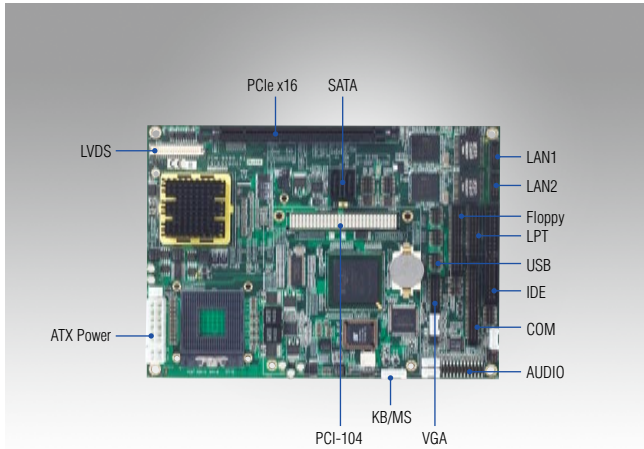


# PCM-9590

Intel® Core™2 Duo Processor EBX SBC with CRT, LVDS, Dual GbE LAN, Audio, PCI-104



## Features

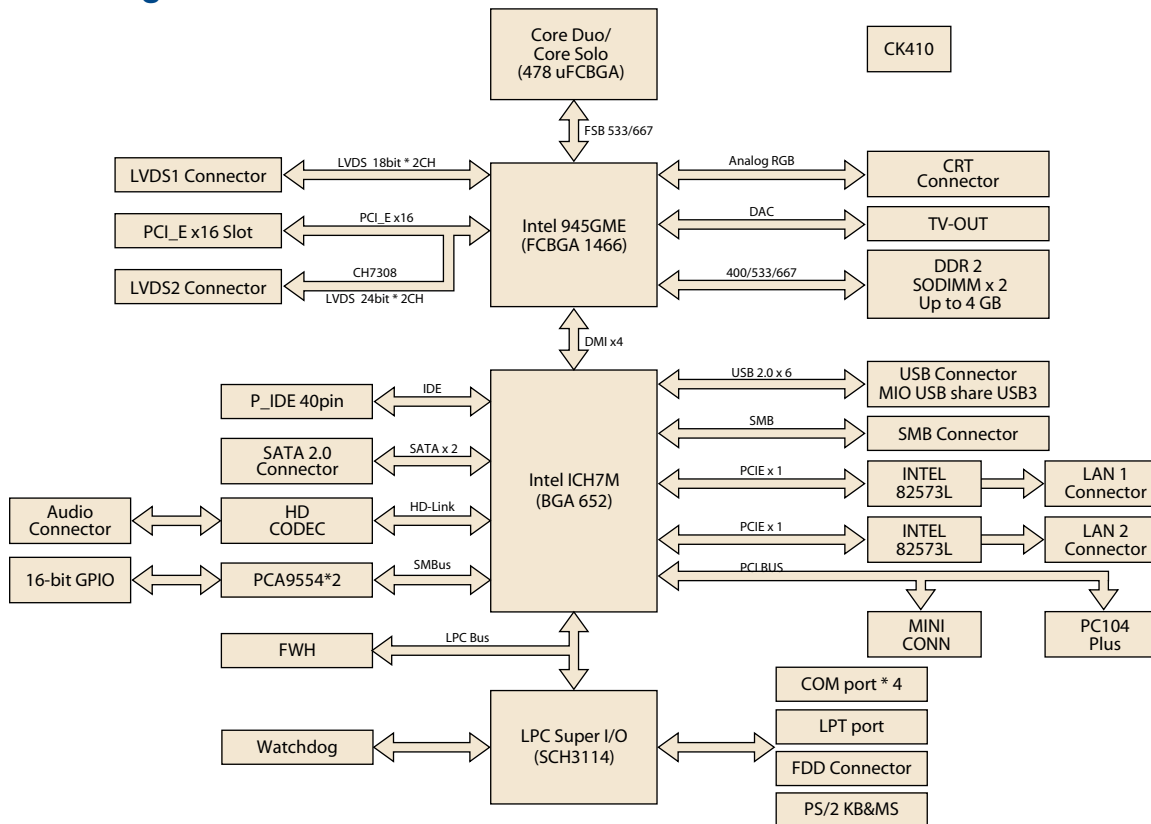
- Supports Intel® Core™2 Duo/ Core™ Duo/ Core™ Solo Processors
- Up to 4 GB DDR2 SODIMM (supports FSB 533/667 MHz)
- Dual independent display (CRT + LVDS1, CRT + LVDS2, LVDS1 + LVDS2)
- Dual Giga Ethernet (10/100/1000 Mbps)
- One PCI-104, one PCIe x16, one mini PCI
- Supports embedded software API and utility



