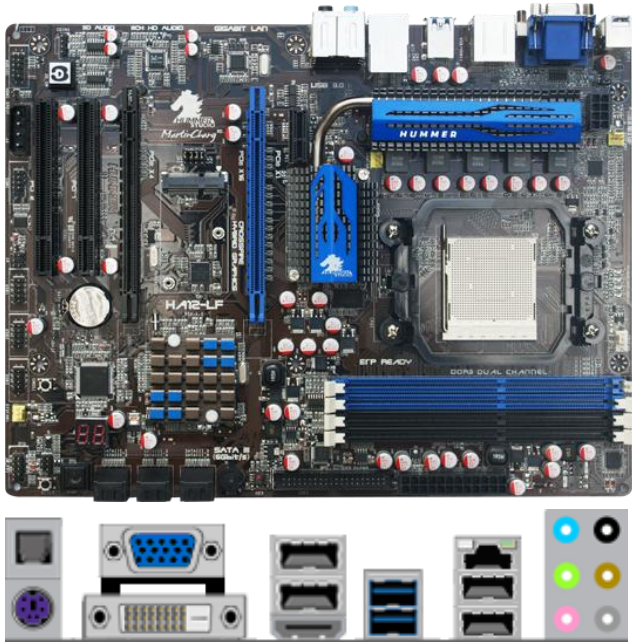


Mainboard Diagram



HA12

1. AMD™ 890GX Chipset and AMD™ SB850 Chipset
2. **AM3 CPU ready**
3. Supports AMD AM3 series processors
4. **Core Enhancer (开核功能)**
5. **Supports NEC USB 3.0**
6. Integrated ATI Radeon™ HD 4290 GPU
7. **Supports 3D Audio Function**
8. **Supports ATI CrossFireX Technology**
9. Supports Dual Channel DDR3 1333/1066(OC 1600)
10. **Integrated Serial ATA3 6Gb/s with RAID function**
11. Integrated Gigabit LAN
12. Integrated ALC883 HD Audio CODEC with 8-CH
13. **Integrated DDR3 128MB sideport memory**
14. **Compliance with ErP standards**
15. ATX Form Factor (230mm X 305mm)



Features and Benefits

AMD New generation of 45nm AMD Socket AM3 processors

The 45nm AM3 processors that support Hyper Transport 3.0 Bus and integrate DDR2 & DDR3 memory controller, To provide advanced visual design and modeling, serious gaming, and visually stunning digital media and entertainment.

AMD™ 890GX Chipset

The AMD 890GX Chipset with ATI Radeon™ HD 4290 Graphics enables an exceptionally power-efficient platform at an incredible value. Bringing features and performance that enrich what you see and do, including next generation gaming and a superior HD video experience¹, the ATI Radeon™ HD 4290 Graphics with AMD 890GX Chipset transforms your PC into a digital media powerhouse.

Hyper Transport Technology 3.0

The highly scalable Hyper Transport 3.0 is capable to provide incredible bandwidth of the system bus up to 20.8GB/s which would dramatically elevate the efficiency of computing performance.

ATI CrossFire Technology

ATI CrossFireX™ is the ultimate multi-GPU performance gaming platform. Enabling game-dominating power, ATI CrossFireX technology enables two or more discrete graphics processors to work together to improve system performance. For The Ultimate Visual Experience™, be sure to select ATI CrossFireX ready motherboards for AMD and Intel® processors and multiple ATI Radeon™ HD graphics cards.

ATI CrossFireX technology allows you to expand your system's graphics capabilities. It allows you the ability to scale your system's graphics horsepower as you need it, supporting up to four ATI Radeon™ HD graphics cards, making this the most scalable gaming platform ever.

