
Board Size	66 X 68mm (2.6 x 2.68 inches)

Packing List

- CF-1915 x1
- Cable
HDD 44P(2.Q) x1

Specifications

Converts 104-pin PC/104 interface to 98-pin ISA Bus

Status Indicators	Power LED for +5V, -5V, +12V, -12V x4
Connectors	2.54mm 104-pin socket for PC/104 interface x1 98-pin Gold finger for ISA interface x1
Weight	34g
Board Size	134 x 33mm (5.27 x 1.3inches)

Packing List

- ICOP-0091 x1

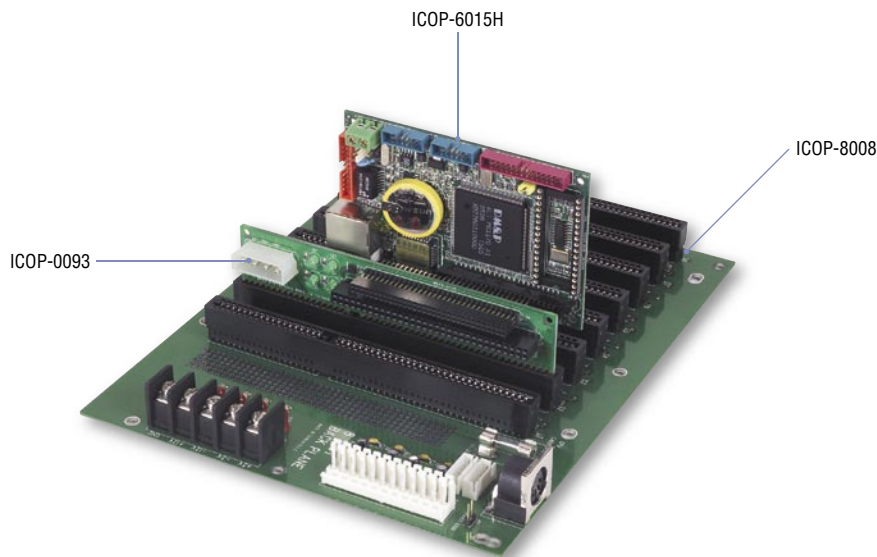
Specifications

Converts 64-pin x-ISA interface to 98-pin ISA Bus

Status Indicators	Power LED for +5V, -5V, +12V, -12V x4
Connectors	2.0mm 64-pin socket for Mity-Mite x-ISA interface x1 2.54mm 64-pin socket for Tiny x-ISA interface x1 98-pin Gold finger for ISA interface x1
Weight	34g
Board Size	134 x 33mm (5.27 x 1.3inches)

Packing List

- ICOP-0093 x1



ICOP-0097

x-PCI Interface to PCI Bus



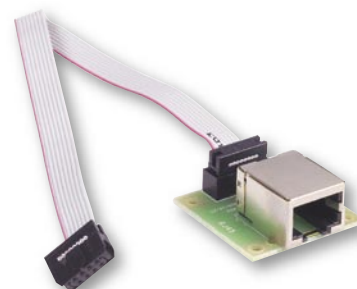
ICOP-0094

IDE Exchanger Kit



ICOP-0076

LAN Adapter Kit



Specifications

Converts 64-pin x-PCI interface to PCI Bus

Connectors	124-pin slot for PCI x1 2.0mm 64-pin header for x-PCI x1
Weight	24g
Board Size	88 x 25mm (3.46 x 0.98inches)

Packing List

- ICOP-0097 x1

Specifications

Converts 2.0mm 44-pin header to 2.54mm 40-pin header

Cable	2.54mm 40-pin to 2.54mm 40-pin IDE cable x1 2.0mm 44-pin to 2.0mm 44-pin IDE cable x1
Connectors	2.0mm 44-pin box header for IDE x2 2.54mm 40-pin box header for IDE x2 4-pin MOLEX connector for power input x1
Weight	80g
Board Size	70 x 50mm (2.75 x 1.96 inches)

Packing List

- ICOP-0094 x1
- Cable
HDD x1
HDD 44P*3(52cm) x1

Specifications

Features	Adapt internal LAN (8 Pin header) for external connection
Connectors	2.0mm 8-pin box header External RJ-45 connector for Ethernet
Weight	10g
Board Size	30 x 30mm (1.18 x 1.18inches)
Operating Temperature	0°C ~ +60°C
Embedded CPU boards support	ICOP series / Vortex86 Series / Vega86 series

Packing List

- ICOP-0076 x1 LAN Adapter Kit
- NET4x2 (2.0)-0076 x1 IDC 4x2+20cm

ICOP-8003

3 Slots ISA Backplane



ICOP-8005

5 Slots ISA Backplane



ICOP-8008

8 Slots ISA Backplane



1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module

5

Peripheral Module

6

Accessories

Specifications

Power Indicators	One each for +5V/-5V/+12V/-12V, 12-pin ATX Molex connector for connection to ATX Power source
Weight	135g
Board Size	180 X 75mm (7.08 x 2.95 inches)

Packing List

- ICOP-8003 x1

Specifications

Power Indicators	One each for +5V/-5V/+12V/-12V, 6-pin ATX Molex connector for connection to ATX Power source
Weight	180g
Board Size	180 X 105mm (7.08 x 4.13 inches)

Packing List

- ICOP-8005 x1

Specifications

Power Indicators	One each for +5V/-5V/+12V/-12V, 12-pin ATX Molex connector for connection to ATX Power source
Terminal Block	5-pole Industrial Terminal Block for connection to power source - +5V/-5V/+12V/-12V/GND
Connectors	2.54mm box header for Keyboard x2 External 5-pin Keyboard connector x1
Safety Fuse	2A Fuse for V-input 220VAC/110VAC x1
Status Indicators	Power LED for +5V/-5V/+12V/-12V x4
Weight	350g
Board Size	220 X 73mm (8.66 x 2.87 inches)

Packing List

- ICOP-8008 x1

AC/DC Switching Adapter for VOX series



Electrical Specifications:

Maximum Power	47W
AC Input	+100~240VAC@1A, 50/60Hz
DC Output	+5VDC@7A, +12VDC@1.5A, -12VDC@0.3A Triple outputs
Protection	Over voltage protection, AC recycle; Over circuit protection, Auto recover
Operating Temperature	0°C to +40°C
Storage Temperature	-10°C to +70°C

AC/DC Power Adapter

Power-15W



Power-15W-3pin

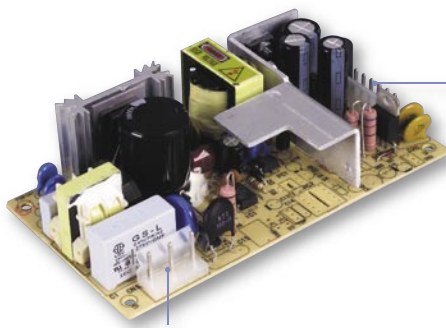


Electrical Specifications:

Maximum Power	15W
AC Input	+100~240VAC@1A, 50/60Hz
DC Output	+5VDC@3A
Protection	Over voltage protection, AC recycle; Over circuit protection, Auto recover
Operating Temperature	0°C to +40°C
Storage Temperature	-10°C to +70°C

Embedded Power Supply Module

RP-4051S-5V



DC Output
 ■ +5V
 ■ +5V
 ■ GND
 ■ GND
 ■ ND
 ■ +12V

AC Input ■ GND ■ AC-in ■ 90~240VAC

Electronic Specifications:

Maximum Power	65W
AC Input	+90~240VAC, 50/60Hz
DC Output	+5VDC@ 7A, +12VDC@2.5A
AC Inrush Curren	20A/110VAC, 40A/220VAC (cold start)
Board Size	70x130mm (2.75 x 5.11 inches)
Weight	250g
Operating Temperature	0°C to +50°C

Accessories & Technical Information

6

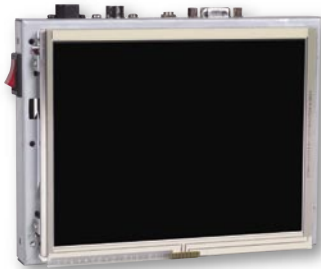


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Open Frame Panel PC

VOX-064

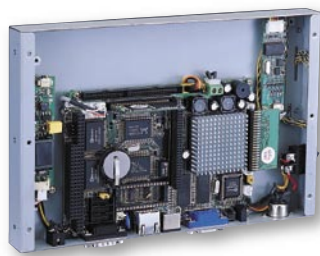
6.4" Open Frame Panel PC with Embedded Board and Touch Screen



- 6.4" TFT Panel (LG LB064V02)
- Vortex86-6071 Embedded PC/104 CPU board
- Vortex86-166MHz Low Voltage CPU
- 128MB SDRAM
- Resistive type Touch Screen
- AC/DC Power supply

VOX-084

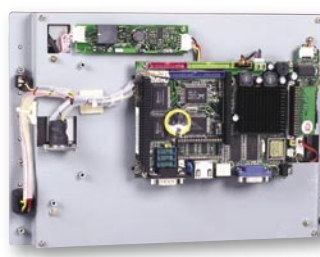
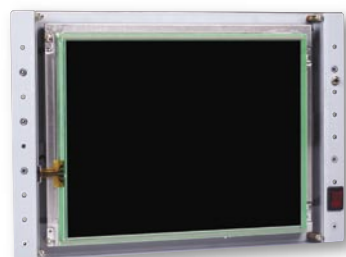
8.4" Open Frame Panel PC with Embedded Board and Touch Screen



- 8.4" TFT Panel (AU B084SN03)
- Vortex86-6047 Embedded 3.5" CPU board
- Vortex86-166MHz Low Voltage CPU
- 128MB SDRAM
- Resistive type Touch Screen
- AC/DC Power supply

VOX-104

10.4" Open Frame Panel PC with Embedded Board and Touch Screen

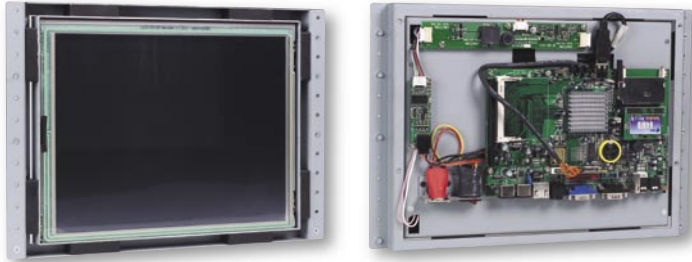


- 10.4" TFT Panel (AU B104SN02)
- Vortex86-6047 Embedded 3.5" CPU board
- Vortex86-166MHz Low Voltage CPU
- 128MB SDRAM
- Resistive type Touch Screen
- AC/DC Power supply

Open Frame Panel PC

VOX-AU121

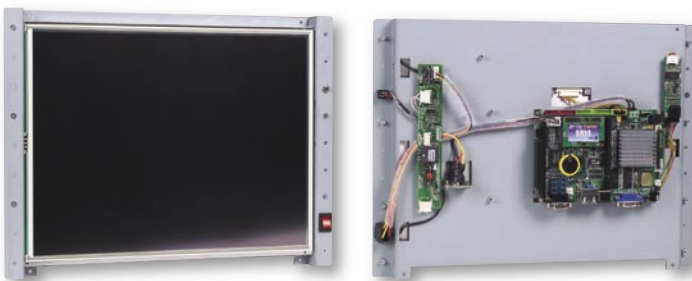
12.1" Open Frame Panel PC with Embedded Board and Touch Screen



- 12.1" TFT Panel (AU G121SN01)
- Vortex86-6048 Embedded ATX CPU board
- Vortex86-200 MHz Low Voltage CPU
- 128MB SDRAM
- Resistive type Touch Screen
- AC/DC Power supply

VOX-AU15

15" Open Frame Panel PC with Embedded Board and Touch Screen



- 15" TFT Panel (AU G150XG01)
- Vortex86-6047-4S Embedded 3.5" CPU board
- Vortex86-166MHz Low Voltage CPU
- 128MB SDRAM
- Resistive type Touch Screen
- AC/DC Power supply

1
Mity/Tiny Module

2
PC/104 Module

3
3.5"/ATX/EBX Module

4
Half-Size Module

5
Peripheral Module

6
Accessories

Order Information

ITEM	Description
VOX-064	6.4" Thin Frame Panel PC w/Vortex86-6071 and Power adapter
VOX-064-TS	6.4" Thin Frame Panel PC w/Vortex86-6071, USB Touch Screen and Power adapter
VOX-084	8.4" Thin Frame Panel PC w/ Vortex86-6047 and Power adapter
VOX-084-TS	8.4" Thin Frame Panel PC w/ Vortex86-6047, USB Touch Screen and Power adapter
VOX-104	10.4" Thin Frame Panel PC w/ Vortex86-6047 and Power adapter
VOX-104-TS	10.4" Thin Frame Panel PC w/Vortex86-6047, USB Touch Screen and Power adapter
VOX-AU121	12.1" Thin Frame Panel PC w/ Vortex86-6048 and Power adapter
VOX-AU121-TS	12.1" Thin Frame Panel PC w/Vortex86-6048, USB Touch Screen and Power adapter
VOX-AU15	15" Thin Frame Panel PC w/ Vortex86-6047-4S and Power adapter
VOX-AU15-TS	15" Thin Frame Panel PC w/Vortex86-6047-4S, USB Touch Screen and Power adapter

