



Desktop
Overclock
Wi-Fi

Key Features

- 14th (up to 8+16 cores)/13th (up to 8+16 cores)/12th (up to 8+8 cores) Gen Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® Processors, LGA 1700 (Intel® V Socket), TDP up to 150W Intel® Z790
- Up to 192GB Unbuffered non-ECC UDIMM 4 DDR5 4400MT/s, 5000+MT/s (OC)
- 2 PCIe 5.0 x16 Slots (16/NA or 8/8) with Armor protection (only available for discrete graphics or storage cards) 2 PCIe 3.0 x1 Slot **M.2 Interface:** 1 PCIe 4.0 x4, 2 PCIe 3.0 x4, RAID 0,1,5 **M.2 Form Factor:** 2260/2280/22110 **M.2 Key:** M-Key
- Single LAN with Intel® single Ethernet PHY i219V Single LAN with Marvell AQC113

Specifications

Product SKUs
MBD-C9Z790-CGW

Physical Stats
Form Factor
ATX
Dimension
12" x 9.6" (30.48cm x 24.38cm)

Processor
CPU
14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® Processors
[\(//de/support/resources/cpu-4th-gen-intel-xeon-scalable\)](#)
Single Socket LGA-1700 (Socket V) supported, CPU TDP supports Up to 150W TDP
Core
Up to 8+16 cores, 32 threads

System Memory
Memory Capacity
4 DIMM slots
Up to 192GB Unbuffered non-ECC UDIMM, DDR5-4400MHz
Memory Type
4400 MT/s 192GB Unbuffered Non ECC UDIMM
DIMM Sizes
8GB, 24GB, 16GB, 32GB, 48GB
Memory Voltage
1.1V

On-Board Devices
Chipset
Intel® Z790
SATA
Intel® Z790 Express controller for 6 SATA 3 (6 Gbps) ports; RAID 0,1,5,10
Audio
RealTek ALC 1220 7.1 HD Audio
Network Controllers
Single LAN with 1Gb Intel® Ethernet PHY i219-V
Single LAN with 10Gb Marvell AQC113C 2.4Gbps Wi-Fi 6E + Bluetooth 5.3 (C9Z790-CGW only)

Input / Output
SATA
6 SATA 3 port(s)
USB
6 USB 2 port(s) (2 via header; 4 rear Type-A)
2 USB 3.2 Gen 2 port(s) (2 rear Type-A)
3 USB 3.2 Gen 2x2 port(s) (2 rear Type-C; 1 via header)
2 USB 3.2 Gen 1 port(s) (2 via header)
Video Output
1 HDMI port(s), 1 DP (DisplayPort) port(s)
Serial Port
1 COM Port(s) (1 header)
TPM
1 TPM Header

Expansion Slots
PCIe
2 PCIe 5.0 x16 slots (16/NA or 8/8), 2 PCIe 3.0 x1
M.2
M.2 Interface: 1 PCIe 4.0 x4, RAID 0, 1, 5; 2 PCIe 3.0 x4, RAID 0, 1, 5; 1 CNVi
Form Factor: 2260/2280, 2260/2280/22110, 2230
Key: M-Key, M-Key, E-Key

System BIOS
BIOS Type
256MB SPI Flash with AMI BIOS
BIOS Features
ACPI 6.0
Plug and Play (PnP)
BIOS rescue hot keys
SMBIOS 3.0 or later
Riser card auto-detection support

Management Software
SuperDoctor® 5
System Management Software
SuperDoctor® 5
Power Configurations
ACPI Power Management

PC Health Monitoring
Voltage
VBAT, System temperature, PCH temperature, CPU temperature, 3.3V standby, 1.05 (PCH), +5V, +3.3V, +12V, CPU thermal trip support, +1.8V CPU
FAN
5x 4-pin fan headers (up to 5 fans)
Fan speed control
5 fans with tachometer status monitoring
Overheat LED indication
Other Features
WOL, RoHS, CPU thermal trip support for processor protection, Control of power-on for recovery from AC power loss, Chassis intrusion header, ATX Power connector, ACPI power management, 8-pin 12V DC power connector, Voltage and Frequency Overclocking

Operating Environment
Operating Temperature Range
0°C - 50°C (32°F - 122°F)

Parts List

Standard Parts (Retail Package)

Antenna

Part Number	CBL-ANTDB-SMA
Qty	2
Description	SMA DUAL BAND ANTENNA, 2.4-2.5GHz/5.15-5.85GHz,RoHS

BACK PLATE(I/O Shield)

Part Number	MCP-260-00161-0N
Qty	1
Description	STD I/O Shield for C9Z590-CG(W) with EMI & black Mylar,RoHS

Driver CD

Part Number	-
Qty	1
Description	Driver CD

M.2 SCREW

Part Number	FST-SCRW-0067L
Qty	2
Description	SCREW, M3.0XP0.5, L=4.5MM, PBF,RoHS/REACH

M.2 STANDOFF

Part Number	FST-SCRW-0116L
Qty	2
Description	STANDOFF,H 5.0mm, M3xL4(male) / M3xDeep3.5 (female),Hex,RoHS

Quick Reference Guide

Part Number	MNL-2547-QRG
Qty	1
Description	C9Z790-CG(W) Quick Reference Guide,RoHS

S-Connector

Part Number	61Y-72-08GB20
Qty	1
Description	S-connector (Front Control Panel Connector/Adapter)

SATA Cables

Part Number	CBL-SAST-1001-2	CBL-SAST-1000-2
Qty	2	2
Description	SATA Cables	Right-Angle SATA Cable

[Global SKU \(/de/products/SMC_global_skus\)](#)