Specifications

Model	**P8Z77-V PRO/THUNDERBOLT** First-choice Thunderbolt™ Z77 Motherboard - Blistering-fast Data Transfers, Blazing Performance Boosts, and DLNA Streaming Made Easy
CPU	Intel® Socket 1155 for 3rd/2nd Generation Core™ i7/Core™ i5/Core™ i3 Processors
Chipset	Intel® Z77
Memory	4 x DIMM, Max. 32GB, DDR3 2400(O.C.)/2200(O.C.)/2133(O.C.)/2133/1866(O.C.)/1800(O.C.)/1600/1333(O.C.)/1333/1066 MHz Non-ECC, Un-buffered Memory Dual Channel Memory Architecture Supports Intel® Extreme Memory Profile (XMP) * Hyper DIMM support is subject to the physical characteristics of individual CPUs. * Refer to www.asus.com or user manual for the Memory QVL (Qualified Vendors Lists).
Thunderbolt	VGA output support Data transfer rate up to 10 Gbps Daisy-chain up to 6 Thunderbolt devices
Graphic	Integrated Graphics Processor Multi-VGA output support : HDMI/DVI/RGB/Thunderbolt ports - 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 - Supports Thunderbolt with max. resolution 2560 x 1600 @ 60 Hz Supports Intel® HD Graphics, InTru™ 3D, Quick Sync Video, Clear Video HD Technology, Insider™
Multi-GPU Support	Supports NVIDIA® 3-Way SLI™ Technology Supports AMD Quad-GPU CrossFireX™ Technology
Expansion Slots	2 x PCIe 3.0/2.0 x16 (x16 or dual x8) *[3] 1 x PCIe 2.0 x16 *[4] 2 x PCIe 2.0 x1 2 x PCI
Storage	**Intel® Z77 chipset :** *[5] 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 *[5] **ASMedia® PCIe SATA controller :** *[6] 2 x SATA 6Gb/s port(s), navy blue
LAN	Intel® 82579V, 1 x Gigabit LAN Controller(s) Intel® LAN- Dual interconnect between the Integrated LAN controller and Physical Layer (PHY)
Wireless Data Network	Wi-Fi 802.11 b/g/n Supports single band frequency 2.4GHz
Audio	Realtek® ALC892 8-Channel High Definition Audio CODEC - Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking **Audio Feature :** - Absolute Pitch 192kHz/ 24-bit True BD Lossless Sound - DTS Ultra PC II - DTS Connect - Optical S/PDIF out port(s) at back panel
USB Ports	**ASMedia® USB 3.0 controller :** *[7] 6 x USB 3.0 port(s) (4 at back panel, , 2 at mid-board) **Intel® Z77 chipset :** *[8] 10 x USB 2.0 port(s) **Intel® Z77 chipset :** 10 x USB 2.0 port(s) (10 at mid-board)
Overclocking Features	**Overclocking Protection :** - ASUS C.P.R.(CPU Parameter Recall) **ASUS Dual Intelligent Processors 3 - SMART DIGI+ Power Control :** **SMART DIGI+ :** - Smart DIGI+ Key- quickly delivers higher VRM frequency, voltage and current for superior CPU/iGPU/DRAM overclocking performance with one switch. - Smart CPU Power Level (Intel® VRD 12.5 Future Power Design)- provides the best digital power saving conditions. **ASUS TPU :** - Auto Tuning - TurboV - GPU Boost - TPU switch **ASUS EPU :** - EPU - EPU switch