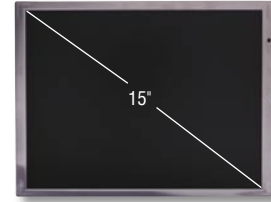
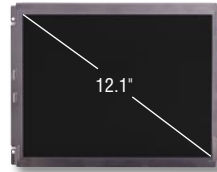
LCD Display



Model name	LCD-6.4"LG	LCD-PVI-PD064VT4	LCD-AU-084SN03
Size	6.4"	6.4"	8.4"
LCD Brand	LG	PVI	AU
Resolution (Pixel)	640x480 VGA	640x480 VGA	800x600 SVGA
Number of colours	262K	262K	262K
Viewing angle (L/R/U/D)	45/45/15/35	60/55/40/55	60/60/60/40
Brightness (nit)	250	400	220
Contrast Ratio	300 : 1	400 : 1	350 : 1
Response Time (ms)	45	40	35
Signal Interface	18bit TTL	18bit TTL	18bit LVDS
Supply Voltage (V)	3.3V	5V	3.3V
LCD Power Consumption (W)	2.31	4.82	3.3
Lamp life (hrs.)	20,000	20,000	20,000
Operation Temp	0°C~+50°C	-20°C~+70°C	0°C~+50°C

Ordering information	Item Number	Description
6.4" LG Set	LCD-LG-6.4"	LG LB064V02,6.4" 640x480 LCD
	INVERTER-WICCFL1	Backlight inverter for LG 6.4" LCD
	LCD-CABLE-LG6.4-15CM	LCD Cable for Vortex86 series
	T/S-CONTROLLER-USB-4	LCD Cable for M6117D series
	LCD-PVI-TOUCHSCREEN	TouchScreen Controller-4 wires-USB LCD-6.4"-TOUCHSCREEN
6.4" PVI Set	LCD-PVI-PD064VT4	PVI PD064VT4 6.4" 640x480 LCD
	INVERTER-QF82V2.02	Backlight inverter for PVI 6.4" LCD
	CABLE-16C6448A/486	LCD Cable for Vortex86 series
	CABLE-16C6448A/386	LCD Cable for M6117D series
	T/S-CONTROLLER-USB-4 LCD-PVI-TOUCHSCREEN	TouchScreen Controller-4 wires-USB LCD-6.4"-TOUCHSCREEN
8.4" AU Set	LCD-LCD-AU-084SN03V0	AU B084SN03, 8.4" 800x600 LCD
	LCD-LCD-AU-084SN03V2	AU B084SN03, 8.4" 800x600 LCD with Touch Screen
	INVERTER-QF38V6.75	Backlight inverter for AU 10.4"LCD
	CABLE-LVDS-30	LCD Cable for Vortex86 series
	ICOP-0096 T/S-CONTROLLER-USB-4	LVDS to 18-bit TFT converter TouchScreen Controller-4 wires-USB

LCD Display



1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module


5

Peripheral Module

6

Accessories

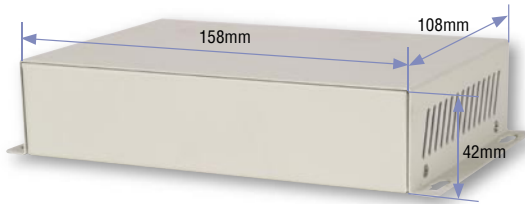
Model name	LCD-AU-10.4"-N2-PANEL	LCD-AU-12.1"-PANEL	LCD-AU-15"-PANEL
Size	10.4"	12.1"	15"
LCD Brand	AU	AU	AU
Resolution (Pixel)	800x600 SVGA	800x600 SVGA	1024x768 XVGA
Number of colours	262K	262K	262K
Viewing angle (L/R/U/D)	60/60/40/60	70/70/50/60	60/60/40/60
Brightness (nit)	400	400	350
Contrast Ratio	500 : 1	500 : 1	400 : 1
Response Time (ms)	35	35	16
Signal Interface	18bit LVDS	18bit LVDS	18bit LVDS
Supply Voltage (V)	3.3V	3.3V	3.3V
LCD Power Consumption (W)	8.3	7.8	11.5
Lamp life (hrs.)	50,000	50,000	50,000
Operation Temp	0°C~+50°C	-20°C~+65°C	0°C~+50°C

Ordering information	Item Number	Description
10.4" AU Set	LCD-AU-10.4"-N2-PANEL INVERTER-QF63V2 CABLE-LVDS-30 ICOP-0096 T/S-CONTROLLER-USB-4 LCD-AU104-TOUCHSCREEN	AU B104SN02, 10.4" 800x600 LCD Backlight inverter for AU 10.4"LCD LCD Cable for Vortex86 series LVDS to 18- bit TFT converter TouchScreen Controller-4 wires-USB LCD-10.4"-TOUCHSCREEN
12.1" AU Set	LCD-AU-12.1"-PANEL INVERTER-QF61V4.50 CABLE-LVDS-AU121-30 ICOP-0096 T/S-CONTROLLER-USB-4 LCD-AU121-TOUCHSCREEN	AU G121SN01, 12.1" 800x600 LCD Backlight inverter for AU 12.1"LCD LCD Cable for Vortex86 series LVDS to 18- bit TFT converter TouchScreen Controller-4 wires-USB LCD-12.1"-TOUCHSCREEN
15" AU Set	LCD-AU-15"-PANEL INVERTER-QF117V1.14 CABLE-LVDS-AU15-30 ICOP-0096 T/S-CONTROLLER-USB-4 LCD-AU15-TOUCHSCREEN	AU G150XG01 15" 1024x768 LCD Backlight inverter for AU 15"LCD LCD Cable for Vortex86 series LVDS to 18- bit TFT converter TouchScreen Controller-4 wires-USB LCD-15"-TOUCHSCREEN
ICOP-0096 CABLE-LVDS	LVDS to 18- bit TFT converter For Vortex86 Series Only 	ICOP-0096 is the one channel LVDS Module,designing especially for Vortex86 series which converts the 18-bit TFT signal. Chip:T1 SN75LVDS84 Connector: 2.0mm 16 -pin box connector x 1 (TFT) 2.0mm 44-pin box header x1 (LVDS) Size: 44x21mm (1.73x0.82 inches) Weight:3g

Chassis Selection

EB201: Chassis for ICOP-6027VE

Front Side View



Rear Side View



Ordering Information

- **EB201** Chassis for ICOP-6027VE
- **ICOP-6027VE** DM&P M6117D 3.5" CPU Module
- **Power-15W** AC/DC Power Adapter

