



184.95 EUR  
incl. 19% VAT, plus [shipping](#)

- Gigabyte Features !
- 2x M.2 slot !
- USB Type-C !
- Displayport/HDMI !

- Supports 9th and 8th Gen Intel® Core™ Processors
- Dual Channel Non-ECC Unbuffered DDR4, 2 DIMMs
- Intel® Optane™ Memory Ready
- 6 Phases IR Digital VRM Solution with PowIRstage
- Advanced Thermal Design with Extended Fin Heatsink
- Onboard Intel® CNVi 802.11ac 2x2 Wave 2 Wi-Fi
- ALC1220-VB Enhance 114dB(Rear)/ 110dB(Front) SNR in Microphone with NICHICON Audio Capacitors
- Intel® Gigabit LAN with cFosSpeed
- RGB FUSION 2.0 with Multi-Zone Addressable LED Light Show Design, Supports Addressable LED & RGB LED Strips
- Smart Fan 5 features Multiple Temperature Sensors and Hybrid Fan Headers with FAN STOP
- Front USB 3.1 Gen 1 Type-C™ Header
- Dual Ultra-Fast M.2 with PCIe Gen3 x4 interface, one with Thermal Guard
- CEC 2019 Ready, Save Power With a Simple Click

#### CPU

#### Chipset

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.)
1. Intel® Z390 Express Chipset

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| <b>Memory</b>                        | <ol style="list-style-type: none"><li>2 x DDR4 DIMM sockets supporting up to 32 GB of system memory</li><li>Dual channel memory architecture</li><li>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</li><li>Support for ECC Un-buffered DIMM 1Rx8/2Rx8 memory modules (operate in non-ECC mode)</li><li>Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules</li><li>Support for Extreme Memory Profile (XMP) memory modules (Please refer "Memory Support List" for more information.)</li></ol> |
| <b>Onboard Graphics</b>              | <p>Integrated Graphics Processor+MegaChips MCDP2800 chip:</p> <ol style="list-style-type: none"><li>1 x HDMI port, supporting a maximum resolution of 4096x2160@60 Hz</li></ol> <p>* Support for HDMI 2.0 version, HDCP 2.2, and HDR.</p> <p>Integrated Graphics Processor-Intel® HD Graphics support:</p> <ol style="list-style-type: none"><li>1 x DisplayPort, supporting a maximum resolution of 4096x2304@60 Hz</li></ol> <p>* Support for DisplayPort 1.2 version, HDCP 2.2, and HDR.</p> <p>Maximum shared memory of 1 GB</p> <p>Actual support may vary by CPU.</p>                                                                                                                                                              |
| <b>Audio</b>                         | <ol style="list-style-type: none"><li>Realtek® ALC1220-VB codec</li></ol> <p>* The back panel line out jack supports DSD audio.</p> <ol style="list-style-type: none"><li>High Definition Audio</li><li>2/4/5.1/7.1-channel</li><li>Support for S/PDIF Out</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>LAN</b>                           | <ol style="list-style-type: none"><li>Intel® GbE LAN chip (10/100/1000 Mbit)</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Wireless Communication module</b> | <ol style="list-style-type: none"><li>Intel® CNVi interface Wi-Fi 802.11a/b/g/n/ac, supporting 2.4/5 GHz Dual-Band</li><li>BLUETOOTH 5</li><li>Support for 11ac 160 MHz wireless standard and up to 1.73 Gbps data rate</li></ol> <p>* Actual data rate may vary depending on environment and equipment.</p>                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Expansion Slots</b>               | <ol style="list-style-type: none"><li>1 x PCI Express x16 slot, running at x16</li><li>1 x M.2 Socket 1 connector for an Intel® CNVi wireless module only (CNVI)</li></ol> <p>Chipset:</p> <ol style="list-style-type: none"><li>1 x M.2 connector (Socket 3, M key, type 2242/2260/2280 SATA and PCIe x4/x2 SSD support) (M2P)</li><li>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)</li><li>4 x SATA 6Gb/s connectors</li><li>Support for RAID 0, RAID 1, RAID 5, and RAID 10</li></ol> <p>* Refer to "1-7 Internal Connectors," for the installation notices for the M.2 and SATA connectors.</p>                                                          |
| <b>Storage Interface</b>             | <p>Intel® Optane™ Memory Ready</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| <b>USB</b>                     | <b>Chipset:</b> <ol style="list-style-type: none"><li>1 x USB Type-C™ port with USB 3.1 Gen 1 support, available through the internal USB header</li><li>1 x USB Type-C™ port on the back panel, with USB 3.1 Gen 2 support</li><li>1 x USB 3.1 Gen 2 Type-A port (red) on the back panel</li><li>6 x USB 3.1 Gen 1 ports (4 ports on the back panel, 2 ports available through the internal USB header)</li><li>2 x USB 2.0/1.1 ports available through the internal USB header</li></ol>                                                                                                                                                                                                                                                                                   |
| <b>Internal I/O Connectors</b> | <ol style="list-style-type: none"><li>1 x 24-pin ATX main power connector</li><li>1 x 8-pin ATX 12V power connector</li><li>1 x CPU fan header</li><li>2 x system fan headers</li><li>1 x digital LED strip header</li><li>1 x digital LED strip power select jumper</li><li>1 x RGB LED strip header</li><li>4 x SATA 6Gb/s connectors</li><li>2 x M.2 Socket 3 connectors</li><li>1 x front panel header</li><li>1 x front panel audio header</li><li>1 x speaker header</li><li>1 x USB Type-C™ port, with USB 3.1 Gen 1 support</li><li>1 x USB 3.1 Gen 1 header</li><li>1 x USB 2.0/1.1 header</li><li>1 x Trusted Platform Module (TPM) header (2x6 pin, for the GC-TPM2.0_S module only)</li><li>1 x Clear CMOS jumper</li><li>1 x chassis intrusion header</li></ol> |
| <b>Back Panel Connectors</b>   | <ol style="list-style-type: none"><li>1 x DisplayPort</li><li>1 x HDMI port</li><li>1 x USB Type-C™ port, with USB 3.1 Gen 2 support</li><li>1 x USB 3.1 Gen 2 Type-A port (red)</li><li>4 x USB 3.1 Gen 1 ports</li><li>1 x RJ-45 port</li><li>2 x SMA antenna connectors (2T2R)</li><li>1 x optical S/PDIF Out connector</li><li>5 x audio jacks</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>I/O Controller</b>          | <ol style="list-style-type: none"><li>1. iTE® I/O Controller Chip</li><li>1. Voltage detection</li><li>2. Temperature detection</li><li>3. Fan speed detection</li><li>4. Overheating warning</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>H/W Monitoring</b>          | <ol style="list-style-type: none"><li>5. Fan fail warning</li><li>6. Fan speed control</li><li>* Whether the fan speed control function is supported will depend on the cooler you install.</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>BIOS</b>                    | <ol style="list-style-type: none"><li>1. 2 x 128 Mbit flash</li><li>2. Use of licensed AMI UEFI BIOS</li><li>3. Support for DualBIOS™</li><li>4. PnP 1.0a, DMI 2.7, WfM 2.0, SM BIOS 2.7, ACPI 5.0</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**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

**Bundle Software**

2. Support for Q-Flash
3. Support for Xpress Install
1. Norton® Internet Security (OEM version)
2. cFosSpeed

**Operating System**  
**Form Factor**

1. Support for Windows 10 64-bit
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.