

New Product/Service

[Advantech Brings Windows CE Multimedia Solution to Embedded Applications](#)

Advantech can now provide customers with a Windows CE multimedia total solution that provides streaming video/audio capability. This solution brings high performance multimedia technologies (Windows Media Technology) found on desktop PCs to Windows CE based devices.



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Fax: 886-2-2218-3875
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New Product

[New PC/104 GPS Module Expands Application Possibilities](#)



Advantech will soon be phasing-in their new PC/104 form factor GPS module, the PCM-3291. The new PCM-3291 now offers an extended operating temperature range of $-30^{\circ}\text{C} \sim 75^{\circ}\text{C}$. Combine this with the rugged industrial grade construction and the new application possibilities become apparent.

Recent News

New Products

- [New PCM-9550F Fanless EBX SBC with PC/104-Plus: Perfect for Medical and POS Applications](#)
- [PCM-5820 Board Now Supports NS Geode™ GX1 Processor](#)

Product Information

- [CompactFlash™ \(50 pin\) to Hard drive \(44 pin\) Adapter](#)
- [PCM-5862E Phase Out Information](#)
- [POS-560 Updated Ordering Information](#)

Technical Information

- [More About the EBX Form Factor](#)

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Technical Information

Advantech Brings Windows CE Multimedia Solution to Embedded Applications

Advantech can now provide customers with a Windows® CE multimedia total solution that provides streaming video/audio capability. Previously introduced and demonstrated using an Advantech [PCM-5820](#) and [PCM-5822](#) SBC at WinHEC 2000 in New Orleans (April 25 - 27, 2000), Advantech is formally announcing to our customers and distributors the capability to combine an Advantech SBC and Windows® CE in a match that is perfect for Internet and multimedia applications.

Solution Brings High Performance PC Multimedia to Windows CE Devices



Bring Streaming Video to Windows CE

This solution brings high performance multimedia technologies (Windows Media Technology) found on desktop PCs to Windows CE based devices. Advantech has been working closely with the Microsoft Windows CE team. The communication channels have resulted in a successful product that offers the extremely small footprint of a Windows CE operating system that can play audio files (MP3 and .WAV) and video files (like MPEG-1) from local storage, LAN or the internet. The system can also play Streaming video and audio files from the

Internet.

The Right Combination of Hardware, Software and Knowhow

The application configuration is a combination of Advantech hardware, Microsoft products and the contribution of the Advantech Windows CE professionals to make this possible on an extremely compact and efficient embedded system. The application hardware and software used is listed below.

Hardware:

- [PCM-5820](#) or [PCM-5822 SBC](#)
- Serial port touchscreen

Software:

- Windows CE 2.12
- Internet Explorer
- Windows Media Technologies 4.1
- Windows Media Player 6.4 ActiveX control

Working Together with Customers

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Playing MPEG-1 Video

These new capabilities open even more application possibilities that cater to Advantech ODM customers extremely well. The ability to offer multimedia files from a local device, LAN or the Internet, on an embedded platform, has enormous market potential. The ability to provide these solutions in record time is also important. Advantech has always been Microsoft's important partner for the embedded market. Bringing this multimedia Windows CE solution to ODM customers creates even more value-added support from Advantech.

[Find Out More Today](#)

This service is available now. Providing total solutions like this, solutions that incorporate services that compliment our product line, is a major goal at Advantech. This Windows CE solution is proof that Advantech is trying hard to become the number one embedded solution provider in the world. For more information and details on this Windows CE multimedia solution, contact epc@advantech.com.tw today. Let Advantech make your Windows CE embedded multimedia ideas a reality today.

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New Product

New PC/104 GPS Module Expands Application Possibilities



PCM-3291 and Antenna

Advantech will soon be phasing-in their new PC/104 form factor GPS module, the PCM-3291. Just like the PCM-3290A GPS Module it will replace, the PCM-3291 is designed with sophisticated satellite technology to locate and track any location in the world, in real-time. However, improvements in the PCM-3291's operating temperature capacity have allowed it to be used in even more applications than the PCM-3290A. Using a Rockwell 12-channel GPS engine that

provides differential input for the use of DGPS to assure pinpoint accuracy, the PCM-3291 offers a wide range of GPS functions such as position, navigation, satellite and timing information for the use in embedded-PC navigation systems.

Improved Temperature Range Increases Capability

The PCM-3291 demonstrates Advantech's focus on built-in quality and reliability. The most notable difference between the PCM-3290A and the PCM-3291, is the operating temperature range. The PCM-3290A has a $-10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ operating temperature range. **The new PCM-3291 now offers an extended operating temperature range of $-30^{\circ}\text{C} \sim 75^{\circ}\text{C}$.** Combine this with the rugged industrial grade construction and the new application possibilities become apparent. Also, another important factor is that this improvement was achieved without a significant increase in the price of the PCM-3291 compared to the PCM-3290A.



PCM-3291 Mounted on PCM-3346 SBC

[Click here to view PCM-3291 Datasheet Information](#)

The temperature range increase opens the PCM-3291 to even more cold and hot weather outdoor applications as well as other temperature critical embedded applications. As mobile embedded applications become more and more commonplace, the ability to withstand higher or lower temperatures will become an industry standard. Advantech has been working hard making sure their product testing, design and QC support these market needs.

Eased Restrictions Mean Better Accuracy

The US DOD (Department of Defense) has recently discontinued Selective

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Availability (SA) used to degrade the accuracy of GPS This removal went into effect May 1st, 2000. This liberalization, which meant setting the SA to 0, gives normal users much more accuracy for their GPS products. This gives system integrators more accuracy to use GPS in different ways, thus increasing the need for rugged and capable GPS embedded products.

