

Z68 Professional Gen3

Intel® Z68 Chipset



ASRock
www.asrock.com



Detail Specification

Platform	- ATX Form Factor: 12.0-in x 9.6-in, 30.5 cm x 24.4 cm - All Solid Capacitor design (100% Japan-made high-quality Conductive Polymer Capacitors)
CPU	- Supports 2 nd Generation Intel® Core™ i7 / i5 / i3 in LGA1155 Package - Advanced V12 + 6 Power Phase Design - Supports Intel® Turbo Boost 2.0 Technology - Supports Intel® K-Series unlocked CPU - Supports Hyper-Threading Technology
Chipset	- Intel® Z68
Memory	- Dual Channel DDR3 memory technology - 4 x DDR3 DIMM slots - Supports DDR3 2133(O.C)/1866(O.C)/1600/1333/1066 non-ECC, un-buffered memory - Max. capacity of system memory: 32GB - Supports Intel® Extreme Memory Profile (XMP)
Expansion Slot	- 2 x PCI Express 3.0 x16 slots (PCI-E2/PCI-E4: single at x16 (PCI-E2) / x8 (PCI-E4) or dual at x8/x8 mode) - 1 x PCI Express 2.0 x16 slot (PCI-E5: x4 mode) - 2 x PCI Express 2.0 x1 slots - 2 x PCI slots - Supports AMD Quad CrossFireX™, 3-Way CrossFireX™ and CrossFireX™ - Supports NVIDIA® Quad SLI™ and SLI™
Graphics	- Supports Intel® HD Graphics Built-in Visuals : Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) - Pixel Shader 4.1, DirectX 10.1 - Max. shared memory 1759MB - Four VGA Output options: one D-Sub port, two HDMI ports and one DVI-D port by the bundled HDMI to DVI adapter - 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 ALC892 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 Dual LAN with Teaming function - Supports PXE
Rear Panel I/O	I/O Panel - 1 x PS/2 Keyboard Port - 1 x VGA/D-Sub Port - 2 x HDMI Ports - 1 x Optical S/PDIF Out Port - 3 x Ready-to-Use USB 2.0 Ports - 1 x Fatal1ty Mouse Port (USB 2.0) - 1 x eSATA3 Connector - 4 x Ready-to-Use USB 3.0 Ports - 2 x RJ-45 LAN Ports with LED (ACT/LINK LED and SPEED LED) - 1 x IEEE 1394 Port - 1 x Clear CMOS Switch with LED - HD Audio Jack: Rear Speaker / Central / Bass / Line in / Front Speaker / Microphone
SATA3	- 2 x SATA3 6.0 Gb/s connectors by Intel® Z68, support RAID (RAID 0, RAID 1, RAID 10, RAID 5, Intel Rapid Storage and Intel Smart Response Technology), NCO, AHCI and "Hot Plug" functions - 4 x SATA3 6.0 Gb/s connectors by ASMedia ASM1061, support NCO, AHCI and "Hot Plug" functions (SATA3_A4 connector is shared with eSATA3 port)
USB 3.0	- 4 x Rear USB 3.0 ports by ASMedia ASM1042, 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) by ASMedia ASM1042, supports USB 1.0/2.0 up to 5Gb/s
Connector	- 4 x SATA2 3.0 Gb/s connectors, support RAID (RAID 0, RAID 1, RAID 10, RAID 5, Intel Rapid Storage and Intel Smart Response Technology), NCO, AHCI and Hot Plug functions - 6 x SATA3 6.0 Gb/s connectors - 1 x ATA133 IDE connector (supports 2 x IDE devices) - 1 x Floppy connector - 1 x IR header - 1 x COM port header - 1 x HDMI_SPDIF header - 1 x IEEE 1394 header - 1 x Power LED header - CPU/Chassis/Power FAN connector - 24 pin ATX power connector - 8 pin 12V power connector - CD in header - Front panel audio connector - 2 x USB 2.0 headers (support 4 USB 2.0 ports) - 1 x USB 3.0 header (supports 2 USB 3.0 ports) - 1 x Dr. Debug with LED
Smart Switch	- 1 x Power Switch with LED - 1 x Reset Switch with LED - 1 x Clear CMOS Switch with LED
BIOS Feature	- 64Mb AMI UEFI Legal BIOS with GUI support - Supports "Plug and Play" - ACPI 1.1 Compliance Wake Up Events - Supports jumpfree - SMBIOS 2.3.1 Support - CPU Core, IGPU, DRAM, PCH, CPU PLL, VTT, VCCSA Voltage Multi-adjustment
Support CD	- Drivers, Utilities, AntiVirus Software (Trial Version), CyberLink MediaEspresso 6.5 Trial, ASRock Software Suite (CyberLink DVD Suite - OEM and Trial)
Unique Feature	- F-Stream - ASRock Instant Boot - ASRock Instant Flash - ASRock APP Charger - ASRock SmartView - ASRock XFast USB - Lucid Virtu - ASRock On/Off Play Technology - 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_25 Card - Quick Installation Guide, Support CD, I/O Shield - Floppy/ATA 133 cables - 6 x SATA Data Cables (Optional) - 2 x SATA 1 to 1 Power Cables (Optional) - 1 x 3.5mm Audio Cable (Optional) - 1 x Front USB 3.0 Panel - 4 x HDD Screws - 6 x Chassis Screws - 1 x Rear USB 3.0 Bracket - 1 x HDMI to DVI Adapter