## Specifications

Processor System	CPU	Core Duo 1.2 GHz	Core Duo 1.66 GHz	Socket Type (Core Solo/ Core Duo/ Core 2 Duo)
	Front Side Bus	533/667 MHz	533/667 MHz	533/667 MHz
	L2 Cache	2 MB	2 MB	4 MB
	Chipset	Intel 945GME + ICH7M		
	BIOS	Award 4 Mbit		
Memory	Technology	DDR2 400/533/667 MHz		
	Max. Capacity	4 GB		
	Socket	2 x 200-pin SODIMM		
Display	Chipset	Intel 945GME		
	VRAM	DVMT 4.0 supports up to 224 MB		
	Graphics Engine	Mobile Intel GMA 950 3D/2D engine		
	LVDS	LVDS1 (36-bit), LVDS2 (48-bit optional)		
	CRT	Up to QXGA (2048 x 1536)		
	TV Out	Yes (doesn't supports Microvision)		
Ethernet	Dual Display	CRT + LVDS1, CRT + LVDS2, LVDS1 + LVDS2 (by IEGD driver): LVDS2 is optional		
	Speed	10/100/1000 Mbps on LAN1, LAN2		
Audio	Controller	2 x Intel 82573L		
WatchDog Timer	Chipset	HD Audio, supports 7.1 channel: CD-input, Line-in, Line-out, Mic-in		
Storage	WatchDog Timer	255-level interval timer, Programmable 1 ~ 255 sec, jumperless selection, generates system reset		
	CompactFlash	Card Type I, Type II		
	SATA	2		
	IDE	1 x EIDE (UDMA 100)		
	Floppy	1 x FDD (Optional)		
Internal I/O	Serial	3 x RS-232, 1 x RS-232/422/485		
	Ethernet	LAN x 2 (RJ-45 connector through the cable)		
	KB/Mouse	1		
	CRT	1		
	USB	6 x USB 2.0		
	IDE	1 x EIDE (UDMA 100)		
	Parallel(LPT)	1		
	FDD	Share with LPT (Optional)		
	GPIO	16-bit general purpose input/output		
	I <sup>2</sup> C	Yes		
Expansion	PCI-104 Slot	1		
	MiniPCI Socket	1		
	PCI Slot	1		
Power	Power Type	ATX (AT mode is optional by request)		
	Power Supply Voltage	ATX, +5 V ± 5%, ±12 V ± 5% (For PCI Card, FAN power, and LVDS inverter power, CPU core power)		
	Power Consumption (Typical)	AT, +5 V ± 5%, ±12 V ± 5% (For PCI Card, FAN power, and LVDS inverter power, CPU core power)		
	Power Consumption (Max, test in HCT)	Suspend: 1.01 A @ 5 V, 0.76 A @ 12 V (CPU U2500 1.2 GHz)		
	Power Management	1.05 A @ 5 V, 0.98 A @ 12 V (CPU U2500 1.2 GHz)		
	Battery	APM, ACPI		
Environment	Operating	Lithium 3 V / 196 mAH		
	Non-Operating	0 ~ 60° C (32 ~ 140° F)		
Physical Characteristics	Dimensions (L x W)	95% @ 60° C Relative Humidity		
	Weight	203 x 146 mm (8" x 5.75")		
		0.85 kg (1.87 lb) (with Heatsink)		

## Board Diagram



## Ordering Information

Part No.	CPU	L2 Cache	DDR2 SODIMM	CRT	LVDS1	LVDS2	GigaLAN	Audio	USB 2.0	RS-232	RS-232/422/485	LPT	PCIe x16 Slot	MIO Type I	Mini PCI	Thermal Solution	Operating Temp.
PCM-9590FG-00A2E	Socket 478	-	2	Yes	36-bit	48-bit (Optional)	2	Yes	6	3	1	Yes	1	Yes	1	Active	0 ~ 60° C
PCM-9590FG-S2A2E	Core Duo 1.2 GHz	2 MB	2	Yes	36-bit	48-bit (Optional)	2	Yes	6	3	1	Yes	1	Yes	1	Passive	0 ~ 60° C
PCM-9590FG-S6A2E	Core Duo 1.66 GHz	2 MB	2	Yes	36-bit	48-bit (Optional)	2	Yes	6	3	1	Yes	1	Yes	1	Active	0 ~ 60° C

## Packing List

Part No.	Description	Quantity
	PCM-9590 A2 SBC	1
9689000002	Mini Jumper Pack	1
2006959001	Startup Manual	1
2066959001	Utility CD	1
1700000265	ATX Power Cable	1
170304015K	12V for CPU Big4P x 2 power cable	1
	Cooler 51 x 51x 40 mm (PCM-9590FG-00A2E only)	
	heatsink 50 x 50 x 30 mm (PCM-9590FG-S2A2E only)	

## Optional Accessories

Part No.	Description
PCM-10586-9590E	Wiring kit for PCM-9590
1703100260	USB cable (26 cm)
1703100121	USB cable (12 cm)
PCM-200-00A2E	PCI-104 to PCI bus module

## Embedded OS

Embedded OS/API	Part No.	Description
Win XPE	2070001575	XPE FP2007 P4&PM-B (from 945) V3.0 ENG
	2070003553	Pentium M Multiprocessor Group V3.0 CHS (722.50M)
	2070003694	PentiumM_Multiprocessor V3.01 JPN (595.27 MB)