Availability

This PCM-3291 will be available in August, 2000, with the PCM-3290A being phased out by the end of September. Contact Advantech anytime at epc@advantech.com.tw to find out more about this new product or any other embedded products we offer. You may also contact your local Advantech representative for more information. Use the following part number for more information: **PCM-3291-0000** PC/104 GPS Module (with antenna included)

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PC/104 GPS Module Datasheet Information

Specifications for New PCM-3291

1. Major Specifications

- 1.1 Receiving channel :12-channel parallel
- 1.2 Receiving frequency :1575.42 MHz \pm 1 MHz (C/A code)
- 1.3 Receiving sensitivity :Under -130 dBm
- 1.4 Accuracy a) Position :2D RMS (PDOP=3 or less) , Spherical error probability 95% :100 m (with SA) :50 m (without SA) b) Velocity :Up to 1m/sec (PDOP=3 or less)with SA Time Mark Pulse :1 Sec \pm 500 ns (TYP.)
- 1.5 Minimum units of measurement a)Position :1/1,0000min b) Velocity :0.1 km/h c) Bearing :0.1 degree
- 1.6 Tracking performance a) Velocity :Up to 950 m/s b) Acceleration :Up to 4 G
- 1.7 Position update rate :1 sec
- 1.8 Time to first fix a) Warm start :Within 60 sec (TYP. at normal temperature, collected all almanac data and restart after fix) b) Cold start :3 minutes (TYP. at normal temperature)
- 1.9 Positioning mode : 2-D Positioning (3 Satellites: HDOP<10) :3-D Positioning (4 Satellites: PDOP<7)
- 1.10 Initial position data :Not necessary
- 1.11 Almanac and Time data : Not necessary
- 1.12 Supply power a) Voltage :+ 5 V \pm 5 %, ripples within 50 mV p-p b) Current :300 mA (NO GYRO)
- 1.13 Operating temperature range:-30° C to + 75° C
- 1.14 Storage temperature range :- 40° C to + 85° C
- 1.15 Weight : less 110 g
- 1.16 Dimensions : 95.9 x 90.2 x 40.3 mm (GYRO) 95.9 x 90.2 x 28.6 mm (No GYRO)
- 1.17 Data communication : Asynchronous bi-directional data communication with TTL level
- 1.18 Input data DGPS : RTCM SC-104 Message type 1 and 9 GPS set up : Original
- 1.19 Output data format : NMEA-0183 or Binary
- 1.20 Time mark pulse output : 1PPS/10 KHz
- Default format type is NMEA-0183 format.
 - 9600 bps nonparty 1 start-bit 1 stop bit.
 - 4800 bps nonparty 1 start-bit 1 stop bit.
- Default Output Message.

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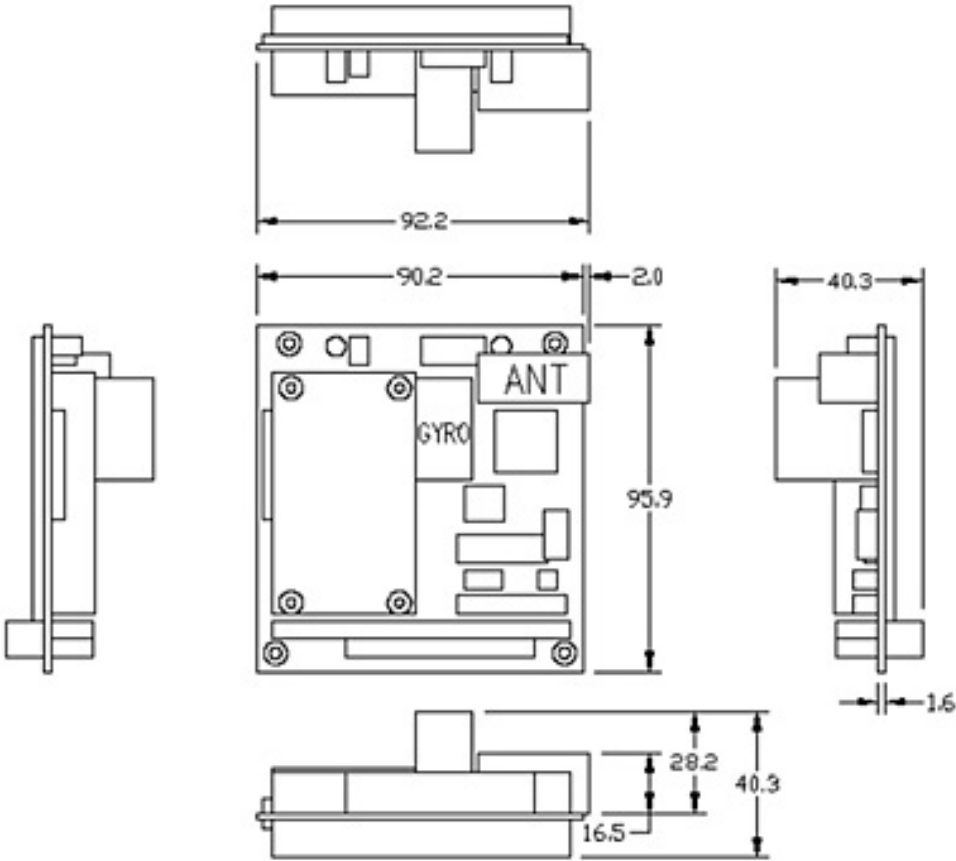
○ Message Type

- GGA
- GSA
- GSV
- RMC
- ZCH

- To change to NMEA0183 format should be use input command. Refer to Binary format and NMEA0183 format.

Ordering Info

PCM-3291-0000 PC/104 GPS Module



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