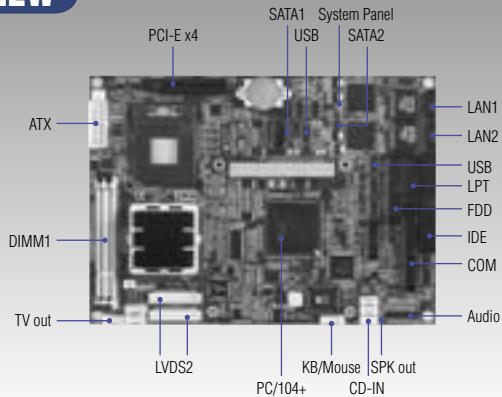


PCM-9590

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

NEW



Specifications

General

- **CPU** Embedded Intel Core Duo/ Core Solo/Celeron M Processor supported
Core Duo 2.0 GHz PCM-9590FG-U0A1E
Core Duo 1.66 GHz PCM-9590FG-S6A1E
Core Duo 1.2 GHz PCM-9590FG-S2A1E
uFCPGA2 (479pin) PCM-9590FG-00A1E
Depends on CPU from 512KB to 2 MB
- **2nd Cache Memory**
- **System Chipset** Intel 945 GM GMCH/ICH7M Chipset
- **BIOS** AWARD® 512 kbit 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 533/667 DRAM
- **Power Management** APM1.2, ACPI support
- **SSD** Supports CompactFlash® Card TYPE I/II (shared 2nd IDE Channel)
- **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 4 Slot, 1 x PCI-104
- **Battery** Lithium 3 V/196 mAH

I/O

- **I/O Interface** 1 x EIDE (UDMA 100), 2 x SATA 150, 1 x K/B, 1 x Mouse, 3 x RS232, 1 x RS232/422/485, 1 x LPT
1 x EIDE conn and 2 x EIDE device
- **USB** 8 x USB 2.0 compliant Ports
- **Audio** AC97 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

Features

- Embedded Intel® Core™ Duo Yonah/ Merom CPU (2 MB L2 cache)
- Up to 2 GB DDR2 SODIMM (support FSB 533/667 MHz)
- Supports Dual LCD (36-bit LVDS + 48-bit LVDS)
- Supports 18/24-bit dual channel, analog VGA, TV out
- Supports two Ethernet up to 10/100/1000 Mbps
- One PCI-Express x16
- Supports eight USB 2.0 ports
- Supports four COMs
- Two SATAII Ports (300MB/s)

Display

- **Chipset** Intel 945GM chip integrated. (Inter Gen 3.5 integrated graphic engine)
- **Memory Size** 32-bit interface to address up to 2 GB of memory
- **Resolution** 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
- **LCD Interface** 2 Channel LVDS 1 (36-bit), LVDS 2 (48-bit)
- **LVDS** Hirose connector support up to 2 channel (1 x 48/1 x 36-bit) LVDS LCD Panel
- **Dual Ind. Display** CRT + LVDS; CRT + TV-Out; LVDS + TV-Out under Windows system 36-bit LVDS (915 GM) + 48-bit LVDS (Chrontel) 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** 0.85 kg (weight of total package)
- **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

