Z77 Extreme4-M

Intel® Z77 Chipset

ASRock®
www.asrock.com

Detail Specification

Platform	- Micro ATX Form Factor: 9.6-in x 9.6-in, 24.4 cm x 24.4 cm - Premium Gold Capacitor design (100% Japan-made high-quality Conductive Polymer Capacitors)
CPU	- Supports 3rd and 2nd Generation Intel® Core™ i7 / i5 / i3 in LGA1155 Package - Digi Power Design - 4 + 2 Power Phase Design - Supports Intel® Turbo Boost 2.0 Technology - Supports Intel® K-Series unlocked CPU - Supports Hyper-Threading Technology
Chipset	- Intel® Z77 - Supports Intel® Rapid Start Technology and Smart Connect Technology
Memory	- Dual Channel DDR3 memory technology - 4 x DDR3 DIMM slots - Supports DDR3 2800+(OC)/2400(OC)/2133(OC)/1866(OC)/1600/1333/1066 non-ECC, un-buffered memory - Max. capacity of system memory: 32GB - Supports Intel® Extreme Memory Profile (XMP) 1.3 / 1.2
Expansion Slot	- 2 x PCI Express 3.0 x16 slots (PCIE1/PCIE3: single at x16 (PCIE1) / x8 (PCIE3) or dual at x8/x8 mode) * PCIE 3.0 is only supported with Intel® Ivy Bridge CPU. With Intel® Sandy Bridge CPU, it only supports PCIE 2.0. - 1 x PCI Express 2.0 x16 slot (PCIE4: x4 mode) - 1 x PCI Express 2.0 x1 slot - Supports AMD Quad CrossFireX™, 3-Way CrossFireX™ and CrossFireX™ - Supports NVIDIA® Quad SLI™ and SLI™
Graphics	* Intel® HD Graphics Built-in Visuals and the VGA outputs can be supported only with processors which are GPU integrated. - Supports Intel® HD Graphics Built-in Visuals : Intel® Quick Sync Video 2.0, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 2500/4000. - Pixel Shader 5.0, DirectX 11 with Intel® Ivy Bridge CPU. Pixel Shader 4.1, DirectX 10.1 with Intel® Sandy Bridge CPU. - Max. shared memory 1760MB - Three VGA Output options: D-Sub, DVI-D and HDMI - Supports HDMI 1.4a Technology with max. resolution up to 1920x1200 @ 60Hz - Supports DVI with max. resolution up to 1920x1200 @ 60Hz - Supports D-Sub with max. resolution up to 2048x1536 @ 75Hz - Supports Auto Lip Sync, Deep Color (12bpc), xvYCC and HBR (High Bit Rate Audio) with HDMI (Compliant HDMI monitor is required) - Supports HDCP function with DVI and HDMI ports - Supports Full HD 1080p Blu-ray (BD) / HD-DVD playback with DVI and HDMI ports
Audio	- 7.1 CH HD Audio with Content Protection (Realtek ALC898 Audio Codec) - Premium Blu-ray audio support - Supports THX TruStudio™
LAN	- PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111E - Supports Wake-On-LAN - Supports LAN Cable Detection - Supports Energy Efficient Ethernet 802.3az - Supports PXE
Rear Panel I/O	I/O Panel - 1 x PS/2 Keyboard Port - 1 x D-Sub Port - 1 x DVI-D Port - 1 x HDMI Port - 1 x Optical SPDIF Out Port - 4 x Ready-to-Use USB 2.0 Ports - 1 x eSATA3 Connector - 2 x Ready-to-Use USB 3.0 Ports - 1 x RJ-45 LAN Ports with LED (ACT/LINK LED and SPEED LED) - HD Audio Jack: Rear Speaker / Central / Bass / Line in / Front Speaker / Microphone
SATA3	- 2 x SATA3 6.0 Gb/s connectors by Intel® Z77, support RAID (RAID 0, RAID 1, RAID 5, RAID 10, Intel Rapid Storage and Intel Smart Response Technology), NCQ, AHCI and "Hot Plug" functions - 2 x SATA3 6.0 Gb/s connectors by ASMedia ASM1061, support NCQ, AHCI and "Hot Plug" functions (SATA3_A1 connector is shared with eSATA3 port)
USB 3.0	- 2 x Rear USB 3.0 ports, support USB 1.0/2.0/3.0 up to 5Gb/s - 1 x Front USB 3.0 header (supports 2 USB 3.0 ports), supports USB 1.0/2.0/3.0 up to 5Gb/s
Connector	- 4 x SATA2 3.0 Gb/s connectors, support RAID (RAID 0, RAID 1, RAID 5, RAID 10, Intel Rapid Storage and Intel Smart Response Technology), NCQ, AHCI and Hot Plug functions - 4 x SATA3 6.0 Gb/s connectors - 1 x IR header - 1 x CIR header - 1 x Print port header - 1 x COM port header - 1 x HDMI_SPDIF header - 1 x Power LED header - CPU/Chassis/Power FAN connector - 24 pin ATX power connector - 8 pin 12V power connector - Front panel audio connector - 3 x USB 2.0 headers (support 6 USB 2.0 ports) - 1 x USB 3.0 header (supports 2 USB 3.0 ports)
BIOS Feature	- 64Mb AMI UEFI Legal BIOS with GUI support - Supports "Plug and Play" - ACPI 1.1 Compliance Wake Up Events - Supports jumperfree - SMBIOS 2.3.1 Support - IGPU, DRAM, 1.8V PLL, VTT, VCCSA Voltage Multi-adjustment
Support CD	- Drivers, Utilities, AntiVirus Software (Trial Version), CyberLink MediaEspresso 6.5 Trial, ASRock MAGIX Multimedia Suite - OEM

