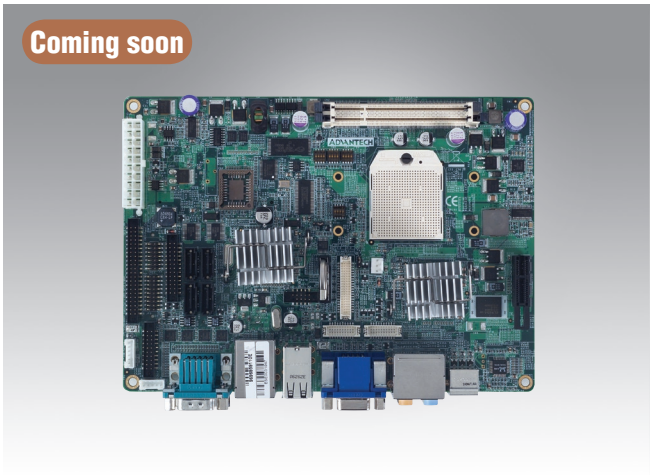
PCM-9591

AMD Dual Core S1 SBC with HDMI/ LVDS/ LAN/ Audio/ 20bit GPIO/ 4 SATA / NVRAM/ TPM/ 2nd RTC



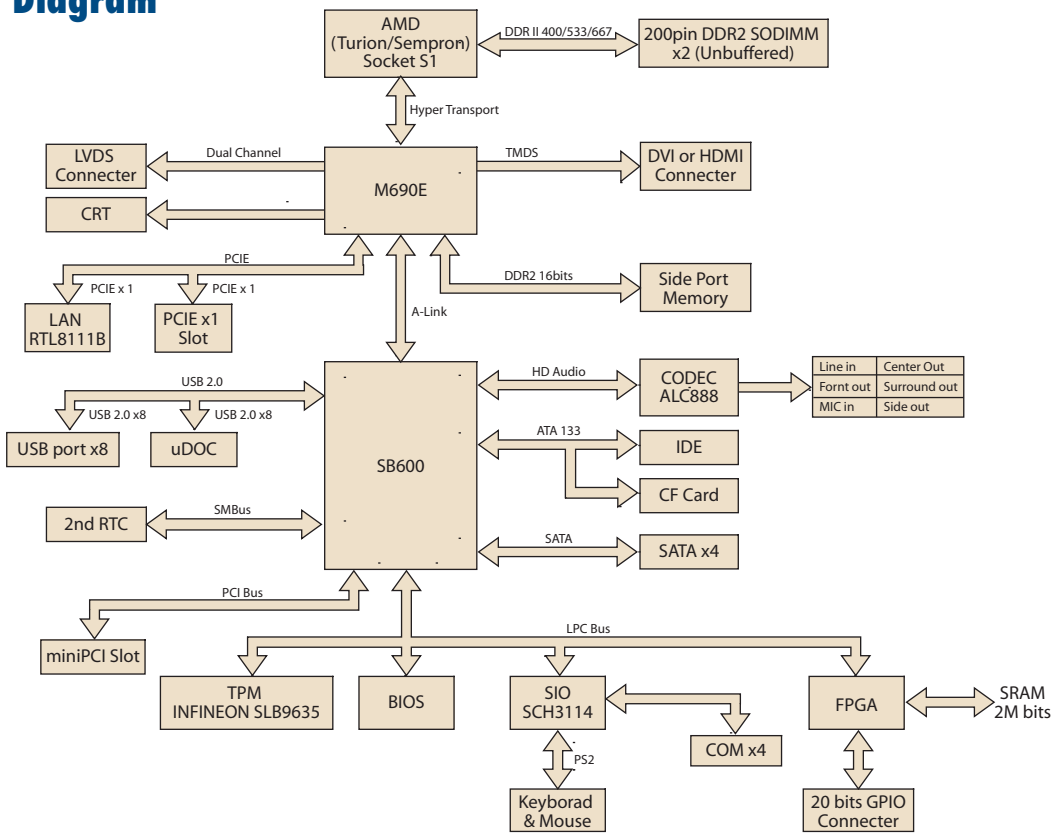
Features

- AMD (Socket Type) + ATI M690E + ATI SB600
- Up to 4 GB DDR2 SODIMM (support FSB 533/667 MHz)
- Integrates a DirectX 9.0 compliant 2D/3D graphics core
- Supports side port: Supports an optional dedicated local frame buffer 64 MB
- Supports Dual independent display (48-bit LVDS / VGA / HDMI or DVI)
- Supports Ethernet up to 10/100/1000 Mbps
- One PCI-Express x 1, one mini PCI
- Supports 8 x USB 2.0, 4 x COM, 4 x SATAII
- Optional in 2Mbits NVRAM, TPM, 2nd RTC, True random number generator, 20bit GPIO (PCM-9591F-00A1E)

