

P8Z77-V LX

Superior graphics performance on Z77



- DIGI+ VRM Digital Power Design
- USB 3.0 Boost - Faster USB 3.0 Transmission with UASP(170%)
- Network iControl
- LucidLogix® Virtu Universal MVP™
- GPU Boost

CPU, Chipset and Graphics Features

LGA1155 Intel® 3rd/2nd Generation Processors Ready

This motherboard supports LGA1155 socket for 3rd generation Intel® Core™ processor-based platform and 2nd Generation Core™ i7/ i5/ i3/ Pentium® / Celeron® Processors in the LGA1155 package, with iGPU, memory and PCI Express controllers integrated to support onboard graphics output with dedicated chipsets, 2-channel (4 DIMM) DDR3 memory and 16 PCI Express 3.0/2.0 lanes. This provides great graphics performance. LGA1155 socket for 3rd generation Intel® Core™ processor-based platform and 2nd Generation Core™ i7/ i5/ i3/ Pentium® / Celeron® Processors are among the most powerful and energy efficient CPUs in the world



Intel® Z77 Express Chipset

The Intel® Z77 Express Chipset is a single-chipset design to support LGA1155 socket for 3rd generation Intel® Core™ processor-based platform and 2nd Generation Core™ i7/ i5/ i3/ Pentium® / Celeron® Processors. It provides improved performance by utilizing serial point-to-point links, allowing increased bandwidth and stability. Additionally, Z77 chipset provides 4 USB 3.0 ports for 10 times faster data retrieval speed. Moreover, Intel® Z77 Express Chipset can also enable iGPU function, letting users enjoy the latest Intel® integrated graphic performance.



Intel® Smart Response Technology

SSD Speed with HDD Capacity

Intel® Smart Response Technology boosts overall system performance. It uses an installed fast SSD (min 18.6GB available capacity required) as a cache for frequently accessed data. Key benefits include reduced load and wait times, and lower power consumption through the elimination of unnecessary hard drive spin. This technology combines SSD performance with hard drive capacity, operating up to 6X faster than a hard drive-only system.



Intel® Smart Connect Technology

Auto Application Refresh. Less Waiting Time

Your computer can receive web updates with fresh content for selected applications, even when the system is in sleep mode. This means less time waiting for applications to update and sync with the cloud, leading to a more efficient computing experience.



Intel® Rapid Start Technology

Instantly Awake your PC from Sleep Mode

Allows your computer to quickly resume from a low-power hibernate state in seconds. Saving your system memory to the designated SSD, it provides your computer a faster wake-up response time, while still keeping the energy use low.



LucidLogix Virtu MVP

LucidLogix Virtu MVP

Up to 60% Hybrid Graphics Boost and 3X Faster Video Conversion

LucidLogix Virtu MVP featuring HyperFormance™ Technology boosts your discrete graphics card up to 60% beyond its original performance through the test of 3DMark Vantage. Designed for Intel® processor graphics and Windows® 7 PCs, it perfectly combines the performance of discrete graphics cards with fast computing iGPU. Also with the newly designed Virtual Sync, users can enjoy a smoother gaming experience by eliminating tearing artifacts. LucidLogix Virtu MVP could also dynamically assign tasks to the best available graphics resource, based on power, performance and system load. This allows users to fully utilize 3x faster video conversion with Intel® Quick Sync Video technology while retaining high-end 3D rendering and gaming performance, provided by both NVIDIA® and AMD graphic cards. When the discrete graphics card is not required, power consumption goes automatically down to near zero, making the system more environmentally-friendly. For users searching for perfection, LucidLogix Virtu MVP provides great graphical performance and the best flexibility and efficiency.



* LucidLogix® Virtu Universal MVP™ supports Windows® 7 operating system.

