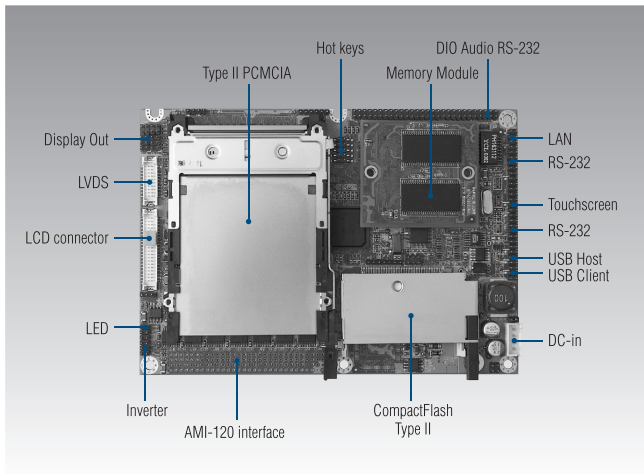


# PCM-7230 Series

**3.5" OS-ready SBC with Intel® XScale® PXA255 processor, Windows® CE .NET/Linux**



## Features

- Intel® Xscale PXA255 400 MHz CPU
- Analog video interface with TV-in/out function for DVD player & CCD camera
- XGA (1024X768), 24 bit Graphic performance with additional Tvia 5202G VGA Controller
- Comprehensive I/O interface with USB, COMs, Audio, CF & PCMCIA slots
- Advantech complete power management with only 40mWatt suspend power consumption
- Boot from External CompactFlash card is default
- AMI (ARM Bus Interface) System Bus Interface for additional expansion application
- OS-Ready for both WinCE.NET and Embedded Linux

## Introduction

The PCM-7230 Series integrates Intel's RISC XScale PXA255-400 MHz processor and Windows CE .NET 4.2 or Embedded Linux on a 145 x 102 mm form factor. It is designed to provide customers an Ultra low power Embedded Platform for heavy graphics applications by the additional VGA controller -Tvia 5202G. It is ready-to-run, system function ready, and flexible for expansion to meet all versatile embedded application needs.

Off-the-shelf, production-ready SBC for customized reference platform

The PCM-7230 offers a fast time to market and flexible reference platform that is fully customizable. All functionality has been completely certified and leveraged to customize different hardware specifications and system optimization based on the customer's request.

XScale base solution platform customizes your versatile needs thru Tvia graphic chip

Based on the Intel XScale PXA255 processor, which is a complete 32-bit, up to 400 MHz speed SOC engine, this platform offers comprehensive I/O interfaces and high performance, it also has reserve interfaces for flexible configuration. With additional VGA Controller (Tvia 5202G graphic chip), resolution would be support up to XGA (1024 x 768), 24-bit graphics performance and also TV-in function for analog video input design for surveillance or in-vehicle applications.

## Applications

- Industrial mobile device platform
- Telematics / Navigator / AVL / DBA
- Touch Panel base terminal
- Low cost HMI

## Specifications

### System Kernel

- **CPU** XScale PXA255 400 MHz default (200,300 MHz optional)
- **OS support** WinCE.NET4.2/Embedded Linux (2.4.19 kernel)
- **Boot Loader** 1 MB AMD Flash ROM for Bootloader
- **OS image storage** OS Image loaded from external CF at default or optional memory module
- **WDT** PXA255 internal
- **RTC** HT1381, backup by internal backup battery

### Memory

- **Flash** Optional CF card or memory module up to 64 MB
- **SDRAM** 64 MB (default) SDRAM on board or up to 128 MB thru memory module

