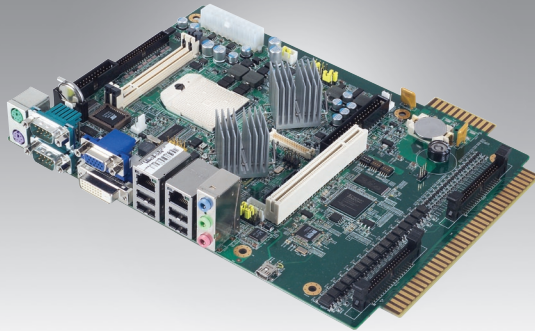


# GMB-RS690

## AMD Turion™ and Sempron™ Processor-based Mini ATX Game Embedded Mother Board

### Preliminary



### Features

- Supports AMD Turion™ 64X2 and Sempron™ mobile processor-AMD M690E and SB600
- Two 200-pin SODIMMs up to 4 GB DDR2 667/800 SDRAM
- Supports 6 serial ports and 2 SATA 2.0 ports
- Supports TPM (Optional)
- JAMMA compatible golden finger
- Hardware Advanced Encryption Standard (AES) security engine
- Hardware Random Number Generator (RNG)
- Battery backup SRAM
- 2nd RTC Support
- SATA Real-time Full disk Encryption ASIC

