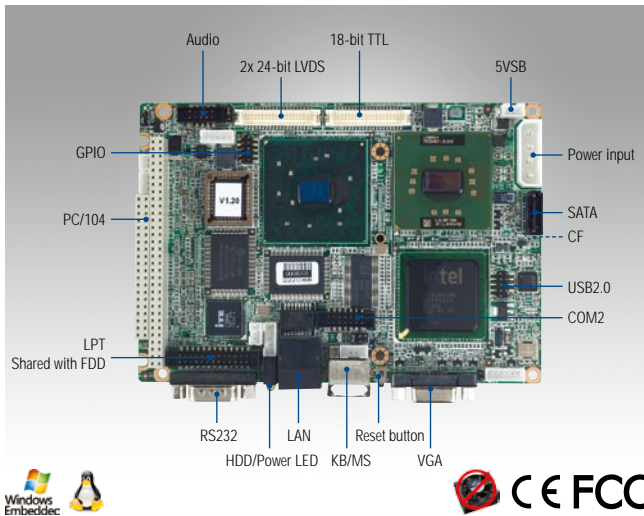


# PCM-9388

Intel® Celeron® M Processor ULV 3.5" SBC,  
CRT, LCD, LAN, USB, PC/104



## Features

- Supports Intel® Celeron® M processor
- Supports 18-bit TTL/36-bit LVDS (48-bit LVDS optional)/ CRT Dual independent display by CRT + LVDS/CRT + TTL
- Fanless support with low profile heatsink
- Full LCD support for 18-bit TTL/2-channel LVDS supports up to 48-bit (Optional)
- Supports embedded software APIs and utilities

**Software APIs:**

- GPIO
- H/W Monitor
- Watchdog
- Backlight On/Off
- SMBus
- CPU Speed
- System Throttling

