TINY PC/104 CPU MODULE BREAKS SIZE BARRIERS
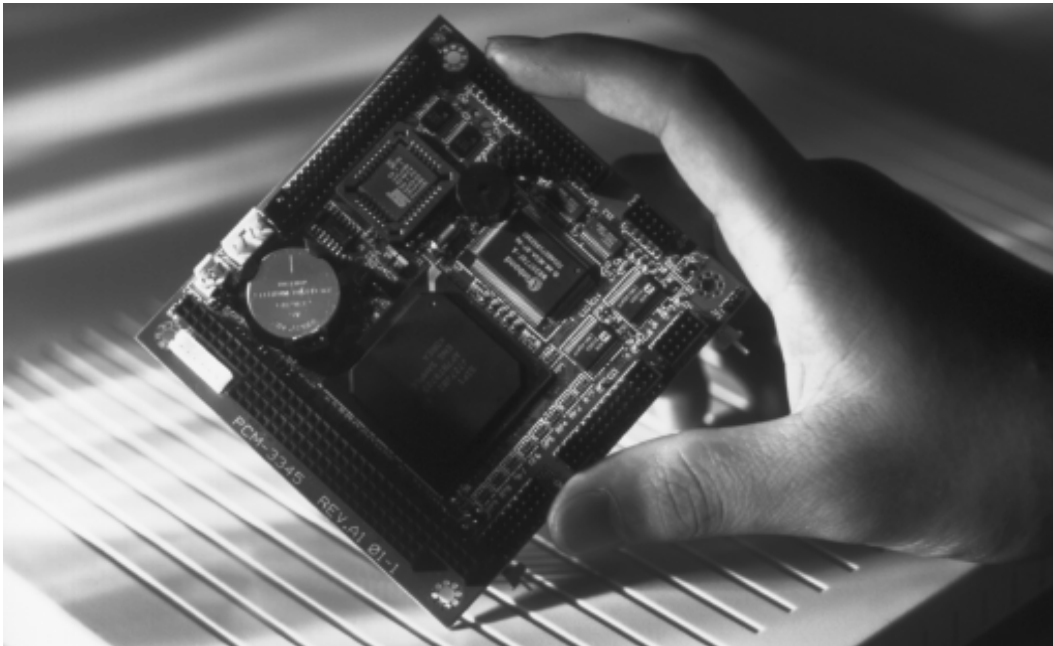
Advantech's New PCM-3345 PC/104 CPU Module

WHAT'S INSIDE

Advantech's new PC/104 module, the PCM-3345, is truly an all-in-one CPU board, yet its form factor is only that of a standard PC/104 module (90 x 96 mm). This makes it one of the smallest complete SBCs on the market.

All On Board!

Even though this module is so tiny, it still contains everything that a full-fledged computer requires. Its on-board CPU is a 486 DX 66 MHz equivalent from ST Thompson (STPC). It's unique for a 486-based CPU in that its front side bus runs at 66 MHz, instead of only 33 MHz like Intel 486 CPUs. Also, since it's integrated on board, there is no need to configure CPU frequency or voltage. Also included on board is 8 MB of SO DIMM (with a 16 or 32 MB option). Extra memory comes in handy because of this board's shared VGA memory capability.
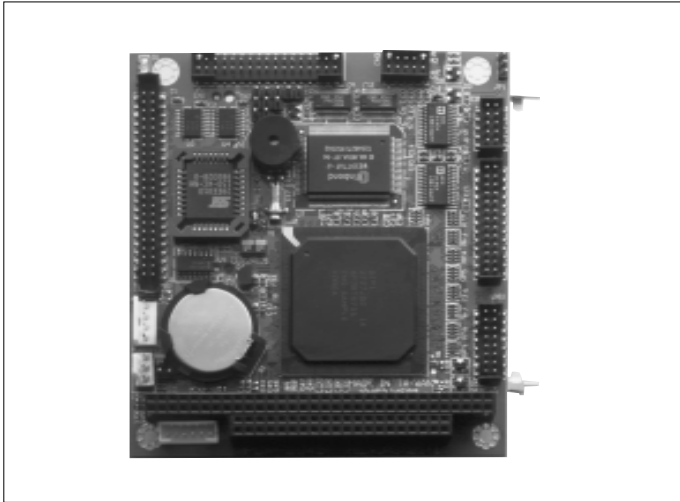
CE

ISO 9001 14001 Certified

There's More...