GPU Clock Adjustable

Onboard VGA can over-clocking

Serial ATA3 6Gb/s&RAID

This platform supports reliable storage solution for enhanced data protection and data accessing performance. Serial ATA 3Gb/s is firstly introduced in this platform to provide blazingly 3Gb/s bus bandwidth thus higher disk performance. The SATA RAID allows multi-disk designs to be set up as RAID 0, 1,10 based on users' priority of protection/performance, and which even makes more accessible by introducing the innovative windows-based facility

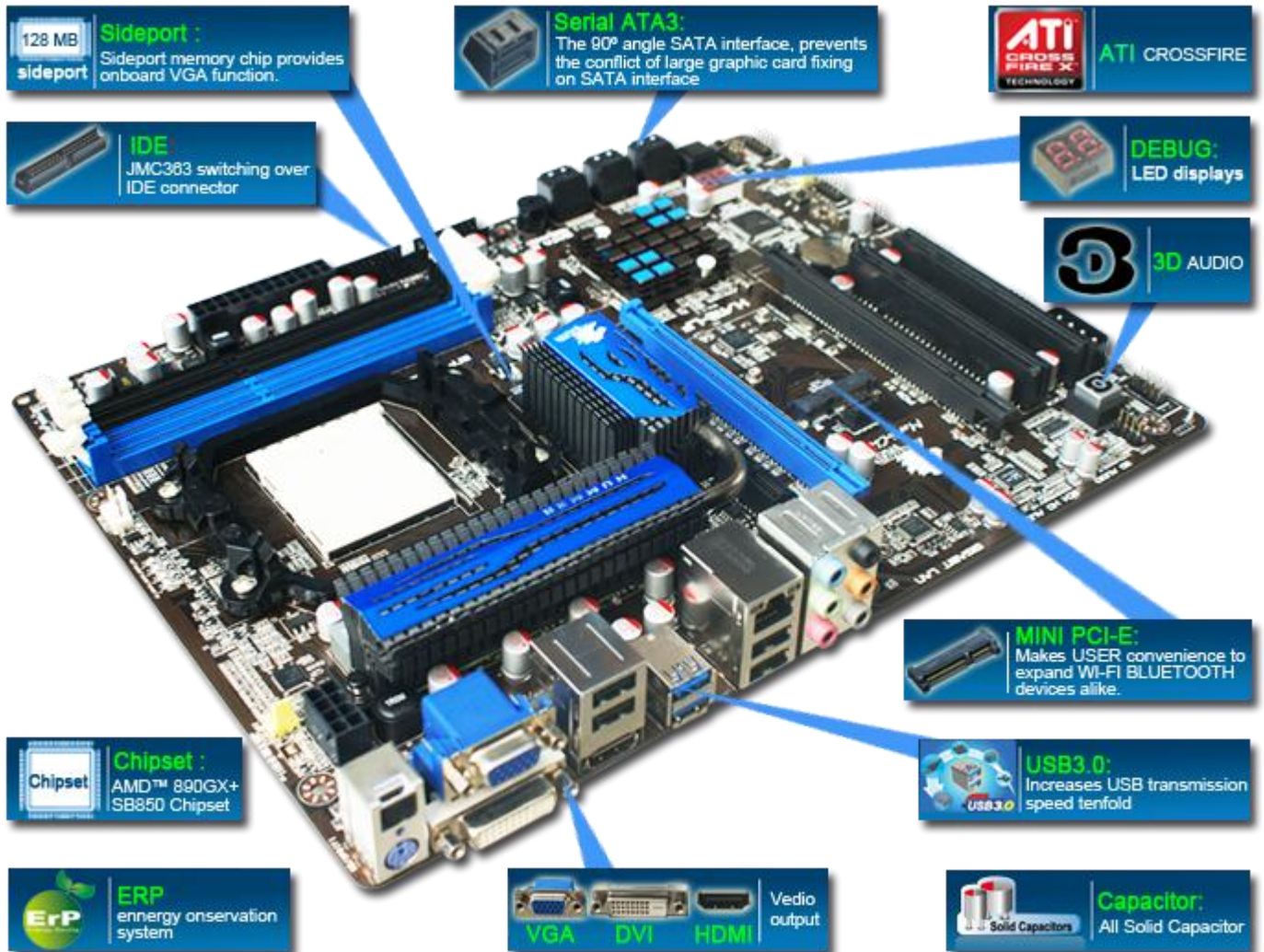
PCI-Express Gigabit LAN

Delivers transfer speed ten times faster than conventional 10/ 100 Ethernet connections, supporting a high transfer rate up to Gigabit/s.