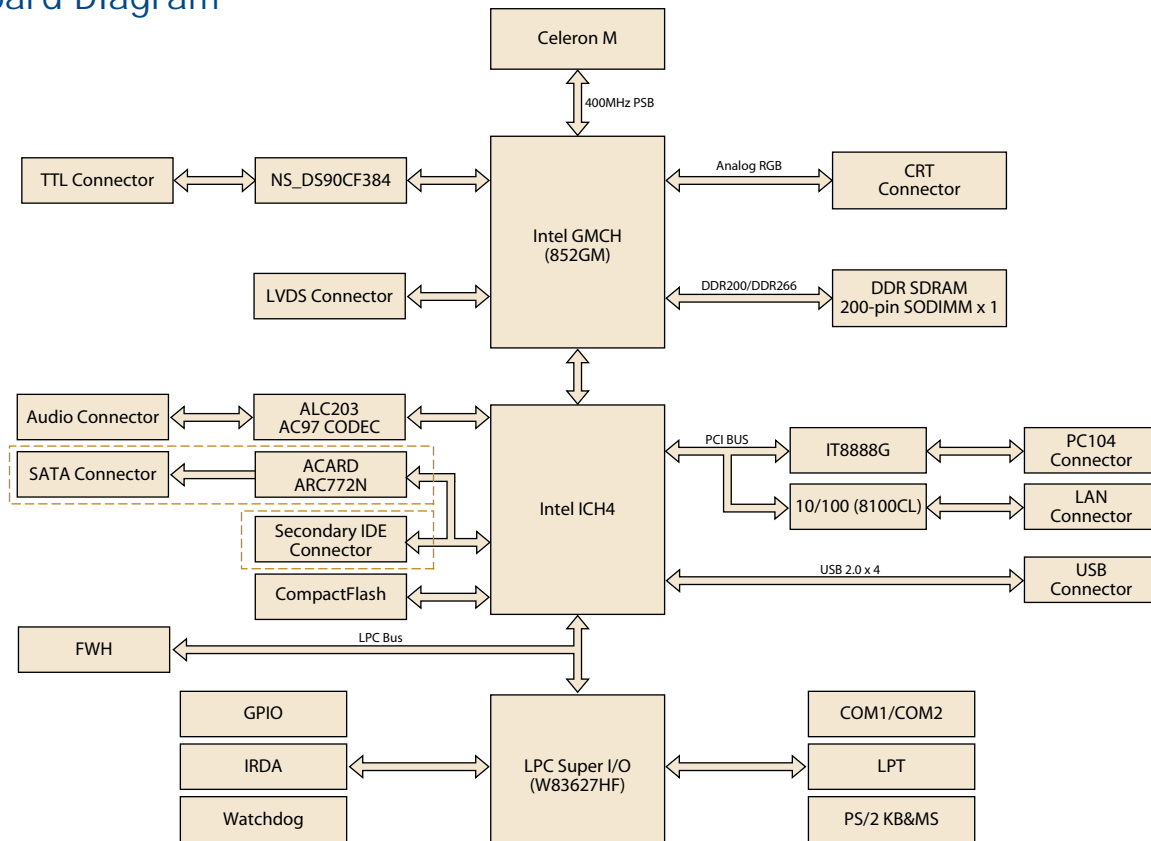
**Utilities:**

- BIOS flash
- Monitoring

## Specifications

|                          |                                      |   |
|--------------------------|--------------------------------------|---|
| Processor System         | CPU                                  | Intel Celeron M 600 MHz and 1.0 GHz on board type   |
|                          | Front Side Bus                       | 400 MHz   |
|                          | Frequency                            | 600 MHz and 1.0 GHz   |
|                          | L2 Cache                             | 512 KB on 600 MHz, 0L2 on 1.0 GHz   |
|                          | System Chipset                       | Intel 852GM + ICH4  |
|                          | BIOS                                 | Award 4 Mb Flash ROM BIOS   |
| Memory                   | Technology                           | DDR266 MHz SO-DIMM supports   |
|                          | Max. Capacity                        | 1 GB  |
|                          | Socket                               | 1 x 200-pin SODIMM  |
| Display                  | Chipset                              | Intel 852 GM  |
|                          | VRAM                                 | Supports 64 MB frame buffer share system memory   |
|                          | Graphics Engine                      | Mobile Intel 852 GM integrated 3D/2D engine   |
|                          | LVDS                                 | 1 x 36-bit LVDS (48-bit optional)   |
|                          | VGA                                  | CRT: up to 1600 x 1200 @ 32 bpp (85 Hz)   |
|                          | TTL LCD                              | 1 x 18-bit TTL  |
| Ethernet                 | Dual Display                         | CRT + TTL, CRT + LVDS   |
|                          | Speed                                | 10/100 Mbps   |
|                          | Controller                           | Realtek RTL 8100CL  |
| Audio                    | Connector                            | RJ-45 on LAN  |
|                          | Chipset                              | Realtek ALC203 AC97, Line-in, Line-out, Mic-in  |
| WatchDog Timer           |                                      | Output System reset<br>Programmable 1 - 255 sec   |
| Storage                  | CompactFlash                         | 1   |
|                          | SATA                                 | 1 (only for PCM-9388S)  |
|                          | IDE                                  | 1 (only for PCM-9388F)  |
|                          | Floppy                               | 1 (share with LPT)  |
| Rear I/O                 | Serial                               | 1 (COM1 supports RS-232)  |
|                          | Ethernet                             | 1 (10/100 Mbps)   |
|                          | KB/Mouse                             | 1   |
|                          | VGA                                  | 1   |
|                          | Reset Button                         | 1   |
| Internal I/O             | USB                                  | 2 x USB 2.0   |
|                          | Serial                               | 1 x COM<br>COM2 supports RS-232/422/485   |
|                          | IDE                                  | 1 UDMA 33 (only for PCM-9388F)  |
|                          | Parallel(LPT)                        | 1 (share with FDD)  |
|                          | FDD                                  | 1 (share with LPT)  |
|                          | SMBUS                                | Supported   |
|                          | GPIO                                 | 8-bit GPIO  |
|                          | IrDA                                 | 115 kbps  |
| Expansion                | PC/104 Slot                          | PC/104 Expansion(8/16-Bit ISA)  |
| Power                    | Power Type                           | AT/ATX  |
|                          | Power Supply Voltage                 | 5V + 5%, 12V + 5% (LCD)   |
|                          | Power Consumption (Typical)          | Typical: 1.56 A @ 5 V, 0.16 A @ 12 V (Celeron M 600/DDR 256 MB)   |
|                          | Power Consumption (Max, test in HCT) | MAX: 2.11 A @ 5 V, 0.17 A @ 12 V (Celeron M 600/DDR 256 MB)   |
|                          | Power Management                     | APM, ACPI S1, S5  |
|                          | Battery                              | 3 V / 210 Mah   |
| Environment              | Operational                          | 0 - 60° C (32 - 140° F)   |
|                          | Non-Operational                      | Operating: 0 - 60° C (32 - 140° F) (Operating humidity: 40° C @ 85% RH non-condensing)<br>Non-Operating: -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                               | 0.85 kg (1.87 lb), weight of total package  |

## Board Diagram



## Ordering Information

| Part No.           | CPU                        | CRT | LVDS | TTL | LAN  | IDE/SATA | USB | RS-232 | RS-232/442/485 | LPT | CF | PC/104 | Thermal Solution | Operating Temp. |
|--------------------|----------------------------|-----|------|-----|------|----------|-----|--------|----------------|-----|----|--------|------------------|-----------------|
| PCM-9388F-M0A1E    | Celeron M 600 MHz (512 KB) | 1   | 1    | 1   | 1 FE | 1 IDE    | 2   | 1      | 1              | 1   | 1  | 1      | Passive          | 0 ~ 60° C       |
| PCM-9388F-S0A1E    | Celeron M 1 GHz (0 KB)     | 1   | 1    | 1   | 1 FE | 1 IDE    | 2   | 1      | 1              | 1   | 1  | 1      | Passive          | 0 ~ 60° C       |
| PCM-9388SF-S0A1E   | Celeron M 1 GHz (0 KB)     | 1   | 1    | 1   | 1 FE | 1 SATA   | 2   | 1      | 1              | 1   | 1  | 1      | Passive          | 0 ~ 60° C       |
| PCM-9388Z-512S0A1E | Celeron M 1 GHz (0 KB)     | 1   | 1    | 1   | 1 FE | 1 SATA   | 2   | 1      | 1              | 1   | 1  | 1      | Passive          | -20 ~ 80° C     |

## Packing List

| Part No.   | Description             | Quantity |
|------------|-------------------------|----------|
|            | PCM-9388 SBC            |          |
|            | Startup Manual          |          |
|            | Utility CD              |          |
| 1701440504 | IDE cable (44p/44p/40p) | x 1      |
| 1700060202 | KB/MS cable             | x 1      |
| 1701140201 | RS-232/422/485 cable    | x 1      |
| 1700260250 | Parallel Port cable     | x 1      |
| 1703100152 | Audio cable             | x 1      |
| 1703100121 | USB cable (2 ports)     | x 1      |

## Optional Accessories

| Part No.   | Description      |
|------------|------------------|
| 1703200201 | ATX power cable  |
| 1700001531 | LTP to FDD cable |

## Embedded OS

| Embedded OS | Part No.   | Description                                     |
|-------------|------------|---|
| WinCE 6.0   | 2070007811 | CE60 Pro Intel (852/855/915/945) 2 COM V1.2 ENG |
| Win XPE     | 2070007789 | XPE WES2009 Intel-Multitprocess V4.0 ENG        |