EB202 & EB202L2: Chassis for Vortex86-6075 & Vortex86-6075L2

Front Side of EB202 & EB202L2



Rear Side of EB202



Rear Side of EB202L2



Removable Shelf for 2.5" Hard Disc



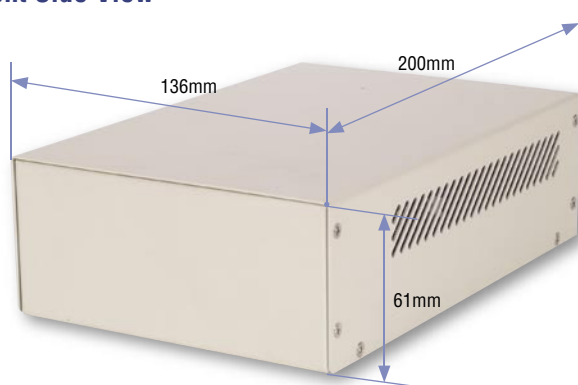
Ordering Information

- **EB202** Chassis for Vortex86-6075
- **Vortex86-6075** DM&P Vortex86 ATX CPU Module
- **EB202L2** Chassis for Vortex86-6075L2
- **Vortex86-6075L2** DM&P Vortex86 ATX CPU Module
- **Power-15W** AC/DC Power Adapter

Chassis Selection

EB205: Chassis for Vortex86-6042

Front Side View



Rear Side View

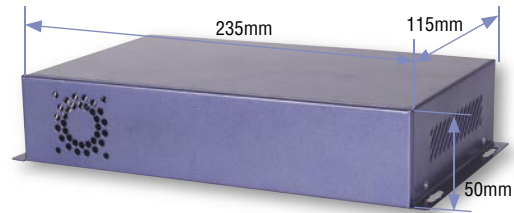


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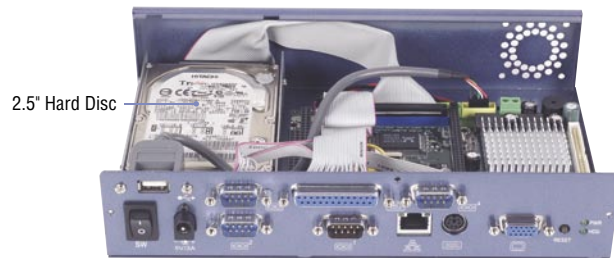
- **EB205** Chassis for Vortex86-6042
- **Vortex86-6042** DM&P Vortex86 Half-Size CPU Module
- **Power-15W** AC/DC Power Adapter

EB207: Chassis for Vortex86-6047-4S

Front Side View



Rear Side View



Ordering Information

- **EB207** Chassis for Vortex86-6047
- **Vortex86-6047-4S** DM&P Vortex86 3.5" CPU Module
- **Power-15W** AC/DC Power Adapter

Power-15W: AC/DC Power Adapter for EB201, EB202, EB202L2, EB205, EB207



1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module

5

Peripheral Module

6

Accessories

Chassis Selection

EB301, EB302 & EB303: Chassis for Vortex86-6076 & Vortex86-6076-L2

Front Side of EB301



Rear Side of EB301



Front Side of EB302



Rear Side of EB302



Front Side of EB303



Rear Side of EB303



Ordering Information

- **EB301** Chassis for Vortex86-6076
- **Vortex86-6076** Vortex86 ATX CPU Module
- **EB302** Chassis for Vortex86-6076
- **Vortex86-6076** Vortex86 ATX CPU Module
- **EB303** Chassis for Vortex86-6076-L2
- **Vortex86-6076-L2** Vortex86 ATX CPU Module
- **POWER-15W-3P** Mini Din 3Pin 15W Power Adapter

3-pin Power Adapter



Accessory Cable



PS2 KB White

Description	2.0mm PS2 Mouse or Keyboard Cable
Specification	2.0mm 6-pin Female Mini-DIN connector to 2.0mm 5-pin Female MPC2 connector
Cable Length	30cm (12 inches)



PS2 KB (TEST) Black

Description	2.54mm PS2 Mouse, Dupont Connector
Specification	2.54mm 6-pin Female Mini-DIN connector to 2.0mm 5-pin Female JCT connector (2-pin connection only), include two Philips type screw and nut
Cable Length	30cm (12 inches)



AT BUS

Description	AT-Bus HDD & FDD Flat Ribbon Cable
Specification	2.54mm 40-pin Socket connector to 2.54mm 40-pin Socket connector & 2.54mm 34-pin Socket connector to 2.54mm 34-pin Socket connector
Number of connectors available	3x 40-pin Socket connector for HDD connections & 3x 34-pin Socket connector for FDD connections
Cable Length	AT-Bus HDD Cable at 45cm (17.7 inches) & AT-Bus FDD Cable at 50cm (19.6 inches)



PRINT

Description	2.54mm PRINTER Flat Ribbon Cable
Specification	2.54mm 26-pin Socket connector to 25-pin Female D-Sub connector
Cable Length	30cm (12 inches)



PRINT(2.0)

Description	2.0mm PRINTER Flat Ribbon Cable
Specification	2.0mm 26-pin Socket connector to 25-pin Female D-Sub connector
Cable Length	30cm (12 inches)



PRINT+F

Description	2.54mm PRINTER Flat Ribbon Cable
Specification	2.54mm 26-pin Socket connector to 25-pin Female D-Sub connector on a I/O Bracket
Bracket Length	12cm/4.72 inches
Cable Length	30cm (12 inches)



HDD

Description	2.54mm HDD Flat Ribbon Cable
Specification	2.54mm 40-pin Socket connector to 2.54mm 40-pin Socket connector
Number of connectors available	3x 40-pin Socket connector for HDD connections
Cable Length	45cm (17.7 inches)



HDD 44P(2.0)

Description	2.54mm HDD Flat Ribbon Cable
Specification	2.0mm 44-pin Socket connector + 5.25" Molex Plug for Power source to 2.54mm 40-pin Socket connector
Cable Length	19 cm (7.48 inches)



Audio(2.0)

Description	3.50 Phone Jack Cable
Specification	2.0mm PH-4P to 3.50 Phone Jack Cable for MIC & SOUND
Cable Length	17cm (6.69inches)

1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module

5

Peripheral Module

6

Accessories

Accessory Cable



HDD 44P*3(52CM)

Description	2.0mm HDD Flat Ribbon Cable
Specification	2.0mm 44-pin Socket connector to 2.0mm 44-pin Socket connector
Number of connectors available	3x 44-pin Socket connector for HDD connections
Cable Length	52cm (20.47 inches)



FDD(2.0)

Description	2.0mm FDD Flat Ribbon Cable
Specification	2.0mm 34-pin Socket connector to 2.54mm 30-pin Socket connector
Cable Length	32 cm (12.59 inches)



RS232

Description	2.54mm RS232 Flat Ribbon Cable
Specification	2.54mm 10-pin Socket connector to 9-pin Male D-Sub connector
Cable Length	30 cm (12 inches)



RS232(2.0)

