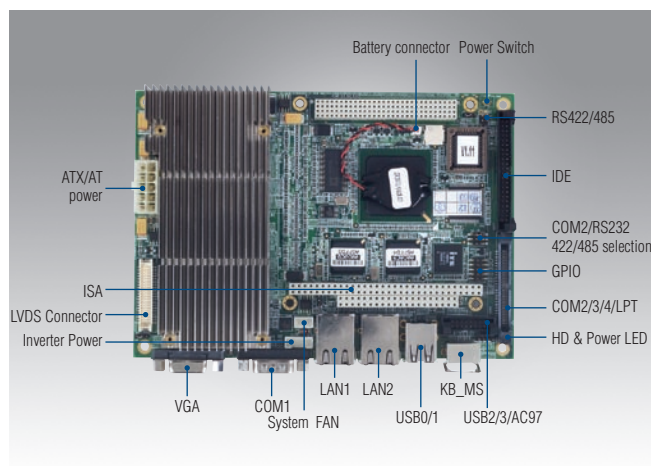


# PCM-4386

**Intel Celeron® M EPIC SBC with  
VGA/ LVDS/ Dual LAN/ PC104 Plus**



## Features

- Intel® Celeron® M processor on board
- SODIMM socket supports up to 1 GB DDR 200/266 SDRAM
- Display Combination: CRT + 36-bit LVDS display support
- Supports 4 COM ports, 6 USB 2.0 ports, an 8-bit GPIO port
- Dual 10/100 Mbps Ethernet
- Supports CompactFlash/uDOC (option)
- Supports ATX/ AT power
- PC/104-Plus bus (Fully 8/16 bit ISA bus)



