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Industrial Computers

Total Integrated Solutions
for Industrial Automation

- ✓ Server-grade IPCs
- ✓ Industrial Computer Chassis
- ✓ PICMG Single Board Computers
- ✓ Passive Backplanes
- ✓ ATX Motherboards



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Full Range of Industrial Computers and Integration Services for Automation Application

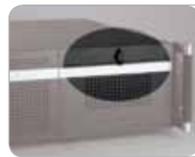
Overview

Advantech delivers a full range of industrial computers for versatile applications in the automation field. With sophisticated system integration services from customization, integration, validation, and certification, a one-stop solution is our commitment in providing rugged systems to customers who require a trusted partner to maximize their application solutions.

Start your Business with an IPC Expert



Screw-less with thumb screws



Lockable door flexible with-or-without key



Easy replaced fan module



Front I/O design to facilitate ATE applications



Plug ring-lock securely fastens the power cord



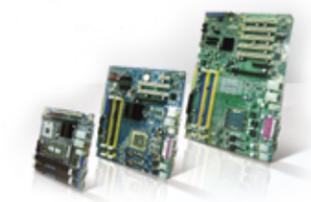
PICMG Single Board Computers

Advantech's slot CPU cards deliver a variety of solutions for industrial and embedded applications. Offering a complete selection of standard PICMG 1.0/1.3 full-size as well as half-size SBCs, scalable product lines have flexible I/O capabilities and great expandability, from ISA to PCI and PCI Express. Ideal for industrial slot-hungry demands, they can be easily accommodated with Advantech full-range backplanes, chassis and peripheral support.



Passive Backplanes

A wide range of Advantech backplanes are available for PICMG 1.0/1.3 SBCs. They range from two to twenty slots and allow optimal system configurations with flexible combinations of ISA, 32-bit / 64-bit PCI and PCIe slots. With strict design policy, customers can easily recognize specific solutions so as to ensure system compatibility. Advantech also provides a low-cost, yet professional design service that tailors backplanes to meet expansion requirements within a short time frame.



Industrial Motherboards

Advantech provides a complete range of industrial motherboards in various form factors from performance-rich ATX to best price/performance MicroATX and ultra compact highly integrated Mini-ITX. These motherboards are highly integrated and deliver advanced features like multi-core processing and PCI Express technology. They are suited for demanding industrial applications that require seamless upgrades, long term support, proven reliability and strict revision control.



Server-grade IPCs

Advantech server-grade IPCs provide customers with complete solutions and value-added services rather than just a standard server product. Designed to deliver system integrator solutions for high-end applications, Advantech servers feature multi-processor computing power, hot swap, redundancy and rich storage capacity.

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Automatic Testing and Inspection

Quality control systems have become very expensive in recent years, creating the demand for more cost-effective alternatives. Along with automatic testing and inspection systems, Advantech's products help reduce human error and accelerate time to market.



Production Automation

Open, embedded architectures with excellent expansion capabilities and high compatibility, and flexible and scalable PACs allow Advantech's customers integrate equipment from a wide range of manufacturers into their systems, and help them meet ever-changing market demands.



Packing Automation

Delivering a high degree of durability with a low total cost of ownership is a key factor for efficient packaging. By integrating a high-precision motors and high-speed data acquisition cards, packaging machines are able to improve performance greatly, setting up flexible systems that can reduce costs at the same time.



Process Control

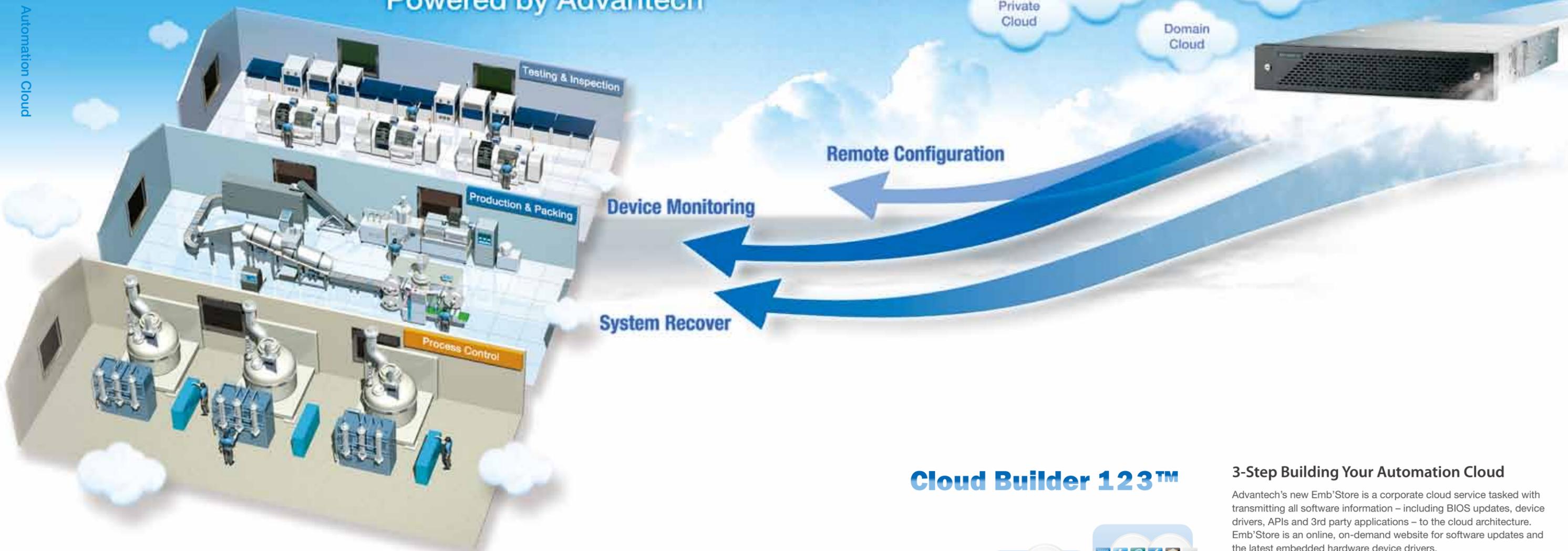
High-computing systems with scalable architectures and time-deterministic control are important factors for process control systems. Advantech's solutions allow customers to Integrate production information into MES and CIM systems, and fulfill discrete, batch and continuous process control.

Automation Cloud

Powered by Advantech

Automation Cloud

Automation Cloud



Industrial Computing in the Cloud

An estimate by IDC marketing intelligence says that sales volume from cloud computing will boom to US \$12.6 billion dollars in the next five years. Large, private cloud service providers will enjoy a revenue boost from US \$7.3 billion in 2009 to US \$11.8 billion during the same period, averaging 10% in compound annual growth rates. Zeroing in on the enormous market potential, companies and vendors alike – including those in Taiwan - are launching cloud-specific products and services.

With cloud services in full swing, the automation market has begun to expand quickly to the corporate networks, and looks towards the age of private cloud architectures. This new trend is a boon for industrial computing service providers who earn their livelihood from servicing corporate networks. Advantech first began exploring the possibility of a new cloud computing platform in 2010, and the company expects to launch Embedded Store and Cloud Services in the second half of 2011 to address issues confronting network professionals when building their cloud service architectures.

Smart Remote Management Utility

Intelligent devices automatically monitor and report back status at all time so that the administrator is able to manage all connected platform effectively. Advantech developed SUSIAccess to facilitate the management. SUSIAccess - Advantech's remote monitoring software-provides real-time monitoring of your systems' health. It is capable of remote recovery or on-site checkups. The administrator can then conduct diagnostic on the terminal via the control application, or make other quick adjustment, such as file transfer, firmware or file upgrades.

Cloud Builder 123™



3-Step Building Your Automation Cloud

Advantech's new Emb'Store is a corporate cloud service tasked with transmitting all software information – including BIOS updates, device drivers, APIs and 3rd party applications – to the cloud architecture. Emb'Store is an online, on-demand website for software updates and the latest embedded hardware device drivers.

Emb'Store is to be launched during Q2 and delivers “software as a service” into the cloud architecture. Emb'Store server will also provide an on-demand “what you click is what you get” service.

Build your own private cloud with Advantech! Advantech industrial computers are the most suitable system for the backbone of a cloud infrastructure. The cloud is private, safe, and secured with an automation domain. With Advantech's software service packages, such as SUSIAccess and Emb'store, cloud building is facilitated with just a few simple clicks.

Now, you can experience Advantech's dynamic cloud software technologies and witness how the company leads the industry in a new generation of industrial cloud computing services.

Star Product Highlights

Full-size SBCs

<p>P25</p>  <p>NEW PCE-5126</p> <ul style="list-style-type: none"> Intel Q67/B65/C206 chipset Supports Intel LGA1155 Core i7/i5/i3/Xeon processor with DDR3 1333 memory PICMG 1.3 full-size SBC 2 LAN, 2 COM, 9 USB Supports 2 SATAIII and 4 SATAII with SW RAID 0, 1, 5, 10 	<p>P27</p>  <p>NEW PCA-6011</p> <ul style="list-style-type: none"> Intel G41 + ICH7R chipset Supports Intel quad core processor with DDR3 memory PICMG 1.0 full-size SBC 2 LAN, 2 COM, 8 USB Supports 4 SATA and SW RAID 0,1,5,10 	<p>P26</p>  <p>NEW PCA-6012</p> <ul style="list-style-type: none"> Intel Atom D525/N455 + ICH8M chipset Supports DDR3 SODIMM memory PICMG 1.0 full-size SBC 2 LAN, 2 COM, 9 USB, 3 SATA Optional module for 4 x RS-485 w/ auto-flow control
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Half-size SBCs

<p>P29</p>  <p>PCI-7031</p> <ul style="list-style-type: none"> Intel Atom N450/ D510 processor Supports maximum 2 GB DDR2 667 memory Supports onboard DDR2 667 memory PCI half-size SBC 2 LAN, 1 CF, 2 COM, 7 USB, 3 SATA, 1 FDD, 1 IDE, 1 LPT, 1 PS/2 	<p>P29</p>  <p>NEW PCA-6782</p> <ul style="list-style-type: none"> Intel Atom N455/D525 processor Supports maximum 2 GB DDR2 667 memory ISA half-size SBC 1 LAN, 1 CF, 2 COM, 8 USB, 3 SATA, 1 FDD, 1 IDE, 1 LPT, 1 PS/2, 1 PC/104 	<p>P29</p>  <p>PCA-6743</p> <ul style="list-style-type: none"> DM&P Vortex86DX Supports 512/256 MB onboard DDR2 memory ISA half-size SBC 1 LAN, 1 CF, 4 COM (F SKU), 8 USB, 1 SATA (F SKU), 1 FDD, 1 IDE, 1 LPT, 1 PS/2, 1 PC/104 (F SKU)
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ATX Motherboards

<p>P35</p>  <p>NEW AIMB-781</p> <ul style="list-style-type: none"> Intel Q67/B65 PCH Supports Intel 2nd generation Core i7/i5/i3/Pentium processor Four channel DDR3 1066/1333 up to 16GB Supports dual display and dual GbE LAN Supports SATA RAID 0, 1, 5, 10, AMT 7.0, TPM 1.2 (optional) 	<p>P35</p>  <p>NEW AIMB-769</p> <ul style="list-style-type: none"> Intel G41 chipset supports 800/1066/1333 MHz FSB Dual channel DDR3 800/1066 SDRAM up to 4 GB Chipset integrated VGA Supports dual core and quad core processors with 45 nm processing Supports single GbE LAN 	<p>P35</p>  <p>NEW AIMB-767</p> <ul style="list-style-type: none"> Intel G41 chipset supports 800/1066/1333 MHz FSB Dual channel DDR3 800/1066 SDRAM up to 4 GB Supports VGA and DVI-D display Supports dual core and quad core processors with 45nm processing Supports SATA RAID 0,1,5,10
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Server-grade Motherboards

<p>P19</p>  <p>NEW ASMB-310IR</p> <ul style="list-style-type: none"> Intel 5520 and ICH10R chipset Supports Intel Xeon processor with DDR3 Memory Supports 2 PCIe x16 double-deck expansion cards 2 LAN, 2 COM, 11 USB Supports 6 SATA, 8 SAS and SW RAID, IPMI 	<p>P19</p>  <p>NEW ASMB-781</p> <ul style="list-style-type: none"> Intel C206 chipset Supports Intel Xeon E3/Core i3 processor with DDR3 Memory Supports 2 PCIe x16 double-deck expansion cards 4 LAN, 2 COM, 12 USB Supports 6 SATA (2 SATAIII) and SW RAID, IPMI
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Compact Mini-ITX Chassis

<p>P20</p>  <p>ARK-6622</p> <ul style="list-style-type: none"> Compact chassis with one expansion Ideal for embedded vision system One expansion for frame grabber Easy-maintain system fan and filter 	<p>P20</p>  <p>ARK-6620</p> <ul style="list-style-type: none"> Front I/O for easy-access Ideal for process control Power cord hook to avoid power cord loose Easy-maintain system fan and filter 	<p>P20</p>  <p>ARK-6610</p> <ul style="list-style-type: none"> With one slim ODD and one expansion Ideal for production automation Font I/O for easy-access LED indicator for system fault detection
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Wallmount Chassis

<p>P21</p>  <p>IPC-3026</p> <ul style="list-style-type: none"> Ultra compact chassis with 5 slot expansion Ideal for production automation Supports half-size CPU card with ISA/PCI interface LED indicator and alarm notify for system fault detection 	<p>P21</p>  <p>IPC-6025</p> <ul style="list-style-type: none"> Compact chassis with 4 slot expansion Ideal for production automation Supports full-size PICMG 1.3/1.0 CPU card with ISA/PCI/PCIe interface Scalable to quad system composed of four IPC-6025 	<p>P21</p>  <p>NEW IPC-7130</p> <ul style="list-style-type: none"> Wallmount chassis with 6 slot expansion Ideal for automatic test Supports ATX motherboard Dual SATA HDD trays for HDD redundancy
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Rackmount Chassis

<p>P22</p>  <p>ACP-1320</p> <ul style="list-style-type: none"> 1U Rackmount Chassis with up to 2 slot expansions Ideal for Process Control Dual SAS/SATA HDD trays Front LEDs for system status & alarm notification Low profile for space saving requirement 	<p>P22</p>  <p>ACP-2320</p> <ul style="list-style-type: none"> 2U Rackmount Chassis with up to 3 slot expansions Ideal for Automatic Test Equipment Dual SAS/SATA HDD trays Front LEDs for system status & alarm notification Front USB and PS/2 ports 	<p>P22</p>  <p>IPC-603</p> <ul style="list-style-type: none"> 2U Rackmount Chassis with up to 3 slot expansions Ideal to built in Machine Equipment Short depth of 308 mm for easy integration Front I/O connectors for convenient access Supports slim ODD and one internal HDD
<p>P22</p>  <p>ACP-4320</p> <ul style="list-style-type: none"> 4U Rackmount Chassis with up to 12 slot expansions Ideal for Production Line Tester Dual SAS/SATA HDD trays Front LEDs for system status & alarm notification 	<p>P23</p>  <p>IPC-610H</p> <ul style="list-style-type: none"> 4U Rackmount Chassis with up to 12 slot expansions Ideal for Machine Vision System Easy maintenance fan module Front USB and PS/2 ports 	<p>P23</p>  <p>IPC-623</p> <ul style="list-style-type: none"> 4U Rackmount chassis with up to 18 slot expansions Ideal for Production Automation Supports Quad systems Front-accessible redundant PS Front LEDs for system status & alarm notification