** Intel® Quick Sync Video feature is supported by 3rd/2nd generation Intel® Core™ processor family.

*** System Config: OS: Windows 7 64bit SP1 | MB: P8Z77-V DELUXE | CPU: CPU-1155-QB15-2700K-3.5G-Sandy BRIDGE100-8M | DIMM: DDR3 G.SKILL 17000CL9Q-16GBZH 4GB * 4 | LucidVirtu MVP version: V2.1.110.19997 | On-board Intel VGA Driver version: V8.15.10.2598 | ASUS GTX580 Driver version: V8.17.12.8562

PCIe 3.0 Ready

PCIe 3.0 Ready

PCI Express® 3.0 (PCIe 3.0) is the latest PCI Express bus standard with improved encoding schemes that provide twice the performance of current PCIe 2.0.



Total bandwidth for a x16 link reaches a maximum of 32GB/s, double the 16GB/s of PCIe 2.0 (in x16 mode). As such, PCIe 3.0 provides users unprecedented data speeds, combined with the convenience and seamless transition offered by complete backward compatibility with PCIe 1.0 and PCIe 2.0 devices. PCIe 3.0 will become a must-have feature for users who wish to improve and optimize graphic performance, as well as have the latest technology available to them.

* PCIe 3.0 speed is supported by Intel® 3rd generation Core™ processors.

ASUS Exclusive Features

DIGI+ VRM Digital Power Design

All-new digital CPU power controls work perfectly together to match digital power signal (SVID) requests from the CPU, with ultra-fast sensing and response efficiently delivering precision power. Accurate delivery reduces waste, and provides more stable CPU Vcore voltages. Users can adjust CPU PWM voltages and frequencies for various overclocking scenarios, with accurate input through UEFI BIOS tuning or the exclusive ASUS interface. This proprietary design increases overclocking headroom to push performance to its full potential.



USB 3.0 Boost

Faster USB 3.0 Transmission with UASP

ASUS USB 3.0 Boost technology supports UASP (USB Attached SCSI Protocol), the latest USB 3.0 standard. With USB 3.0 Boost technology, a USB device's transmission speed is significantly increased up to 170%, adding to an already impressive fast USB 3.0 transfer speed. ASUS software automatically accelerates data speeds for compatible USB 3.0 peripherals without the need for any user interaction.



EPU

Energy Efficiency All Around

Tap into the world's first real-time PC power saving chip through a simple onboard switch or AI Suite II utility. Get total system-wide energy optimization by automatically detecting current PC loadings and intelligently moderating power consumption. This also reduces fan noise and extends component longevity!



Network iControl

Real-time Network Bandwidth Control

With a single-click on/off button, the application currently in use has its data and network bandwidth prioritized over other programs. Moreover, you can prioritize your favorite software easily by configuring profiles through the intuitive user interface. Within the profile, programs can be pre-scheduled to run in a specific time period to avoid network congestion and long-waits on downloads. Auto PPPoE network connection provides a one-step setup for enhanced online convenience. Overall, it's an intuitive network bandwidth control center.



GPU Boost

Go to the Limit with iGPU Level Up!

GPU Boost accelerates the integrated GPU for extreme graphics performance. The user-friendly interface facilitates flexible frequency adjustments. It easily delivers stable system-level upgrades for every use.



HDMI Support

Enjoy Full HD 1080p Multimedia Home-Theater Entertainment

High-Definition Multimedia Interface (HDMI) is a set of digital video standards that delivers multi-channel audio and uncompressed digital video for full HD 1080p visuals and 3D animation through all high speed HDMI cable with HD DVD devices. Supporting HDCP copy protection such as HD DVD and Blu-ray Discs, HDMI provides you with the highest-quality home theater experience.



MemOK!

Any Memory is A-OK!

MemOK! quickly ensures memory boot compatibility. This remarkable memory rescue tool requires a mere push of a button to patch memory issues. MemOK! determines failsafe settings and dramatically improves your system boot success. Get your system up and running in no time!



ASUS UEFI BIOS (EZ Mode)

Flexible and Easy BIOS Interface

ASUS UEFI BIOS offers the first mouse-controlled graphical BIOS designed with selectable modes, providing a user-friendly interface that goes beyond the traditional keyboard-only controls. It also natively supports fully-utilized hard drives larger than 2.2TB in 64-bit operating systems.