Unique Feature	- ASRock Extreme Tuning Utility (AXTU)
	- ASRock Instant Boot
	- ASRock Instant Flash
	- ASRock APP Charger
	- ASRock SmartView
	- ASRock XFast USB
	- ASRock XFast LAN
	- ASRock XFast RAM
	- ASRock Crashless BIOS
	- Lucid Virtu Universal MVP
	* Lucid Virtu Universal MVP can be supported only with processors which are GPU integrated.
	- Hybrid Booster:
	  - CPU Frequency Stepless Control
	  - ASRock U-COP
	  - Boot Failure Guard (B.F.G.)
	- Combo Cooler Option (C.C.O.)
	- Good Night LED

Hardware Monitor	- CPU Temperature Sensing - Chassis Temperature Sensing - CPU/Chassis/Power Fan Tachometer - CPU/Chassis Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) - CPU/Chassis Fan Multi-Speed Control - Voltage Monitoring: +12V, +5V, +3.3V, CPU Vcore
OS	- Microsoft® Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit compliant
Certifications	- FCC, CE, WHQL - ErP/EuP Ready (ErP/EuP ready power supply is required)
Accessories	- 1 x ASRock SLI_Bridge Card - Quick Installation Guide, Support CD, I/O Shield - 2 x SATA Data Cables (Optional)

Product Brief

- Premium Gold Caps
- Digi Power Design
- Supports Dual Channel DDR3 2800+(OC)
- 2 x PCIe 3.0 x16 Slots, Supports AMD Quad CrossFireX™, 3-Way CrossFireX, CrossFireX™ and NVIDIA Quad SLI™, SLI™
- PCIE Gigabit LAN
- Supports Intel® HD Graphics with Built-in Visuals
- Multi-VGA Output Options : DVI-D, D-Sub, HDMI
- Combo Cooler Option (C.C.O.)
- 7.1 CH HD Audio with Content Protection (Realtek ALC898 Audio Codec), Supports THX TruStudio™
- Supports ASRock XFast RAM, XFast LAN, XFast USB, UEFI System Browser
- Supports Intel Smart Connect, Intel Rapid Start, Lucid Virtu Universal MVP
- Free Bundle : CyberLink MediaEspresso 6.5 Trial, ASRock MAGIX Multimedia Suite

5x XFast
- 5x LAN SPEED
- 5x SYSTEM SPEED
- XFast RAM
- XFast USB
- 5x USB SPEED
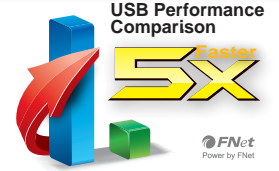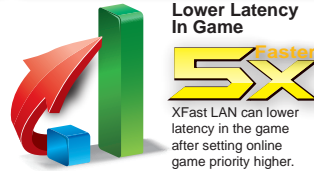
XFast RAM
Fully Optimize Memory Usage

Photoshop 5X Faster

5X Faster for Photoshop Execution

XFast RAM will create a virtual disk from the system memory to boost the performance for Photoshop. It can even perform 5X faster than before.