Special Features	**ASUS Digital Power Design :** - Industry leading Digital 12 Phase Power Design (8 -phase for CPU, 4 -phase for iGPU) - Industry leading Digital 2 Phase DRAM Power Design - CPU Power Utility - DRAM Power Utility **ASUS Wi-Fi GO!** - Wi-Fi GO! Function: DLNA Media Hub, Smart Motion Control, Remote Desktop, Remote Keyboard & Mouse, File Transfer, Capture & Send - Wi-Fi GO! Remote for portable Smartphone/Tablet, supporting iOS & Android systems - Wi-Fi Engine for network sharing and connection: Client Mode, AP Mode **ASUS Exclusive Features** : - USB BIOS Flashback - MemOK! - AI Suite II - Ai Charger+ - USB Charger+ - Anti-Surge - ASUS UEFI BIOS EZ Mode featuring friendly graphics user interface - Network iControl - USB 3.0 Boost - Disk Unlocker **ASUS Quiet Thermal Solution** : - Stylish Fanless Design Heat-sink solution - ASUS Fan Xpert 2 **ASUS EZ DIY :** - ASUS O.C. Tuner - ASUS CrashFree BIOS 3 - ASUS EZ Flash 2 **ASUS Q-Design :** - ASUS Q-Shield - ASUS Q-LED (CPU, DRAM, VGA, Boot Device LED) - ASUS Q-Slot - ASUS Q-DIMM - ASUS Q-Connector
Back I/O Ports	1 x PS/2 keyboard/mouse combo port(s) 1 x DVI-D 1 x D-Sub 1 x Thunderbolt port(s) *9 1 x HDMI 1 x LAN (RJ45) port(s) 4 x USB 3.0 1 x Coaxial S/PDIF out 1 x Optical S/PDIF out 6 x Audio jack(s) 1 x WLAN connector(s) for ASUS wireless module
Internal I/O Ports	1 x USB 3.0 connector(s) support(s) additional 2 USB 3.0 port(s) (19-pin) 5 x USB 2.0 connector(s) support(s) additional 10 USB 2.0 port(s) 1 x TPM connector(s) 1 x COM port(s) connector(s) 4 x SATA 6Gb/s connector(s) 4 x SATA 3Gb/s connector(s) 1 x CPU Fan connector(s) (4 -pin) 1 x CPU OPT Fan connector(s) (4 -pin) 3 x Chassis Fan connector(s) (4 -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) (Q-Connector) 1 x MemOK! button(s) 1 x TPU switch(es) 1 x EPU switch(es) 1 x CPU/DRAM overvoltage jumper(s) 1 x Clear CMOS jumper(s) 1 x USB BIOS Flashback button(s) User's manual ASUS Q-Shield

Accessories	4 x SATA 3Gb/s cable(s) 2 x SATA 6Gb/s cable(s) 1 x SLI bridge(s) 1 x Q-connector(s) (2 in 1) 1 x 2-port USB 2.0 and eSATA module(s) 1 x ASUS Wi-Fi GO! card(s) 1 x Wi-Fi Ring Moving Antenna(s)
BIOS	64 Mb Flash ROM, UEFI AMI BIOS, PnP, DMI2.0, WfM2.0, SM BIOS 2.5, ACPI 2.0a, Multi-language BIOS, information, ASUS UEFI (Unified Extensible Firmware Interface) BIOS
Manageability	WfM 2.0, DMI 2.0, WOL by PME, PXE
Support Disc	Drivers ASUS Utilities ASUS Update Anti-virus software (OEM version)
Form Factor	ATX Form Factor 12 inch x 9.6 inch (30.5 cm x 24.4 cm)
Note	*1: With 2 PCIex16 graphics cards *2: LucidLogix Virtu MVP supports Windows® 7 operating systems. *3: PCIe 3.0 speed is supported by Intel® 3rd generation Core™ processors. Install the Ivy Bridge CPU before installing a device on the PCIeX16_3 slot. *4: The PCIe x1_2 slot shares bandwidth with SATA6G_E12. SATA6G_E12 is enabled by default for system resource optimization. *5: Supports on Intel® Core™ processor family with Windows® 7 operating systems. *6: These SATA ports are for data hard drivers only. ATAPI devices are not supported. *7: Supports ASUS USB 3.0 Boost UASP Mode. *8: Supports ASUS USB 3.0 Boost Turbo Mode. *9: Thunderbolt port shares bandwidth with SATA6G_E12, USB3_E12 and PCIeX1_2. The Thunderbolt port default runs at X2(Auto) mode, SATA6G_E12 and USB3_E12 are enabled for system resource optimization. Go to Advanced> Onboard Devices Configuration> Thunderbolt bandwidth in BIOS to configure the bandwidth to [X4] for full speed support.

The product (electrical , electronic equipment, Mercury-containing button cell battery) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

All specifications are subject to change without notice. Please check with your supplier for exact offers. Products may not be available in all markets.

PCB color and bundled software versions are subject to change without notice.

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