Description	2.0mm RS232 Flat Ribbon Cable
Specification	2.0mm 10-pin Socket connector to 9-pin Male D-Sub connector
Cable Length	30 cm (12 inches)



VGA

Description	2.54mm VGA Flat Ribbon Cable
Specification	2.54mm 10-pin Socket connector to 15-pin Female High Density D-Sub connector
Cable Length	32 cm (12.59 inches)



USB(2.54)

Description	2.54mm USB Connector
Specification	2.54mm 10-pin Socket connector to Two USB 4-pin Female Series A Receptacle on a I/O Bracket
Bracket Length	12cm/4.72 inches
Cable specification	4-wire, AWG28, double shielded
Cable Length	31cm (12.2 inches)



NET 4x2(2.0)

Description	2.0mm Ethernet LAN Flat Ribbon Connector
Specification	2.0mm 8-pin Socket connector to RJ-45 Socket 8P8C
Cable specification	4-wire, AWG28, shielded
Cable Length	17cm (6.69 inches)



GPIO(2.0)

Description	2.0mm GPIO AWG24
Specification	2.0mm 20-pin Socket connector to Open wires 20-wire
Cable specification	20-wire, AWG24, unshielded
Cable Length	15cm (5.9 inches)

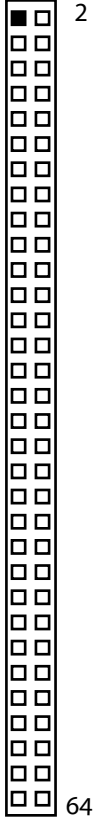


YKB

Description	PS/2 Mouse & Keyboard Y-Cable
Specification	2.0mm 6-pin Male Mini-DIN connector to Two 2.0mm 6-pin Female Mini-Din connector
Cable Length	19.5cm (7.67 inches)

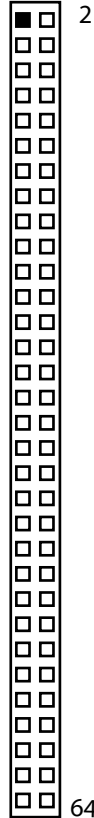
Pin Definition

2.0mm 64-pin x-PCI socket



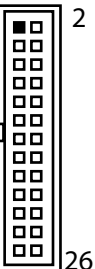
Pin #	Signal Name	Pin #	Signal Name
1	GND	2	GND
3	AD0	4	AD1
5	AD2	6	AD3
7	AD4	8	AD5
9	AD6	10	AD7
11	AD8	12	AD9
13	AD10	14	AD11
15	AD12	16	AD13
17	AD14	18	AD15
19	VCC	20	VCC
21	AD16	22	AD17
23	AD18	24	AD19
25	AD20	26	AD21
27	AD22	28	AD23
29	AD24	30	AD25
31	AD26	32	AD27
33	AD28	34	AD29
35	AD30	36	AD31
37	VCC3	38	VCC3
39	CBE-0	40	CBE-1
41	CBE-2	42	CBE-3
43	PGNT-0	44	PREQ-0
45	PGNT-1	46	PREQ-1
47	PGNT-2	48	PREQ-2
49	INT-A	50	INT-B
51	INT-C	52	INT-D
53	GND	54	GND
55	FRAME-	56	IRDY-
57	TRDY-	58	STOP-
59	SERR-	60	PAR
61	DEVSEL-	62	PLOCK
63	PCIRST-	64	PCICLK1

2.0mm/2.54mm 64-pin x-ISA socket



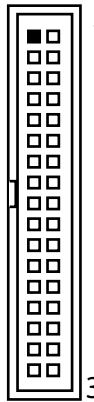
Pin #	Signal Name	Pin #	Signal Name
1	GND	2	SBHE
3	RSTDRV	4	SD7
5	VCC	6	SD6
7	SD8	8	SD5
9	SD9	10	SD4
11	SD10	12	SD3
13	SD11	14	SD2
15	SD12	16	SD1
17	SD13	18	SD0
19	GND	20	IOCHRDY
21	SMEMW	22	AEN
23	SMEMR	24	SA19
25	IOW	26	SA18
27	IOR	28	SA17
29	SD14	30	SA16
31	SD15	32	SA15
33	MEMCS16	34	SA14
35	IOCS16	36	SA13
37	REFRESH	38	SA12
39	SYSCLK	40	SA11
41	IRQ7	42	SA10
43	IRQ6	44	SA9
45	IRQ5	46	SA8
47	IRQ4	48	SA7
49	IRQ3	50	SA6
51	IRQ10	52	SA5
53	IRQ11	54	SA4
55	BALE	56	SA3
57	VCC	58	SA2
59	OSC	60	SA1
61	GND	62	SA0
63	IRQ12	64	IRQ14

2.0mm 26-pin box header for Printer



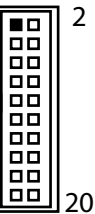
Pin #	Signal Name	Pin #	Signal Name
1	STB-	14	AFD-
2	PD0	15	ERR-
3	PD1	16	PRINIT-
4	PD2	17	SLIN-
5	PD3	18	GND
6	PD4	19	GND
7	PD5	20	GND
8	PD6	21	GND
9	PD7	22	GND
10	ACK-	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SLCT	26	NC

2.0mm 34-pin box header for FDD



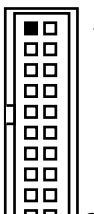
Pin #	Signal Name	Pin #	Signal Name
1	GND	2	DENSEL
3	GND	4	NC
5	GND	6	NC
7	GND	8	INDEX\
9	GND	10	MTRO\
11	GND	12	DS1\
13	GND	14	DS0\
15	GND	16	MTR1\
17	GND	18	DIR\
19	GND	20	STEP\
21	GND	22	WD\
23	GND	24	WG\
25	GND	26	TRO\
27	GND	28	WP\
29	GND	30	RD\
31	GND	32	HDSEL\
33	GND	34	DSKCHG\

2.0mm 20-pin box header for 16-bit GPIO



Pin #	Signal Name	Pin #	Signal Name
1	GND	2	VCC
3	GP0	4	GP8
5	GP1	6	GP9
7	GP2	8	GP10
9	GP3	10	GP11
11	GP4	12	GP12
13	GP5	14	GP13
15	GP6	16	GP14
17	GP7	18	GP15
19	VCC	20	GND

2.0mm 20-pin socket for Low Pin Count

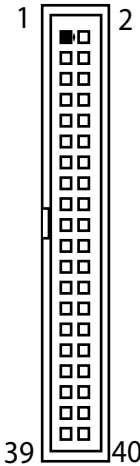


Pin #	Signal Name	Pin #	Signal Name
1	GND	2	VCC
3	LAD0	4	LAD1
5	LAD2	6	LAD3
7	SIRQ	8	LDRQ-
9	VOSCX	10	LFRAME-
11	PCIRST-	12	PCICLK
13	AC RESET-	14	BIT CLK
15	SDAT10	16	SDAT0
17	SYNC	18	VCC3
19	SDAT11	20	GND

- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories

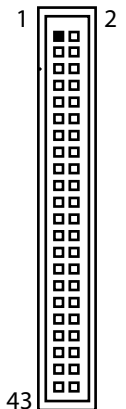
Pin Definition

2.54mm 40-pin box header for IDE



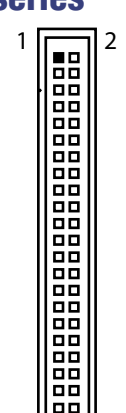
Pin #	Signal Name	Pin #	Signal Name
1	IDERST-	2	GND
3	IDED7	4	IDED8
5	IDED6	6	IDED9
7	IDED5	8	IDED10
9	IDED4	10	IDED11
11	IDED3	12	IDED12
13	IDED2	14	IDED13
15	IDED1	16	IDED14
17	IDED0	18	IDED15
19	GND	20	VCC
21	N/C	22	GND
23	IDEIOW	24	GND
25	IDEIOR	26	GND
27	N/C	28	N/C
29	N/C	30	GND
31	IDEIRQ14	32	IOCS16
33	IDESA1	34	N/C
35	IDESA0	36	IDESA2
37	HDCS-0	38	HDCS-1
39	IDELED	40	GND

2.0mm 44-pin LCD box header for Vortex86 series



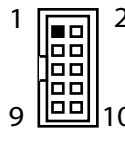
Pin #	Signal Name	Pin #	Signal Name
1	LCDVCC	2	LCDVCC
3	VAD0	4	VAD1
5	VAD2	6	VAD3
7	VAD4	8	VAD5
9	VAD6	10	VAD7
11	VAD8	12	VAD9
13	VAD10	14	VAD11
15	GND	16	UD4
17	UD5	18	UD6
19	UD7	20	GND
21	VBD0	22	VBD1
23	VBD2	24	VBD3
25	VBD4	26	VBD5
27	VBD6	28	VBD7
29	VBD8	30	VBD9
31	VBD10	32	VBD11
33	GND	34	GND
35	PLDXCLK	36	VBGCLK
37	VADE	38	VBDE
39	AHSYNC	40	VBHSYNC
41	AVSYNC	42	VBVSYNC
43	DISPOFF	44	VDDEN

2.0mm 44-pin LCD box header for Vega86 series



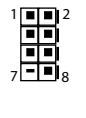
Pin #	Signal Name	Pin #	Signal Name
1	LCDVCC	2	LCDVCC
3	FPD0	4	FPD1
5	FPD2	6	FPD3
7	FPD4	8	FPD5
9	FPD6	10	FPD7
11	FPD8	12	FPD9
13	FPD10	14	FPD11
15	FPD12	16	FPD13
17	FPD14	18	FPD15
19	FPD16	20	FPD17
21	FPD18	22	FPD19
23	FPD20	24	FPD21
25	FPD22	26	FPD23
27	FP24	28	FP25
29	FPD26	30	FPD27
31	FPD28	32	FPD29
33	GND	34	GND
35	FPD30	36	FPCLK
37	FPD31	38	FPDEN
39	FPD32	40	FPHS
41	FPD34	42	FPVS
43	ENVEE	44	ENVDD

2.0mm/2.54mm 10-pin box header for RS-232




Pin #	Signal Name	Pin #	Signal Name
1	DCD1	2	RXD1
3	TXD1	4	DTR1
5	GND	6	DSR1
7	RTS1	8	CTS1
9	RI1	10	NC

2.54mm 8-pin header for Ethernet




Pin #	Signal Name	Pin #	Signal Name
1	TX+	2	TX-
3	RX+	4	LED0
5	LED0+	6	RX-
7	LED1+	8	LED1

2.0mm 4-pin wafer for MIC-in




Pin #	Signal Name
1	VREFOUT
2	GND
3	GND
4	MIC1

2.0mm 4-pin wafer for Line-in




Pin #	Signal Name
1	LINEIN_R
2	GND
3	GND
4	LINEIN_L

2.0mm 4-pin wafer for Line-out



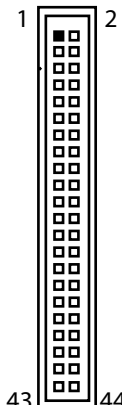
Pin #	Signal Name
1	LOUTR
2	GND
3	GND
4	LOUTL

2.54mm 2-pin header for RS-485



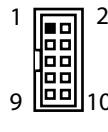
Pin #	Signal Name
1	RS485+
2	RS485-

2.0mm 44-pin box header for IDE



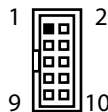
Pin #	Signal Name	Pin #	Signal Name
1	IDERST-	2	GND
3	IDED7	4	IDED8
5	IDED6	6	IDED9
7	IDED5	8	IDED10
9	IDED4	10	IDED11
11	IDED3	12	IDED12
13	IDED2	14	IDED13
15	IDED1	16	IDED14
17	IDED0	18	IDED15
19	GND	20	NC
21	IDEREQ	22	GND
23	IDEIOW-	24	GND
25	IDEIOR-	26	GND
27	ICHRDY	28	GND
29	IDACK-	30	GND
31	IDEIRQ	32	NC
33	IDESA1	34	CBLLID
35	IDESA0	36	IDESA2
37	IDECS-0	38	IDECS-1
39	DASP	40	GND
41	VCC	42	VCC
43	GND	44	NC

2.0mm 10-pin box header for USB



Pin #	Signal Name	Pin #	Signal Name
1	VCC	2	VCC
3	-DATA1	4	-DATA0
5	+DATA1	6	+DATA0
7	GND	8	GND
9	GND	10	GND

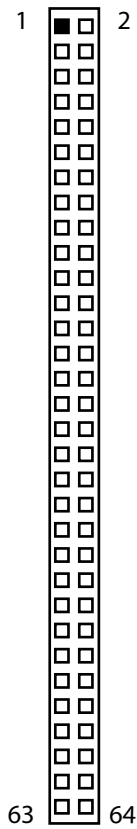
10-pin box header for VGA



Pin #	Signal Name	Pin #	Signal Name
1	ROUT	2	GND
3	GOUT	4	GND
5	BOUT	6	GND
7	HSYNC	8	GND

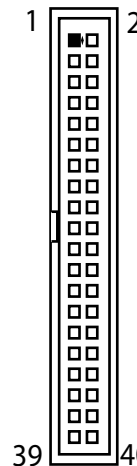
Pin Definition

PC/104 Connector - 64pin Header Connector (CN1)