XFast LAN
Faster Internet Access

Lower Latency In Game

5X Faster

XFast LAN can lower latency in the game after setting online game priority higher.

Time latency in World of Warcraft: Cataclysm
*Lower is better
- ASRock Motherboard with XFast LAN
- Other Motherboard without XFast LAN

XFast USB
Boosts up your USB speed

USB Performance Comparison

5X Faster

FNet
Power by FNet

ATTO Disk Benchmark 4K Read
- ASRock Motherboard with XFast USB
- Other Motherboard without XFast USB

● The performance boost percentage may vary with a different configuration.

Virtu Universal MVP - Uncompromised Game Response Performance

ASRock VIRTU MVP
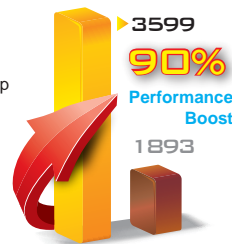Universal.GPU.Virtualization
by Lucid

1. HyperFormance™ :

A new technology which combines integrated and discrete graphics for uncompromised performance and get up to a 90% performance boost!

- ▮ Virtu HyperFormance ON (discrete VGA+ integrated VGA)
- ▮ Virtu HyperFormance OFF (discrete VGA only)

3DMark11 (Extreme 1080p) - Graphics Score

▶3599

90% Performance Boost

1893

3. Switchable Graphics :

Dynamically assigns tasks to the best graphics resource regardless of physical cable connections.

VIRTU MVP
Universal.GPU.Virtualization
by Lucid

2. Virtual Vsync :

A technology designed to solve the ever lasting debate between quality and performance. Bring GPU performance from 60 FPS Vsync limit back to its maximum while keeping Vsync image quality and no tearing.

Before Virtual Vsync:
TEARING ARTIFACT OR FPS LIMIT

After Virtual Vsync:
NO TEARING

Intel Smart Connect Technology

Intel Smart Connect Technology keeps content continuously updated while the PC is asleep! It will periodically wake up the PC while in a sleep state and check updates for things like email, Twitter, Facebook, etc.

Intel Rapid Start Technology

Quickly return to where you left off with a PC that goes from deep-sleep to full awake in a flash.

Premium Gold Caps

Premium Gold Caps are 100% made in Japan; these solid capacitors are sleek, high gloss caps with a premium gold coating representing long life and stable performance.

Digi Power

By adopting digital Pulse-width modulation (PWM), the Z77 motherboard can provide CPU Vcore voltage more efficiently and smoothly.

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4 x DDR3 2800+(OC)

ASRock 7-Series motherboards unlock maximum memory performance, coming with 4 DIMM slots for dual-channel memory, supporting up to DDR3 2800+(OC) MHz!

Next-Gen PCIe 3.0

- Higher bit rate - 8.0GT/s
- Higher bandwidth per lane - 1GB/s
- Higher efficiency - 98.5% encoding efficiency
- 100% backward compatible with previous PCI-E 2.0 / 1.0 standard

Note: Supported with 3rd Gen Intel Core Processor

Intel HD Graphics

Intel® HD Graphics, simplifies your designs by eliminating additional discrete graphics hardware, while integrating stunning visuals and performance for immersive gaming.

THX TruStudio

Delivering the fullest audio experience for games, music and movies.

Intel® Quick Sync Video   Intel® InTru™ 3D   Intel® Clear Video HD Technology

Intel® Insider™   Intel® HD Graphics 2500/4000

UEFI System Browser

UEFI system browser is a useful tool included in graphical UEFI. It can detect the devices and configurations that users are currently using in their PC.

AXTU

ASRock Extreme Tuning Utility (AXTU) is an all-in-one software to fine-tune different features in an userfriendly interface, which includes Hardware Monitor, Fan Control, Overclocking, OC DNA, IES and XFast RAM.

Cyberlink MediaEspresso 6.5 Trial

The fastest video media conversation software

MAGIX Multimedia Suite

The ultimate solutions to enhance your media experience. From music management, music creation, video editing to photo management. Simply do more with your media than you ever thought possible.