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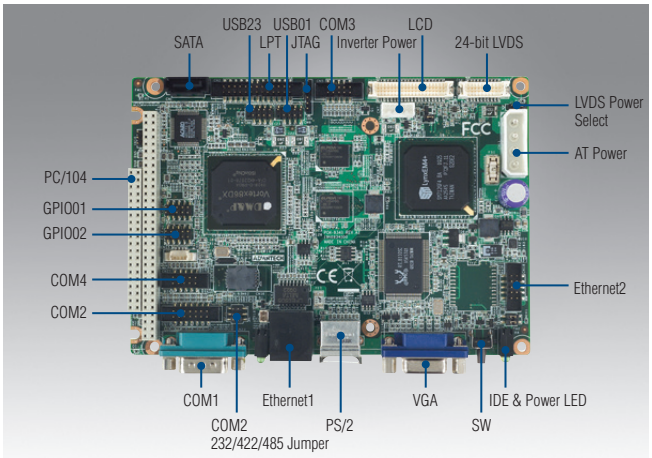
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# PCM-9343

## DM&P Vortex86DX 800MHz 3.5" SBC, Ultra Low Power, Onboard Memory, Dual Ethernet, CF, PC/104




VxWorks® Windows Embedded QNX SUSIAccess CE FCC

## Features

- DM&P Vortex86DX, onboard DDR2 memory up to 512 MB
- Display type: VGA, 18/24-bit LVDS, 18/24-bit TTL
- Supports Floating Point Unit, total power consumption 4 ~ 6 Watts, supports extended temperature to -40 ~ 85° C
- Dual Ethernet: 10/100 Ethernet1 and 10/100 Ethernet2, supports PC/104 (8-bit/16-bit ISA) expansion
- Supports SUSIAccess and Embedded Software APIs