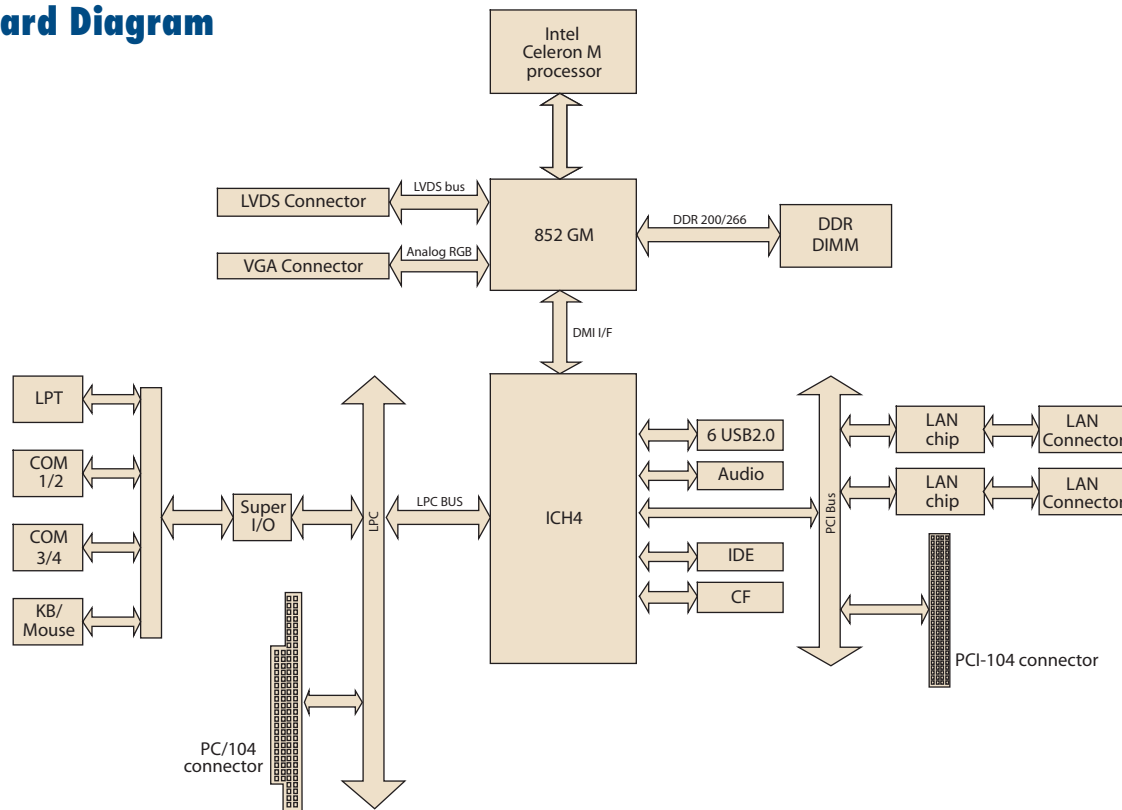
## Specifications

|                          |                                     |                                                                                                                                                        |                    |
|--------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Processor System         | CPU                                 | Intel ULV Celeron M 600 MHz                                                                                                                            | Celeron M 1.0 GHz  |
|                          | Front Side Bus                      | 400 MHz                                                                                                                                                | 400 MHz            |
|                          | L2 Cache                            | 512 KB/ 0 KB                                                                                                                                           | 0 KB               |
|                          | Chipset                             | Intel 852GM + ICH4                                                                                                                                     | Intel 852GM + ICH4 |
|                          | BIOS                                | Award 4-Mbit                                                                                                                                           | Award 4-Mbit       |
| Memory                   | Technology                          | DDR 200/266                                                                                                                                            |                    |
|                          | Max. Capacity                       | 1 GB                                                                                                                                                   |                    |
|                          | Socket                              | 1 x 200-pin SODIMM                                                                                                                                     |                    |
| SSD                      | CompactFlash                        | Card Type I, USB-DOM                                                                                                                                   |                    |
| Coastline I/O            | VGA                                 | 1                                                                                                                                                      |                    |
|                          | COM                                 | 1                                                                                                                                                      |                    |
|                          | LAN                                 | 2                                                                                                                                                      |                    |
|                          | USB                                 | 2                                                                                                                                                      |                    |
|                          | KB/MS                               | 1                                                                                                                                                      |                    |
| I/O Interface            | LPT                                 | 1                                                                                                                                                      |                    |
|                          | RS-232                              | 2                                                                                                                                                      |                    |
|                          | RS-232/422/485                      | 1                                                                                                                                                      |                    |
|                          | USB                                 | 4 x USB 2.0 (2 via USB DOM connector)                                                                                                                  |                    |
|                          | Audio                               | AC97, Line-in, Line-out, Mic-in (optional with PCM-410)                                                                                                |                    |
|                          | GPIO                                | 8-bit general purpose input/output                                                                                                                     |                    |
|                          | SMBus                               | Supported                                                                                                                                              |                    |
| EIDE                     | Mode                                | UDMA 33                                                                                                                                                |                    |
|                          | Channel                             | 1                                                                                                                                                      |                    |
| Expansion Slot           | PC/104-Plus                         | 1                                                                                                                                                      |                    |
| Ethernet                 | Speed                               | 10/100 Mbps                                                                                                                                            |                    |
|                          | Controller                          | 2 x Intel 82551ER, 82541PI (optional)                                                                                                                  |                    |
|                          | Interface                           | 2 x RJ-45                                                                                                                                              |                    |
| Display                  | Controller                          | Intel 852GM                                                                                                                                            |                    |
|                          | VRAM                                | Optimized Shared Memory Architecture up to 32 MB system memory                                                                                         |                    |
|                          | LVDS LCD                            | 1 x 36-bit LVDS                                                                                                                                        |                    |
|                          | Dual Independent Display            | CRT + LVDS                                                                                                                                             |                    |
| Environment              | Operating Temperature               | 0 ~ 60° C (32 ~ 140° F), Z : -20 ~ 80° C (-4 ~ 176° F) (Optional)                                                                                      |                    |
|                          | Operating Humidity                  | 0% ~ 90% relative humidity, non-condensing                                                                                                             |                    |
| Power                    | Power Type                          | AT / ATX                                                                                                                                               |                    |
|                          | Power Supply Voltage                | ATX, +5 V ± 5%, ±12 V ± 5%<br>AT, 5 V only to boot up, 12 V for LCD inverter and PC/104 module (12 V optional for PC/104 add on card and LCD inverter) |                    |
|                          | Power Consumption: Typical (XP)     | 2.62 A @ 5 V, 0.03 A @ 12 V, 0.49 A @ 3.3 V, 1.08 A @ 5 VSB (Celeron M 600 with 256 MB DDR266)                                                         |                    |
|                          | Power Consumption: Max, Test in HCT | 2.63 A @ 5 V, 0.03 A @ 12 V (Celeron M 600 with 256 MB DDR266)                                                                                         |                    |
|                          | Power Management                    | APM, ACPI                                                                                                                                              |                    |
|                          | Battery                             | Lithium 3 V / 196 mAH                                                                                                                                  |                    |
| Watchdog Timer           | Output                              | System reset                                                                                                                                           |                    |
|                          | Interval                            | Programmable 1 ~ 255 sec                                                                                                                               |                    |
| Physical Characteristics | Dimensions (L x W)                  | 115 x 165 mm (4.5" x 6.5")                                                                                                                             |                    |
|                          | Weight                              | 0.35 kg (0.77 lb)(with Heatsink)                                                                                                                       |                    |