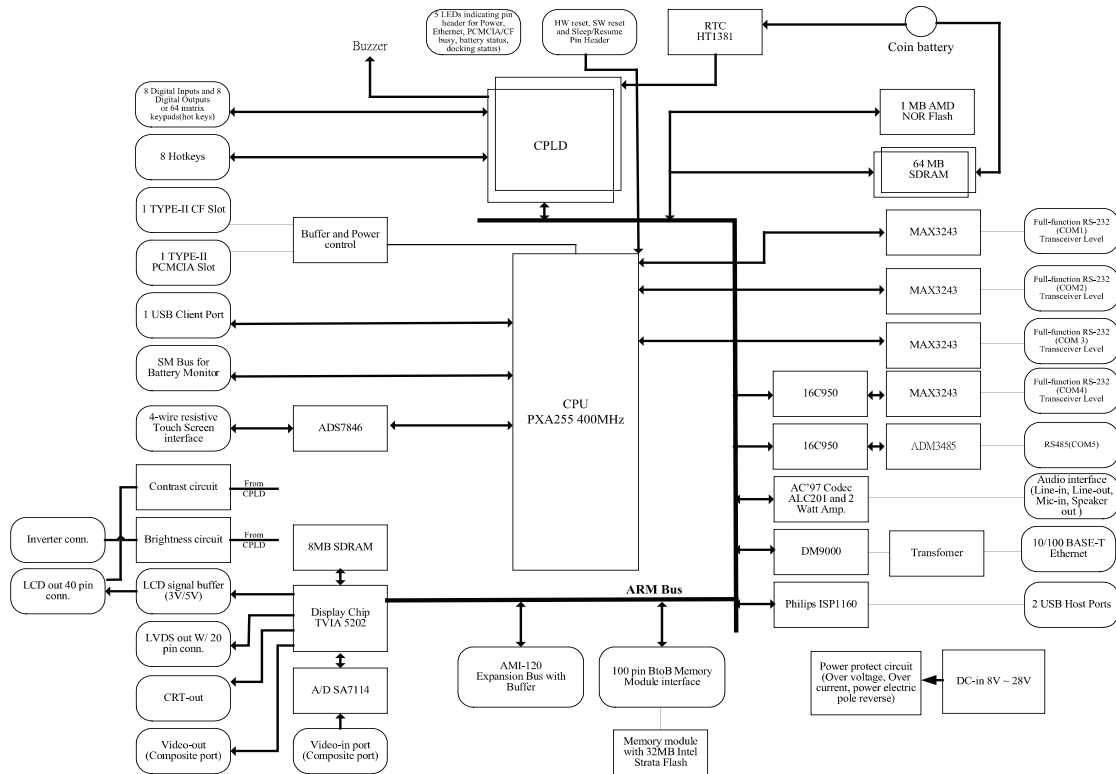
### Display

- **LCD** Default thru Tvia5202G, support 640 x 480 & 800 x 600 (default) (1024x768 is by project) Or PXA255 internal LCD controller reserved for QVGA
- **CRT** Yes
- **Video-in/ out** Output NTSC (Default) /PAL, Up to VGA (640X480) resolution support
- **T/S** 4-wire resistant touch screen
- **SM bus** For smart battery, pin header, I2C bus
- **System Back-up Battery** Rechargeable Li-ion battery 65mAH, Support System SDRAM and RTC

### I/Os

- **CompactFlash** 1x type II CF slot support I/O & data mode.
- **PCMCIA** 1x type II PCMCIA slot support I/O & data mode.
- **RS232(COM1-COM4)** 4x RS-232 COM Port full 9 pin transceiver level
- **RS485 (COM5)** 1x RS-485 COM W/ AFC. ( RS-232, 2-pin TTL configurable)
- **USB** ISP1160. 2x USB host(1.1).& 1x USB Client for Sync DM9000. 10/100 based-T.
- **Ethernet Interface** 8 DI & 8 DO. Pin header output. Provide API to access DIO.
- **Digital I/Os**
- **HotKey** 8x hotkey(1 GPIO) Pin header output. Hotkey function configurable in System configurator.

## Board Diagram



## Specifications (cont.)

- **Audio** ALC201. AC97 interface included line-in, line-out, speaker out and MIC in. Pin header output.
- **Input power** Wide range 8-28 V DC input
- **Operating temperature** 0 to 60° C
- **Storage temperature** -20 to 60° C
- **Relative humidity** 0 to 90% noncondensing
- **Certification** CE, FCC Class A
- **Board size** 145 mm X 102 mm

## Packing List

- **Advantech Software Support CD: Windows® CE .NET**
- **Windows® CE .NET end user license agreement**

## Ordering Information

- **PCM-7230S-030CE** XScale PXA255 processor, 64MB SDRAM, with CF/PCMCIA slot and Windows® CE .Net solution integrated
- **PCM-7230S-230CE** XScale PXA255 processor, 32MB Flash ROM on Memory Module, 64MB SDRAM, with CF/PCMCIA slot and Windows® CE .Net solution integrated

### ▪ PCM-7230-0K0CE

PCM-7230 Evaluation kit system based on PCM-7230S-230CE

### ▪ PCM-7230-CK001

Cable kit for PCM-7230 series  
Includes the following items:

- 1 x Audio cable
- 2 x composite connector cables
- 4 x DB-9 RS-232 cables
- 1 x DB-9 RS-485/232 cable
- 1 x two ports USB host cable & one USB client cable
- 1 x DB-15 CRT cable
- 1 x RJ45 Ethernet cable
- 1 x 3 Push button cables
- 1 x power in cable
- 1 x Power switch cable
- 1 x JTAG cable
- 1 x Null modem cable
- 1 x USB client ActiveSync cable
- 1 x DB-25 cable for DIO & hotkey function

### Remarks:

- All Linux OS package ready for evaluation reference by project request.

- 1 Applied Panel Computing
- 2 Industrial Computing Platform
- 3 Compact PCI
- 4 Industrial Workstation & Panel Computing
- 5 Industrial I/O