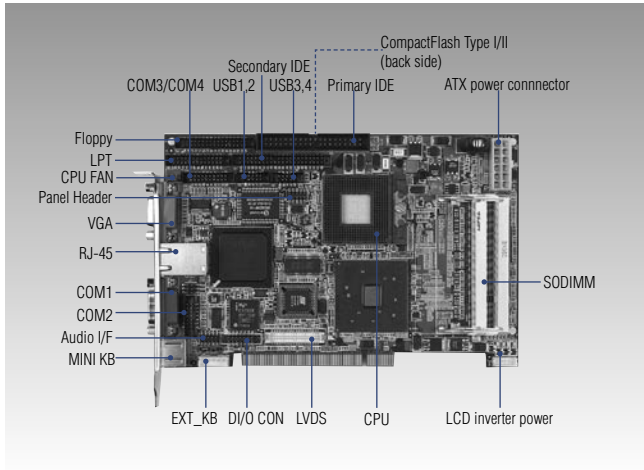# PCI-6881

PCI Intel® Pentium® M/Intel Celeron® M Half-sized SBC with VGA/LCD/LVDS/Giga LAN/ USB 2.0 and SSD

Features

- Embedded new generation Intel® Pentium® M/Intel Celeron® M Processor
- Fanless operation @ 0 ~ 60°C (Celeron M 600 MHz/Pentium 1.1 GHz)
- Supports 400 MHz Front Side Bus
- Supports 200 MHz, 266 MHz and 333 MHz ECC DDR SDRAM
- Supports up to 1000Base-T Ethernet on board
- Supports up to 2 Channel 36 bits LVDS for LCD
- Supports 4 x USB 2.0 ports
- Supports Enhanced Intel SpeedStep technology (Intel Pentium M)

Specifications

General

CPU	Embedded Intel Pentium M (Banias/Dothan)/Celeron M Processor supported, up to 2.0 GHz
	Celeron M 600 MHz (512 KB): PCI-6881F-M0A2
	Pentium M 1.1 GHz: PCI-6881F-S0A2
	uFCPGA2 (478pin): PCI-6881F-00A2/PCI-6881FG-00A2
2nd Cache Memory	1 or 2 MB on Pentium M processor, 512 KB/1 MB on Celeron M
System Chipset	Intel 855GME + ICH4
BIOS	AWARD® 4 Mbit Flash BIOS
System Memory	2 x 200 pin SODIMM x 2, support ECC DDR up to 2 GB
Power Management	APM 1.2, ACPI supported
SSD	Supports CompactFlash® Card Type I/II
Watch Dog Timer	0 ~ 255 sec, System reset or IRQ11
Expansion Interface	1 x 32-bit PCI slot
Battery	Lithium 3 V/196 mAH

I/O

I/O Interface	2 x EIDE (1 x Ultra DMA100,1 x Ultra DMA33), 1 x FDD, 1 x K/B, 1x Mouse, 1 x RS-232/422/485, 3 x RS-232, 1 x LPT
USB	4 x USB ports, USB 2.0 compliant
Audio	Supports AC97 Audio with optional PCM-231A-00A1
IrDA	N/A
GPIO	8-bit general purpose input/output
I/O Expansion	PCI

Ethernet

Chipset	Intel 82541PI (Gigabit), Intel 82551ER/82551QM (optional)
Speed	10/100Base-T, 10/100/1000Base-T
Interface	1 x RJ-45
Standard	IEEE 802.3 z/ab (1000Base-T) or IEEE 802.3u (100 Base-T) protocol compatible

