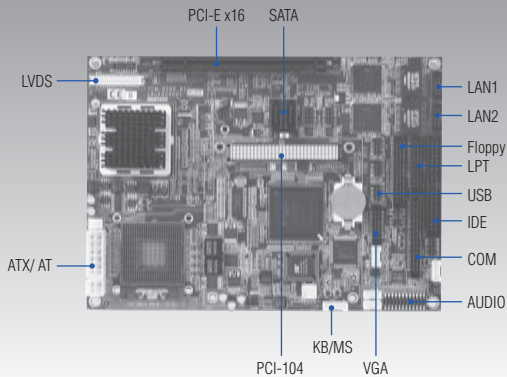


PCM-9590

Onboard Intel® Core™ 2 Duo EBX SBC
with Audio, VGA/ LVDS and LAN

NEW



Features

- Embedded Intel® Core™ 2 Duo Yonah/ Merom CPU (2 MB L2 cache)
- Up to 2 GB DDR2 SODIMM (support FSB 533/667 MHz)
- Supports Dual independent display (36-bit LVDS + VGA)
- Supports 18/24-bit dual channel, analog VGA
- Supports two Ethernet up to 10/100/1000 Mbps
- One PCI-Express x16
- Supports six USB 2.0 ports
- Supports four COMs
- Two SATAII Ports (300MB/s)

Specifications

General

- **CPU** Embedded Intel Core 2 Duo/ Core Duo/ Core Solo/ Celeron M Processor supported
Core Duo 1.2 GHz PCM-9590FG-S2A1E
uFCPGA2 (479pin) PCM-9590FG-00A1E
Depends on CPU from 512KB to 4 MB
- **2nd Cache Memory**
- **System Chipset** Intel 945 GM GMCH/ICH7M Chipset
- **BIOS** AWARD® 4Mbit Flash BIOS
- **System Memory** 2 x 200-pin SODIMM sockets, Double Data Rate (DDR2)
128 MB to 2 GB, accept 128/256/512/1024 MB DDR2 up to 400/533/667 DRAM
- **Power Management** APM1.2, ACPI support
- **Watchdog Timer** 255-level interval timer, setup by software, Super I/O integrated, SMSC Controller
- **Expansion Interface** Supports PCI-104, Mini PCI interface, one PCI-E X 16 Slot
- **Battery** Lithium 3 V/196 mA

I/O

- **I/O Interface** 1 x EIDE (UDMA 100), 2 x SATA 300, 1 x K/B, 1 x Mouse, 3 x RS232, 1 x RS232/422/485, 1 x LPT and 2 x EIDE device
- **USB** 6 x USB 2.0 compliant Ports
- **Audio** HD Audio codec ALC883, support 7.1 channel
Supports Speaker out, CD-input, Line-in, Line-out, Microphone
- **IrDA** -
- **GPIO** 16-bit general purpose 16 input/16 output

Ethernet

- **Chipset** 2 x Intel 82573L
- **Speed** 10/100/1000 Mbps
- **Interface** 2 x RJ45 by cable
- **Standard** IEEE 802.3u 100Base-T & IEEE 802.3ab 1000Base-T

Display

- **Chipset** Intel 945GM chip integrated. (Inter Gen 3.5 integrated graphic engine)
32-bit interface to address up to 32MB of memory
- **Memory Size** CRT Display mode: pixel resolution up to QXGA (2048x1536)
LCD Display mode: Dual channel LVDS panel supports up to UXGA panel resolution with frequency range from 25 MHz to 112 MHz
- **Resolution**

- **LCD Interface** 2 Channel LVDS 1 (36-bit)
- **LVDS** Hirose connector support up to 2 channel (1 x 36-bit) LVDS LCD Panel
- **Dual Ind. Display** CRT + LVDS; CRT + TV-Out; LVDS + TV-Out under Windows system 36-bit LVDS (945 GM) LCD Panel
Dual independent display options with digital display

Mechanical and Environmental

- **Dimension (L x W)** 203 x 146 mm (8" x 5.75")
- **Weight** 345 g (Heat sink)
- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F)
- **Operating Humidity** 0% ~ 90% relative humidity, non-condensing
- **Storage Temperature** -20 ~ 70° C (accessories Storage temperature: -20 ~ 60° C)
- **Storage Humidity** 95% @ 60° C