Server-grade Chassis

<p>P18</p>  <p>HPC-7280 NEW</p> <ul style="list-style-type: none"> 2U Rackmount Chassis with up to 3 full length slot expansions via riser card Supports ATX/CEB/EATX motherboard Eight hot-swap SAS/SATA HDD trays Lockable front bezel prevents unauthorized access 800 W redundant power supply 	<p>P18</p>  <p>HPC-7480 NEW</p> <ul style="list-style-type: none"> 4U Rackmount/Tower Chassis with up to 7 slot expansions Supports ATX/CEB/EATX motherboard Eight hot-swap SAS/SATA HDD trays Lockable front bezel prevents unauthorized access 665 W single power supply
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LED Die Bonding Machine Solution

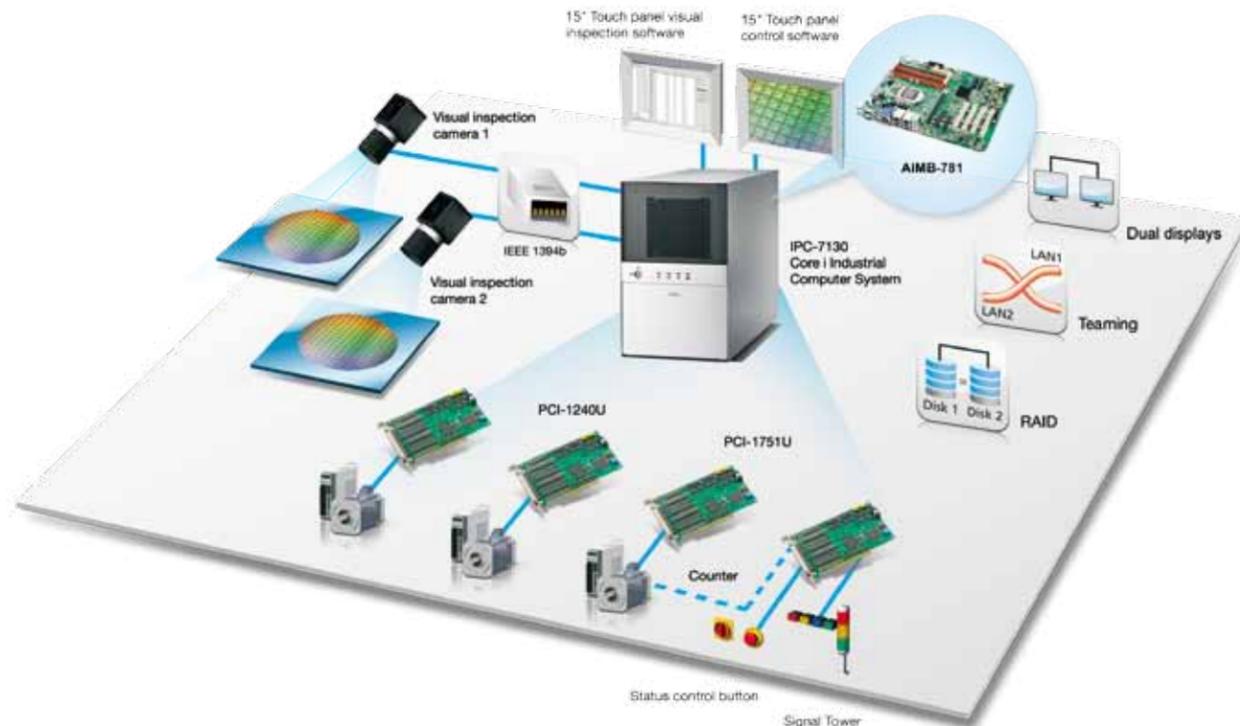
Project

The world's environmental protection and energy conservation trends have spurred the emergence of the LED industry. LEDs are widely used in many fields, including streetlights, advertising signs, traffic signals, consumer electronic products, and transportation vehicles. Because of these burgeoning applications, suppliers are currently finding it extremely difficult to meet demand, and therefore seek faster LED production equipment that will maintain a high level of product quality. Because LED production requires numerous high-tech processes, the development of LED production equipment that meets manufacturers' needs while striking an optimal balance between performance, cost, and reliability is a great challenge. In particular, the LED die bonding process is the manufacturing step most dependent on close coordination between machine vision and multiple-axis motion control; this process requires the aggregation and processing of production condition data with millisecond precision.

Requirements

Several years ago, when the LED industry was still at an early stage of development, ordinary LED equipment manufacturers used computer-based inspection systems which relied on image comparison, and pursued integration with motion control and digital signal monitoring PLC systems. However, maintaining synchronized real-time communications between these two subsystems ran into severe problems when customers attempted to increase their production rates; problems were chiefly due to skewed LED legs during the movement process and the resulting loss of system positioning precision. As a result, manufacturers encountered lower production yield rates. Accordingly, manufacturers have been searching for new system solutions with good cost-performance ratios and the following attributes:

- High-performance embedded industrial computers must employ Intel® processors, and integrate powerful image acquisition cards, cameras, and motion control cards able to accommodate up to 12 axes.
- The embedded industrial computers must provide a RAID 0, 1 storage array and redundant backup data storage.
- The embedded industrial computer must possess a 2-channel Gigabit Ethernet teaming function providing manufacturing execution system (MES) feedback.
- The embedded industrial computer must provide a dual-display interface, allowing the simultaneous display of control software and image inspection software.
- Must employ a high-accuracy, high-speed motion chip to dramatically improve bonding speed.
- Must use a PC-based image acquisition card to achieve even higher speeds and more precise machine vision and image acquisition.
- System volume must be optimized to enable embedding within equipment.



System

Advantech offers mid-level and introductory solutions aimed at the LED industry. The mid-level system combines multiple-axis servo motors and stepping motors to achieve high-speed production and the high-accuracy manufacture of high-quality LEDs. Advantech's IPC-7130 chassis + AIMB-781 embedded computer offers numerous interfaces, collects data feedback, and performs Raid 0,1 data storage. The introductory system is aimed specifically at integrated applications involving multiple-axis stepping motors; it can enable manufacturers to competitively produce large quantities of standard LEDs. Both systems contain Advantech's IPC-7130 + AIMB-781 IPC platform, and employ 1394b PCI interface cards linked to high-speed 1394b CCD cameras to perform image acquisition and quality analysis. Both systems also provide PCIe or PCI expansion slots able to accommodate image acquisition, motion control, analog data, and digital data cards. In addition, the AIMB-781 supports dual-display output, enabling the simultaneous monitoring of visual inspection software and test equipment control software.

Both systems include PCI-1751U cards with digital I/O and 2-channel counters; these cards bear responsibility for digital data, status monitoring, and action counter feedback. The mid-level system contains three embedded 4-axis PCI-1240U motion control cards with high speed stability to perform synchronization and servo motor control duties. This system provides 2/3-axis linear, 2-axis annular, and continuous interpolation functions, and can control complex, precise motions. The introductory system contains two embedded introductory-grade PCI-1245E 4-axis synchronization and servo motor control cards; this system offers 2-axis point-to-point and linear interpolation functions, and also has an embedded 4-axis PCI-1243U stepping motor control card to control basic transport functions, etc.

Conclusion

Advantech's embedded industrial computers provide all-round solutions for all types of industrial applications. Users can freely select different configurations of introductory or mid-level products, and can add appropriate control interface cards in order to strike an optimal balance between performance and cost, and meet their specific microelectronic element assembly needs.



Implemented Products

IPC-7130	<ul style="list-style-type: none"> • Desktop chassis, supports standard ATX motherboard • Equipped with 7 expansion slots and anti-vibration optical drive bracket • Can support one 5.25" and three 3.5" HDDs, where two 3.5" HDDs are hot swappable • Smart system LED indicator lights allow monitoring of temperature, voltage, fan, and hard drives for abnormalities • An audio alarm module beeps to provide early warning of problems affecting system operating status • Uses hand-turned screws to greatly shorten system assembly time
AIMB-781	<ul style="list-style-type: none"> • ATX industrial motherboard, supports Intel® 2nd generation Core™ i processor • Equipped with three PCIe Gen II slots and four PCI slots • Supports up to 16GB DDR3-1333 memory, dual network interfaces, and two displays • Provides an all-in-one platform
PCI-1751U	<ul style="list-style-type: none"> • 48-channel TTL digital I/O multifunctional PCI card with two-channel counter
PCI-1240U	<ul style="list-style-type: none"> • 4-axis stepping/pulse servo motor control PCI card

Solar Cell Solution

Project

Today's steadily growing environmental protection energy conservation trends are creating rapidly increasing demand for low-power household devices, and energy-efficient public transportation signals and lighting, LCD TVs, and personal computers. In parallel with this trend, there has been a surge in development of electronic product production equipment. The most indispensable steps in the solar cell production process include pick-and-place; high-speed movement, accurate positioning, and attachment of insertion elements; these processes all require motion control mechanisms. However, companies often encounter great difficulties when they attempt to measure the minute dislocations of high-precision parts and inspect for defective soldering points. The key to enhancing the efficiency of these inspection processes is the use of high-speed multi-axis motion control systems in conjunction with machine vision.

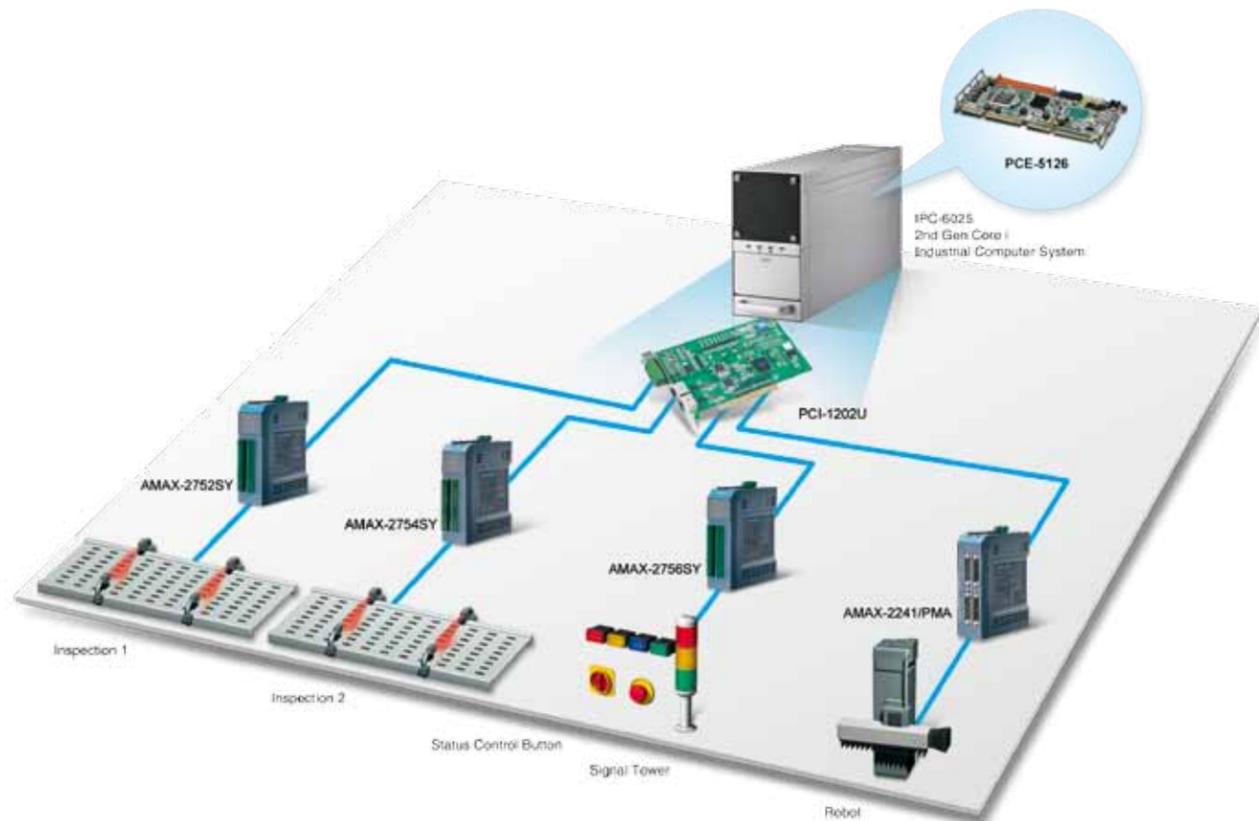
Requirements

The system employs pick-and-place technology to place solar cells on a conveyor device that uses a belt to move the cells. After sensors inspect the cells, they are placed either in a prepared device or a carrying box. As the efficiency of capacity utilization and production processes improves, and manufacturers demand increasingly rapid inspection and higher resolution imaging, the development of systems providing high operating performance and optimal spatial arrangement have become leading goals for manufacturers. Accordingly, this solution responds to the following customer needs:

- High performance operation can provide even faster motion control and more accurate image processing.
- Compact systems allow customers to use their equipment space even more effectively.
- An expanded backplane supports different interfaces.

System

The PCE-5126QG2 has an Intel® Core™ i7-2600 processor, which is currently Intel® newest quad-core processor. It can support up to 8G DDR3 1333 memory, and can provide the fastest operating performance of any system in the mainstream market. Hard drives storing inspection data can use the newest SATA3 interface, which can double data transmission speed. The system supports two network interfaces and dual displays, providing a complete, all-in-one platform. Equipped with a PCI-1202U AMONet communication control card providing a 20MHZ data transmission rate (can update 1024 digital quantity I/O channels in 1.04 ms or manage up to

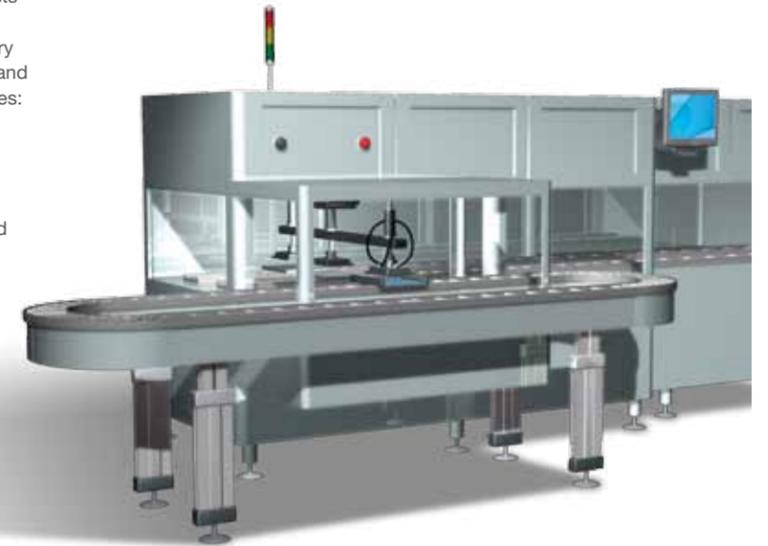


256 control devices), the system enables real-time control of pick-and-place mechanisms. The industrial cases consist of the IPC-6025 small-form-factor, 5-slot chassis, which allows equipment space to be used and arranged in the most effective manner. It uses AMONet communications and Advantech's AMAX-2752SY/ 2754SY/ 2756 SY digital control module to transmit I/O control signals from equipment to the control end for analysis and control operations. Each AMAX product serves as a control intermediary between equipment and the main controller; the controller can transmit all production information in real-time, and can simultaneously accept precision control needs from the operation control center in order to adjust status of the entire line in order to satisfy customer needs.