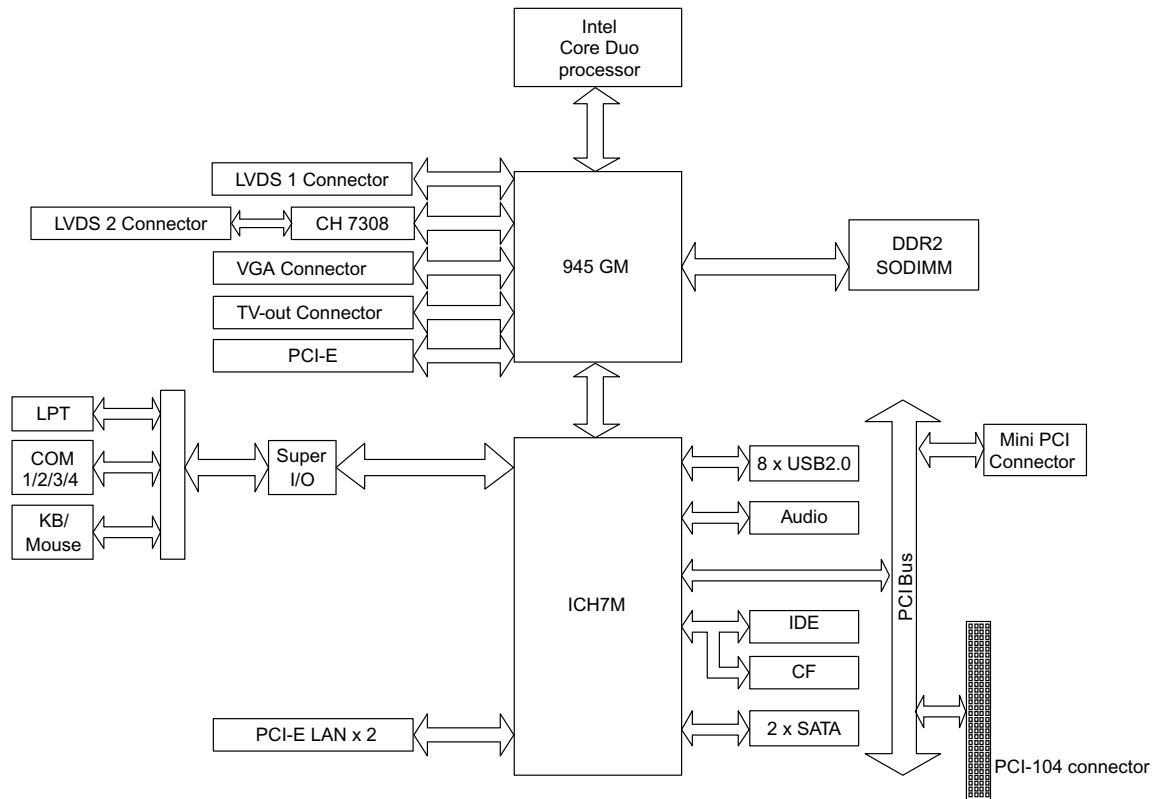
Power

- **Power Supply Voltage** +5 V ±5%, +12 V ±5%
- **Power Consumption** (Pentium M with 1.4 GHz)
Max (HCT): 2.42 A @ 5 V, 1.01 A @ 12 V
Suspend: 1.86 A @ 5 V, 0.48 A @ 12 V
(Pentium M with 2.0 GHz)
Max (HCT): 2.43 A @ 5 V, 1.65 A @ 12 V
Suspend: 1.87 A @ 5 V, 0.75 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:1700001112)

Board Diagram



Ordering Information

Part No.	CPU	L2 Cache	DDR2 SODIMM	CRT	LVDS1	LVDS2	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	48-bit	2	Yes	8	3	1	Yes	1	Yes	1	Active	0 ~ 60° C
PCM-9590FG-S2A1E	Core Duo 1.2 Ghz	2 MB	2	Yes	36-bit	48-bit	2	Yes	8	3	1	Yes	1	Yes	1	Passive	0 ~ 60° C
PCM-9590FG-S6A1E	Core Duo 1.66 Ghz	2 MB	2	Yes	36-bit	48-bit	2	Yes	8	3	1	Yes	1	Yes	1	Active	0 ~ 60° C
PCM-9590FG-U0A1E	Core Duo 2.0 Ghz	2 MB	2	Yes	36-bit	48-bit	2	Yes	8	3	1	Yes	1	Yes	1	Active	0 ~ 60° C

Optional Accessories

- **PCM-10586-9590E** Wiring kit for PCM-9590
- **1703100260** USB cable (26 cm)
- **1703100121** USB cable (12 cm)
- **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

- 1 System On Modules
- 2 Stackable SBCs
- 3 Single Board Computers
- 4 Slot CPU Cards
- 5 Industrial Motherboards
- 6 Embedded Box Computers
- 7 RISC-Based Evaluation Kit
- 8 Public Service Computers
- 9 Vehicle Mounted Computing Platforms
- 10 Medical Computing Platforms
- 11 Ubiquitous Computing
- 12 Display Solutions
- 13 Digital Signage
- 14 Portable Computing Platforms
- 15 Video Surveillance
- 16 Embedded Software Services