This module supports ATX power (allowing for remote power-on) and watchdog timer protection. Its small size doesn't limit the number of ports or connectors, either. On board, there are two serial and one parallel ports,

PCM-3345

one FDD connector and one IDE connector, allowing for as much peripheral expansion as most much larger size SBCs. This board also supports one compact Flash card for use as an emulated HDD (any CFA approved compact Flash card can be used). Advantech provides several size options of compact Flash cards (up to 40 MB).

Add-on Possibilities

The PCM-3345 has on-board VGA support for CRTs, but if your application requires LCD, you can purchase Advantech's newly upgraded PCM-3521 Flat Panel/CRT VGA PC/104 module. To increase the usable distance of your LCD, you can consider using Advantech's PCM-3540T/R LVDS transmitting and receiving modules for ranges of up to 12 meters (see story on next page). Increasing the range of LCD displays from 30 cm to 12 meters opens up a whole new range of application possibilities.

Now Accepting Orders

Engineering samples of the PCM-3345 will become available in October. If you are interested in acquiring a sample for evaluation purposes, or inquire about more information on the PCM-3345, please consult your Advantech sales representative. Advantech always strives to satisfy its customers.

Advantech Introduces Its Revised Multimedia SBC

Advantech has recently upgraded its PCM-5862E/5862EL Pentium MMX SBC (with VGA/LCD, Ethernet and optional audio), which now has several advantages over the earlier PCM-5862/5862L. The most important modification is an upgrade in Ethernet speeds from 10Base-T to 100Base-T, allowing for faster and more versatile communication options. An ATX power supply allows for
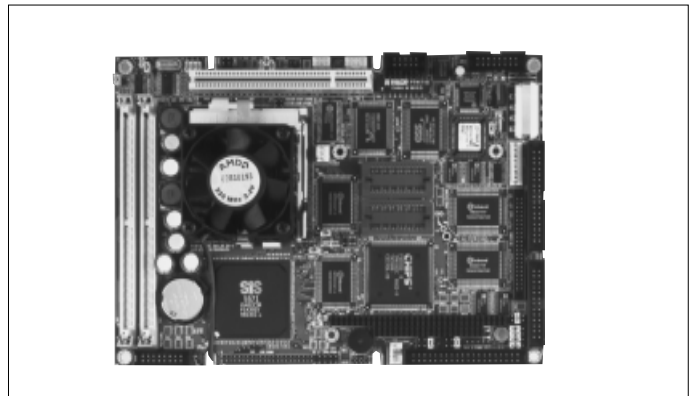
PCM-5862E/5862EL

power control signaling and automation, unlike other power supplies. Lastly, the PCM-5862E/5862EL employs a new, improved chipset, the RTL 8139A.

Other Improvements Important Too

Another important modification is a more flexible switching power supply. Whereas before only 4 voltage levels were selectable, now 15 are available (from 2.1 V to 3.5 V in 0.1 V increments), allowing for freer selection by the user of CPU brands and speeds. Also, temperatures should be lower due to the appropriate use of voltage settings.

Application Possibilities

This powerful, compact SBC promises nearly unlimited application possibilities. Multimedia applications such as information kiosks, internet terminals, interactive maps, airport and train station information or control systems, etc. Feel free to discuss application options and product information more in-depth with Advantech's many representatives and/or application engineers.

Popular LVDS Demo Kit Now Available

At Advantech's 15th Anniversary Global Business Development Conference in July, many attendees expressed interest in an LVDS long distance LCD support demo configuration on display there. It linked an Advantech CPU card (PCA-6153 586-based CPU card) to an XGA LCD (Sharp's 13.8" 36-bit XGA LCD) over 12 meters away by employing Advantech's PCM-3540T and PCM-3540R modules.