Conclusion

Employing Advantech's new-generation, Intel® Core™ i-series compact IPC, this system provides even higher operating performance and uses space more efficiently. In conjunction with the AMONet module, different operating procedures can be applied to multiple validity zones. The entire system boosts production inspection efficiency and reduces the error rate, effectively cutting production and maintenance costs. Factory personnel can conveniently implement production changes and updates. Advantech's solution offers the following advantages:

- Can be applied to high-precision equipment such as photovoltaic and LCD automatic production systems.
- High operating performance, compact layout.
- Integrates Advantech's SUSIAccess remote monitoring and management software, which enables central control and remote operation.
- Full-sized card system speeds spare replacement time, improves equipment assembly performance.



Implemented Products

IPC-6025	<ul style="list-style-type: none"> • Compact industrial chassis, supports standard PICMG 1.3 slot SBC • Equipped with four expansion slots and a vibration-proof optical drive bracket • Can support one 5.25" and one 3.5" HDD and intelligent system LED indicator lights, monitors temperature, voltage, fan, and normal hard drives operation • Audio warning module can emit alarm beeps; monitors entire system operation • Designed with hand-turned screws for dramatically lower customer system assembly time
PCE-5126QG2	<ul style="list-style-type: none"> • PICMG 1.3 full-size single board computer, supports Intel® 2nd generation Core™ i processor • Supports a maximum of 8GB DDR3-1333 memory • Has dual network interfaces and supports two displays • Supports multi-PCI/PCI Express backplanes • High CPU and I/O performance
PCI-1202U	<ul style="list-style-type: none"> • AMONet communication control card
AMAX-2241/PMA	<ul style="list-style-type: none"> • AMONet 4-axis servo motion control module
AMAX-2752SY	<ul style="list-style-type: none"> • AMONet 32-channel digital input module
AMAX-2754SY	<ul style="list-style-type: none"> • AMONet 32-channel digital output module
AMAX-2756SY	<ul style="list-style-type: none"> • AMONet 16-channel digital output and 16-channel digital output module

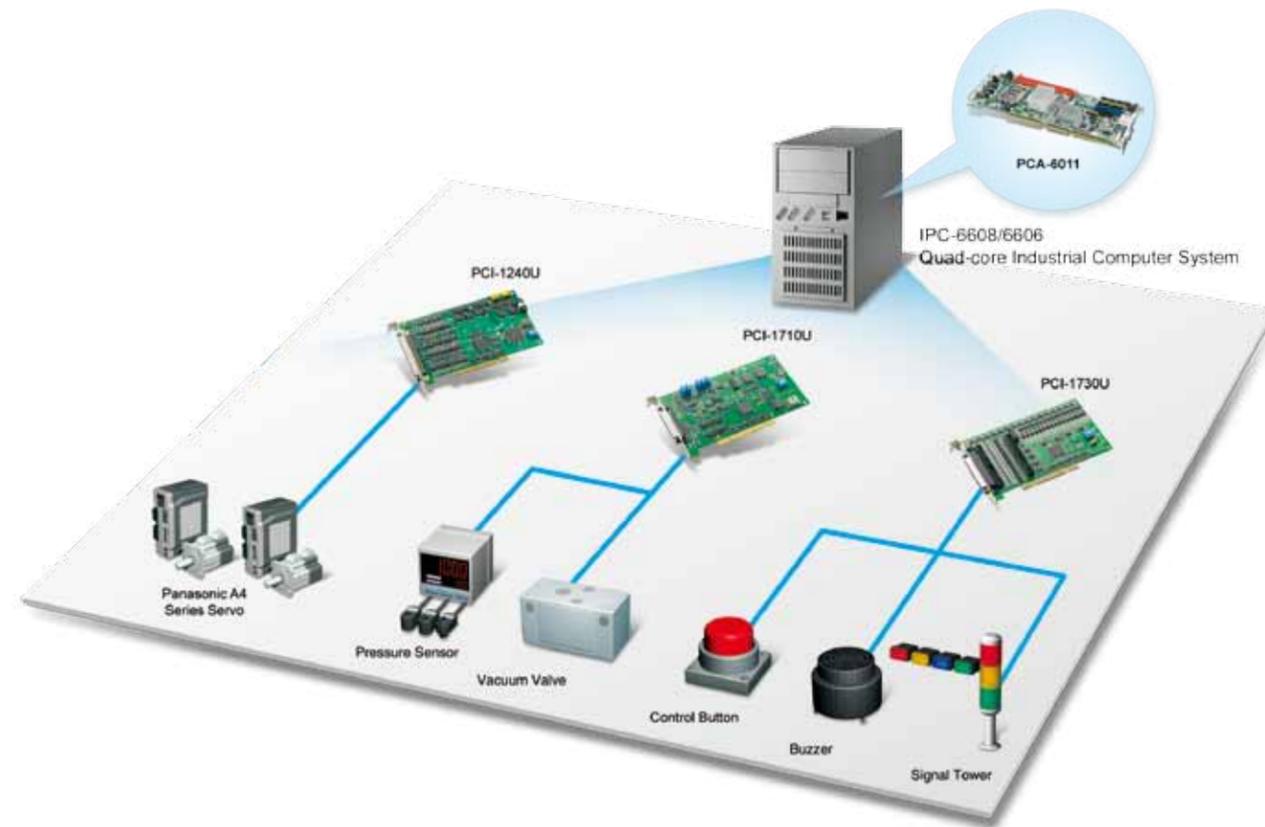
Touch Panel Inspection & Testing Solution

Project

The growing need for touch panels due to the emergence of products such as smart phones and tablets has also spurred a large and growing demand for control equipment and testing machines. As a result, equipment manufacturers are working hard to improve their product technology and quality. Although many equipment firms employ programmable logic controllers (PLCs) to perform relevant functions, when there are too many axes, the amount of data to be transmitted and corresponding transmission speeds grow exponentially; the limited processing capacity of conventional PLCs puts them at a disadvantage versus PC-based systems. As a result, in the testing process, panel data acquisition, storage, and processing speed and performance play extremely important roles in the testing process. Advantech has supplied industrial computers for a long time, and can offer stable testing and inspection processes. In addition, in conjunction with data capture cards and motion control cards, our touch panel testing equipment is the ideal solution for equipment manufacturers.

Requirements

Customers consist of touch panel testing equipment firms. This equipment must perform data access, must be able to process large quantities of graphic data, and must have large storage capacity. The equipment tests each panel by pressing down on its surface and dragging, then analyzing the resultant data output. While early customers hoped that commercial PCs could be used to control test machines, the development process requires at least 6 to 8 months, and the ordinary commercial PC has a product life cycle of two years at most. As a result, hardware and software developed at great customer effort quickly becomes outdated and difficult to maintain. In addition, Advantech's global service team can provide the fastest local service, enabling customers to avoid the nightmare of work stoppages caused by the need to maintain equipment. Customers also demand a high level of product compatibility. Because Advantech offers a full line of computers, control cards, and driver programs, there is no need to use products from different manufacturers, which can result in jury-rigged combinations or even outright incompatibility.



System

In keeping with the trend toward more compact equipment, Advantech's IPC-6608/IPC6606 is a vertical industrial computer that can be used with a highly compact machine. This computer's fast recovery function is indispensable on plant equipment, and can enable normal operation to be restored in the shortest possible time after a system crash or interruption. The PCA-6011's quad-core processor and DDR3 memory allow it to support large quantities of high-speed graphic computations; this lets the system respond rapidly to the vast amounts of data from multiple axes and restore itself quickly. Furthermore, the PCA-6011's embedded Intel® 4500 graphic accelerator and up to 352 MB of shared memory provide optimal graphics rendering ability. The system can effectively lower costs while reducing energy consumption and heat output, enabling increasingly compact main PC systems to achieve the highest cost effectiveness.

Conclusion

Apart from satisfying touch panel equipment manufacturers' need for powerful compact PC systems, Advantech's products also provide customers with the finest service and safeguards in connection with product compatibility, equipment space, troubleshooting, and after-sales service. In addition, Advantech's global maintenance network ensures that Advantech product service is highly dependable, enabling equipment manufacturers to reduce their system maintenance costs, and making sure that factory operations continue without interruptions.



Implemented Products

IPC-6608/IPC-6606	<ul style="list-style-type: none"> • 8/6-slot desktop/wallmount chassis • Equipped with PS/2 and backup power supply • Two/one front-end 5.25" hard drive, one 3.5" FDD and two front-end USB interfaces
PCA-6011	<ul style="list-style-type: none"> • Quad-core single board computer • Possesses ultra-powerful I/O ability • Can support LGA775 series processors • Support up to 1333 MHz FSB, up to 4GB DDR3 800/1066MHz SDRAM • High cost / performance ratio with mainstream platform and components
PCI-1710U	<ul style="list-style-type: none"> • 100 kS/s, 12-bit, 16-channel general-purpose PCI multifunctional data capture card
PCI-1730U	<ul style="list-style-type: none"> • 32-channel isolated digital I/O data capture card
PCI-1240U	<ul style="list-style-type: none"> • 4-axis stepping and servo motor control card

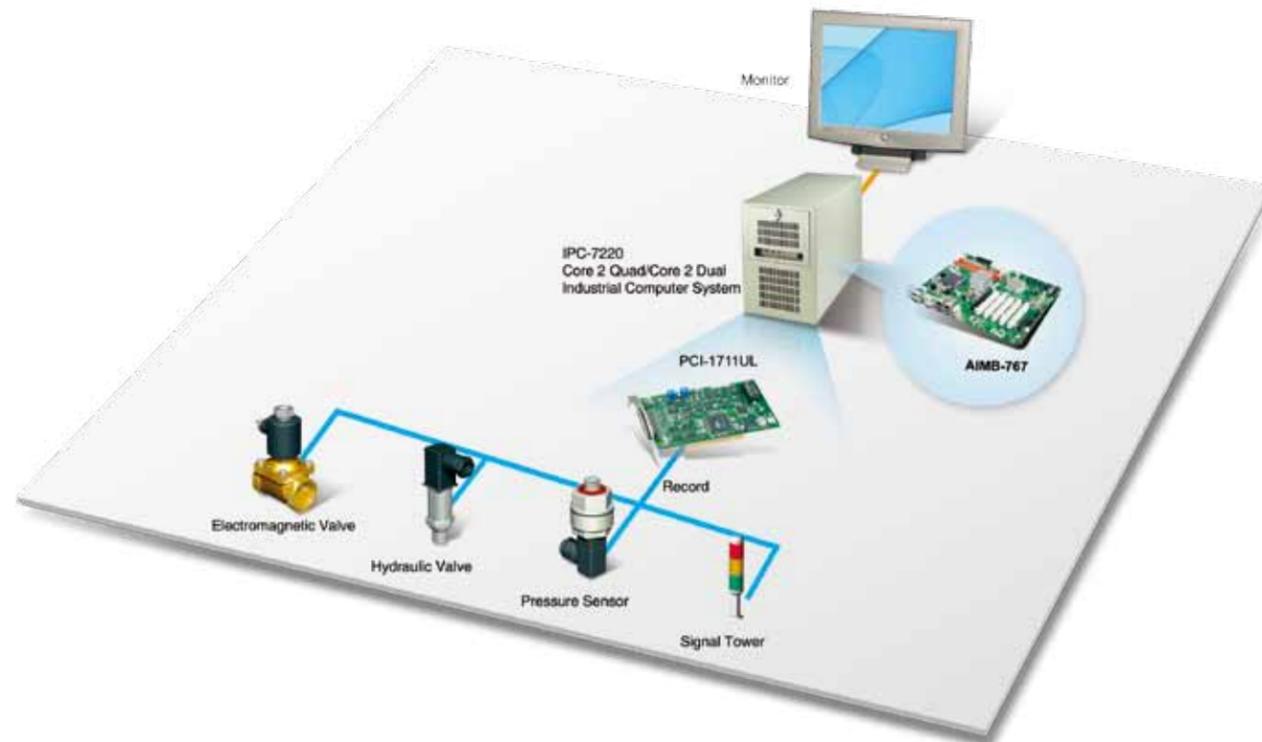
Auto Safety Airbag High-Pressure Tank Testing Machine

Project

When an airbag-equipped vehicle is involved in a collision, a storage tank full of compressed air causes airbags in the center of the steering wheel and on the sides of the instrument panel to rapidly inflate, preventing people in the vehicle from suffering injury. In line with maintaining the safety of the driver and passengers, an airbag system with a safety and quality guarantee must assure the quality of its air storage tank. If an air storage tank ruptures, the gas escaping at high velocity causes the container to shatter, and may cause great injury to nearby objects and persons. Because of this, manufacturing, quality, and inspection guidelines have been drafted for high-pressure steel tanks. In addition, specialized air-container-failure-limitation-test machines that test the containers are a necessary means of ensuring product quality and safety during the manufacturing process.

Requirements

Various types of steel tanks require container verification testing during the manufacturing process. The high-pressure tanks used in auto airbags are only the size of two fingers. The main test items for these tanks are fatigue and rupture testing. First, a test machine's fatigue testing system must automatically pressurize containers to the specified test pressure for a preset number of cycles. In addition, the rupture testing system must monitor tanks subjected to high pressures in order to find out at what pressure level they do rupture. Afterwards, the system must also record the test process and calculate pressure-time curves, which facilitate the acquisition of detailed information concerning the pressure that can be withstood by the tanks, allowing analysis and revision of the product. In the past, this kind of test equipment employed a PC and programmable logic controller (PLC) to perform processing of test data. However, because PLCs have insufficient analog signal sampling speed, data distortion could occur. As a result, when a correct sample cannot be obtained, the tank's tolerance cannot be precisely analyzed. Furthermore, Taiwan currently does not produce this type of standard test machine, and our customers must therefore develop and assemble their own air container failure limitation test machines. These customers require immediate local support in order to resolve technical issues quickly. Customers may also feel concern about whether they can purchase all parts and components from one source, and whether products from different suppliers will have compatibility problems.



System

Advantech provides IPC-7220, AIMB-767 and PCI-1711L I/O cards to quickly acquire data. Other features include IEC 61 131-3 control software, which can reduce customer R&D time, APAX I/O modules for controlling various valves and equipment, and the WebOP-2057V programmable user interface for real-time display of data. These features ensure that a test machine can accurately measure and record data and provide reports. The AIMB-767 is Advantech's basic industrial motherboard, and can support an Intel® Core™ 2 Quad processor, DDR3 memory, 5 PCI slots, and 2 PCIe slots. It also allows customers to install various types of I/O cards and interface cards. Apart from greatly increasing the sampling rate, the system offers a speed roughly ten times faster than that of PLC products. As for customer need to obtain accurate pressure data, the PCI-1711L can perform rapid data acquisition 100 times faster than a PLC. This can resolve the problem of data distortion encountered by customers using PCs in conjunction with PLCs.