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## Board Diagram



## Ordering Information

| Number           | CPU               | L2 cache | 10/100 | LVDS   | USB 2.0 | COM     | GPIO | LPT | CF  | USB-DOM | Audio    | PC/104-plus | Operating Temp. | Thermal Solution |
|------------------|-------------------|----------|--------|--------|---------|---------|------|-----|-----|---------|----------|-------------|-----------------|------------------|
| PCM-4386F-M0A2E  | Celeron M 600 MHz | 512 KB   | 2      | 36-bit | 4       | 4 ports | 8    | 1   | Yes | -       | Optional | Yes         | 0 ~ 60° C       | Passive          |
| PCM-4386F-S0A2E  | Celeron M 1.0 GHz | 0 KB     | 2      | 36-bit | 4       | 4 ports | 8    | 1   | Yes | -       | Optional | Yes         | 0 ~ 60° C       | Passive          |
| PCM-4386U-S0A2E  | Celeron M 1.0 GHz | 0 KB     | 2      | 36-bit | 4       | 4 ports | 8    | 1   | -   | Yes     | Optional | Yes         | 0 ~ 60° C       | Passive          |
| PCM-4386FY-S0A2E | Celeron M 1.0 GHz | 0 KB     | 2      | 36-bit | 4       | 4 ports | 8    | 1   | Yes | -       | Optional | Yes         | -40 ~ 85° C     | * Passive        |
|                  | Celeron M 1.0 GHz | 0 KB     | 2      | 36-bit | 4       | 4 ports | 8    | 1   | Yes | -       | Optional | Yes         | -20 ~ 80° C     | Passive          |

Note 1: The PCM-4386FY-S0A1E is a Phoebus with -40 ~ 85° C operations designed in, operates continuously under -40 ~ 85° C for at least 8 hrs.

Note 2: Support for 48-bit LVDS is possible upon evaluation, please contact Advantech for more detail

## Optional Accessories

| Part No.          | Description                                    |
|-------------------|------------------------------------------------|
| PCD-USBH11-MS0256 | USB-DOM, 256 MB, -40 ~ 85° C                   |
| PCD-USBH11-MS0512 | USB-DOM, 512 MB, -40 ~ 85° C                   |
| PCD-USBH11-MS1024 | USB-DOM, 1 GB, -40 ~ 85° C                     |
| PCD-USBH11-MS2048 | USB-DOM, 2 GB, -40 ~ 85° C                     |
| 9696290100        | IDE to CF module                               |
| PCM-410A-00A1E    | AC97 Audio/USB module for PCM-4380/4386 series |
| PCM-410C-00A1E    | COM/LPT daughter board for EPIC                |
| 1700090301        | COM2 RS-422/485 D-sub 9P to 4P cable, 30 cm    |

## Packing List

| Part No.   | Description               | Quantity |
|------------|---------------------------|----------|
|            | PCM-4386 SBC              | 1        |
| 9689000002 | Mini Jumper Pack          | 1        |
|            | Startup Manual            | 1        |
|            | Utility CD                | 1        |
| 1700002034 | 3 COM ports and LPT cable | 1        |
| 1700002055 | ATX power cable           | 1        |
| 1700060202 | 6P-6P-6P PS/2 KB/MS       | 1        |
| 1700004891 | USB cable 2 port/20-pin   | 1        |
| 1701440504 | IDE cable                 | 1        |
| 1700003931 | AT power cable            | 1        |