Because of the strong interest expressed in this system, EPC has decided to detail it here for your information. This is a complete set, and all components can be purchased from Advantech. The LCD used is a Sharp 13.8" TFT LCD with 36-bit XGA capability. The CPU card is a Pentium-processor based half-size SBC equipped with the C&T 65550 chipset. For more product names and ordering item numbers, please refer to the information and diagram below. If you are interested in this particular setup, or in any similar combination, please don't hesitate to contact an Advantech sales representative.

Advantech CPU board/card:

PCA-6153-02A2 (Half-size Pentium CPU card with 2 MB video RAM)

LVDS module:

Transmitter: PCM-3540T-00A1 (including one 44-pin LCD cable)
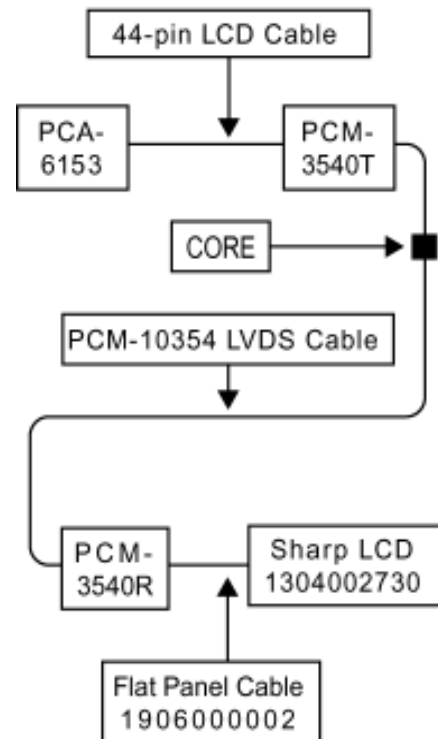
Receiver: PCM-3540R-00A1

Cable (12 m): PCM-10354-1200

Flat panel cable (from PCM-3540R to LCD): FPC for Sharp LQ14X03E Rev.A101-1 (Item No.: 1906000002)

LCD: 36-bit XGA TFT LCD, Sharp LQ14X03E (Item No.: 1304002730)

You may need to modify your CPU BIOS to operate the Sharp LQ14X03E LCD. Please contact Advantech's Customer Service Department for the modified BIOS.

LVDS Demo Configuration

Advantech's IDE Flash Module Upgraded

Advantech's PCD-1230A is a new upgrade of its popular PCD-1230 IDE Flash disk module. This module, like its predecessor, has both the advantages of Flash disks (fast and rugged) and IDE HDDs (easy interface and configuration).

Worthy Improvements

Utilizing TSOP instead of LCC packaging for the Flash memory chip, the PCD-1230A is now even more reliable in harsh environments. Another improvement is the increased amount of memory supported. This upgrade now supports Flash disk sizes of 4, 8 and 16 MB, verses the previous version's 2, 4 and 8 MB. One can get all of this now for an even lower price than the original version. For more information, or to place orders, please contact your local Advantech representative today.

New Features on Upgraded Pentium POS Board

Advantech's newly upgraded POS-560 Rev.B1 Pentium MMX has several advantages over the earlier POS-560 Rev.A1. The most important modification is, similar to the PCM-5862E/5862EL, a more flexible switching power supply. Whereas before only 4 voltage levels were selectable, now 15 are available (from 2.1 to 3.5 V), allowing for freer selection by the user of CPU brands and speeds. Also, temperatures should be lower due to the appropriate use of the switching power supply. Another important improvement is the use of built-in polyswitches for COM1-4 voltage protection, verses the previously used fuses.

Other Improvements Important Too

Other improvements include a fixed voltage setting of 5 V for SIMMs and 3.3 V for DIMMs (setting jumpers is no longer necessary), lithium vs. Ni-MH batteries (safer at high temperatures and more environment friendly), and more versatile keyboard and mouse connectors. Now, instead of dedicated connectors, the first connector can be used for either keyboard or keyboard and mouse (with a Y-cable) and the second connector can connect to a mouse or a keyboard (by jumper setting). Contact Advantech for more details.