Conclusion

Advantech's wide range of products can satisfy most customer hardware and software needs. From the most basic embedded industrial computers to all types of I/O modules and software, customers no longer have to settle for cobbled solutions involving different configurations of individual products. Our nearby professional technicians can provide real-time assistance throughout customers' R&D and assembly processes, assisting with the resolution of problems and bottlenecks, and shortening test machine completion time.



Implemented Products

IPC-7220	<ul style="list-style-type: none"> • Desktop chassis, supports standard ATX motherboard, with anti-vibration optical drive bracket • Supports two 5.25" and two 3.5" HDDs, smart system LED lights; monitor temperature, voltage, fan, and hard drives for abnormalities • An audio alarm module beeps to provide early warning of problems affecting system operating status • Fan and filters are easy to replace, reducing system down-time due to maintenance • The power module design facilitates easy operation and assembly
AIMB-767	<ul style="list-style-type: none"> • ATX industrial motherboard supports an LGA775 series C2Q/C2D processor • Supports up to 1333 MHz FSB and 4GB DDR3 800/1066MHz SDRAM • Equipped with 5 PCI slots, one PCIe x16 and PCIe x4 slot each • Support provided for dual network interfaces and two displays • Provides an all-in-one platform
PCI-1711L	<ul style="list-style-type: none"> • PCI multifunction card

Integrated IC Packaging Machine Solution

Project

As semiconductor firms race to introduce ever faster and better-performing chips, process line width has been shrinking steadily and is now at the nanometer level. In addition, in view of the great diversity of semiconductor products, which include flash memory, logic chips, analog chips, etc., semiconductor manufacturers are requiring an increasing output rate per unit time and shorter production cycles. Responding to technological and market trends, the integration of multiple processes in individual machines during back-end semiconductor processes is employed as a strategy for simplifying production line equipment, while also greatly shortening process cycles. Integrated production machines must therefore accommodate ever more control cards, motion cards, and image acquisition cards in order to accommodate high-speed image pickup and testing actions, and reduce the error rate, as well as the cost of manual inspection.

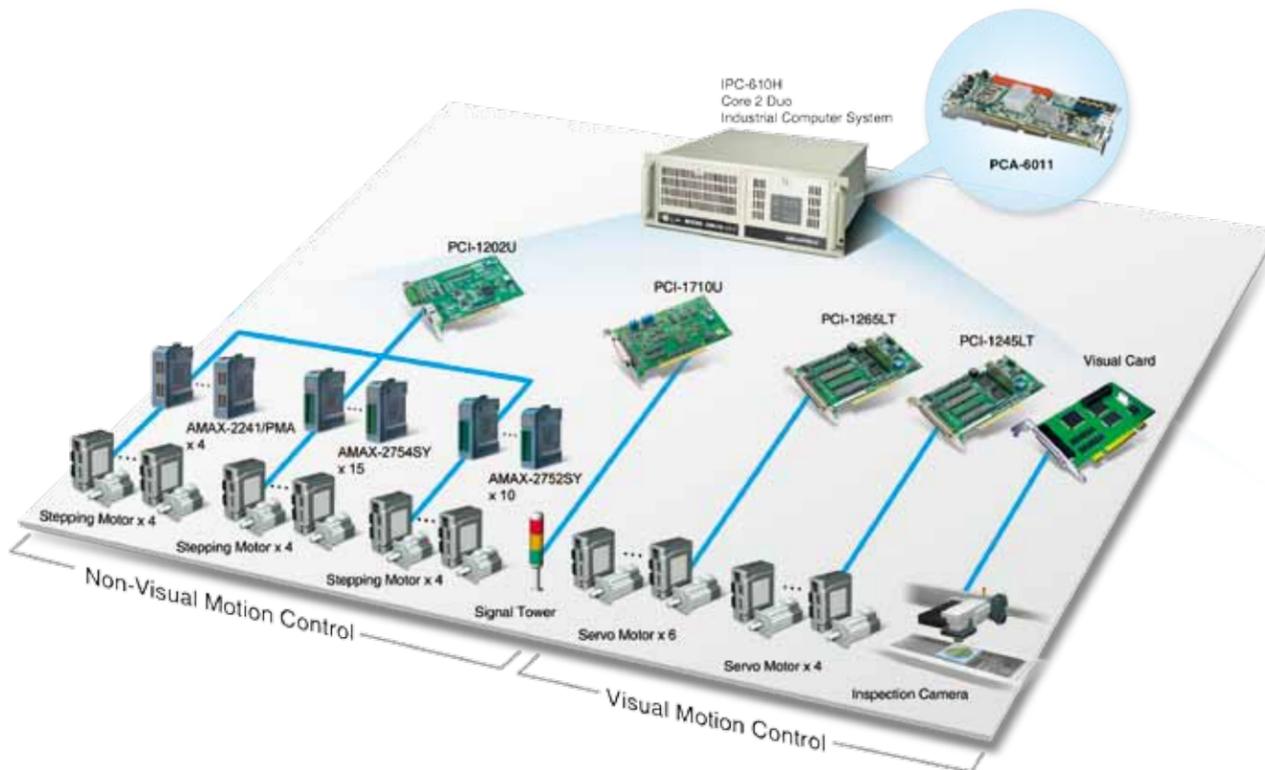
Requirements

While in the past machines were usually designed to perform individual specific functions, the need to achieve integration and accommodate high-speed production has led to the incorporation of multiple functions in single machines. This trend toward integrated machines has increased structural complexity, and caused the number of control axes in a machine to increase dramatically. Accordingly, this solution responds to the following customer needs:

- Must employ at least a dual-core industrial computer in order to achieve high processing speeds and shorten control cycle time.
- Because several processes are integrated within a single piece of equipment, there may be as many as 30 control axes, and there must be support for numerous external card slots.
- Must have a high level of expandability and support a PCI interface backplane.
- Since space may be limited, machine volume must not be greatly increased by the integration of functions.

System

In view of the fact that customers may need to integrate several work stations in a single machine, Advantech provides integrated systems consisting of highly expandable single board computer and backplane combinations equipped with control axis cards, high-speed motion pick-up cards, and image acquisition cards. A dual-core Intel® LGA775 PCA-6011 single-board computer meets



customers' high-speed processing needs, and a PCA-6114P12 backplane is integrated with an Advantech control card and motion card. The use of Advantech industrial control cards avoids the possible incompatibilities that may occur when using products from different companies. The use of a backplane solution enables better use of space than ordinary commercial motherboard systems, and also provides customers with the expandability needed to accommodate more external cards, ensuring an effective structure and optimal control performance. In addition, the IPC-610H panel and warning functions can accurately pinpoint system problems, greatly shortening system troubleshooting time.

Conclusion

Advantech can provide all-round solutions allowing customers to select applications' product configurations meeting their own particular needs, and striking an optimal balance between cost and performance. Apart from providing secure, reliable platforms, Advantech's sturdy industrial computer systems also offer the newest multi-core technology, and can process and analyze data and images from multiple work points. The system backplane ensures accurate processing and a high degree of expandability, while offering diverse transmission interface options, and maintaining compatibility with various control cards, data acquisition cards, and image cards.



Implemented Products

IPC-610H	<ul style="list-style-type: none"> • 4U frame-type industrial chassis, supports standard PICMG 1.0 slot SBCs • Equipped with 12 expansion slots and anti-vibration optical drive bracket • Supports two 5.25" and one 3.5" HDDs • Dual fan module not only optimizes system cooling, but also facilitates maintenance and reduces system stoppage • Front panel has a lockable hatch boosting system security
PCA-6011	<ul style="list-style-type: none"> • PICMG 1.0 full-size card, supports Intel® 2nd generation Core™ i processors • Supports up to 4GB DDR3-1066 memory • Dual network interfaces • Equipped with PCI/PCI-Express backplane • Provides an optimal, all-in-one platform.
PCA-6114P12	<ul style="list-style-type: none"> • 14-slot backplane, 12 PCI slots
PCI-1202U	<ul style="list-style-type: none"> • AMONet motion communication card
AMAX-2241/PMA	<ul style="list-style-type: none"> • AMONet can support a Panasonic Minas A3/A4 distributed motion module
AMAX-275xSY Series	<ul style="list-style-type: none"> • AMONet digital I/O module
PCI-1265LT	<ul style="list-style-type: none"> • SoftMotion 6-axis motion control card

Automatic Optical Inspection (AOI) – A Solution for PCB Inspection

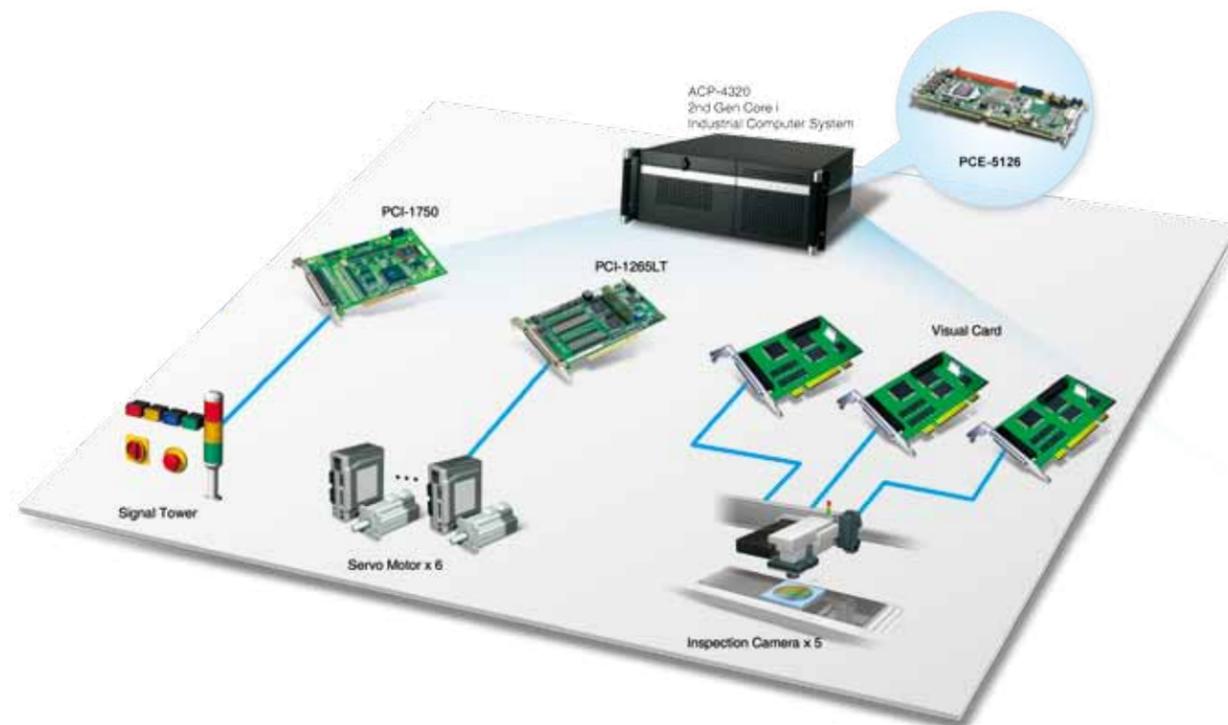
Project

As application devices in the market continue to increase in multi-functionality, integration, mobility, and miniaturization, the built-in printed circuit boards (PCBs) on these devices will contain more components than in the past. High density PCB components are a necessity, which raises the importance of automatic optical inspection (AOI). AOI has evolved from 2D to 3D inspection, where it is capable of effectively detecting whether components have been successfully soldered, the condition of those solder joints, and whether component placement is skewed or not. In order to increase inspection efficiency, a high-performance, highly-expandable industrial computer needs to be built with a motion control card capable of position comparing and triggering an output signal, so that on-the-fly capturing and on-the-fly-inspection are both possible. There is a growing trend to use AOI in PCB inspection applications. This project explains how Advantech's new generation industrial computers and Softmotion image capture and detection software technology can be combined in order to quickly carry out detection and inspection of soldering processes.

Requirements

In the past image detection relied heavily on a non-read, "on-the-fly" method. By comparison, today's continuous process, high-speed capture and inspection is very important in improving inspection efficiency. At the computing core, and one of the factors that best determine overall performance is a high performance industrial computer combined with a motion control card and frame grabber. Image capture from multiple CCD detectors builds the base for 3D inspection; therefore, selection of the light source and control of the exposure time determines the speed and quality of the image capture. High performance industrial computers with quad-core computing capability offer a stable and reliable computing platform further shortening the time required for image recognition. The requirements for this project can be defined as:

- Industrial computers with quad-core and above processors to achieve high-speed computing and shorten the image recognition cycle.
- PCIe and PCI interface expansion capability to allow sufficient motion control cards and frame grabbers to be installed.
- Motion control that provides position comparison using table Interval compare methods, and also triggers signal output.
- Simultaneous start and simultaneous stop (STA/STP) functions.
- Visual capture and detection compatibility from other card manufacturers in the inspection process.



System

Advantech industrial-grade systems with quad-core processors which are highly expandable and very stable were selected to meet customer requirements. Advantech delivers the best platform for the integration of visual data and motion. The inclusion of a SoftMotion 6-axis motion control card allows the system to use customized algorithms and high-speed position comparison. It also can trigger output functions which enables other brand's frame grabbers to capture images on-the-fly and promptly use them without stopping.

Conclusion

Advantech offers high performance industrial computers with motion control technology for AOI making integration with third party brands possible via a frame grabber or through a standard digital interface (eg: GigaLAN or others). Since Advantech's motion control technology uses SoftMotion technology, it can be customized to control axis motion in order to fine tune mechanism and control, providing the best solution to fit specific functional needs. Advantech's rugged industrial computers make a safe and reliable platform and utilize the newest multi-core technologies that facilitate multi-tasking of data processes and image analysis, delivering precise computation. The highly expandable backplate offers diverse transmission interfaces, and is compatible with various kinds of control cards, data acquisition cards, and video cards.