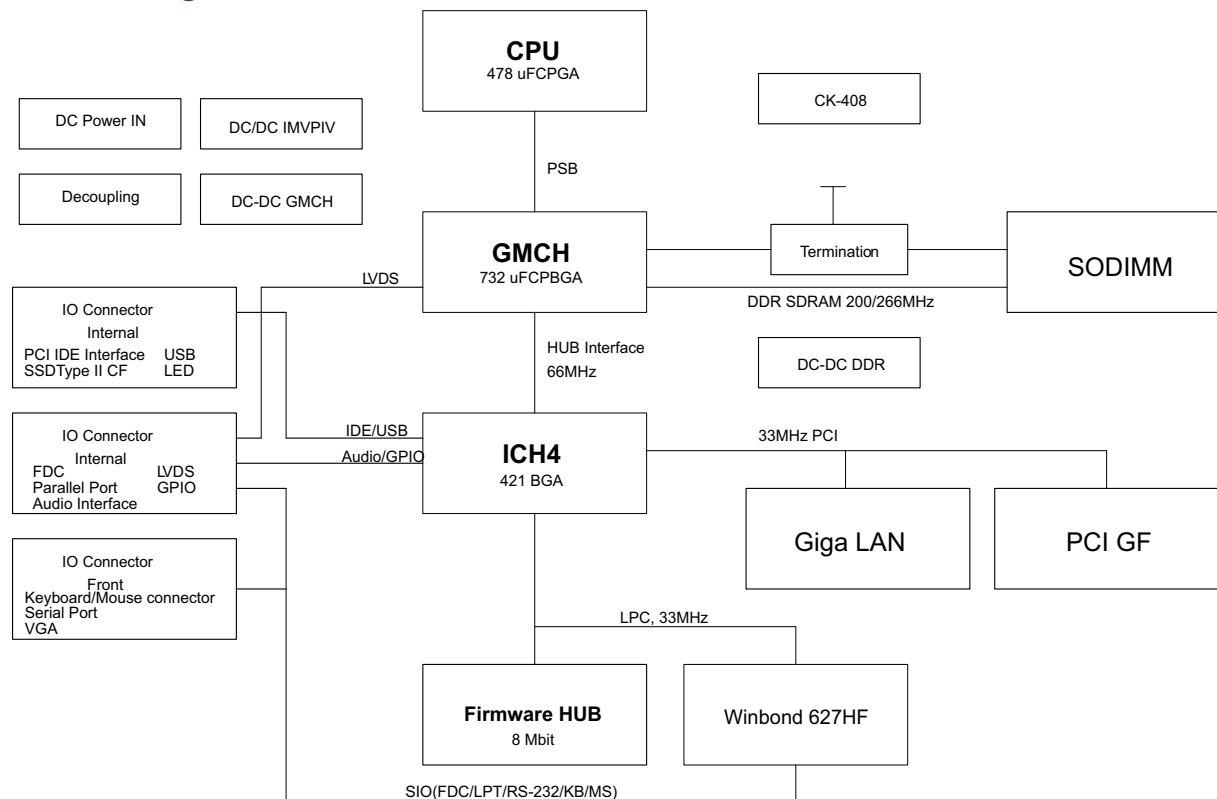|	
Built-in Boot ROM	82541PI and 82551QM (optional)

Display

Chipset	Intel 855GME chip integrated. (Extreme Graphics 2)
Memory Size	Optimized Shared Memory Architecture, supports up to 64 MB frame buffer using system memory
Resolution	CRT Mode: up to 2048 x 1536 @ 75 Hz
	LVDS Mode: up to 1280 x 1024 @ 36 bpp, up to UXGA panel resolution with frequency range from 25 MHz to 112 MHz
LCD Interface	2 Channel LVDS (36-bit)
LVDS Interface	Hirose connector supports dual channel LVDS panel
TV-Out	N/A
Dual Independent Display	CRT + LVDS

Mechanical and Environmental

Dimension (L x W)	185 x 122 mm (7.3" x 4.8")
Weight	0.27 kg (weight of total package)
Operating Temperature	0 ~ 60° C (32 ~ 140° F), operation
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power Supply Voltage	+5 V, +12 V ±5%
Power Consumption	Max: 6 A @ 5 V, 0.5 A @ 12 V,
	Typical: 5.2 A @ 5 V
	0.25 A @ 12 V (w/PentiumM 1.6 GHz + 512 MB)