PCA-6154/L Passes CE Certification

Because quality and safety are extremely important to Advantech, its policy demands that all products get CE approval. That being the case, Advantech is happy to announce that its PCA-6154/L Half-size Pentium MMX CPU card has officially passed CE approval. Both the certificate and the report are available by request (report numbers 87072210 for CE and F87072210 for FCC).
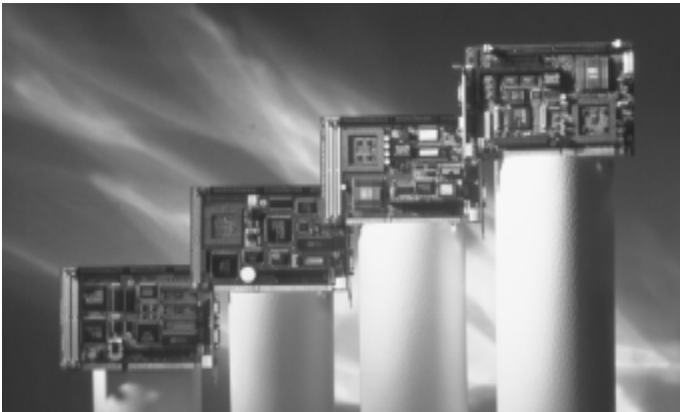
Phase-in/Phase-out List for EPC Products

Because of the fast development pace of the computer industry in general, embedded PC products are continually being upgraded to take advantage of these new improved, and often cheaper, technologies. Also, as with the computer industry, individual 3rd party chips and other products are continually being phased-in and phased-out, based on market demand and evolving technologies and standards. Below is a list of Advantech products that have, or are soon to be, phased out, as well as their corresponding replacement models, most of which have additional or more flexible features and often a lower price than the original, phased-out model. If you have any further questions, do not hesitate to contact your local Advantech representative.

Phased-out Model	Phased-in or Replacement Model
PCM-5860-0000	PCM-5862L
PCM-4824-0000	PCM-4825L
PCM-4822-0000	PCM-4823L
PCM-4820-0000	PCM4825L/4823L
	PCM-5862E/L[1]
PCA-6151-0002	PCA-6154/L
PCA-6144V-0000	PCA-6145B/L
PCA-6143P-0000	PCA-6144S
PCA-6134P-4100	PCA-6135L
POS-460-00A1	POS-460-00A2
POS-460-0400	POS-460-40A2
POS-560-00A1	POS-560-00B1
	POS-562/L
PCM-3290-0000	PCM-3290A-0100
PCM-3200	N/A
PCM-3420	N/A
PCM-3510	N/A
PCM-3410	N/A
PCM-3110	PCM-3110A
PCM-3330	PCM-3335
PCM-3810-00A2[2]	PCM-3810A-00A1
PCM-3820	PCM-3840
PCM-3520-0000[3]	PCM-3521-00A1[4]
PCM-3920-0000	N/A
PCM-3920V-0000	N/A
PCD-896	PCD-897
PCD-1230	PCD-1230A
	PCM-3345[5]
	PCM-3540 T/R[6]
POS-815-0000[7]	POS-810/POS-808

[1] Available 10/15/1998
[2] Last buy date: 12/31/1998
[3] Last buy date: 1/31/1999
[4] Available 10/31/1998
[5] Available 11/15/1998
[6] Available 9/30/1998
[7] Last buy date: 10/31/1998

Advantech Inside European Automated Roulette Machine

A European company has combined a range of Advantech SBCs and expansion modules to build an unmanned roulette machine. Automation saves a lot in overhead wages in the mid- to long-run, since traditional roulette tables require eight employees (this one only requires 0.3!). This machine can support up to eight players at any one time. Each player is equipped with a multilingual display (8 languages), a keyboard, and bill and credit card acceptors (optional).

Advantech Inside

Each roulette machine uses nearly two dozen Advantech components. Each of the eight player 'terminals' uses a PCM-3864 386-based SBC with VGA/LCD interface in conjunction with a PCD-1230 IDE Flash disk module with 2 MB of memory. Each of these 'terminals' is connected to a 'server' by means of an RS-485 connection. This server is composed of a PCM-4825 486-based SBC with VGA/LCD and audio, also in conjunction with a PCD-1230 IDE Flash disk module with 2 MB of memory. By exploiting 386-based boards for terminals and 486-based boards as servers, a significant cost savings was achieved. Using IDE Flash modules also makes the system more rugged and tolerant of the bumps and vibrations inherent in publicly operated devices.