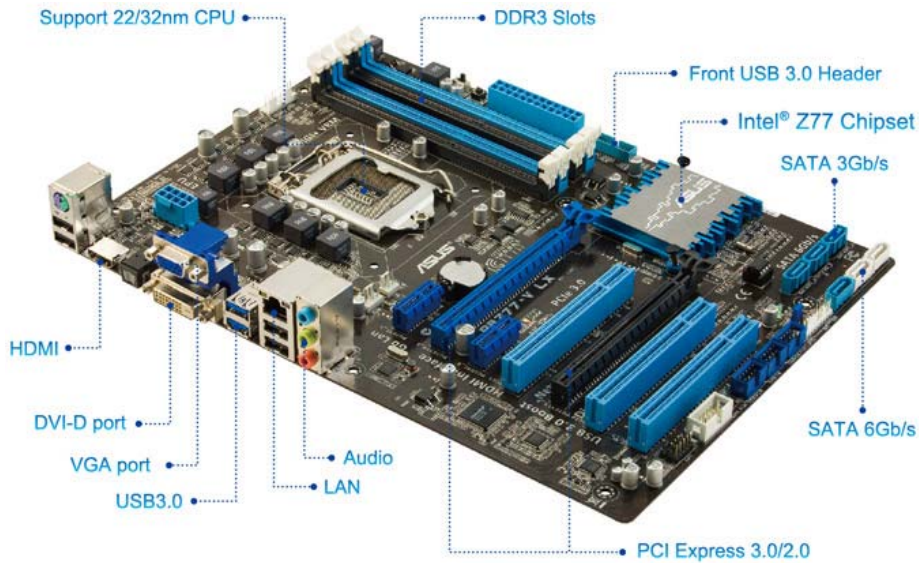
ASUS exclusive interface

EZ Mode displays frequently-accessed info. Users can choose system performance settings, and drag and drop boot priorities. Advanced Mode for performance enthusiasts includes detailed DRAM settings via a dedicated memory info page for complete insight.

New upgrade! Quick and easy information for enhanced system control

- F12 BIOS snapshot hotkey for sharing UEFI information and troubleshooting
- New F3 Shortcut for most accessed information
- ASUS DRAM SPD (Serial Presence Detect) information for accessing memory information, detecting faulty DIMMs, and helping with difficult POST situations.

P8Z77-V LX Product Overview



Specifications

CPU	<p>Intel® Socket 1155 for 3rd/2nd Generation Processors</p> <p>Supports Intel® 22 nm CPU</p> <p>Supports Intel® 32 nm CPU</p> <p>Supports Intel® Turbo Boost Technology 2.0</p> <p>* The Intel® Turbo Boost Technology 2.0 support depends on the CPU types.</p> <p>* Refer to www.asus.com for CPU support list</p>
Chipset	Intel® Z77
Memory	<p>4 x DIMM, Max. 32GB, DDR3 MHz Memory</p> <p>Dual Channel Memory Architecture</p> <p>Supports Intel® Extreme Memory Profile (XMP)</p> <p>* Hyper DIMM support is subject to the physical characteristics of individual CPUs.</p> <p>* Refer to www.asus.com or user manual for the Memory QVL (Qualified Vendors Lists).</p>
Graphic	<p>Integrated Graphics Processor</p> <p>Multi-VGA output support : HDMI/DVI/RGB ports</p> <ul style="list-style-type: none"> - Supports HDMI with max. resolution 1920 x 1200 @ 60 Hz - Supports DVI with max. resolution 1920 x 1200 @ 60 Hz - Supports RGB with max. resolution 2048 x 1536 @ 75 Hz <p>Maximum shared memory of 1696 MB</p> <p>Supports Intel® HD Graphics</p>
Multi-GPU Support	<p>Supports AMD Quad-GPU CrossFireX™ Technology</p> <p>Supports LucidLogix® Virtu™ MVP Technology *¹</p>
Expansion Slots	<p>1 x PCIe 3.0/2.0 x16 (blue) *²</p> <p>1 x PCIe 2.0 x16 (x4 mode, black)</p> <p>2 x PCIe 2.0 x1</p> <p>3 x PCI</p>
Storage	

