



### Features

- **AMD AM2/AM2+ socket supports Phenom / Athlon 64 / Athlon 64x2 / Sempron processor**
- **AMD M690E / SB600**
- **Two 200-pin SODIMMs up to 2 GB DDR2 400/533/667/800 MHz SDRAM**
- **Dual View, 2-CH LVDS, VGA, DVI**
- **Realtek ALC888 Supports 7.1 / 5.1+2-CH Audio streams, 6W AMP**
- **Realtek RTL8111C Gigabit Ethernet**
- **1 PCI 2.3, 1 Mini PCIe, 1 bNAND, 1 CF, 2 SATA II**
- **2 COM (5V/12V) + 2 COM, 6 USB, 8-bit GPIO**
- **TPM 1.2 9635TT 1.2**

AMD AM2	Dual View	2 LVDS	DVI	2 Audio Streams
6W AMP	GbE	4 COM	Powered COM	Mini PCIe
bNAND	6 USB	8 GPIO	2 SATA	TPM

### System

<b>CPU</b>	Supports AM2/AM2+ Phenom, Athlon 64 / 64x2, Sempron processor socket
<b>FSB</b>	200/400/600/800/1000 MHz HyperTransport (HT)
<b>BIOS</b>	Award 8 Mb SPI BIOS
<b>System Chipset</b>	AMD M690E +SB600
<b>I/O Chip</b>	Winbond W83627DHG-A
<b>System Memory</b>	Two 200-pin SODIMMs up to 2GB DDR2 400/533/667/800 MHz
<b>SSD</b>	One CompactFlash Type I/II socket
<b>Watchdog Timer</b>	Reset: 1 sec.~255 min. and 1 sec. or 1 min./step
<b>H/W Status Monitor</b>	Monitoring CPU temperature and fan status with auto throttling control
<b>Expansion</b>	One PCI (PCI Rev. 2.3 compliant), one bNAND, one Mini PCIe
<b>TPM</b>	Onboard Infineon SLB 9635 TT 1.2 TPM chipset
<b>Wake up on LAN/Ring</b>	Supports LAN and Ring modes (COM w/o power when WOR)
<b>S3 / S4</b>	Supports both S3 and S4
<b>SmartFan Control</b>	Supports 3 modes in Silent / Optimal / Performance modes
<b>I/O</b>	
<b>MIO</b>	1 x IDE, 4 x RS-232 (COM1/2 with 5V/12V), 2 x SATAII, 1 x K/B, 1 x Mouse
<b>USB</b>	6 x USB 2.0
<b>DIO</b>	8-bit General Purpose I/O for 4-bit DI and 4-bit DO
<b>Ethernet</b>	
<b>LAN</b>	Realtek RTL8111C PCIe Gigabit Ethernet

### Display

<b>Chipset</b>	IGP ATI Radeon X1250-base
<b>Display Memory</b>	Share System Memory , up to 256 MB
<b>Resolution</b>	2048 x 1536 @ 32 bpp(@ 60Hz)
<b>Dual Display</b>	VGA+DVI, or VGA+LVDS, or DVI+LVDS
<b>LVDS</b>	2-CH 18/24-bit LVDS
<b>DVI</b>	Supported by M690E

### Audio

<b>Chipset</b>	AMD SB600
<b>Audio Code</b>	Realtek ALC888 HD Audio Codec supports 7.1-CH single streaming, or 5.1+2-CH HD Audio streamings
<b>Audio Interface</b>	Line in, Mic in , Line out
<b>Audio Amplifier</b>	TPA3005D2 6W (per front channel) stereo amplifier

### Mechanical & Environmental

<b>Power Type</b>	24-pin ATX Power Supply
<b>Operating Temperature</b>	0~60°C (32~140°F)
<b>Operating Humidity</b>	0%~90% relative humidity, non-condensing
<b>Size (L x W)</b>	6.69" x 6.69" (170 mm x 170 mm)
<b>Weight</b>	0.88 lbs (0.4 Kg)

### Ordering Information

**EMX-M690AM2-A1R** AMD M690E AM2/AM2+ Socket Mini-ITX Motherboard with VGA, LVDS/DVI, Audio, GbE, PCI, Mini PCIe, bNAND, 4 COM, 6 USB, 2 SATA II, 8-bit GPIO, TPM & 6W AMP w/ SATA cable, IDE cable, Bracket, CD driver

1  
ATX

2  
Micro  
ATX

3  
Mini  
ITX

4  
Nano  
ITX

5  
ACP

6  
System

7  
Accessory