Implemented Products

ACP-4320	<ul style="list-style-type: none"> • 4U rack-mount industrial chassis; supports a standard PCIMG 1.3 slot SBC • Equipped with 12 expansion slot, anti-shock CD-ROM tray • Supports two 5.25" and two 3.5" hot plugging disc drives • Smart LCD indicators monitor temperature, voltage, and proper functioning of the fan and hard drives • Thumbscrew design drastically shortens assembly time for customers • Frontplate is provided with a lockable door to increase system security control
PCE-5126	<ul style="list-style-type: none"> • PICMG 1.3 full-size single board computer supports Intel® 2nd generation Core™ i processors • Supports up to 8GB DDR3-1333 Memory • Provided with dual Ethernet sockets and supports dual displays • Pairing with PCI/PCI-Express backplane delivers the best complete platform
PCE-5B12-07	<ul style="list-style-type: none"> • High expandability PICMG1.3 backplane, provided with 1 PCIe x16, 3 PCIe x4, and 7 PCI expansion slots
PCI-1265LT	<ul style="list-style-type: none"> • SoftMotion 6-Axis motion control card

Server-grade IPCs

NEW



NEW



Server Chassis

Model Name		HPC-7280		HPC-7480	
Processor Support		Supports dual, single Intel processors		Supports dual, single Intel processors	
Form Factor Support		2U chassis support for max. motherboard size - 12" x 13" EATX		4U chassis support for max. motherboard size - 12" x 13" EATX	
Expansion Slots		3 x Full-height, Full-length (with riser card)		7 x Full-height, Full-length PCI expansion slots	
Drive Bay	Slim ODD Bay	1		-	
	5.25" (front-accessible)	-		3	
	3.5" (front-accessible)	8		8	
	3.5" (internal)	-		-	
	2.5" (front-accessible)	-		-	
	2.5" (internal)	-		-	
Cooling	Chassis Fan	3 (8 cm / CFM)		4 (8 cm / CFM)	
	Air Filter	-		Yes	
System Monitoring		Chassis intrusion switch		Chassis intrusion switch	
Front I/O Interface	USB	1		2	
	PS/2	-		-	
Miscellaneous	LED Indicators	Power, HDD activity, LAN		Power, HDD activity, LAN	
	Rear Panel	-		-	
Environment		Operating	Non-Operating	Operating	Non-Operating
	Temperature	0 ~ 40° C (32 ~ 104° F)	-40 ~ 70° C (-40 ~ 158° F)	0 ~ 40° C (32 ~ 104° F)	-40 ~ 70° C (-40 ~ 158° F)
	Humidity	10 ~ 85% @ 40° C non-condensing	10 ~ 95% @ 40° C non-condensing	10 ~ 85% @ 40° C non-condensing	10 ~ 95% @ 40° C non-condensing
	Vibration (5~500 Hz)	1 Grms	2 G	1 Grms	2 G
	Shock	10 G	30 G	10 G	30 G
		(with 11 ms duration, half sine wave)		(with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482.6 x 88 x 700 mm (2U)		452 x 178 x 648 mm (4U)	
	Weight	28 kg		29.94 kg	

NEW



NEW



Server Boards

Model Name		ASMB-3101R	ASMB-781
Form Factor		CEB	ATX
Processor System	CPU	Intel Xeon E5600/E5500 Series	Intel Xeon E3/ Core i3 Series
	Socket	2 x socket 1366	1 x socket 1155
	Max. Speed	2.53 GHz	3.4 GHz
	Front Side Bus	QPI 6.4 GT/s	-
	L2 Cache	12 MB /8 MB	8MB /6 MB/3 MB
	Chipset	Intel 5520, Intel ICH10R	Intel C206
Expansion Slot	BIOS	AMI 32 Mbit, SPI	AMI 64 Mbit, SPI
	PCI	-	3
	PCIe x16	2	2
	PCIe x8	2	-
	PCIe x4	1 (2 on ASMB-310 SKU)	1
	PCIe	-	1
Memory	Technology	DDR3 Reg/unb. ECC 800/1066/1333 MHz	DDR3 ECC/non-ECC Unbuffer 800/1066/1333 MHz
	Max. Capacity	48 GB (RDIMM) 24 GB (UDIMM)	32 GB ECC/Non-ECC UDIMM
	Socket	6 x 240-pin DIMM	4 x 240-pin DIMM
Graphics	Controller	AST 2050	AST2300
	VRAM	DDR2 64 MB	DDR3 64 MB
	LCD	-	-
	DVI	-	-
Ethernet	Dual Display	-	-
	Interface	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit Ethernet
	Controller	1 x Intel 82574L, 1 x Intel 82567LM 1 x Mgmt LAN (optional)	1 x Intel 82579LM + 1 x Intel 82574L Intel 82580DB (optional)
TPM	Connector	RJ-45 x 3 (1 x Mgmt LAN)	RJ-45 x 4 (ASMB-781G4 SKU)
	Max. Data Transfer Rate	-	optional
SATA	Channel	300 MB/s	300 MB/s for SATA2 600 MB/s for SATA3
	VGA/DVI/HDMI	6	4 for SATA2, 2 for SATA3
Rear I/O	Ethernet	1 / - / -	1 / - / -
	USB	2	4 (2 for optional)
	Audio	6	4
	Parallel	-	-
	Serial	-	-
	PS/2	1 (RS-232)	1 (RS-232)
Internal Connector	DVI	2	2
	USB	-	-
	Serial	1	8 (2 x Type-A)
	Parallel	5	1
	IDE	1	-
	SATA	-	-
	SAS	6	6
	Compact Flash	8	-
Watchdog Timer	GPIO	-	8 bit
	Output	-	System reset
Interval	-	Programmable, 1 ~ 255 sec/min	

Industrial Wallmount Chassis



Height (1U = 1.75")		ARK-6610 / ARK-6620	ARK-6622H/L	AIMB-C200	IPC-5120/7120	IPC-5122	IPC-7220
Model Name		ARK-6610 / ARK-6620	ARK-6622H/L	AIMB-C200	IPC-5120/7120	IPC-5122	IPC-7220
Form Factor Support		Mini-ITX	Mini-ITX	Mini-ITX	MicroATX/ATX	MicroATX	ATX/MicroATX
Drive Bay	Slim Optical Drive	1/-	-	-	-	1	-
	3.5"	Front	-	-	1	1	1
		Internal	1/1	2 x 2.5"	1 x 2.5"	1	1
5.25"	-	-	-	1	-	2	
Front I/O	USB	Yes (on motherboard) + 2 cutouts	Yes (on motherboard)	Yes	Yes (on motherboard)	Yes	Yes
	PS/2	Yes (on motherboard)	Yes (on motherboard)	-	Yes (on motherboard)	-	Yes
Cooling	No. of Fans	1/2	2/1	-	2	1	1
	CFM	52.5 / 27.72	27.7/15.5	-	1 x 85 1 x 10	85	85
Power	AC	180 W ATX/PFC 270 W ATX/PFC	180 W ATX/PFC	-/55W ATX	250 W ATX/PFC 300 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC
	AC Redundant	-	-	-	-	-	300 W 1+1 400 W 1+1
	DC	-	-	-	-	-	300 W ATX
No. of Slots / No. of Full-size Cards		1 for ARK-6610	1	-	7/0	4/0	7/7
Passive Backplane Options	PICMG 1.0	-	-	-	-	-	-
	PICMG 1.3	-	-	-	-	-	-
System Fault Detection		Yes	Yes	Yes	-	Yes	Yes
Dimensions (W x H x D)	mm	250 x 156 x 253 (ARK-6610) / 272 x 88 x 232 (ARK-6620)	272 x 88 x 232	230 x 65 x 215	380 x 164 x 316.5	157 x 360 x 340	200 x 320 x 480
	inch	9.8 x 6.1 x 10 (ARK-6610) / 10.7 x 3.5 x 9.1 (ARK-6620)	10.7 x 3.5 x 9.1	8.9 x 2.53 x 8.38	15 x 6.5 x 12.5	6.2 x 14.2 x 13.4	7.9 x 12.6 x 18.9
Weight	kg	4.8 (ARK-6610) / 3.5 (ARK-6620)	3.49	2.5	9	6.5	13.7
	lb	10.5 (ARK-6610) / 7.7 (ARK-6620)	7.68	5.5	19.8	14.3	30.5



IPC-6006	IPC-6806	IPC-6908	IPC-6606/6608	IPC-3026	IPC-6025	IPC-7130	
PICMG 1.0	PICMG 1.0	PICMG 1.0/1.3	PICMG 1.0/1.3	PICMG1.0/1.3	PICMG 1.0/1.3	ATX/MicroATX	
-	-	-	-	-	-	-	
-	1	1	1	-	1	2	
-	1	1	-	1	1	1	
-	1 (IPC-6806W) 0 (IPC-6806/6806S)	2	1 (IPC-6606) 2 (IPC-6608)	-	-	1	
-	Yes	-	Yes	Yes	Yes	Yes	
-	-	-	-	-	-	-	
-	1	2	1	1	1	2	
-	58 (IPC-6806W) 53 (IPC-6806/6806S)	53	53 (IPC-6606) 85 (IPC-6608)	53	53	1 x 85 1 x 27.7	
-	150 W ATX/PFC (IPC-6806S) 250 W ATX/PFC (IPC-6806) 300 W ATX/PFC (IPC-6806W)	250 W ATX/PFC 300 W ATX/PFC 400 W ATX/PFC	250 W ATX/PFC 300 W ATX/PFC 400 W ATX/PFC	150W ATX/PFC	270 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	
-	-	300 W 1+1	-	-	-	300W 1+1	
-	-	300 W ATX	-	-	-	-	
6/6 (IPC-6006/6006P) 6/0 (IPC-6006S)	6/0 (IPC-6806S) 6/6 (IPC-6806/6806W)	8/8	6/6 (IPC-6606) 8/8 (IPC-6608)	6/0	5/5	7/7	
refer to Page 30~33							-
refer to Page 30~33							-
-	-	Yes	-	Yes	-	Yes	
158 x 186 x 368 (IPC-6006/6006P) 158 x 186 x 215 (IPC-6006S)	191 x 170 x 285 (IPC-6806S) 166 x 170 x 393 (IPC-6806) 198 x 213 x 393 (IPC-6806W)	200 x 300 x 463	173 x 254 x 396 (IPC-6606) 173 x 315 x 410 (IPC-6608)	150 x 222 x 270	111 x 212 x 420	200x320x480	
6.2 x 7.3 x 14.5 (IPC-6006/6006P) 6.2 x 7.3 x 8.4 (IPC-6006S)	7.7 x 6.7 x 11.2 (IPC-6806S) 6.5 x 6.7 x 15.4 (IPC-6806) 7.8 x 8.4 x 15.4 (IPC-6806W)	7.9 x 11.8 x 18.2	6.8 x 12.4 x 16.1	5.9 x 8.7 x 10.6	4.4 x 8.3 x 16.5	7.87x12.59x18.89	
2.5 (IPC-6006/6006P) 1.6 (IPC-6006S)	5.6 (IPC-6806S) 6.3 (IPC-6806) 7.8 (IPC-6806W)	12.9	9 (IPC-6606) 11 (IPC-6608)	4.4	4.7	14	
5.5 (IPC-6006/6006P) 3.5 (IPC-6006S)	12.3 (IPC-6806S) 13.9 (IPC-6806) 17.2 (IPC-6806W)	28.5	19.8 (IPC-6606) 24.2 (IPC-6608)	9.7	10.3	30.8	

Industrial Rackmount Chassis



Height (1U = 1.75")		1U Rackmount		2U Rackmount			4U Rackmount			
Model Name		IPC-100-60SE	ACP-1010/1320	ACP-2000/IPC-602	ACP-2010MB/ACP-2320MB	IPC-603MB	ACP-4000	ACP-4010/ACP-4320	ACP-4360	
Form Factor Support		Mini-ITX	PICMG 1.0/1.3 ATX/MicroATX	PICMG 1.0/1.3	ATX/MicroATX	ATX/MicroATX	PICMG 1.0/1.3 ATX/MicroATX	PICMG 1.0/1.3 ATX/MicroATX	PICMG 1.0/1.3 ATX/MicroATX	
Drive Bay	Slim Optical Drive	1	1	1/-	-/1	1	-	-	1	
	3.5"	Front	-	1/2 (SAS/SATA)+1	2/1	1/2 (SAS/SATA)	-	1	1/2 (SAS/SATA) + 1	6 (SAS/SATA) + 1
		Internal	-	1/-	-/1	2	1	-	1/-	-
	5.25"	-	-	-/1	1/-	-	3	2	-	
Front I/O	USB	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	
	PS/2	-	-	Yes	Yes	-	Yes	-	-	
Cooling	No. of Fans	0	2 (MB), 4 (BP)	2	2/3	2	2	2/2	3	
	CFM	-	2 x 24 (MB)/ 3 x 24 + 1 x 15 (BP)	2 x 47/ 2 x 40	2 x 47/ 2 x 47 + 1 x 28	47	85	2 x 85/ 1 x 114 + 1 x 28	1 x 114 + 2 x 47	
Power	AC	-	250 W ATX/PFC 300 W ATX/PFC	250 W ATX/PFC (IPC-602) 300 W ATX/PFC 400 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	300 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	400 W ATX/PFC 500 W ATX/PFC	
	AC Redundant	-	-	300 W 1+1 (ACP-2000)	-	-	300 W 1+1 400 W 1+1	300 W 1+1 400 W 1+1	400 W 1+1	
	DC	60W	-	-	-	-	-	-	-	
No. of Slots / No. of Full-size Cards		2/0	MB: 1/1 BP: 3/2	6/6	3/3	3/0	15/11	15/15 (ACP-4010) 15/10 (ACP-4320)	15/9	
Passive Backplane Options	PICMG 1.0	-	refer to Page 30-33			-	refer to Page 30-33			
	PICMG 1.3	-	refer to Page 30-33			-	refer to Page 30-33			
System Fault Detection		-	Yes	Yes	Yes	-	Yes	Yes	Yes	
Dimensions (W x H x D)	mm	480 x 44 x 288	1010: 480 x 44 x 497 1320: 480 x 44 x 617	482 x 88 x 451	482 x 88 x 480	482 x 88 x 308	482 x 177 x 479	482 x 177 x 479	482 x 177 x 501	
	inch	19 x 1.7 x 11.3	1010: 19 x 1.7 x 19.6 1320: 19 x 1.7 x 24.3	19 x 3.5 x 17.8	19 x 3.5 x 18.9	19 x 3.5 x 12.1	19 x 7 x 18.9	19 x 7 x 18.9	19 x 7 x 19.8	
Weight	kg	2.2	8	11.5/11.3	10.7/11.7	6.4	15.2	16.6/17.6	19.5	
	lb	4.8	17.6	25.3/24.9	23.5/25.7	14.1	33.5	36.5/38.7	42.9	



4U Rackmount								5U Rackmount	6U Rackmount	7U Rackmount
IPC-510	IPC-610-F	IPC-610-H	IPC-610-L	IPC-611	IPC-619/619S	IPC-623	IPC-630	ACP-5360	IPC-622	ACP-7360
PICMG 1.0 ATX/MicroATX	PICMG 1.0/1.3 ATX/MicroATX	PICMG 1.0/1.3 ATX/MicroATX	PICMG 1.0/1.3 ATX/MicroATX	PICMG 1.0/1.3 ATX/MicroATX	PICMG 1.0/1.3 ATX/MicroATX	PICMG 1.0/1.3	PICMG 1.0/1.3 ATX/MicroATX	PICMG 1.0/1.3	PICMG 1.0	PICMG 1.0/1.3
-	-	-	-	-	-	-	-	1	-	1
1	1	1	1	1	-	1	1	6 (SAS/SATA) + 1	-	6 (SAS/SATA) + 1
1	1	-	-	-	1	1	1	-	2	-
3	3	3	3	3	2/1	3	3	1	4	2
Yes	-	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes
Yes	-	Yes	-	-	-	-	-	Yes	-	Yes
1	1	2	1	1	1	3	1	7	4	6
77	85	85	85	85	85	114	85	3 x 114 + 2 x 47 + 2 x 25	58	4 x 58 + 2 x 47
250 W ATX/PFC 300 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	250 W ATX/PFC 300 W ATX/PFC	250 W ATX/PFC 300 W ATX/PFC	250 W ATX/PFC 300 W ATX/PFC 400 W ATX/PFC	400 W ATX/PFC 500 W ATX/PFC	300 W ATX/PFC 400 W ATX/PFC	-	400 W ATX/PFC 500 W ATX/PFC	-
-	300 W 1+1	300 W 1+1	-	-	-	460 W 1+1 570 W 2+1 810 W 3+1	300 W 1+1 400 W 1+1	460 W 1+1 570 W 2+1 810 W 3+1	460 W 1+1	460 W 1+1 570 W 2+1 810 W 3+1
-	-	-	-	-	-	-	-	-	-	-
14/8	15/10	15/11	15/11	15/11	15/10 10/0	20/20	15/10	20/20	20/20	20/20
refer to Page 30-33										
refer to Page 30-33										
-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes
482 x 177 x 446	BP: 482 x 177 x 449 MB: 482 x 177 x 499	482 x 177 x 479	482 x 177 x 479	482 x 177 x 479	482 x 177 x 430 / 482 x 177 x 275	482 x 177 x 657	BP: 482 x 177 x 449 MB: 482 x 177 x 499	482 x 222 x 662	482 x 266 x 464	482 x 307 x 502
19 x 7 x 17.6	BP: 19 x 7 x 17.8 MB: 19 x 7 x 19.6	19 x 7 x 18.9	19 x 7 x 18.9	19 x 7 x 18.9	19 x 7 x 16.9 / 19 x 7 x 10.8	19 x 7 x 26	BP: 19 x 7 x 17.8 MB: 19 x 7 x 19.6	19 x 8.75 x 26	19 x 10.5 x 18.3	19 x 12.1 x 19.7
10.7	18	15	14.5	14.2	15 / 8	26	18	30	30	35
23.5	39.6	33	31.9	31.2	33/17.6	57	39.6	66	66	77