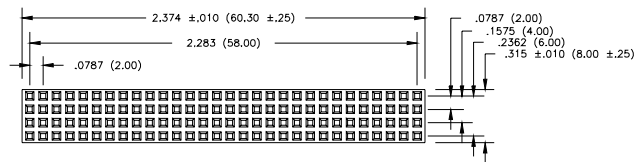
Pin#	Signal Name	Pin#	Signal Name
1	IOCHCHK *	2	GND
3	SD7	4	RSTDRV
5	SD6	6	VCC
7	SD5	8	IRQ9
9	SD4	10	-5V
11	SD3	12	DRQ2
13	SD2	14	-12V
15	SD1	16	OWS
17	SD0	18	+12V
19	IOCHRDY	20	GND
21	AEN	22	SMEMW *
23	SA19	24	SMEMR *
25	SA18	26	IOW *
27	SA17	28	IOR *
29	SA16	30	DACK3 *
31	SA15	32	DRQ3
33	SA14	34	DACK1 *
35	SA13	36	DRQ1
37	SA12	38	REFRESH *
39	SA11	40	SYSCCLK
41	SA10	42	IRQ7
43	SA9	44	IRQ6
45	SA8	46	IRQ5
47	SA7	48	IRQ4
49	SA6	50	IRQ3
51	SA5	52	DACK2 *
53	SA4	54	TC
55	SA3	56	BALE
57	SA2	58	VCC
59	SA1	60	OSC
61	SA0	62	GND
63	GND	64	GND

PC/104 Connector - 40pin Header Connector (CN2)



Pin#	Signal Name	Pin#	Signal Name
1	GND	2	GND
3	MEMCS16 *	4	SBHE *
5	IOCS16 *	6	LA23
7	IRQ10	8	LA22
9	IRQ11	10	LA21
11	IRQ12	12	LA20
13	IRQ15	14	LA19
15	IRQ14	16	LA18
17	DACK0 *	18	LA17
19	DRQ0	20	MEMR *
21	DACK5 *	22	MEMW *
23	DRQ5	24	SD8
25	DACK6 *	26	SD9
27	DRQ6	28	SD10
29	DACK7 *	30	SD11
31	DRQ7	32	SD12
33	VCC	34	SD13
35	MASTER *	36	SD14
37	GND	38	SD15
39	GND	40	NC

PCI-104 Bus Signal Assignments



Pin	A	B	C	D
1	GND	NC	+5V	AD00
2	+5V	AD02	AD01	+5V
3	AD05	GND	AD04	AD03
4	C/BE0	AD07	GND	AD06
5	GND	AD09	AD08	GND
6	AD11	+5V	AD10	GND
7	AD14	AD13	GND	AD12
8	+3.3V	C/BE1	AD15	+3.3V
9	SERR	GND	SBO	PAR
10	GND	PERR	+3.3V	NC
11	STOP	+3.3V	LOCK	GND
12	+3.3V	TRDY	GND	DEVSEL
13	FRAME	GND	IRDY	+3.3V
14	GND	AD16	+3.3V	C/BE2
15	AD18	+3.3V	AD17	GND
16	AD21	AD20	GND	AD19
17	+3.3V	AD23	AD22	+3.3V
18	IDSEL0	GND	IDSEL1	IDSEL2
19	AD24	C/BE3	+5V	IDSEL3
20	GND	AD26	AD25	GND
21	AD29	+5V	AD28	AD27
22	+5V	AD30	GND	AD31
23	REQ0	GND	REQ1	+5V
24	GND	REQ2	+5V	GNT0
25	GNT1	+5V	GNT2	GND
26	+5V	CLK0	GND	CLK1
27	CLK2	+5V	CLK3	GND
28	GND	INTD	+5V	PCIRST
29	+12V	INTA	INTB	INTC
30	-12V	NC	NC	GND

- 1 Mity/Tiny Module
- 2 PC/104 Module
- 3 3.5"/ATX/EBX Module
- 4 Half-Size Module
- 5 Peripheral Module
- 6 Accessories



Extreme temp -40°C to +85°C
Shock resistant
Supreme reliability
Dependable and secure
Highest performance

EmbedDisk- Industrial Grade IDE Flash Storage

Unbeatable Serial EmbedDisk

The EmbedDisk is unbeatable in today's embedded module market. With a maximum capacity of 2 GB and its exceptional temperature resistance, the EmbedDisk is a cost effective IDE/ATA solution with an extremely compact low profile. It incorporates solid-state and flash-based features. This new storage product functions as a standalone solution or as an embedded plug and play component in a system.

Superior Embedding

This unit has exceptional ruggedness and a wide operating temperature range. It has no moving parts and is 100% IDE compatible with no special drivers or flash file managers required. It's ideal as a direct drop-in replacement for conventional rotating storage which is prone to short production life and often fails in mobile computing and industry environments where temperature fluctuations, shock, vibration, dust, moisture and magnetic fields are present.

Dependable and secure

One the EmbedDisk exceptional benefits are implementation with a custom IDE flash controller with multi-tasking technology. A proprietary integrated error detection and correction, re-mapping and wear-leveling technology with power hold-up circuit greatly improves data reliability. Its cost effectiveness and low-power operation satisfy applications requiring high performance and reliability. Advanced PIO modes and multi sector transfer modes are supported, as well as LBA addressing.

Feature

- Compatible ATA/True IDE standard interface
- Very low power consumption
- Rugged environment is working well
- Very high performance
- Low weight
- Noiseless
- Automatic error correction and retry capabilities
- Support power down command and Auto Stand-by/Sleep
- Support VCC power supply at 20th pin for 40pin Model
- +5 Volts or +3.3 Volts operation
- Master/Slave selectable
- Support O/S : DOS / Windows 3.1 / 95 / 98 / ME / NT / 2000 /XP / 2003Wince. NET 4.1/4.2/5.0 and XP Embedded, UNIX, Linux, QNX

MSTI EmbedDisk



Specifications for Embeddisk Module IDE/ATA

SERIALS PHYSICAL SPECIFICATIONS

Bus Interface	ATA Compatibility
Connector	44-Pin/44-Pin IDE/ATA ANSI Standards
Storage capacity	16MB to 2.0 GB
Sector size	512 bytes
Drive Number	Drive 0 or 1

PERFORMANCE SPECIFICATIONS

Media Transfer Rate	16.6 Mbytes/sec burst
Read Transfer Rate	7 Mbytes/sec sustained
Write Transfer Rate	1.6 Mbytes/sec sustained
BIOS Setup	PIO Mode 4

ENVIRONMENTAL SPECIFICATION

Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +95°C
Humidity	5 ~ 95% non-condensing
Shock (Operating)	1000G
Vibration (Operating)	15G
Airflow	None Required

