



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

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 32 GB 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.)

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.

## **Onboard Graphics**

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<sup>®</sup> Optane™ Memory Ready

### Chipset:

## USB

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

## Bundle 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.