PICMG 1.3 System Host Boards



NEW



Model Name		Core 2 Duo PICMG 1.3 SHB	Core 2 Quad PICMG 1.3 SHB
		PCE-5020	PCE-5124
Processor System	CPU	Intel Core 2 Duo/Pentium/Celeron 4XX/Pentium 4/Celeron D LGA775 processors	Intel Core 2 Quad/Core 2 Duo/Pentium/Celeron 4XX LGA775 processors
	Max. Speed	3.06 GHz/3.06 GHz/2 GHz/3.4 GHz/3.6 GHz	3.00 GHz/3.33 GHz/3.06 GHz/2 GHz
	Cache	L2: 4 MB/2 MB/512 KB/2 MB/512 KB	L2: 12 MB/6 MB/2 MB/512 KB
	Chipset	Intel 945GC + ICH7/7R	Intel Q35 + ICH9DO
	BIOS	Award 4 Mbit FWH	AMI 16 Mbit SPI Flash
Bus	FSB	1066/800/533 MHz	1333/1066/800/533 MHz
	PCIe	One x16 & four x1	One x16 & four x1
	PCI	32-bit/33 MHz PCI	32-bit/33 MHz PCI
Graphics	Controller	Chipset integrated Intel Graphics Media Accelerator 950	Chipset integrated Intel Graphics Media Accelerator 3100
	VRAM	Shared with 224 MB system memory	Shared with 384 MB system memory
	Output	-	-
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	Intel 82573L/Intel 82573L	Intel 82566DM/82573V
	Connector	RJ-45 x 2	RJ-45 x 2
	Disabled in BIOS	Yes	Yes
Memory	Technology	Dual-channel DDR2 533/667 MHz	Dual-channel DDR2 667/800 MHz
	Max. Capacity	4 GB	8 GB
	Socket	240-pin DIMM x 2	240-pin DIMM x 4
SATA	Max. Data Transfer Rate	300 MB/s	300 MB/s
	Channel	4	6
	RAID	0, 1, 5, 10	0, 1, 5, 10
EIDE	Mode	ATA 100/66/33	-
	Channel	1 (Max. two devices)	-
I/O Interface	USB	Max. 8 (USB 2.0 compliant) 4 on SHB by pin headers, 4 to backplane	Max. 12 (USB 2.0 compliant) 8 on SHB by pin headers, 4 to backplane
	Serial	4 (1 RS-485 and 3 RS-232) with pin headers	6 (1 RS-485 and 5 RS-232) with pin headers
	Parallel	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)
	FDD	1	1
	PS/2	1	1
	LAN	1 (for VG version) 2 (for G2 version)	1 (for VG version) 2 (for G2 version)
	Hardware Monitor	Yes	Yes
Watchdog Timer	Output	System reset	System reset
	Interval	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min
Miscellaneous	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E
	Advantech SNMP-1000	-	Yes
	IPMI	-	-
	Solid State Disk	Optional (CompactFlash Type I/II)	-

Model Name		Core i7/i5/i3 PICMG 1.3 SHB	Core i7/i5/i3 PICMG 1.3 SHB	Dual Quad Core Xeon PICMG 1.3 SHB
		PCE-5125	PCE-5126	PCE-7214
		Intel Xeon/Core i7/Core i5/Core i3/Pentium LGA1156 processors	Intel Xeon/Core i7/Core i5/Core i3 LGA1155 processors	Dual Intel Quad Core or Dual Core Xeon / Xeon LV LGA771 processors
		2.93 GHz/2.93 GHz/3.60 GHz/3.06 GHz/2.8 GHz	3.4 GHz/3.4 GHz/3.1 GHz/3.3 GHz	3.16 GHz/3.33 GHz
		L3: 8 MB/8 MB/8 MB/4 MB/4 MB/3 MB	L3: 8 MB/8 MB/6 MB/3 MB	L2: 12 MB/6 MB
		Q57 for QG2 version; 3450 for WG2 version	B65 for QVG version; Q67 for QG2 version; C206 for WG2 version	Intel 5100 + ICH9R
		AMI 64 Mbit SPI Flash	AMI 64 Mbit SPI Flash	AMI 32 Mbit SPI Flash
		-	-	1066/1333 MHz
		Two x8/One x16 & four x1	Two x8/One x16 & four x1	Two x8/one x16 & one x4
		32-bit/33 MHz PCI	32-bit/33 MHz PCI	32-bit/33 MHz PCI
		Chipset integrated Intel HD Graphics (Except Core i7-8xx CPU)	Chipset integrated Intel HD Graphics	XGI Volari Z11 (PCIe X1)
		1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed	32 MB frame buffer memory
		-	-	-
		10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
		QG2: Intel 82578DM/82583V; WG2: Intel 82578DM/82574L	QVG: Intel 82579LM; QG2: Intel 82579LM/82583V; WG2: Intel 82579LM/82574L	Intel 82566DM/82573V
		RJ-45 x 2	RJ-45 x 2 for QG2 & WG2 version; RJ-45 x 1 for QVG version	RJ-45 x 2
		Yes	Yes	Yes
		Dual-channel (ECC) DDR3 800/1066/1333 MHz (Only WG2 version supports ECC memory)	Dual-channel (ECC) DDR3 1066/1333 MHz (Only WG2 version supports ECC memory)	Dual-channel DDR2 533/667 MHz (ECC Registered DIMMs)
		8 GB	8 GB	32 GB
		240-pin DIMM x 2	240-pin DIMM x 2	240-pin DIMM x 4
		300 MB/s	300 MB/s SATA2 & 600 MB/s SATA3	300 MB/s SATA2
		6	QG2 & WG2 : 2 x 600 MB/s ; 4 x 300 MB/s (SW RAID); QVG : 1 x 600 MB/s ; 5 x 300 MB/s	6
		0, 1, 5, 10	0, 1, 5, 10	0, 1, 5, 10
		-	-	ATA 100/66/33
		-	-	1 (Max. two devices)
		13 (USB 2.0 compliant) 9 on SHB by pin headers, 4 to backplane	QG2/QG2: 13 (USB 2.0 compliant) 9 on SHB by pin headers, 4 to backplane ; QVG: 10 (USB 2.0 compliant) 6 on SHB by pin headers, 4 to backplane	Max. 12 (USB 2.0 compliant) 8 on SHB by pin headers, 4 to backplane
		2 RS-232 with pin headers	2 RS-232 with pin headers	2 (RS-232) with pin headers
		1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)
		1	-	1
		1	1	1
		-	1 (for QVG version)	2
		2	2 (for QG2/WG2 version)	-
		Yes	Yes	Yes
		System reset	System reset	System reset
		Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min
		PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E
		Yes	Yes	Yes
		-	Optional	-
		-	-	-

PICMG 1.0 Single Board Computers



NEW



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Model Name		Pentium M PICMG 1.0 SBC	Atom D525/N455 PICMG 1.0 SBC
		PCA-6008	PCA-6012
Processor System	CPU	Intel Pentium M/Celeron M (G2 version only) Onboard Celeron M (VG version only)	Onboard Intel Atom D525/N455 processors
	Max. Speed	2.26/1.7 GHz (G2 version only) 1.0 GHz/600 MHz (VG version only)	1.8GHz (D525 G2 version) 1.66GHz (N455 VG version)
	Max. L2 Cache	G2: 1 MB, 2 MB VG: 512 KB	1MB (D525 G2 version) 512KB (N455 VG version)
	Chipset	Intel 915GME+ ICH6M (G2 version only) Intel 910GML+ ICH6M (VG version only)	Intel Atom D525+ICH8M (G2 version) Intel Atom N455+ICH8M (VG version)
	BIOS	Award 4 Mbit FWH	AMI 16 Mb SPI Flash
Bus	FSB	533/400 MHz	-
	PCI	32-bit/33 MHz PCI	32-bit/33 MHz PCI
Graphics	ISA	HISA (ISA High Drive)	HISA (ISA High Drive)
	Controller	Chipset integrated Intel Graphics Media Accelerator 900	Embedded Gen3.5+ GFX Core technology
	VRAM	Shared with system memory up to 128 MB	Shared with system memory up to 224MB
Ethernet	Output	LVDS/DVI (G2 version only)	LVDS (Optional)
	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: RTL8111B LAN2: RTL8111B	LAN1: Intel 82567V LAN2: Intel 82583V
	Connector	RJ-45 x 2	RJ-45 x 2
Memory	Disabled in BIOS	Yes	Yes
	Technology	Dual-channel DDR2 533/400 MHz	Dual channel DDR3 800 MHz
	Max. Capacity	2 GB	4 GB (D525 G2 version) 2 GB (N455 VG version)
SATA	Socket	240-pin DIMM x 2	204-pin SODIMM x 2
	Max. Data Transfer Rate	150 MB/s	300 MB/s
	Channel	2	3
EIDE	RAID	-	-
	Mode	ATA 100/66/33	ATA 100/66/33
I/O Interface	Channel	1 (Max. two devices)	1 (Max. two devices)
	USB	8 (USB 2.0, for G2 version) 4 (USB 2.0, for VG version)	9 (USB 2.0 for G2 version) 8 (USB 2.0 for VG version)
	Serial	G2 version: 5 (RS-232)/1 (RS-232/422/485) VG version: 1 (RS-232)/1 (RS-232/422/485)	2 (RS-232)
	Parallel	1 (EPP/ECP/SPP)	1 (EPP/ECP)
	FDD	1	1
	PS/2	1	1
	LAN	1 (for VG version) 2 (for G2 version)	1 (for VG version) 2 (for G2 version)
	Hardware Monitor	Yes	Yes
Watchdog Timer	Output	System reset	System reset
	Interval	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min
Miscellaneous	Audio	PCA-AUDIO-00A1E	PCA-AUDIO-HDA1E
	Advantech SNMP-1000-B	Yes	Yes
	Solid State Disk	CompactFlash Type I/II	CompactFlash Type I/II (G2 version only)

Model Name		Core 2 Duo PICMG 1.0 SBC	Core 2 Quad PICMG 1.0 SBC	Core 2 Duo PICMG 1.0 SBC
		PCA-6010	PCA-6011	PCA-6194
Processor System	CPU	Intel Core 2 Duo/Pentium/Celeron 4XX/Pentium 4/Celeron D LGA775 processors	Intel Core 2 Quad/Core 2 Duo/Pentium/Celeron LGA775 processors	Intel Core 2 Duo/Pentium/Celeron 4XX/Pentium 4/Celeron D LGA775 processors
	Max. Speed	3.06 GHz/3.06 GHz/2 GHz/3.4 GHz/3.6 GHz	3.0 GHz/3.16 GHz/2.93 GHz/2.2 GHz	3.06 GHz/3.06 GHz/2 GHz/3.4 GHz/3.6 GHz
	Max. L2 Cache	4 MB/2 MB/512 KB/2 MB/512 KB	12 MB/6 MB/8 MB/512 KB	4 MB/2 MB/512 KB/2 MB/512 KB
	Chipset	Intel 945GC + ICH7	Intel G41 + ICH7 (VG version only) Intel G41 + ICH7R (G2 version only)	Intel Q965 + ICH8D0
	BIOS	Award 8 Mbits SPI Flash	AMI 16 Mb SPI Flash	Award 16 Mbit SPI Flash
Bus	FSB	1066/800/533 MHz	1333/1066/800 MHz	1066/800/533 MHz
	PCI	32-bit/33 MHz PCI	32-bit/33 MHz PCI	32-bit/33 MHz PCI
Graphics	ISA	HISA (ISA High Drive)	HISA (ISA High Drive)	HISA (ISA High Drive)
	Controller	Chipset integrated Intel Graphics Media Accelerator 950	Intel Graphics Media Accelerator X4500	Chipset integrated Intel Graphics Media Accelerator 3000
	VRAM	Shared with system memory up to 224 MB	Shared with system memory up to 352 MB	Shared with system memory up to 256 MB
Ethernet	Output	DVI (G2 version only)	DVI (Optional)	-
	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel 82574L LAN2: Intel 82574L	LAN1: Intel 82583V LAN2: Intel 82574L	LAN1: Intel 82566DM LAN2: Intel 82573V
	Connector	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2
Memory	Disabled in BIOS	Yes	Yes	Yes
	Technology	Dual-channel DDR2 667/533 MHz	Dual-channel DDR3 1066/800 MHz	Dual-channel DDR2 800/667/533 MHz
	Max. Capacity	4 GB	4 GB	8 GB
SATA	Socket	240-pin DIMM x 2	240-pin DIMM x 2	240-pin DIMM x 4
	Max. Data Transfer Rate	300 MB/s	300 MB/s	300 MB/s
	Channel	4	4	6
EIDE	RAID	-	0, 1, 5, 10 (G2 version only)	0, 1, 5, 10
	Mode	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33
I/O Interface	Channel	1 (Max. two devices)	1 (Max. two devices)	1 (Max. two devices)
	USB	8 (USB 2.0, for VG version) 7 (USB 2.0, for G2 version)	8 (USB 2.0, for VG version) 7 (USB 2.0, for G2 version)	6 (USB 2.0)
	Serial	2 (RS-232)	2 (RS-232)	1 (RS-232)/1 (RS-232/422/485)
	Parallel	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)
	FDD	1	1	1
	PS/2	1	1	1
	LAN	1 (for VG version) 2 (for G2 version)	1 (for VG version) 2 (for G2 version)	1 (for VG version) 2 (for G2 version)
	Hardware Monitor	Yes	Yes	Yes
Watchdog Timer	Output	System reset	System reset	System reset
	Interval	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable 1~255 sec/min
Miscellaneous	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E
	Advantech SNMP-1000-B	Yes	Yes	Yes
	Solid State Disk	CompactFlash Type I/II (G2 version only)	(Optional)	-