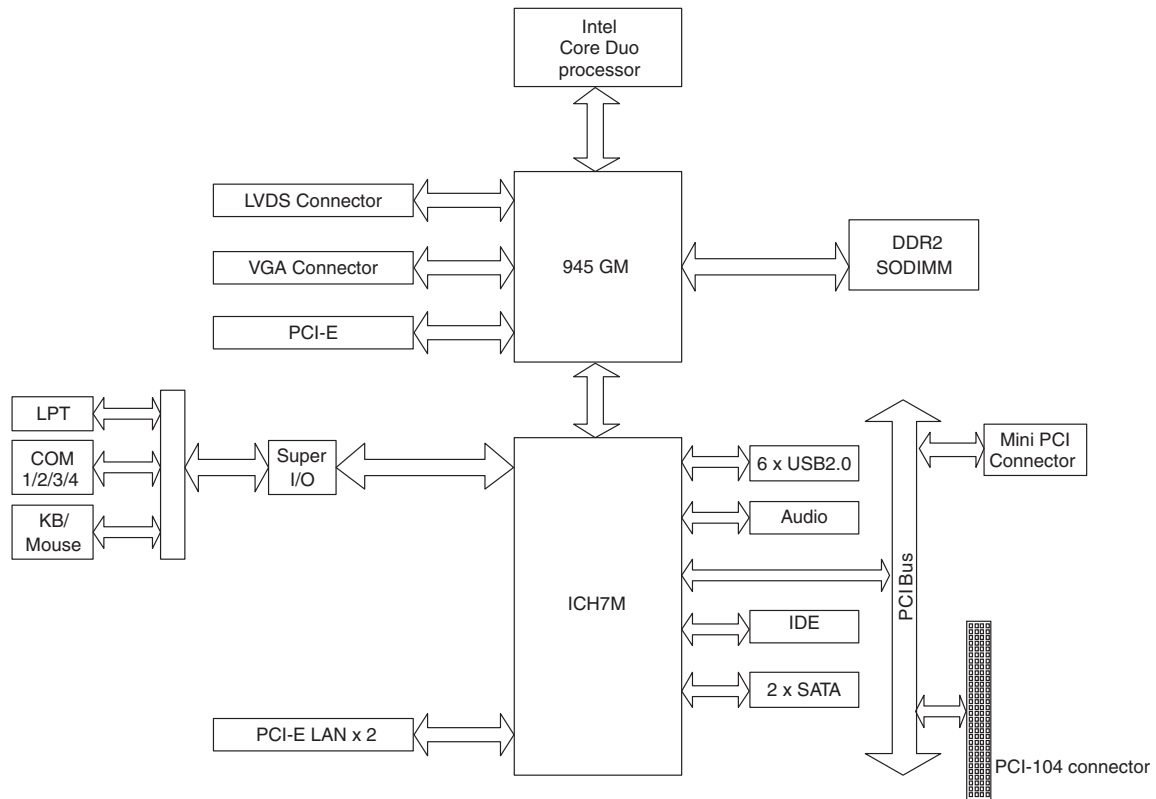
Power

- **Power Supply Voltage** Voltage requirement with ATX Power:
- +5 V DC +/- 5%
- +5 V DC Standby +/- 5%
- +12 V DC (For PCI Card, FAN power, and LVDS inverter power, CPU core power)
Voltage requirement with AT Power:
- +5 V DC +/- 5%
- +12 V DC (For PCI Card, FAN power, and LVDS inverter power, CPU core power)
- **Power Consumption** (CPU T7400 2.16 GHz)
Max (HCT): 1.03 A @ 5 V, 2.09 A @ 12 V
Suspend: 0.96 A @ 5 V, 0.81 A @ 12 V
(CPU U2500 1.2 GHz)
Max (HCT): 1.05 A @ 5 V, 0.98 A @ 12 V
Suspend: 1.01 A @ 5 V, 0.76 A @ 12 V

Packing List

- 1 x PCM-9590 SBC
- 1 x Mini Jumper Pack (p/n:9689000002)
- 1 x Startup Manual
- 1 x Utility CD
- 1 x ATX Power Cable (p/n:1700000265)
- 1 +12V for CPU Big4P*2 power cable (p/n:170304015K)

Board Diagram



Ordering Information

Part No.	CPU	L2 Cache	DDR2 SODIMM	CRT	LVDS1	GigaLAN	Audio	USB2.0	RS-232	RS/232/422/485	LPT	PCI-E x16 Slot	MIO Type/II	Mini PCI	Thermal Solution	Operation Temp.
PCM-9590FG-00A1E	Socket 479	-	2	Yes	36-bit	2	Yes	6	3	1	Yes	1	Yes	1	Active	0 ~ 60° C
PCM-9590FG-S2A1E	Core Duo 1.2 Ghz	2 MB	2	Yes	36-bit	2	Yes	6	3	1	Yes	1	Yes	1	Passive	0 ~ 60° C

Optional Accessories

- **PCM-10586-9590E** Wiring kit for PCM-9590
- **1703100260** USB cable (26 cm)
- **1703100121** USB cable (12 cm)
- **1700006200** AT Power Cable 6*2P to 10*2P 100mm PCM-9590
- **PCM-110-00A3E** 1-slot PCI riser card for 5.25" biscuits
- **PCM-120-00A3E** 2-slot PCI riser card for 5.25" biscuits
- **PCM-200-00A2E** PCI-104 to PCI bus module
- **MIO-3110-00A1E** Mini PCI to USB interface connection hub
- **MIO-3120-00A1E** Mini PCI interface to Wireless 802.11 b/g communication module
- **MIO-3121-00A1E** Mini PCI to 4 COM Module
- **MIO-3140-00A1E** Mini PCI interface to SATA storage module
- **MIO-3150-00A1E** Mini PCI interface to video capture module