Alternative Application Ideas

Beside using this setup simply as a roulette table, virtually the same configuration could be used in any multiple player games or other multiple user applications. For additional ideas and/or ordering information, contact your local Advantech representative today.

Industrial PC & Scale Integrated into an Affordable Solution

A long-term Advantech partner has chosen the PCA-6153 (Pentium-processor based half-size CPU card with PCI, LCD/CRT interface) as the heart of its multirange industrial PC and scale. The highly-precise scale is designed for use in laboratories or supermarkets, and its pairing with a Pentium-level computer allows for flexible and extensive software application support for nearly any project you are working on.

Why Advantech?

Advantech's PCA-6153 was chosen because it comes with LCD interface and is designed for Pentium processors. Maybe an even more important reason why Advantech was chosen over its competitors was because of pre- and post-sales service. The quality and reliability of this service has been important, not only for this project, but also for an on-going project (based around Advantech's PCM-4862) and possible future projects (based around Advantech's PCM-4823 and Windows CE).

Alternative Application Ideas

Besides this example, there are several similar kinds of applications in which Advantech products can be used efficiently and effectively. Temperature or pressure measuring systems and lab- or factory-based sensor monitoring networks are only a few examples.

Your Total Solution

These kinds of applications only touch the tip of the iceberg of potential uses for Advantech's large array of industrial grade computing products. These powerful, flexible, yet inexpensive components can serve as the solution for nearly any systems integration problem that you may have. Contact your Advantech representative for more detailed information.

Goal of Leadership in Automation Emphasized at Conference

From July 14 through 16, Advantech held its Global Business Development Conference to celebrate its 15th year anniversary. The conference was held at Tashee Resort, a 5-star resort located not far from Taipei. Hundreds of guests

attended, including Advantech's overseas vendors, manufacturers, distributors and customers, as well as many international and local members of the media and other industry VIPs. Representatives from Intel, Microsoft, Sharp and Intellution gave well-received keynote speeches.

This meeting was the first where all of Advantech's division groups (IC, IA, EPC and PPC) were represented. The theme

was how to build on the experience of Advantech's first 15 years to become a leader in industrial automation in the 21st century. After the first day's speeches and receptions, attendees met in group-specific conferences to discuss and share issues and experiences with each other. Everyone considered both the content and the location of this conference as excellent.

EPC's Volume 91 Master Catalog Available in Decenber

Advantech EPC group's new Master Catalog, volume 91, will contain all of EPC's popular products, as well as dozens of new products developed to meet the needs of an expanding embedded PC marketplace. With this guide, Advantech hopes to ease the product selection process for its customers, with whom we wish to create new business possibilities and partnerships. The pilot run is set for the end of Oct. 1998. On Oct. 30, EPC will begin to take customized version orders. Mass printing will be available by the end of December.

AE Training in Düsseldorf on Sept. 28-29

Each year, the EPC group holds three Application Engineering training sessions for its regional distributors, representatives, and customers: one in the U.S., one in Asia, and one in Europe. This year's European AE training session will be held in Düsseldorf on Sept. 28-29.

Product Searches Are Now a Snap on EPC's Web Site

Finding exactly the kind of product with the right specifications for your needs is now just a few mouse clicks away. By accessing EPC Web site's new search page, one can identify the individual features required in an easy, step-by-step fashion. Simply click on the Product Search icon on EPC's home page to access this function. We welcome you to try it for yourselves at the follow internet address:

http://www.advantech.com.tw/epc

EPC Q4 Trade Show Schcdule

Show Name	Region	Preiod
Embedded System Conf.	London/UK	Sept 7-9
Comdex/Asia	Singapore	Sept 23-25
World PC Expo'98	Japan	Sept 30-Oct 3
PC Developers' Conf. & Expo	Paris/France	Oct 5-8
Electronica	Munchen	Nov. 10-13
Comdex/Fall	Vegas/US	Nov. 16-20