Half-Size Single Board Computers



Specifications		PCI Half-Size SBC	PCI Half-Size SBC
		PCI-7020	PCI-7030
Processor System	CPU	Intel Core 2 Duo/Pentium/Celeron 4xx/ Pentium 4/Celeron D LGA775 processors	Intel Atom N270 processor onboard
	Max. Speed	3.06 GHz/3.06 GHz /2 GHz/3.4 GHz/3.6 GHz	1.6 GHz
	L2 Cache	4 MB/2 MB/512 KB/2 MB/512 KB	512 KB
	Chipset	Intel 945GC + ICH7R	Intel 945GSE+Intel ICH7M
	BIOS	Award 8 MB SPI Flash	Award SPI 8 MB SPI Fash
	FSB	533/800/1066 MHz	400/533 MHz
Bus	PCIe	-	-
	PCI	32-bit/33 MHz PCI	32-bit/33 MHz PCI
	ISA	-	-
Graphics	Controller	Chipset integrated Intel Graphics Media Accelerator 950	Chipset integrated Intel Graphics Media Accelerator 950
	VRAM	Shared with system memory up to 224 MB	Shared with system memory up to 224 MB
	Output	DVI (optional)	DVI(G2 version), Dual-channel 18/36 bit LVDS
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	Intel 82574L	Intel 82574L
	Connector	RJ-45 x 1	RJ-45 x 1 (VG version) RJ-45 x 2 (G2 version)
	Disabled in BIOS	Yes	Yes
Memory	Technology	Dual-channel DDR2 533/667 MHz	Single-Channel DDR2 400/533 MHz
	Max. Capacity	4 GB	2 GB
	Socket	200-pin SODIMM x 2	200-pin SODIMM x 1
SATA	Max. Data Transfer Rate	300 MB/s	150 MB/s
	Channel	3	2
	RAID	-	-
EIDE	Mode	-	Ultra ATA 100/66/33
	Channel	-	1 (Max. 2 devices)
I/O Interface	USB	6	6 (VG version) or 5 (G2 version)
	Serial	2 x RS-232 Optional: 4 x RS-422/485 w/Auto-flow by COM module	2 x RS-232 Optional: 4 x RS-422/485 w/Auto-flow by COM module
	Parallel	1	1
	FDD	-	1
	PS/2	1	1
	LAN	1	1 (VG version) 2 (G2 version)
	Hardware Monitor	Yes	Yes
Watchdog Timer	Output	System reset	System reset
	Interval	Programmable, 1~255 sec/min	1 min/sec or Max. 65535 min/sec
Miscellaneous	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E
	Advantech SNMP-1000	-	-
	IPMI	-	-
	Solid State Disk	CompactFlash Type I/II	CompactFlash Type I/II



NEW



PCI Half-Size SBC	ISA Half-Size SBC	ISA Half-Size SBC	ISA Half-Size SBC
PCI-7031	PCA-6742	PCA-6743	PCA-6782
Intel Atom D510/N450	Advantech EVA-X4300	DM&P Vortex86DX	Intel Atom D525/N455
1.66 GHz	300 MHz	800 MHz	D525 1.8 GHz/N455 1.6 GHz
512 KB (N450)/1 MB (D510)	L1 Cache 32 KB	256 KB	512 KB (N455)/1 MB (D525)
Intel Atom D510/N450+ICH8M	Advantech EVA-X4300	DM&P Vortex86DX	Intel Atom D525/N455+ICH8M
AMI 16 MB SPI Flash	Award integrated 256 KB ROM in EVA-X4300	Award integrated 256 KB ROM in Vortex86DX	AMI 16 MB SPI Flash
-	-	-	-
-	-	-	-
32-bit/33 MHz PCI	-	-	-
-	8/16-bit 8 MHz ISA	16-bit/8 MHz ISA	16-bit/Gold Finger
Embedded Gen3.5+ GFX Core technology	Chipset integrated VGA controller	Chipset integrated VGA controller	Embedded Gen3.5+ GFX Core technology
Shared with system memory up to 224 MB	4 MB display memory	4 MB display memory	Shared with system memory up to 224 MB
Single channel 18-bit LVDS	24-bit LVDS (optional) or 24-bit TTL	24-bit LVDS (optional) or 24-bit TTL	Single channel 18-bits LVDS
10/100/1000 Mbps	10/100 Mbps	10/100 Mbps	10/100/1000 Mbps
LAN1: Intel 82567V LAN2: Intel 82583V	Realtek RTL8100CL	LAN on Vortex86DX	Intel 82567V
RJ-45 x 2	RJ-45 x 1 (VE version) - (LV version)	RJ-45 x 1	RJ-45 x 1
Yes	Yes	Yes	Yes
Onboard 1G DDR2 667 MHz (for PCI-7031N) Single Channel DDR2 667 MHz (for PCI-7031D)	Default onboard DDR 2 128 MB	Default onboard DDR2 256 MB (for VE SKU) Default onboard DDR2 512 MB (for F SKU)	Single-Channel DDR2 667 MHz (for PCA-6782N) Single-Channel DDR2 667/800 MHz (for PCA-6782D)
1 GB (for PCI-7031N) 2 GB (for PCI-7031D)	-	-	2 GB
200-pin SODIMM x 1	-	-	200-pin SODIMM x 1
300 MB/s	-	150 MB/s	300 MB/s
3	-	1 (for F SKU)	3
-	-	-	-
ATA 100/66/33	PIO 4	UDMA 100	ATA 100/66/33
1 (Max. 2 devices)	1 (Max. 2 devices)	1 (Max. 2 devices)	1 (Max. 2 devices)
7	4	4	8
2 x RS-232 Optional: 4 x RS-422/485 w/Auto-flow by COM module	1 x RS-232/422/485 3 x RS-232	2 x RS-232 2 x RS-232/422/485	2 x RS-232 Optional: 4 x RS-422/485 w/Auto-flow by COM module
1	1	1	1
1	(Optional)	1	1
1	1	1	1
2	1 (VE) - (LV)	1	1
Yes	Yes	Yes	Yes
System reset	System reset/IRQ11	System reset/IRQ11	Interrupt, System reset
Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min
PCA-AUDIO-HDA1E	-	-	PCA-AUDIO-HDA1E
-	-	-	-
-	-	-	-
CompactFlash Type I/II	CompactFlash Type I/II	CompactFlash Type I/II	CompactFlash Type I/II

PICMG1.3 Full-Size SHB Backplanes

Server Grade: Compatible with PCE-7XXX Series CPU Boards

Yes: Supported/-: Not supported

Model Name	PCIe				PCI-X			PCI	Rackmount Chassis					
	x16	x8	x4	x1	64/66	64/100	64/133	32/33	ACP-1010	ACP-1320	ACP-2000EBP	IPC-602EBP	IPC-510	IPC-610
PCE-7B03V-01A1E	-	1	-	-	-	-	-	1	Yes	Yes	-	-	-	-
PCE-7B03V-00A1E	-	2	-	-	-	-	-	-	Yes	Yes	-	-	-	-
PCE-7B06V-04A1E	-	1	-	-	-	-	-	4	-	-	Yes	Yes	-	-
PCE-7B06V-30A1E	-	2	-	-	-	2	1	-	-	-	Yes	Yes	-	-
PCE-7B05-20A1E	-	2	-	-	-	-	2	-	-	-	-	-	-	-
PCE-7B06-04A1E	-	1	-	-	-	-	-	4	-	-	-	-	-	-
PCE-7B06-40A1E	-	1	-	-	-	4	-	-	-	-	-	-	-	-
PCE-7B08-04A1E	-	2	1	-	-	-	-	4	-	-	-	-	-	-
PCE-7B13-64B1E	-	2	-	-	4	2	-	4	-	-	-	-	-	Yes
PCE-7B13-07A1E	-	2	3	-	-	-	-	7	-	-	-	-	-	Yes
PCE-7B10-04A1E	-	-	5	-	-	-	-	4	-	-	-	-	-	Yes
PCE-7B13D-04A1E	-	1, 2	-	-	-	-	-	4	-	-	-	-	-	-
PCE-7B19-88A1E	-	2	-	-	8	-	-	8	-	-	-	-	-	-
PCE-7B16Q-02A1E	-	1	-	-	-	-	-	2	-	-	-	-	-	-

Model Name	Rackmount Chassis										Wallmount/Desktop Chassis				
	IPC-611	IPC-630	ACP-4000	ACP-4010	ACP-4320	ACP-4360	IPC-623	ACP-5360	IPC-622	ACP-7360	IPC-6025	IPC-6606	IPC-6806	IPC-6608	IPC-6908
PCE-7B03V-01A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCE-7B03V-00A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCE-7B06V-04A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCE-7B06V-30A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCE-7B05-20A1E	-	-	-	-	-	-	-	-	-	Yes	-	-	-	-	-
PCE-7B06-04A1E	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-	-
PCE-7B06-40A1E	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-	-
PCE-7B08-04A1E	-	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes	-
PCE-7B13-64B1E	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-
PCE-7B13-07A1E	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-
PCE-7B10-04A1E	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-
PCE-7B13D-04A1E	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-	-
PCE-7B19-88A1E	-	-	-	-	-	-	Yes	Yes	-	Yes	-	-	-	-	-
PCE-7B16Q-02A1E	-	-	-	-	-	-	Yes	Yes	-	Yes	-	-	-	-	-

Desktop: Compatible with PCE-5XXX Series CPU Boards

Yes: Supported/-: Not supported

Model Name	PCIe				PCI-X			PCI	Rackmount Chassis					
	x16	x8	x4	x1	64/66	64/100	64/133	32/33	ACP-1010	ACP-1320	ACP-2000	IPC-602	IPC-510	IPC-610
PCE-5B03V-01A1E	1	-	-	-	-	-	-	1	Yes	Yes	-	-	-	-
PCE-5B03V-00A1E	1	-	1	-	-	-	-	-	Yes	Yes	-	-	-	-
PCE-5B06V-04A1E	1	-	-	-	-	-	-	4	-	-	Yes	Yes	-	-
PCE-5B05V-30A1E	1	-	-	-	-	2	1	-	-	-	Yes	Yes	-	-
PCE-5B06V-00A1E	1	-	-	4	-	-	-	-	-	-	Yes	Yes	-	-
PCE-5B05-02A1E	1	-	1	-	-	-	-	2	-	-	-	-	-	-
PCE-5B05-04A1E	-	-	-	-	-	-	-	4	-	-	-	-	-	-
PCE-5B04-20A1E	1	-	-	-	-	-	2	-	-	-	-	-	-	-
PCE-5B06-04A1E	1	-	-	-	-	-	-	4	-	-	-	-	-	-
PCE-5B06-00A1E	1	-	-	4	-	-	-	-	-	-	-	-	-	-
PCE-5B06-40A1E	1	-	-	-	-	4	-	-	-	-	-	-	-	-
PCE-5B07-04A1E	1	-	1	-	-	-	-	4	-	-	-	-	-	-
PCE-5B08-02A1E	1	-	-	4	-	-	-	2	-	-	-	-	-	-
PCE-5B12-64B1E	1	-	-	-	4	2	-	4	-	-	-	-	-	Yes
PCE-5B12-07A1E	1	-	3	-	-	-	-	7	-	-	-	-	-	Yes
PCE-5B13-08A1E	1	-	-	3	-	-	-	8	-	-	-	-	-	Yes
PCE-5B10-04A1E	1	-	-	4	-	-	-	4	-	-	-	-	-	Yes
PCE-5B12D-04A1E	1	-	-	-	-	-	-	4	-	-	-	-	-	-
PCE-5B18-88A1E	1	-	-	-	8	-	-	8	-	-	-	-	-	-
PCE-5B16Q-02A1E	1	-	-	-	-	-	-	2	-	-	-	-	-	-

Model Name	Rackmount Chassis										Wallmount/Desktop Chassis				
	IPC-611	IPC-630	ACP-4000	ACP-4010	ACP-4320	ACP-4360	IPC-623	ACP-5360	IPC-622	ACP-7360	IPC-6025	IPC-6606	IPC-6806	IPC-6608	IPC-6908
PCE-5B03V-01A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCE-5B03V-00A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCE-5B06V-04A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCE-5B05V-30A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCE-5B06V-00A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCE-5B05-02A1E	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-	-
PCE-5B05-04A1E	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-	-
PCE-5B04-20A1E	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-	-
PCE-5B06-04A1E	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
PCE-5B06-00A1E	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
PCE-5B06-40A1E	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-	-
PCE-5B07-04A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
PCE-5B08-02A1E	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
PCE-5B12-64B1E	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-
PCE-5B12-07A1E	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-
PCE-5B13-08A1E	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-
PCE-5B10-04A1E	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-
PCE-5B12D-04A1E	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-	-
PCE-5B18-88A1E	-	-	-	-	-	-	Yes	Yes	-	Yes	-	-	-	-	-
PCE-5B16Q-02A1E	-	-	-	-	-	-	Yes	Yes	-	Yes	-	-	-	-	-

PCI/ISA Backplanes

Yes: Supported/-: Not supported

Category	Model Name	Slot per segment					Segment	AT	ATX	1U Chassis		2U Chassis		4U Chassis	
		ISA	PCI	PICMG	PICMG/PCI	ISA/PCI				ACP-1010	ACP-1320	ACP-2000	IPC-602	ACP-4360	ACP-4320
		2-slot	2-slot	6-slot	6-slot	15-slot				15-slot					
1U Butterfly BP	PCA-6103P2V-0A2E*	-	2	1	-	-	1	-	Yes	Yes	Yes	-	-	-	-
	PCA-6105P4V-0B3E*	-	4	1	-	-	1	-	Yes	-	-	Yes	Yes	-	-
2U Butterfly BP	PCA-6106P3V-0B2E*	1	3	2	-	-	1	Yes	Yes	-	-	Yes	Yes	-	-
	PCA-6105P3-5A1E	1	2	1	-	1	1	-	Yes	-	-	-	-	-	-
5 Slot BP	PCA-6106P4-0A2E	-	4	2	-	-	1	Yes	Yes	-	-	-	-	-	-
	PCA-6106P3-0D2E	2	2	1	1	-	1	Yes	Yes	-	-	-	-	-	-
	PCA-6106-0B2E	6	-	-	-	-	1	Yes	Yes	-	-	-	-	-	-
	PCA-6108E-0C2E	8	-	-	-	-	1	Yes	Yes	-	-	-	-	-	-
	PCA-6108P6-0B4E	1	5	1	1	-	1	Yes	Yes	-	-	-	-	-	-
	PCA-6108P4-0C2E	3	3	1	1	-	1	Yes	Yes	-	-	-	-	-	-
6/8 Slot BP	PCA-6108-0B2E	8	-	-	-	-	1	Yes	Yes	-	-	-	-	-	-
	PCA-6114P12-0B3E	1	11	1	1	-	1	Yes	Yes	-	-	-	-	Yes	Yes
	PCA-6114P10-0B2E	2	10	2	-	-	1	Yes	Yes	-	-	-	-	Yes	Yes
	PCA-6114P7-0D3E	4	6	3	-	1	1	Yes	Yes	-	-	-	-	Yes	Yes
	PCA-6114P4-0C2E	8	4	2	-	-	1	Yes	Yes	-	-	-	-	Yes	Yes
	PCA-6113P4R-0C2E	7	4	2	-	-	1	Yes	Yes	-	-	-	-	Yes	Yes
14/15 Slot BP	PCA-6114-0B2E	14	-	-	-	-	1	Yes	Yes	-	-	-	-	Yes	Yes
	PCA-6115-0B2E	15	-	-	-	-	1	Yes	Yes	-	-	-	-	Yes	Yes
	PCA-6113DP4-0A2E	1	3.4	1.2	1.0	-	2	Yes	Yes	-	-	-	-	-	-
	PCA-6119P17-0B2E	-	16	1	1	-	1	Yes	optional	-	-	-	-	-	-
	PCA-6120P18-0A2E	1	17	1	1	-	1	Yes	optional	-	-	-	-	-	-
	PCA-6116QP2-0B2E	1.0	2	1.2	-	-	4	Yes	optional	-	-	-	-	-	-
20 Slot BP	PCA-6120P4-0B2E	14	4	2	-	-	1	Yes	optional	-	-	-	-	-	-
	PCA-6120P12-0A2E	7	11	1	1	-	1	Yes	optional	-	-	-	-	-	-
	PCA-6119P7-0B3E	10	7	2	-	-	1	Yes	optional	-	-	-	-	-	-
	PCA-6120DP4-0B2E	3.4	3	2	1	-	2	Yes	optional	-	-	-	-	-	-
	PCA-6120Q-0B2E	5	-	-	-	-	4	Yes	optional	-	-	-	-	-	-