**Software APIs:** Watchdog, I²C, Brightness, GPIO, Backlight On/Off

**Utilities:** BIOS flash

## Specifications

| | | |
|---|---|---|
| Processor System | CPU | DM&P Vortex86DX 800 MHz, supports floating Point Unit (FPU) |
| | Frequency | 800 MHz |
| | L2 Cache | 256 KB |
| | System Chipset | DM&P Vortex86DX + SMI SM712 |
| | BIOS | Award integrated 16 Mbit ROM in SOC |
| Memory | Technology | DDR2 333 MHz SDRAM on board |
| | Max. Capacity | 512 MB |
| | Onboard memory | Onboard 256 MB or 512 MB |
| Display | Chipset | SMI SM712 2D graphics chip |
| | VRAM | 4 MB internal memory |
| | Graphics Engine | 62.5 MHz single clock/cycle engine (EM+)<br>86 MHz single clock/cycle engine (EM4+)<br>Designed to accelerate DirectDraw |
| | LVDS | Supports single channel 18/24-bit LVDS LCD Panel to 1024 x 768 (1280 x 1024 supported by request) |
| | VGA | Supports up to 1024 x 768 @ 85 Hz |
| | TTL LCD | Supports up to 1024 x 768 @ 24-bit TFT LCD Panel |
| | Dual Display | VGA + TTL, VGA + LVDS |
| Ethernet | Speed | 10/100 Mbps |
| | Controller | Ethernet1: 10/100 Mbps on DM&P Vortex86DX<br>Ethernet2: 10/100 Mbps on Realtek RTL8110SC |
| | Connector | RJ-45 on Ethernet1, box header on Ethernet2 |
| WatchDog Timer | | Internal: 2 sets,<br>32.768 KHz frequency source to count a 24-bit counter so the time range is from 30.5μ sec to 512 sec with resolution 30.5μ sec |
| Storage | CompactFlash | CompactFlash type I/II (Primary Master IDE Channel)<br>Supports 2 channels Ultra-DMA 100 |
| | SATA | 1 x SATA (Max. Data Transfer Rate 150 MB/s) |
| | SPI Flash | Optional onboard 4MB SPI Flash Disk (Supported by request) |
| Rear I/O | Serial | 1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) (COM1 supports console mode) |
| | Ethernet | 1 (10/100 Mbps Ethernet1) |
| | PS/2 KB/Mouse | 1 |
| | VGA | 1 |
| | IDE&PWR LED | 1 |
| | Reset Button | 1 |
| Internal I/O | USB | 4 x USB 2.0 |
| | Serial | 3 COM (COM2, COM3, COM4) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)<br>COM2 supports RS-232/422/485 (Supports RS-485 auto flow control), COM2 supports console mode<br>COM3/COM4 supports RS-232 |
| | Ethernet | 1 (10/100 Mbps Ethernet2) |
| | Parallel (LPT) | 1 |
| | GPIO | 16-bit GPIO |
| | I²C | 1 |
| Expansion | PC/104 Slot | PC/104 Expansion (8/16-Bit ISA) |
| Power | Power Type | AT |
| | Power Supply Voltage | Single +5V boot up, ± 5% (+12V option for LCD, ISA) |
| | Power Consumption (Typical) | PCM-9343EL: 0.44 A @ 5 V (2.2 W)<br>PCM-9343EF: 0.81 A @ 5 V (4.05 W)<br>PCM-9343EFG: 1.02 A @ 5 V (5.1 W) |
| | Power Consumption (Max, test in HCT) | PCM-9343EL: 0.75 A @ 5 V (3.75 W)<br>PCM-9343EF: 1.09 A @ 5 V (5.45 W)<br>PCM-9343EFG: 1.04 A @ 5 V (5.2 W) |
| | Power Management | APM |
| | Battery | Lithium 3 V / 210 mAH |
| Environment | Operational | 0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing) |
| | Non-Operational | -40° C ~ 85° C and 60° C @ 95% RH non-condensing |
| Physical Characteristics | Dimensions (L x W) | 146 x 102 mm (5.7" x 4") |
| | Weight | 0.64 kg (1.41 lb), weight of total package |
| | Total Height | 23.7 mm |