RELIABILITY SPECIFICATION

MTBF	App. 1 Million hours
ECC	22-bit
Data Integrity	10 years

POWER REQUIREMENTS

Input Voltage	DC +3.3V±5%	DC +5.0V±10%	
Power Consumption	Read @31.5 mA	0.11 watts	0.15 watts
	Write @ 27.6 mA	0.09 watts	0.19 watts
	Stand By @ 16.2 mA	0.05 watts	0.08 watts
	Sleep @3.9 mA	0.013 watts	0.02 watts

1

Mity/Tiny Module

2

PC/104 Module

3

3.5"/ATX/EBX Module

4

Half-Size Module

5

Peripheral Module

6

Accessories

Global Sales and Technical Service Website

To assist the global ICOP clients, ICOP create the multi-language websites, such as English, Chinese, Japanese, Spanish, Portuguese and Russian, for users to understand ICOP products easily. As most of ICOP clients are skilled technicians, ICOP also create the technical websites, including M611D, Vortex86 and Windows Embedded, to help technicians to obtain the solution easily when encountering technical issues. Below are the 5 main websites.

www.icop.com.tw



The main website of ICOP, it contains the newest information, including news & events, product info, user's manual, drivers, etc. If you need information in different languages, please log on ICOP global multi-language websites (www.icoptech.com, www.icop.com.cn, www.icop.co.jp, www.icop.co.uk, www.icop.co.ir, www.icop.com.br, www.icop.ru).

www.m6117d.com



The website contains the detailed information of M6117D, spanning from system block diagram, detail features & functions, hardware reference, software resource to the technical FAQs. Users can easily comprehend their M6117D CPU boards for various applications.

www.vortex86.com



The website contains the key information regarding x86 based SoC. For those who like to develop their systems from Vortex86 CPU boards, this website provides the newest drivers and the free BSP for Windows Embedded OS. The complete FAQ assists users to accomplish their projects in the shortest course of time.

www.embeddisk.com



Nowadays, IDE Flash Disk is the most popular storage in embedded applications. EmbedDisk series is the industrial grade Flash Disk which is compatible with True IDE standard interface, the whole series include 40-pin and 44pin, 2.5" HDD size and 3.5" HDD size. In this website, you can get all product information and test reports.

www.windowembedded.com.tw



www.windowembedded.jp

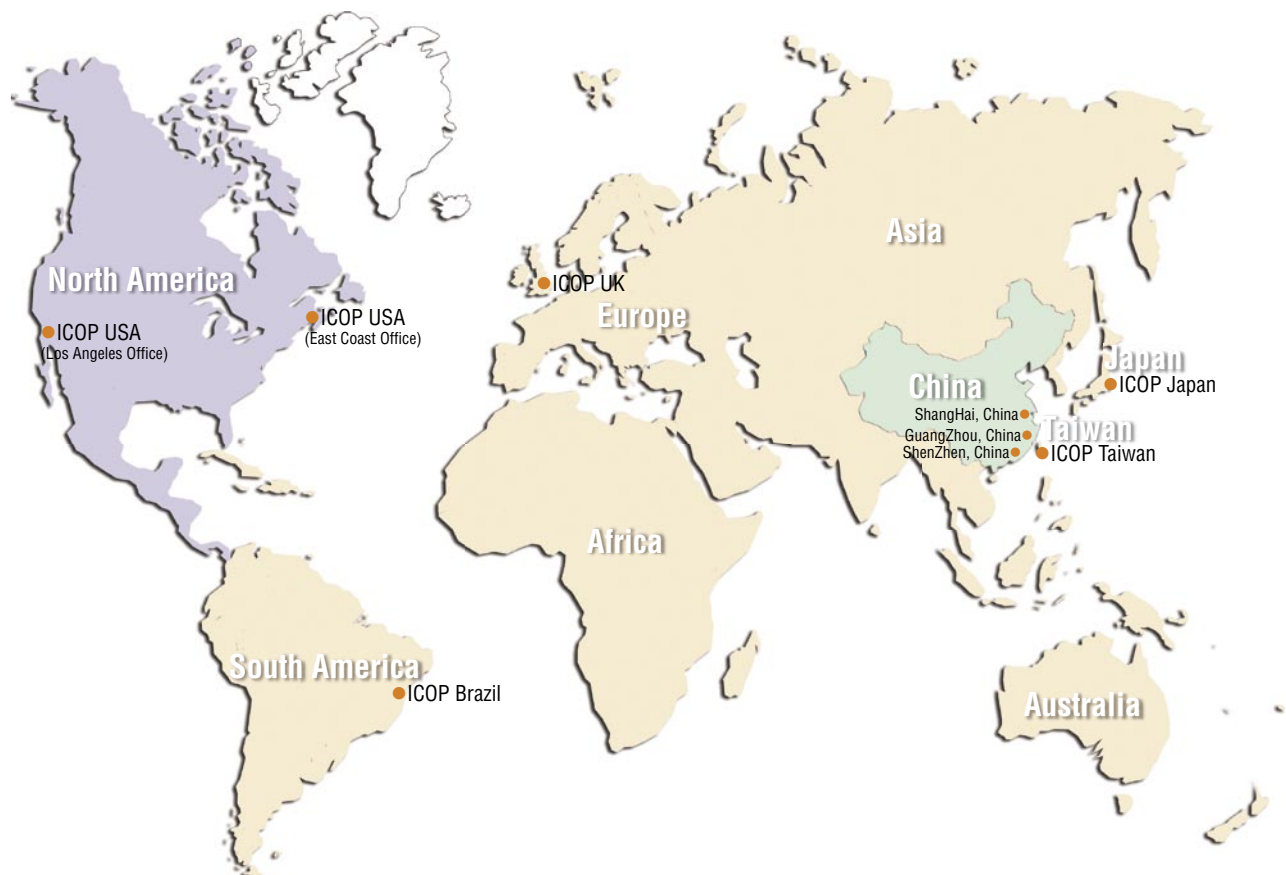
www.windowembedded.com.cn

To support all the global users, who use Windows Embedded OS, ICOP is honored to introduce the multi-language Windows Embedded supporting websites, which including English, Chinese and Japanese. Users can free download the latest BSP & software drivers there. Those websites will also update the latest news and events of Windows Embedded global activities. By the Forums in the website, software engineers can also take the advantage on getting the advice by the professional instructors.

For more service and information

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English Website (UK)	www.icop.co.uk
Spanish Website (Brazil)	www.icop.com.br
Iranian Website	www.icop.co.ir
Technical Support & Information	
Global Technical Support	www.icop.com.tw/tech
DM&P M6117D SoC	www.m6117d.com
DM&P Vortex86 SoC	www.vortex86.com
Support for Windows Embedded	
Global Main Website	www.WindowsEmbedded.com.tw
Japanese Website	www.WindowsEmbedded.jp
Simplified Chinese Website	www.WindowsEmbedded.com.cn

ICOP Global Branch Office



1

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Accessories