Board Diagram

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                              ┌──────────────┐
                              │     CPU      │
                              │  478 uFCPGA  │            ┌──────────┐
                              └──────────────┘            │  CK-408  │
┌──────────────┐ ┌──────────────┐     │                  └──────────┘
│ DC Power IN  │ │ DC/DC IMVPIV │    PSB                       │
└──────────────┘ └──────────────┘     │                       │
┌──────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
│  Decoupling  │ │ DC-DC GMCH   │ │    GMCH      │ │ Termination  │ │   SODIMM     │
└──────────────┘ └──────────────┘ │ 732 uFCPBGA  │ └──────────────┘ └──────────────┘
                                   └──────────────┘  DDR SDRAM 200/266MHz
                          LVDS            │
┌──────────────────────┐                 │ HUB Interface    ┌──────────────┐
│    IO Connector      │                 │ 66MHz            │  DC-DC DDR   │
│     Internal         │                 │                  └──────────────┘
│ PCI IDE Interface USB│        IDE/USB   │
│ SSDType II CF     LED │      ┌──────────────┐        33MHz PCI
└──────────────────────┘      │    ICH4      │─────────────────────────────
┌──────────────────────┐      │   421 BGA    │   ┌──────────────┐ ┌──────────────┐
│    IO Connector      │ Audio/GPIO       │      │  Giga LAN    │ │   PCI GF     │
│     Internal         │      └──────────────┘   └──────────────┘ └──────────────┘
│ FDC         LVDS     │             │
│ Parallel Port GPIO   │             │ LPC, 33MHz
│ Audio Interface      │      ┌──────────────┐ ┌──────────────┐
└──────────────────────┘      │ Firmware HUB │ │Winbond 627HF │
┌──────────────────────┐      │   8 Mbit     │ └──────────────┘
│    IO Connector      │      └──────────────┘
│      Front           │    SIO(FDC/LPT/RS-232/KB/MS)
│ Keyboard/Mouse connector
│ Serial Port          │
│ VGA                  │
└──────────────────────┘
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Packing List

- 1 x PCI-6881 SBC
- 1 x Y cable for PS/2 Keyboard, PS/2 Mouse   (p/n:1700060202)
- 1 x E-IDE (HDD) Cable   (p/n:1701400452)
- 1 x FDD Cable (600 mm)   (p/n:1701340603)
- 1 x Parallel port cable   (p/n:1700260250)
- 1 x Power Cable   (p/n:1700000265)
- 1 x ATX feature Cable   (p/n:1700001276)
- Mini Jumper   (p/n:1653302122)
- 1 x Startup Manual
- 1 x Utility CD

Ordering Information

Standard

PCI-6881F-00A2	PCI FCPGA 478 Slot-PC, w/LAN/VGA/LVDS/CFC
PCI-6881FG-00A2	Same as PCI-6881F-00A2 but with Gigabit Ethernet
PCI-6881F-M0A2	Same as PCI-6881F-00A2 W/Celeron M 600MHz on board
PCI-6881FG-M0A2	Same as PCI-6881F-M0A2 but with Gigabit Ethernet
PCI-6881F-S0A2	Same as PCI-6881F-00A2 W/Pentium M 1.1 GHz on board
PCI-6881FG-S0A2	Same as PCI-6881F-S0A2 but with Gigabit Ethernet
PCI-6881F-00A2E	Same as PCI-6881F-00A2, RoHS
PCI-6881FG-00A2E	Same as PCI-6881FG-00A2, RoHS
PCI-6881F-M0A2E	Same as PCI-6881F-M0A2, RoHS
PCI-6881F-S0A2E	Same as PCI-6881F-S0A2, RoHS

Optional Accessories

IPC-644P4-80	Chassis w/PCA-6104P4/80 W power supply
IPC-6806P5	Chassis w/PCA-6105P5/100 W power supply
PCA-6104P4-0B1	4-PCI slot passive backplane
PCA-6105P5-0B1	5-PCI slot passive backplane
1703100260	USB cable adapter (2.00 mm)
CF-HDD-ADP	CompactFlash 50-pin to IDE 44-pin adapter
PCM-231A-00A1	Audio module with Line-in, Line-out, Mic
1701140201	COM2 cable (2.00 mm)
1700001166	COM3 & COM4 cable with bracket (2.00 mm)