Gigabit LAN is the networking standards for the future and is ideal for handing large amount of data such as video, audio, and voice

OC-CON high-polymer solid electrolysis aluminum capacitors embedded

The working temperature is from 55 degrees Centigrade below zero to 125 degrees Centigrade, OC_CON capacitors possess superior physical characteristics that can be while reducing the working temperature between 20 degrees Centigrade each time, intact extension 10 times of effective product operation lives, at not rising degrees Centigrade of working temperatures each time a relative one, life of product decline 10% only too.



Mainboard Specifications

■ CPU	Supports AMD Socket AM3: <ul style="list-style-type: none"> ■ AMD Athlon™, AMD Athlon™ II, AMD Phenom™, AMD Phenom™ II
■ Chipset	<ul style="list-style-type: none"> ■ AMD™ 890GX Chipset + AMD™ SB850 Chipset
■ Hyper Transport Bus	<ul style="list-style-type: none"> ■ HT 3.0
■ Memory	<ul style="list-style-type: none"> ■ Dual Channel DDR3 memory technology ■ 4 * 240-pin DDR3 DIMM slots ■ Supports DDR3 1333/1066(OC 1600) non-ECC ,un-buffered memory ■ Max.16GB
■ Expansion Slots	<ul style="list-style-type: none"> ■ 2 * 32-bit PCI slots ■ 2 * PCI Express 2.0 x16 slots by 8-LANE ■ 1 * PCI Express x1 slot ■ 1 * Mini PCI Express slot <p>*(PCI-E x1 slot and MINI PCI-E slot cannot be used at the same time)</p>
■ Storage	AMD™ SB850 Southbridge Chipset : <ul style="list-style-type: none"> ■ 6 * Serial ATA3 6Gb/s connectors ■ Supports HDDs with RAID 0, 1,5,10,JBOD functions ■ 1 * Ultra DMA 133 IDE connector
■ Audio	<ul style="list-style-type: none"> ■ Realtek ALC883 HD Audio CODEC with 8-Channel
■ Ethernet LAN	<ul style="list-style-type: none"> ■ Realtek RTL8111DL PCI Express Gigabit LAN
■ USB	<ul style="list-style-type: none"> ■ Embedded 10 * USB 2.0 + 2 * USB 3.0
■ Special Features	<ul style="list-style-type: none"> ■ Advanced Power Design that supports the latest Socket-AM3 K10 CPU ■ Support ACPI S3 & G.P.I Technology& Core Enhancer ■ 3D Audio Function & Debug Port ■ Integrated DDR3 128MB sideport memory
■ Rear Panel I / O	<ul style="list-style-type: none"> ■ 2 * USB 3.0 + 4 * USB 2.0 ■ 1 * PS/2 KB/MS port ■ 1 * VGA port / 1 * DVI port / 1 * HDMI port ■ 1 * RJ-45 port ■ 1 * Optical Out ■ 1 * Audio I / O ports
■ Internal I / O	<ul style="list-style-type: none"> ■ 3 * USB 2.0 headers for 6 USB 2.0 ports ■ CPU / Chassis Fan connectors ■ 1 * 8-pin ATX 12V Power connector ■ 1 * 24-pin ATX Power connector ■ 1 * COM headers & 1 * Audio headers
■ BIOS	<ul style="list-style-type: none"> ■ 16MB SMTx1 Flash ROM
■ Form Factor	<ul style="list-style-type: none"> ■ ATX Form Factor (230 mm X 305 mm)