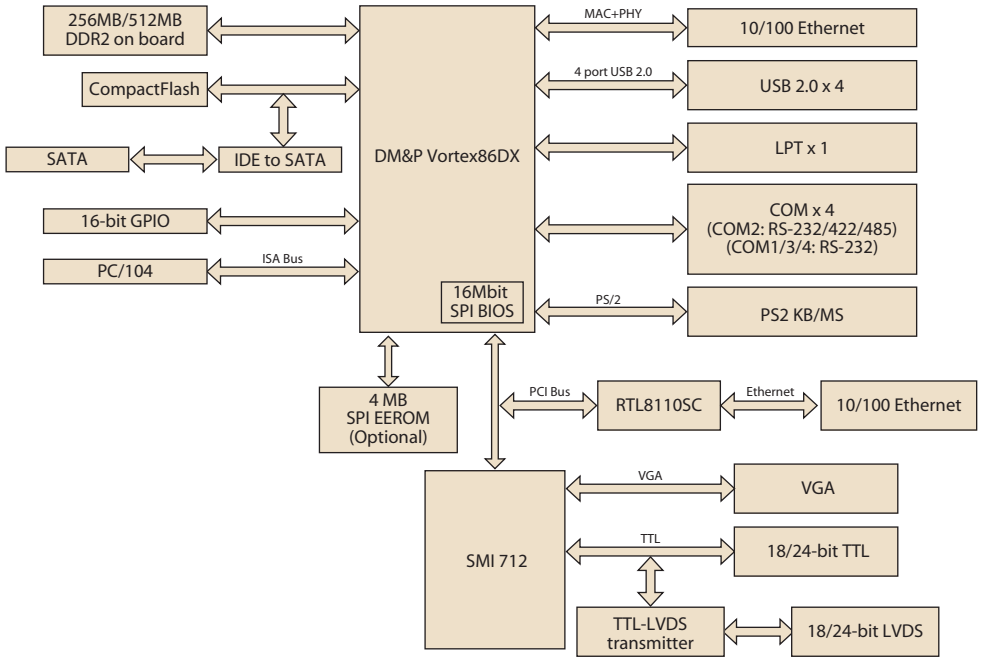



All product specifications are subject to change without notice



Last updated : 15-Jan-2014

## Block Diagram




## Ordering Information

| Part No. | CPU | CPU Frequency | Onboard Memory | TTL | LVDS | VGA | 10/100 Ethernet | RS-232/ 422/485 | RS-232 | USB 2.0 | CF | SATA | Expansion | Thermal Solution | Operational Temp. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PCM-9343EL-S6A1E | Vortex86DX | 800 MHz | 256 MB | - | - | - | 1 | 1 | 1 | 2 | 1 | - | PC/104 | Passive | 0 ~ 60° C |
| PCM-9343EF-S6A1E | Vortex86DX | 800 MHz | 256 MB | 18/24-bit | 18/24-bit | Yes | 1 | 1 | 3 | 4 | 1 | 1 | PC/104 | Passive | 0 ~ 60° C |
| PCM-9343EFG-S6A1E | Vortex86DX | 800 MHz | 512 MB | 18/24-bit | 18/24-bit | Yes | 2 | 1 | 3 | 4 | 1 | 1 | PC/104 | Passive | 0 ~ 60° C |
| PCM-9343FGZ-S6A1E | Vortex86DX | 800 MHz | 512 MB | 18/24-bit | 18/24-bit | Yes | 2 | 1 | 3 | 4 | 1 | 1 | PC/104 | Passive | -20 ~ 80° C |
| PCM-9343FGZ2-S6A1E | Vortex86DX | 800 MHz | 512 MB | 18/24-bit | 18/24-bit | Yes | 2 | 1 | 3 | 4 | 1 | 1 | PC/104 | Passive | -40 ~ 85° C |

Note: Passive = fanless; Active = with fan

## Packing List

| Part No. | Description | Quantity |
|---|---|---|
| | PCM-9343 SBC | |
| | Startup Manual | |
| | Utility CD | |
| 1700008894 | SATA 7P 30 cm cable | 1 |
| 1700060202 | PS2 6P x 2 20 cm cable | 1 |
| 1700100250 | COM3/4 IDE D-SUB 25 cm cable | 2 |
| 1701140201 | COM2 IDE D-SUB 20 cm cable | 1 |
| 1700260250 | LPT IDE 26P D-SUB 25 cm cable | 1 |
| 1703100121 | USB 2 x 5P-2.0 12 cm W/BKT cable | 1 |
| 1700017863 | Ethernet cable RJ45 15cm (PCM-9343EFG/FGZ use) | 1 |
| 9689000002 | mini jumper pack | 1 |
| 1960047356N001 | Heatsink for DM&P Vortex86DX (27x27x6.3mm) | 1 |

## Optional Accessories

| Part No. | Description |
|---|---|
| 1703150102 | SATA 10 cm Power cable |

## Embedded OS/API

| Embedded OS/API | Part No. | Description |
|---|---|---|
| WinCE | 2070009764 | CE 5.0 Pro PCM-9343 V1.3 ENG |
| | 2070009537 | Image CE 6.0 Pro PCM-9343 V1.3 ENG |
| | 2070010821 | Image CE 7.0 Pro PCM-9343 ENG |
| Win XPE | 2070009528 | Image XPE for PCM-9343 ENG |
| | 2070009529 | Image XPE for PCM-9343 24MUI |
| QNX | | 6.4.1 |
| Vxwork | | 5.5 |
| Linux | | Ubuntu 10.04.1 |
| Software API | 2056343000 | SUSI 3.0 SW API for PCM-9343 B:20100122 XP |

## Rear I/O View



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