Category	Model Name	4U Chassis						5U Chassis	6U Chassis	7U Chassis	Wallmount/Desktop Chassis						Cage
		ACP-4010	ACP-4000	IPC-630	IPC-610	IPC-611	IPC-623	ACP-5360	IPC-622	ACP-7360	8-slot	8-slot	6-slot	6-slot	5-slot	6-slot	
		15-slot	15-slot	15-slot	15-slot	15-slot	20-slot	20-slot	20-slot	20-slot	IPC-6908	IPC-6608	IPC-6606	IPC-6806	IPC-6025	IPC-6006	
1U Butterfly BP	PCA-6103P2V-0A2E*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2U Butterfly BP	PCA-6105P4V-0B3E*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	PCA-6106P3V-0B2E*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5 Slot BP	PCA-6105P3-5A1E	-	-	-	-	-	-	-	-	-	-	-	-	Yes	-	-	
	PCA-6106P4-0A2E	-	-	-	-	-	-	-	-	-	-	Yes	Yes	-	Yes	-	
6/8 Slot BP	PCA-6106P3-0D2E	-	-	-	-	-	-	-	-	-	-	Yes	Yes	-	Yes	-	
	PCA-6106-0B2E	-	-	-	-	-	-	-	-	-	-	Yes	Yes	-	Yes	-	
	PCA-6108E-0C2E	-	-	-	-	-	-	-	-	Yes	Yes	-	-	-	-	-	
	PCA-6108P6-0B4E	-	-	-	-	-	-	-	-	Yes	Yes	-	-	-	-	-	
	PCA-6108P4-0C2E	-	-	-	-	-	-	-	-	Yes	Yes	-	-	-	-	-	
	PCA-6108-0B2E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14/15 Slot BP	PCA-6114P12-0B3E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	
	PCA-6114P10-0B2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	
	PCA-6114P7-0D3E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	
	PCA-6114P4-0C2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	
	PCA-6113P4R-0C2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	
	PCA-6114-0B2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	
20 Slot BP	PCA-6115-0B2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	
	PCA-6113DP4-0A2E	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	PCA-6119P17-0B2E	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-	-	
	PCA-6120P18-0A2E	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-	-	
	PCA-6116QP2-0B2E	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-	-	
	PCA-6120P4-0B2E	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-	-	

Remarks:

- * : only sold with Advantech's 1U/2U chassis
- IPC-622, IPC-623, ACP-7360 provides four reset buttons for quad-system. For more information regarding chassis, please refer to Page 20-23

Backplanes Compatible with Half-Size SBCs

Yes : Supported / - : Not supported

Category	Model Name	Slots per segment						Segment
		ISA	PCI	PCIe x16	PCIe x4	PCIe x1	PICMG	
Pure ISA Backplane	PCA-6104-0C2E	3	-	-	-	-	1	1
	PCA-6106-0B2E	5	-	-	-	-	1	1
	PCA-6108-0B2E	7	-	-	-	-	1	1
	PCA-6108E-0C2E	7	-	-	-	-	1	1
Pure PCI Backplane	PCA-6104P4-0B2E	-	3	-	-	-	1	1
	PCA-6105P5-0B2E	-	4	-	-	-	1	1
	PCA-6108P8-0A2E	-	7	-	-	-	1	1
	PCA-6110P10-0A1E *	-	9	-	-	-	1	1
PCI/ISA Backplane	PCI-7110P3S6-00A1E	6	3	-	-	-	1	1
PICMG1.3 Half-Size Backplanes	PCE-3B04-00A1E	-	-	1	-	1	1	1
	PCE-3B04-03A1E	-	3	-	-	-	1	1
	PCE-3B03-00A1E	-	-	1	1	-	1	1
	PCE-3B06-00A1E	-	-	1	-	4	1	1
	PCE-3B06-03A1E	-	3	1	-	1	1	1

Category	Model Name	AT	ATX	IPC-619S	IPC-6908	IPC-6608	IPC-6606	IPC-6806S*	IPC-6006S	IPC-3026
				Backmount	Wallmount	Wallmount	Wallmount	Wallmount	Wallmount	Wallmount
				10-slot	8-slot	8-slot	6-slot	6-slot	6-slot	6-slot
Pure ISA Backplane	PCA-6104-0C2E	Yes	Yes	-	-	-	-	-	-	-
	PCA-6106-0B2E	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes
	PCA-6108-0B2E	Yes	Yes	-	-	-	-	-	-	-
Pure PCI Backplane	PCA-6108E-0C2E	Yes	Yes	-	Yes	Yes	-	-	-	-
	PCA-6104P4-0B2E	Yes	Yes	-	-	-	-	-	-	-
	PCA-6105P5-0B2E	Yes	Yes	-	-	-	Yes	Yes	Yes	Yes
	PCA-6108P8-0A2E	Yes	Yes	-	Yes	Yes	-	-	-	-
PCI/ISA Backplane	PCA-6110P10-0A1E*	-	Yes	-	-	-	-	-	-	-
	PCI-7110P3S6-00A1E	-	Yes	Yes	-	-	-	-	-	-
Half-Size Backplanes	PCE-3B04-00A1E	-	Yes	-	-	-	-	-	-	-
	PCE-3B04-03A1E	-	Yes	-	-	-	-	-	-	-
	PCE-3B03-00A1E	-	Yes	-	-	-	-	-	Yes	Yes
	PCE-3B06-00A1E	-	Yes	-	-	-	-	-	Yes	Yes
	PCE-3B06-03A1E	-	Yes	-	-	-	-	-	Yes	Yes

* Not suitable for Advantech Chassis

ATX Motherboards



Model Name		AIMB-763	AIMB-766
Processor System	CPU	Intel Core 2 Duo/Pentium 4/ Celeron D	Intel Core 2 Quad/Core 2 Duo/Pentium dual-core/Celeron
	Socket	LGA775	LGA775
	Max. Speed	2.66 GHz/ 3.8 GHz/ 3.06 GHz	3.0 GHz/ 3 GHz/ 2.6 GHz/ 2.2 GHz
	Front Side Bus	1066/800/533 MHz	1333/1066/800 MHz
	Cache	L2: 2 MB/ 2 MB/ 2 MB/ 512 KB	L2: 6 MB/ 6 MB/ 2 MB/ 512 KB
	Chipset	Intel 945G + ICH7R	Intel Q35 + ICH9 DO
	BIOS	Award 8 Mbit, FWH	AMI 32 Mbit, SPI
Expansion Slot	PCI	5	4
	PCIe x16	1	1
	PCIe x1	1	2
	PCIe x4	-	-
Memory	Technology	Dual channel DDR2 533/667 MHz	Dual Channel DDR2 667/ 800 MHz
	Max. Capacity	4 GB	8 GB
	Socket	4 x 240-pin DIMM	4 x 240-pin DIMM
Graphics	Controller	Intel GMA 950	Intel GMA 3100
	VRAM	Shared system memory up to 224 MB	Shared system memory up to 384 MB
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	Dual Intel 82573L	GbE LAN1: 82566DM GbE LAN2: 82573L
SATA	Max. Data Transfer Rate	300 MB/s	300 MB/s
	Channel	4 (SW RAID)	6 (SW RAID)
EIDE	Mode	ATA 100/66/33	ATA 100/66/33
	Channel	1	1
I/O Interface	VGA	1	1
	DVI	-	-
	USB	8	12
	Serial	4	4
	Parallel	1	1
	FDD	1	1
	PS/2	2 (1 x keyboard and 1 x mouse)	2 (1 x keyboard and 1 x mouse)
	Ethernet (GbE)	2	2
	Audio	Mic-in, Line-in, Line-out	Mic-in, Line-out
Watchdog Timer	Output	System reset	System reset
	Interval	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min

NEW

NEW

NEW



AIMB-767	AIMB-769	AIMB-780	AIMB-781
Intel Core 2 Quad/Core 2 Duo/Pentium dual-core/Celeron	Intel Core 2 Quad/Core 2 Duo/Pentium dual-core/Celeron	Intel Core i7/i5/i3/Pentium/Xeon	Intel 2nd generation Core i7/i5/i3
LGA775	LGA775	LGA1156	LGA1155
3.0 GHz/ 3.16 GHz/ 2.93 GHz/ 2.2 GHz	3.0 GHz/ 3.16 GHz/ 2.93 GHz/ 2.2 GHz	2.93 GHz/ 2.93 GHz/ 3.60 GHz/3.06 GHz/ 2.8 GHz	3.4 GHz/ 3.1 GHz/ 3.3 GHz
1333/1066/800 MHz	1333/1066/800 MHz	-	-
L2: 12 MB/ 6 MB/ 8 MB/ 512 KB	L2: 12 MB/ 6 MB/ 8 MB/ 512 KB	L3: 8 MB/ 4 MB/ 4 MB/ 3 MB/ 8 MB	L3: 8 MB/ 6 MB/ 3 MB
Intel G41 + ICH7R	Intel G41 + ICH7	Q57 for QG2 version; 3450 for WG2 version	Q67 for QG2 version; B65 for QVG version
AMI 16 Mbit, SPI	AMI 16 Mbit, SPI	AMI 64 Mbit SPI	AMI 64 Mbit SPI
5	5	4	4
1	1	1 (Gen2)	1 (Gen2)
-	1	1	1 (Gen2)
1	-	1	1 (Gen2)
Dual channel DDR3 800/1066 MHz	Dual channel DDR3 800/1066 MHz	Dual Channel DDR3 800/1066/1333 MHz	Dual Channel DDR3 1066/1333
4 GB	4 GB	16 GB	16 GB
2 x 240-pin DIMM	2 x 240-pin DIMM	4 x 240-pin DIMM	4 x 240-pin DIMM
Intel GMA X4500	Intel GMA X4500	Intel HD Graphics	Intel HD 2000/3000 Graphics
Shared system memory up to 352 MB	Shared system memory up to 352 MB	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Dual Intel 82583V	GbE LAN: Realtek RTL8111DL	GbE LAN1: Intel 82578DM, GbE LAN2: Intel 82583V	GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82583V
300 MB/s	300 MB/s	300 MB/s	600 MB/s; 300 MB/s
4 (SW RAID)	4	6 (SW RAID)	6 (SW RAID)
-	-	-	-
-	-	-	-
1	1	1	1
1	-	1	1 for QG2 version
8	8	14	14 for QG2 version; 12 for QVG version
4	2	4	6 for QG2 version ; 2 for QVG version
1	-	1	1
1	1	1	-
2 (1 x keyboard and 1 x mouse)	2 (1 x keyboard and 1 x mouse)	2 (1 x keyboard and 1 x mouse)	2 (1 x keyboard and 1 x mouse)
2	1	2	2 for QG2 version; 1 for QVG version
Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out
System reset	System reset	System reset	System reset
Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min

Configuration Table

Find the best combinations of chassis and Motherboards

Yes : supported / - : not supported / Δ : supported with limitation

		ATX Motherboards					MicroATX Motherboard			Mini-ITX Motherboard			
		AIMB-781	AIMB-780	AIMB-767	AIMB-766	AIMB-763	AIMB-580	AIMB-567	AIMB-562	AIMB-280	AIMB-270	AIMB-258	AIMB-212
1U System	ACP-1010MB ACP-1320MB	Δ Supports up to 2nd generation Core i3 (65W) only	Δ Supports up to Core i5 (73W) only	Δ Supports up to Core 2 Duo (65W) and Pentium 4 3.4 GHz (84W) only	Δ Supports up to Core 2 Duo (65W) and Pentium 4 3.4 GHz (84W) only	-	Δ Supports up to Core i5 (73W) only	Δ Supports up to Core 2 Duo (65W) and Pentium 4 3.4 GHz (84W) only	-	-	-	-	-
	ACP-2010MB ACP-2320MB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
2U System	IPC-603MB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
	ACP-4360MB ACP-4362MB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
4U System	ACP-4310MB ACP-4010MB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
	ACP-4000MB IPC-610MB-H	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
	IPC-610MB-F/L IPC-611MB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
	IPC-619MB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
	IPC-630MB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
	IPC-510MB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
	IPC-5120	-	-	-	-	-	Yes	Yes	Yes	-	-	-	-
	IPC-5122	-	-	-	-	-	Yes	Yes	Yes	-	-	-	-
Wallmount System	IPC-7120	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
	IPC-7130	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
	IPC-7220	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
Embedded System	ARK-6610	-	-	-	-	-	-	-	-	Yes	Yes	Yes	-
	ARK-6620	-	-	-	-	-	-	-	-	-	Yes	Yes	-
	ARK-6622	-	-	-	-	-	-	-	-	-	Yes	Yes	-
	AIMB-C200	-	-	-	-	-	-	-	-	-	Yes	Yes	Yes

Find the best combinations of chassis and PICMG SBCs

Yes : supported / - : not supported / Δ : supported with limitation

		PICMG 1.3 Full-Size SHB			PICMG 1.0 Full-Size SBC				PCI Half-Size SBC			ISA Half-Size SBC		
		PCE-7214	PCE-5125	PCE-5124	PCA-6194	PCA-6012	PCA-6011	PCA-6010	PCI-7031	PCI-7030	PCI-7020	PCA-6782	PCA-6743	PCA-6742
1U System	ACP-1010 ACP-1320	-	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
2U System	IPC-602	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
4U System	ACP-4000 IPC-610	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	ACP-4010 ACP-4320	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	ACP-4360 ACP-4362	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	IPC-619	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	IPC-619S	-	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	IPC-630	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	IPC-610-F/L IPC-611	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	IPC-510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
IPC-623	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	
5U System	ACP-5360	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
6U System	IPC-622	-	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-	-
7U System	ACP-7360	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
Wallmount System	MBPC-641	-	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	IPC-3026	-	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	IPC-6806S	-	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	IPC-6025	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	IPC-6606	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	IPC-6806	-	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	IPC-6806W	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
IPC-6608	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	
IPC-6908	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	