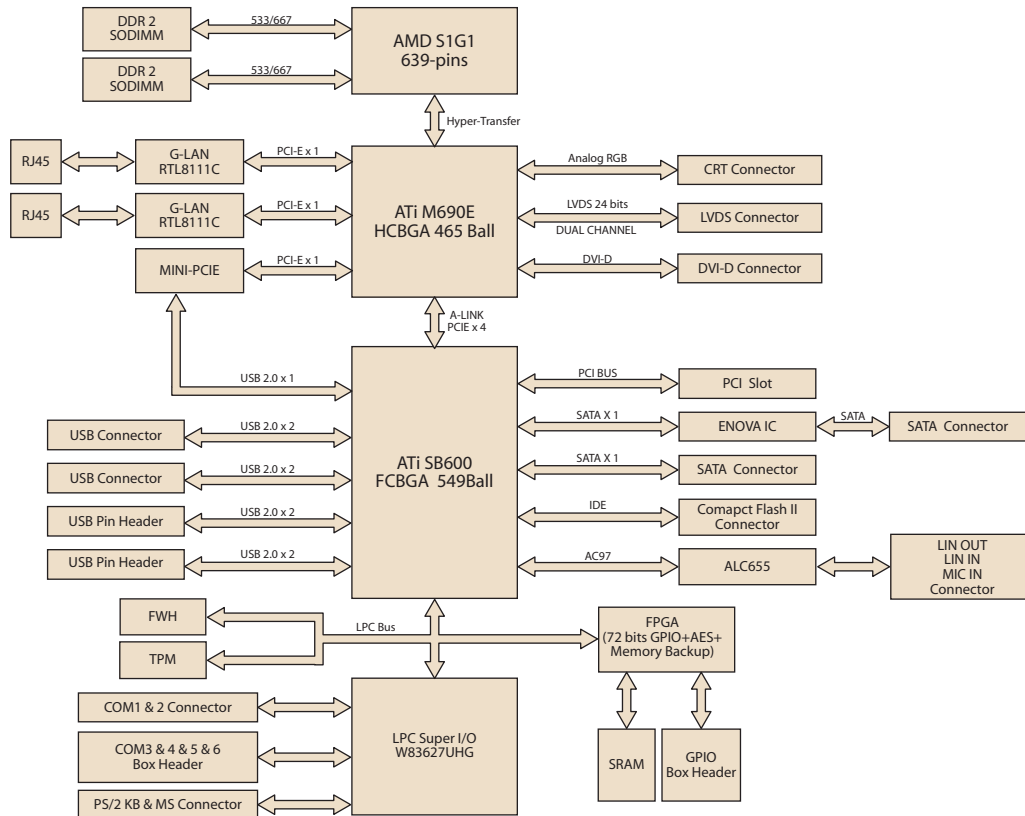


### Specifications

	CPU (65 nm S1g1)	AMD Turion 64 X2 TL-62	AMD Turion 64 X2 TL-56	AMD Sempron 3700+	AMD Sempron 2100+
Processor System	Max. Speed	2.1 GHz (dual core)	1.8 GHz (dual core)	2.0 GHz	1.0 GHz
	Hyper Transport Speed	800 MHz	800 MHz	800 MHz	800 MHz
	L2 Cache	1 MB	1 MB	512 KB	256 KB
	Chipset	AMD M690E and SB 600			
	BIOS	Award 4 Mbit via LPC			
Expansion Slot	PCI	32-bit/33 MHz, 1 slot			
	Mini-PCI	N/A			
	Mini PCI-Express	1 slot			
Memory	Technology	DDR2 667/800 SDRAM			
	Max. Capacity	4 GB			
	Socket	200-pin SODIMM x 2, Dual channel			
Graphics	Controller	AMD M690E Integrated ATI Radeon X1250-base graphic engine			
	VRAM	Share system memory up to 512 MB video memory			
	LVDS	Single channel 18/24-bit, Dual channel 36/48-bit LVDS			
	HDMI	N/A			
	DVI	Single Link			
Ethernet	Dual Display	CRT + LVDS, DVI + LVDS, CRT + DVI			
	Interface	10/100/1000Base-T			
	Controller	GbE LAN1: Realtek RTL8111C; GbE LAN2: Realtek RTL8111C			
SATA	Max Data Transfer Rate	300 MB/s			
	Channel	2 (Port 1, SATA Encryption) option			
EIDE	Mode	EIDE (Ultra DMA 133)			
	Channel	1			
SSD	Compact Flash	Supports compact flash Type II/III			
	VGA	1			
Rear I/O	Ethernet	2 (default 1 port; 2 port option)			
	USB	4 (USB 2.0 compliant)			
	Serial	2 (COM 1: RS-232, supply 5 V, 12 V; COM 2: RS-232/422/485)			
	PS/2	2 (1 x K/B and 1 x Mouse)			
	Audio	Line-in, Line-out, MIC-in			
	LVDS	1			
	DVI	1			
Internal Connector	USB	4 (USB 2.0 compliant)			
	Serial	4 (RS-232)			
	IDE	1			
	SATA	4			
	Compact Flash	1			
	Parallel	1			
	IrDA	-			
	FDD	-			
	DIO	32-bit GPI (5 V); 32-bit GPO thra FPGA (ESD protection)			
	IC	Thru SB600 (South Bridge)			
	Data Protection and Safety	Battery	Battery backup up to 128 KB in 2 banks for each SRAM		
Data Security		TPM, AES, SATA Disk Encryption			
Watchdog Timer	Output	Interrupt, system reset			
	Interval	Programmable 1 ~ 255 sec/min			
Power Requirement	Typical	Turion 64 X2 TL-62 2.1GHz HT 800 MHz, 4GB DDR2 SDRAM			
		+5 V 3.45 A	+3.3 V 0.72 A	+12 V 2.45 A	+5 VSB
Environment	Operating				
	Temperature	0 ~ 60° C (32 ~ 140° F)			
Physical Characteristics	Dimensions	257 x 180 mm			

\* Note: AMD DVI Driver support expected Q4 2008.

## Board Diagram



## Ordering Information

Part Number	GbE	Mini PCI	CF	COM
POD-DB10-00A1E	2	1	1	6

## Packing List

Description	Quantity
GAME-RS690 SBC	x 1
IDE HDD cable (40 pin)	x 1
SATA HDD Data cable	x 2
SATA HDD Power cable	x 2
CPU Cooler	x 1
I/O port bracket	x 1
Startup Manual	x 1
Driver CD	x 1

## Accessories

Part Number	Description
1700003195	USB cable with four ports, 17.5 cm
1700002204	USB cable with four ports, 27 cm
1700002314	USB cable with four ports, 30.5 cm
1701400181	IDC 40P/4 com cable, 18 cm
1700000821	DVI Cable 24P/DF13-20P W/Bracket
1700001577	DVI Cable 24P/DF13-20P 20 cm W/O Bracket
1700008809	Printer port cable, 25 cm, W/Bracket