	<p>Intel® Z77 chipset : 2 x SATA 6Gb/s port(s), gray 4 x SATA 3Gb/s port(s), blue Support Raid 0, 1, 5, 10 Supports Intel® Smart Response Technology, Intel® Rapid Start Technology, Intel® Smart Connect Technology *3</p>
LAN	Realtek® 8111E , 1 x Gigabit LAN Controller(s)
Audio	<p>Realtek® ALC887 8-Channel High Definition Audio CODEC *4 - Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking</p> <p>Audio Feature : - Optical S/PDIF out port(s) at back panel</p>
USB Ports	<p>Intel® Z77 chipset : *5 4 x USB 3.0 port(s) (2 at back panel, blue, 2 at mid-board)</p> <p>Intel® Z77 chipset : 10 x USB 2.0 port(s) (4 at back panel, black, 6 at mid-board)</p>
Overclocking Features	<p>Overclocking Protection : - ASUS C.P.R.(CPU Parameter Recall)</p>
Special Features	<p>ASUS EPU : - EPU</p> <p>ASUS Digital Power Design : - Industry leading 4 + 1 + 1 Phase Power Design - ASUS DIGI+ VRM Utility</p> <p>TurboV</p> <p>GPU Boost</p> <p>ASUS Exclusive Features : - MemOK! - AI Suite II - Ai Charger - Anti-Surge - Low EMI Solution - ASUS UEFI BIOS EZ Mode featuring friendly graphics user interface - Network iControl - USB 3.0 Boost - Disk Unlocker</p> <p>ASUS Quiet Thermal Solution : - Stylish Fanless Design Heat-sink solution - ASUS Fan Xpert+</p> <p>ASUS EZ DIY : - ASUS CrashFree BIOS 3 - ASUS EZ Flash 2 - ASUS MyLogo 2</p> <p>100% All High-quality Conductive Polymer Capacitors</p>
Back I/O Ports	<p>1 x PS/2 keyboard/mouse combo port(s) 1 x DVI 1 x D-Sub 1 x HDMI 1 x LAN (RJ45) port(s) 2 x USB 3.0 4 x USB 2.0 1 x Optical S/PDIF out 3 x Audio jack(s)</p>
Internal I/O Ports	<p>1 x USB 3.0 connector(s) support(s) additional 2 USB 3.0 port(s) 3 x USB 2.0 connector(s) support(s) additional 6 USB 2.0 port(s) 1 x COM port(s) connector(s) 2 x SATA 6Gb/s connector(s) 4 x SATA 3Gb/s connector(s) 1 x CPU Fan connector(s) (4 -pin) 2 x Chassis Fan connector(s) (4 -pin) 1 x Power Fan connector(s) (3 -pin) 1 x S/PDIF out header(s) 1 x 24-pin EATX Power connector(s) 1 x 8-pin ATX 12V Power connector(s) 1 x Front panel audio connector(s) (AAFP) 1 x System panel(s) 1 x MemOK! button(s) 1 x GPU Boost switch(es) 1 x Clear CMOS jumper(s)</p>
Accessories	<p>User's manual I/O Shield 2 x SATA 6Gb/s cable(s)</p>
BIOS	64 Mb Flash ROM, UEFI AMI BIOS, PnP, DMI2.0, WfM2.0, SM BIOS 2.7, ACPI 2.0a, Multi-language BIOS, ASUS EZ Flash 2, ASUS CrashFree BIOS 3, F12 PrintScreen, F3 Shortcut Function and ASUS DRAM SPD (Serial Presence Detect) memory information
Manageability	WfM 2.0, DMI 2.0, WOL by PME, WOR by PME, PXE
Support Disc	

	Drivers ASUS Utilities ASUS Update Anti-virus software (OEM version)
Form Factor	ATX Form Factor 12 inch x 8.6 inch (30.5 cm x 21.8 cm)
Note	*1: LucidLogix Virtu MVP supports Windows 7 operating systems. *2: PCIe 3.0 speed is supported by Intel® 3rd generation Core™ processors. *3: Supports on Intel® Core™ processor family with Windows 7 operating systems. *4: Use a chassis with HD audio module in the front panel to support an 8-channel audio output *5-1: Supports ASUS USB 3.0 Boost UASP Mode. *5-2: The USB 3.0 ports only support Windows® 7 or later versions.