Intel® Z390 Chipset

Compare

CPU	1. Support for 9th and 8th Generation Intel®Core™ i9 processors/Intel® Core™ i7 processors/Intel® Core™ i5 processors/Intel® Core™ i3 processors/Intel® Pentium®processors/Intel® Celeron® processors in the LGA1151 package 2. L3 cache varies with CPU (Please refer "CPU Support List" for more information.)
Chipset	1. Intel® Z390 Express Chipset
Memory	1. 2 x DDR4 DIMM sockets supporting up to 64GB (32GB single DIMM capacity) of system memory 2. Dual channel memory architecture 3. Support for DDR4 4400(O.C.) / 4333(O.C.) / 4133(O.C.) / 4000(O.C.) / 3866(O.C.) / 3800(O.C.) / 3733(O.C.) / 3666(O.C.) / 3600(O.C.) / 3466(O.C.) / 3400(O.C.) / 3333(O.C.) / 3300(O.C.) / 3200(O.C.) / 3000(O.C.) / 2800(O.C.) / 2666 / 2400 / 2133 MHz memory modules 4. Support for ECC Un-buffered DIMM 1Rx8/2Rx8 memory modules (operate in non-ECC mode) 5. Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules 6. Support for Extreme Memory Profile (XMP) memory modules (Please refer "Memory Support List" for more information.)
Onboard Graphics	Integrated Graphics Processor+MegaChips MCDP2800 chip: 1. 1 x HDMI port, supporting a maximum resolution of 4096x2160@60 Hz * Support for HDMI 2.0 version, HDCP 2.2, and HDR. Integrated Graphics Processor-Intel® HD Graphics support: 1. 1 x DisplayPort, supporting a maximum resolution of 4096x2304@60 Hz * Support for DisplayPort 1.2 version, HDCP 2.2, and HDR. Maximum shared memory of 1 GB Actual support may vary by CPU.
Audio	1. Realtek® ALC1220-VB codec * The back panel line out jack supports DSD audio.

	2. High Definition Audio 3. 2/4/5.1/7.1-channel 4. Support for S/PDIF Out
LAN	1. Intel® GbE LAN chip (10/100/1000 Mbit)
Wireless Communication module	1. Intel® CNVi interface Wi-Fi 802.11a/b/g/n/ac, supporting 2.4/5 GHz Dual-Band 2. BLUETOOTH 5 3. Support for 11ac 160 MHz wireless standard and up to 1.73 Gbps data rate * Actual data rate may vary depending on environment and equipment.
Expansion Slots	1. 1 x PCI Express x16 slot, running at x16 2. 1 x M.2 Socket 1 connector for an Intel®CNVi wireless module only (CNVI)
Storage Interface	Chipset: 1. 1 x M.2 connector (Socket 3, M key, type 2242/2260/2280 SATA and PCIe x4/x2 SSD support) (M2P) 2. 1 x M.2 connector on the back of the motherboard (Socket 3, M key, type 2260/2280 SATA and PCIe x4/x2 SSD support) (M2M) 3. 4 x SATA 6Gb/s connectors 4. Support for RAID 0, RAID 1, RAID 5, and RAID 10 * Refer to "1-7 Internal Connectors," for the installation notices for the M.2 and SATA connectors. Intel® Optane™ Memory Ready
USB	Chipset: 1. 1 x USB Type-C™ port with USB 3.1 Gen 1 support, available through the internal USB header 2. 1 x USB Type-C™ port on the back panel, with USB 3.1 Gen 2 support 3. 1 x USB 3.1 Gen 2 Type-A port (red) on the back panel 4. 6 x USB 3.1 Gen 1 ports (4 ports on the back panel, 2 ports available through the internal USB header) 5. 2 x USB 2.0/1.1 ports available through the internal USB header
Internal I/O	

Connectors	1. 1 x 24-pin ATX main power connector 2. 1 x 8-pin ATX 12V power connector 3. 1 x CPU fan header 4. 2 x system fan headers 5. 1 x digital LED strip header 6. 1 x digital LED strip power select jumper 7. 1 x RGB LED strip header 8. 4 x SATA 6Gb/s connectors 9. 2 x M.2 Socket 3 connectors 10. 1 x front panel header 11. 1 x front panel audio header 12. 1 x speaker header 13. 1 x USB Type-C™ port, with USB 3.1 Gen 1 support 14. 1 x USB 3.1 Gen 1 header 15. 1 x USB 2.0/1.1 header 16. 1 x Trusted Platform Module (TPM) header (2x6 pin, for the GC-TPM2.0_S module only) 17. 1 x Clear CMOS jumper 18. 1 x chassis intrusion header
Back Panel Connectors	1. 1 x DisplayPort 2. 1 x HDMI port 3. 1 x USB Type-C™ port, with USB 3.1 Gen 2 support 4. 1 x USB 3.1 Gen 2 Type-A port (red) 5. 4 x USB 3.1 Gen 1 ports 6. 1 x RJ-45 port 7. 2 x SMA antenna connectors (2T2R) 8. 1 x optical S/PDIF Out connector 9. 5 x audio jacks
I/O Controller	1. iTE® I/O Controller Chip
H/W Monitoring	1. Voltage detection 2. Temperature detection 3. Fan speed detection 4. Overheating warning 5. Fan fail warning 6. Fan speed control * Whether the fan speed control function is supported will depend on the cooler you install.
BIOS	1. 2 x 128 Mbit flash

	2. Use of licensed AMI UEFI BIOS 3. Support for DualBIOS™ 4. PnP 1.0a, DMI 2.7, WfM 2.0, SM BIOS 2.7, ACPI 5.0
Unique Features	1. Support for APP Center * Available applications in APP Center may vary by motherboard model. Supported functions of each application may also vary depending on motherboard specifications. 3D OSD @BIOS AutoGreen Cloud Station EasyTune Easy RAID Fast Boot Game Boost ON/OFF Charge Platform Power Management RGB Fusion Smart Backup Smart Keyboard Smart TimeLock Smart HUD Smart Survey System Information Viewer USB Blocker 2. Support for Q-Flash 3. Support for Xpress Install
Bundled Software	1. Norton® Internet Security (OEM version) 2. cFosSpeed
Operating System	1. Support for Windows 10 64-bit
Form Factor	1. Mini-ITX Form Factor; 17.0cm x 17.0cm
Remark	1. Due to different Linux support condition provided by chipset vendors, please download Linux driver from chipset vendors' website or 3rd party website. 2. Most hardware/software vendors may no longer offer drivers to support Win9X/ME/2000/XP. If drivers are available from the

vendors, we will update them on the GIGABYTE website.

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* The entire materials provided herein are for reference only. GIGABYTE reserves the right to modify or revise the content at anytime without prior notice.
* Advertised performance is based on maximum theoretical interface values from respective Chipset vendors or organization who defined the interface specification. Actual performance may vary by system configuration.
* All trademarks and logos are the properties of their respective holders.
* Due to standard PC architecture, a certain amount of memory is reserved for system usage and therefore the actual memory size is less than the stated amount.