Specifications

Processor System	CPU	AMD FPGA 638P S1 Processor supported (Socket type)
	Front Side Bus	533/667 MHz
	L2 Cache	256 KB ~ 1 MB
	Chipset	ATI M690E + SB600
	BIOS	Award 8 Mbit
Memory	Technology	DDR2 533/667
	Max. Capacity	4 GB
	Socket	2 x 200-pin SODIMM
SSD	CompactFlash	Card Type I, Type II (shared 2nd IDE Channel), USB-DOM
I/O Interface	LPT	--
	RS-232	3
	RS-232/422/485	1
	K/B	1
	Mouse	1
	USB	8 x USB 2.0
	Audio	HD Audio, supports 7.1 channel: Speaker out, CD-input, Line-in, Line-out, Mic-in
	GPIO	Digital 20-bit general purpose 10bit input/ 10bit output (Optional)
	SMBus	Supported
SATA	Max. Data Transfer Rate	150 (RIAD 0,1,10)
	Channel	4
EIDE	Mode	UDMA 133
	Channel	1
Expansion Slot	PCI Express	1 x PCIe x 1
	miniPCI	1
Ethernet	Speed	10/100/1000Mbps
	Controller	1 x Realtek RTL8111B-GR
	Interface	1 x RJ-45
Display	Controller	ATI M690E
	Side port	Supports an optional dedicated local frame buffer (side-port) of 64 MB through a 16-bit interface
	VRAM	Share system memory up to 512 MB video memory
	LVDS LCD	1 x 48-bit LVDS
	HDMI	1650 Mbps/channel†
	DVI	Single or Dual Channel DVI is optional by request (BOM different)
	Dual Independent Display	CRT + LVDS, HDMI + LVDS, DVI + LVDS, CRT + DVI, CRT + HDMI (DVI Option)
Security	TPM	Infineon (Optional)
	NVRAM	2 Mbits battery back-up SRAM (Optional)
	2nd Battery	Yes (Optional)
	2nd RTC	Yes (Optional)
	True Random Number Generator	Yes (Optional)
Environment	Operation Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Power	Power Type	AT / ATX
	Power Supply Voltage	ATX, 3.3V, +5 V ± 5%, ±12 V ± 5%, 5 VSB AT, +5 V ± 5%, ±12 V ± 5%
	Power Consumption: Typical	ATX:1.05 A @ +3.3 V, 0.13 A @ +5 VSB, 2.94 A @ +5 V, 1.9 A @ +12 V AT: 3.66A @+5 V, 1.96 A @ +12 V (Dual Core Turion 1.6 GHzv /2G DDR2)
	Power Consumption: HCT	ATX:1.07 A @ +3.3 V, 0.15 A @ +5 VSB, 2.12 A @ +5 V, 1.85 A @ +12 V AT: 2.63 A @ +5 V, 1.78 A @ +12 V (Dual Core Turion 1.6 GHz)
	Power Management	APM, ACPI
	Battery	Lithium 3 V / 220 mAH
Watchdog Timer	Output	System reset
	Interval	Programmable 1 ~ 255 sec
Physical Characteristics	Dimensions (L x W)	203 x 146 mm (8" x 5.75")
	Weight	0.85 kg (1.87 lb) (weight of total package)

Board Diagram



Ordering Information

Part No.	CPU	L2 Cache	Side Port	DDR2 SODIMM	CRT	LVDS	HDMI	DVI	Giga LAN	HD Audio	NVRAM	2nd RTC	TPM	True random number generator	20bit GPIO	USB2.0	RS-232	RS232/ 422/485	SATAII	PCI-E x1 Slot	Mini PCI	Thermal Solution	Operation Temp.
PCM-9591-00A1E	Socket 638	depends on CPU	64 MB	2	Yes	48-bit	Yes	Optional	1	Yes	-	-	-	-	-	8	3	1	4	1	1	Active	0 ~ 60° C
PCM-9591F-00A1E	Socket 638	depends on CPU	64 MB	2	Yes	48-bit	Yes	Optional	1	Yes	2Mbits	Yes	Yes	Yes	Yes	8	3	1	4	1	1	Active	0 ~ 60° C

Optional Accessories

Part No.	Description
PCM-10586-9591E	Wiring kit for PCM-9591
96MPAMS-21P-2KS1T	AMD S1 2100+ 256 K L2 1.0 GHz 8 W CPU
96MPAMS-37P-5KS1T	AMD S1 3700+ 512 K L2 2.0 GHz CPU
96MPATD-TL56-1MS1T	AMD TURION Dual Core TL-56 1 MB L2 1.8 GHz CPU
96MPATD-TL62-1MS1T	AMD TURION Dual Core TL-62 1 MB L2 2.1 GHz CPU
1703100260	USB cable (26 cm)
1703100121	USB cable (12 cm)
1700006494	From AT power supply to ATX connecter
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
MIO-3130-00A1E	Mini PCI Interface to Dual LAN Communication Module
MIO-3131-00A1E	Mini PCI Interface to Single Giga LAN Communication Module

Packing List

Part No.	Description	Quantity
	PCM-9591 SBC	1
9689000002	Mini Jumper Pack	1
	Startup Manual	1
	Utility CD	1
	Cooler 75 x 50 x 30 mm	1