Product Brief

- Premium Gold Caps (2.5 x longer life time), 100% Japan-made high-quality Conductive Polymer Capacitors
- Digital PWM Design, Advanced V12 + 6 Power Phase Design
- Supports Dual Channel DDR3 2133(O.C)
- 2 x PCI-E 3.0 x16 slots, 1 PCI-E 2.0 x16 slot
- Supports AMD Quad CrossFireX™, 3-Way CrossFireX™ and CrossFireX™
- Supports NVIDIA® Quad SLI™ and SLI™
- Dual PCIe GLAN with Teaming function
- Dr. Debug, Smart Swith Design: Power/Reset/Clear CMOS Switch with LED
- Supports Fatal1ty XFast USB Technology, Graphical UEFI, Lucid Virtu, Intel Smart Response Technology
- Supports Fatal1ty F-Stream, On/Off Play Technology, APP Charger, SmartView
- 7.1 CH HD Audio with Content Protection (Realtek ALC892 Audio Codec), Supports THX TruStudio™
- Free Bundle : 1 x 3.5mm Audio Cable, 1 x Front USB 3.0 Panel, CyberLink MediaEspresso 6.5 Trial

The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

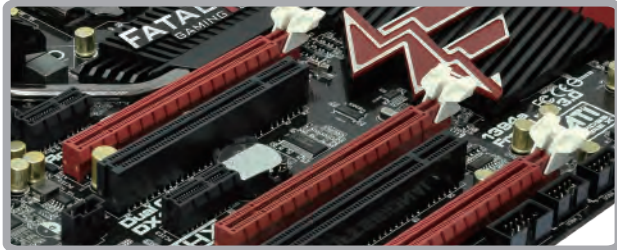
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PCI-E 3.0 slots – Support Quad SLI, 3-Way CrossFireX



Supporting Nvidia SLI / Quad SLI and AMD 3-Way CrossFireX / Quad CrossFireX.

PCI Express 3.0 slots maximize the bandwidth for the next-gen PCI Express 3.0 VGA cards, provide ultimate graphics performance.

Note:

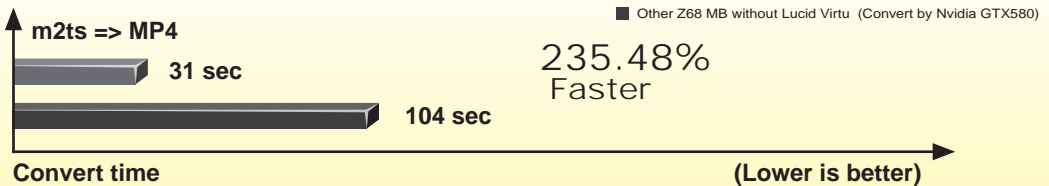
1. PCIE2/PCIE4 are PCI Express 3.0 slots; PCIE5 is PCI Express 2.0 slot.
2. To run the PCI Express 3.0 slots in Gen3 speed, please must install the Ivy Bridge CPU which supports PCI Express 3.0. If you install the Sandy Bridge CPU, the PCI Express 3.0 slots will run only at Gen2 speed.

Lucid Virtu™



With Lucid Virtu software, next-generation PCs with 2nd Generation Intel® Core™ processor platforms will dynamically assign tasks in real time to the best available graphics resource based on power, performance and features.

Video File Convert Comparison



Test Platform :

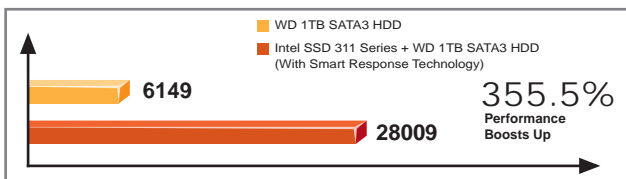
MB : Fatal1ty Z68 Motherboard
Other Z68 Motherboard
CPU : Intel Core i7 2600K 3.4GHz
DRAM : Kingston DDR3-1333 2Gx2
HDD : WD 500GB
VGA : Nvidia GTX580 ; Intel HD Graphics
OS : Windows 7 64bit SP1
Lucid : Lucid VIRTU 1.0.105
Nvidia Driver : 266.58
Application : Cyberlink MediaEspresso 6.5
Original File : m2ts, 1080p, 2200MB

Intel Smart Response Technology

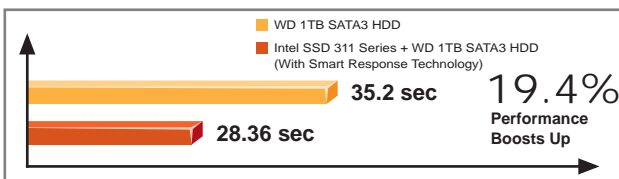


For users who are tempted to connect the SSD and HDD on Fatal1ty Z68 Professional Gen3 Motherboard, the Intel Smart Response Technology can make the SSD become the "Cache of the HDD" to boost up the HDD access speed.

