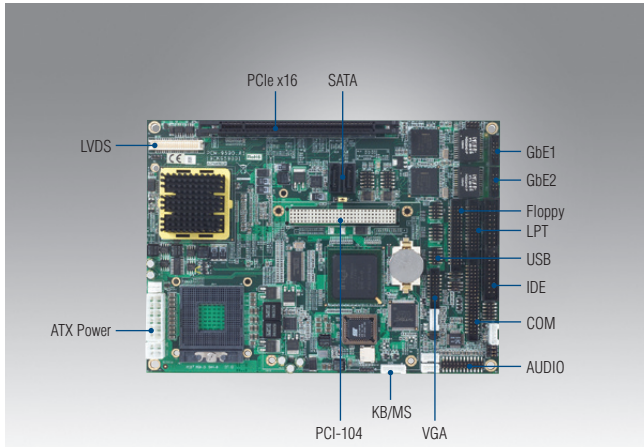


PCM-9590

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



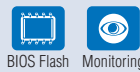
Features

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

Software APIs:



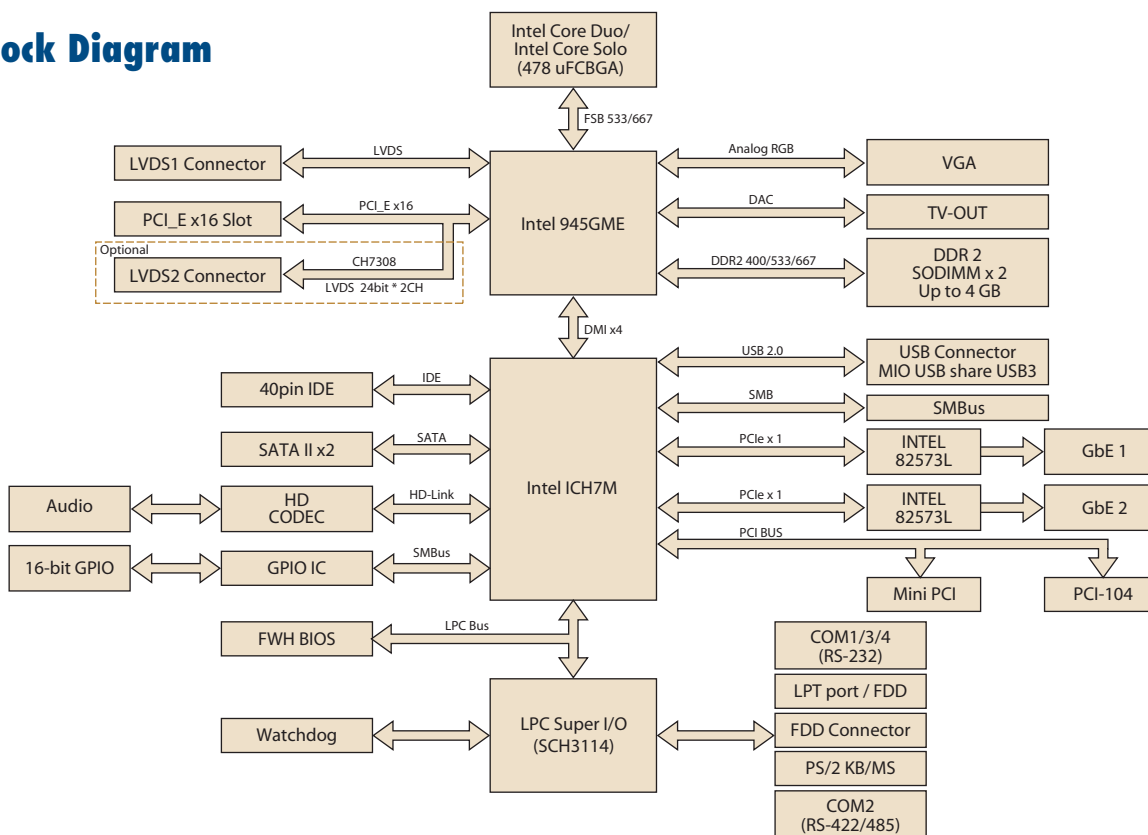
Utilities:



Specifications

		Core Duo 1.2 GHz	Core Duo 1.66 GHz	Socket Type (Core Solo/ Core Duo/ Core 2 Duo)
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 (single channel 18-bit or dual channel 36-bit LVDS) LVDS2 (optional) (single channel 18/24-bit or dual channel 36/48-bit LVDS)		
	VGA	Up to QXGA (2048 x 1536)		
	TV Out	Yes (doesn't support Microvision)		
	Dual Display	VGA + LVDS1, VGA + LVDS2, LVDS1 + LVDS2 (by IEGD driver): LVDS2 is optional		
Ethernet	Speed	10/100/1000 Mbps on GbE1, GbE2		
	Controller	2 x Intel 82573L		
Audio	Chipset	HD Audio, supports 7.1 channel: CD-input, Line-in, Line-out, Mic-in		
WatchDog Timer		255-level interval timer, Programmable 1 ~ 255 sec, jumperless selection, generates system reset		
Storage	CompactFlash	Card Type I, Type II		
	SATA	2 SATA II (Max. Data Transfer Rate 300 MB/s)		
	IDE	1 x EIDE (UDMA 100)		
	Floppy	1 x FDD (Optional)		
	Internal I/O	Serial	3 x RS-232 (COM1/3/4) 1 x RS-422/485 (COM2) with auto-flow control ESD protection for RS-232: Air gap ±15kV, Contact ±8kV	
Ethernet		GbE x 2 (RJ-45 connector through the cable)		
PS/2 KB/Mouse		1		
VGA		1		
USB		6 x USB 2.0		
IDE		1 x EIDE (UDMA 100)		
Parallel (LPT)		1		
FDD		Share with LPT (Optional)		
GPIO		16-bit GPIO		
I2C		Yes		
Expansion	PCI-104 Slot	1		
	Mini PCI Socket	1		
	PCIe	PCIe x16		
Power	Power Type	ATX (AT mode is optional by request)		
	Power Supply Voltage	ATX, +5 V ± 5%, 12 V ± 10% (For PCI Card, FAN power, and LVDS inverter power, CPU core power) AT, +5 V ± 5%, 12 V ± 10% (For PCI Card, FAN power, and LVDS inverter power, CPU core power)		
	Power Consumption (Typical)	Suspend: PCM-9590FG-S2A2E: 1.01 A @ 5 V, 0.76 A @ 12 V (14.17 W)		
	Power Consumption (Max, test in HCT)	PCM-9590FG-S2A2E: 1.05 A @ 5 V, 0.98 A @ 12 V (17.01 W)		
	Power Management	APM, ACPI		
	Battery	Lithium 3 V / 196 mAh		
Environment	Operating	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)		
	Non-Operating	-40° C ~ 85° C and 60° C @ 95% RH non-condensing		
Physical Characteristics	Dimensions (L x W)	203 x 146 mm (8" x 5.75")		
	Weight	0.7 kg (1.54 lb) (with heatsink)		
	Total Height (with cooler + PCB + Bottom)	42.6mm (PCM-9590 with CPU cooler), 36.8mm (PCM-9590 W/O CPU cooler)		

Block Diagram



Ordering Information

Part No.	CPU	L2 Cache	DDR2 SODIMM	VGA	LVDS1	LVDS2	GbE	Audio	USB 2.0	RS-232	RS-232/422/485	LPT	PCIe x16 Slot	MIO Type I	Mini PCI	Power	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	AT/ATX	Active	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	AT/ATX	Active	0 ~ 60° C

Passive = fanless; Active = with fan

Packing List

Part No.	Description	Quantity
PCM-9590 A2 SBC	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
1960018234S000	Cooler 51 x 51x 40 mm (PCM-9590FG-00A2E only)	1
1750000761	Cooler 50 x 50 x 40 mm (PCM-9590FG-S6A2E only)	1

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
1700001531	LPT to FDD cable

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
	2070003694	PentiumM_Multiprocessor V3.01 JPN
QNX		6.4.1