PCMark 05 HDD Score



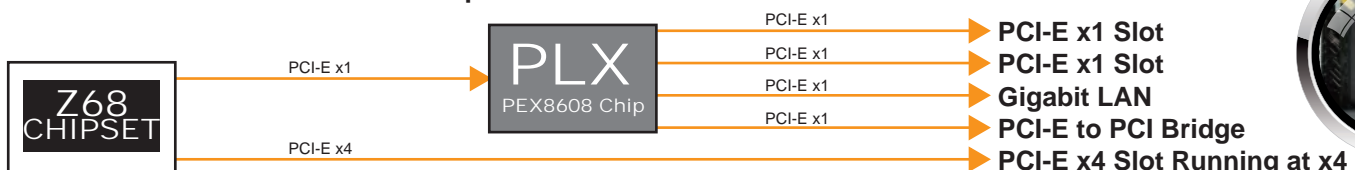
Boot time



System Configuration:

MB : Z68 Professional Gen3
BIOS : L0.33
CPU : i7-2600K 3.4G
DRAM : Kingston DDR3-1333 2Gx2
SSD : Intel SSD 311 Series
HDD : WD 1TB SATA3 HDD
OS : Windows 7 64bit SP1 on WD 1TB SATA3 HDD

PLX PEX8608 Chip Onboard



With PLX PEX8608 chip, it generates more PCI-E lanes for PCI-E devices, so that all PCI-E devices are able to work at the proper speed simultaneously!

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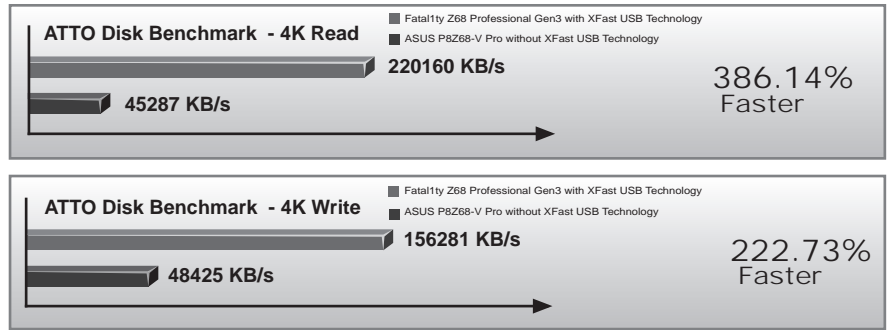
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XFast USB Technology

The world's fastest USB transfer speed.



USB 3.0 Performance Comparison



On/Off Play

Enjoy great audio experience from the portable audio devices via PC speaker even when the system is powered off.



Free Bundle
3.5mm Audio Cable

Intel® HD Graphics Built-in Visuals



F-Stream

The Fatal1ty F-Stream tuning program is an all-in-1 software utility that supports overclocking and hardware tuning such as energy usage, H/W monitor, fan speed control and Fatal1ty Mouse Port Configuration.



THX TruStudio

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



Graphical UEFI

* Graphical Visual Experience
* Mouse Enabling
* Supports 3TB bootable HDD



Dual LAN - Teaming

Dual LAN with Teaming function enabled on this motherboard allows two single connections to act as one single connection for twice the transmission bandwidth, making data transmission more effective.



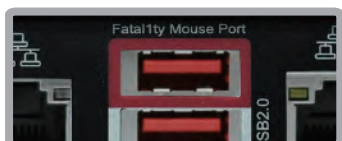
Cyberlink MediaEspresso 6.5 Trial

The fastest video media conversation software



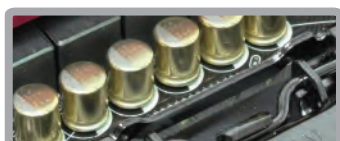
Fatal1ty Mouse Port

Fatal1ty Mouse Port is a customizable technology for PC gamers that is a part of F-Stream. After plugging the USB mouse into the Fatal1ty Mouse Port and running F-Stream, gamers can use Fatal1ty's personal preferred mouse polling rate at 500 Hz. F-Stream also provides the flexibility for gamers to adjust the mouse polling rate from 125 Hz to 1000 Hz. This is helpful for professional gamers to experience smoother gameplay and faster response time to the mouse.



Premium Gold Caps

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



V12+6 CPU Power Phase

To improve CPU power solution, this board is designed with the advanced V12+6 power phase design which signatures tough components and smooth power delivery to the CPU.



Digital PWM Design

By adopting digital Pulse-width modulation (PWM), the Fatal1ty Motherboard Series can provide CPU Vcore voltage more efficiently and smoothly. Compared to analog PWM, digital PWM can optimize the CPU power solution and provide a proper and stable Vcore for the processor.

