# Z170A TOMAHAWK

## (MS-7970v1.1
## ATX Motherboard

## Motherboard Components Overview



## Rear I/O Panel



PS/2 Port
USB 3.1 Gen 2 Ports
LAN Port
CS-Out
Line-In
RS-Out
Line-Out
Mic
USB 2.0 Ports
DVI-D Port
HDMI
Clear COMS
USB 3.1 Gen1 Ports
Optical S/PDIF-Out
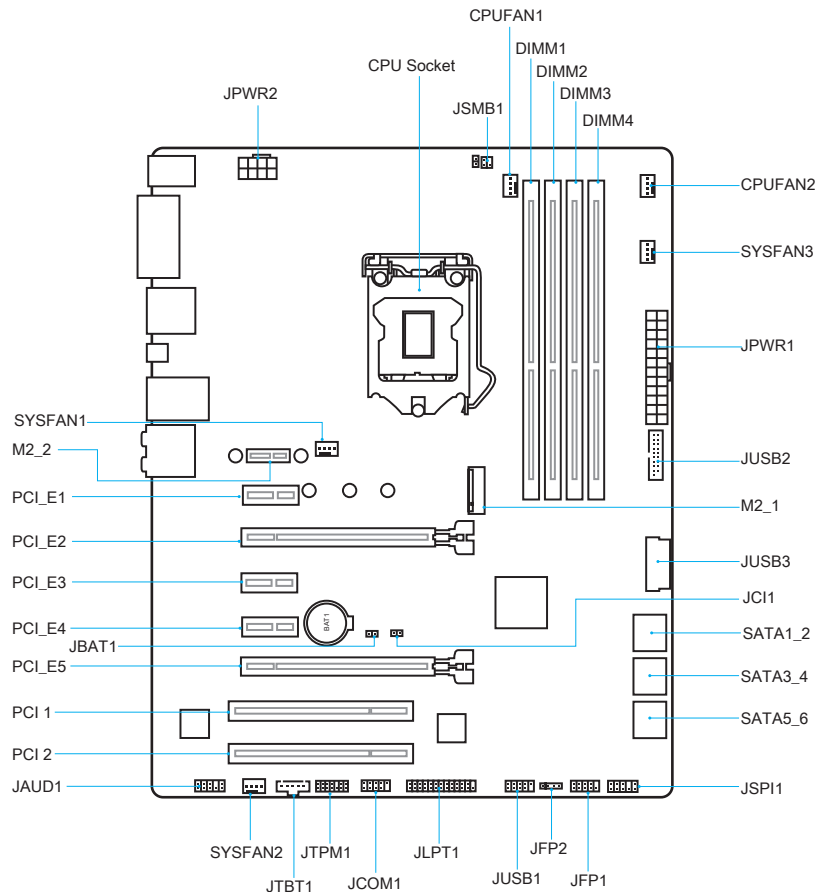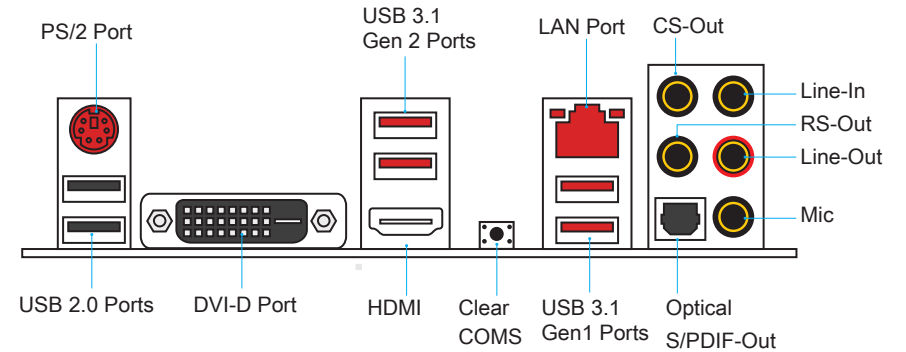
## Motherboard Specification

### CPU Support
- Supports 6th Gen Intel® Core™ i3/i5/ i7 processors, and Intel® Pentium® and Celeron® processors for Socket LGA1151

### Chipset
- Intel® Z170 Express Chipset

### Memory Support
- 64GB
  - ‣ Supports DDR4 2133 MHz
- Dual channel memory architecture
- Supports ECC, un-buffered memory
- Supports Intel® Extreme Memory Profile (XMP)

### Expansion Slots
- 2x PCIe 3.0 x 16 slots (Support x16/x4, x4/ x4 modes)
- 3x PCIe x 1 slots
- 2x PCI slots

### Onboard Graphics
- 1x HDMI port, supporting a maximum resolution of 4096x2160@24Hz, 2560x1600@60Hz
- 1x DVI-D Port, supporting a maximum resolution of 1920x1200@60Hz.

### Multi-GPU Support
- Supports 2-Way AMD® CrossFire™ Technology

### Storage
- Intel Z170 Express Chipset
- 6x SATA 6Gb/s ports
- Supports RAID 0, RAID1, RAID 5 and RAID 10
- Supports Intel Smart Response Technology, Intel® Rapid Start Technology and Intel Smart Connect Technology
- 1x M.2 port, M.2 supports PCIe 3.0 x4 and SATA 6Gb/s standards, 4.2cm/ 6cm/ 8cm length SSD cards*

M.2, SATA ports maximum 1x M.2_PCIe + 4x SATAs or 1x M.2_SATA + 4x SATAs. Please refer to M.2 slots with examples of various combination possibilities

*** Supports Intel® Core processors on Windows® 7 and Windows® 8/ 8.1 and Windows® 10

### USB
- Intel Z170 Express Chipset
- 6x USB 3.1 Gen1 (5GT/s) ports available through the internal USB connectors (2 ports on the back panel, 4 ports available through the internal USB connectors)
- 4x USB 2.0 ports (2 ports on the back panel, 2 ports available through the internal USB connectors)
- ASMedia ASM1142AE Chipset
- 2x USB 3.1 Gen 2 (10GT/s) ports

### Audio
- Realtek® ALC892 Codec
- 7.1-Channel High Definition Audio
- Supports S/PDIF output

### LAN
- 1x REALTEK RTL8111H Gigabit LAN controller

### Wireless LAN / Bluetooth
- Wi-Fi/Bluetooth M.2 expansion slot for Intel Dual Band Wireless-AC 8260 module

### Back Panel Connectors
- 1x PS/2 keyboard/ mouse port
- 2x USB 2.0 ports
- 2x USB 3.1 Gen1 ports
- 2x USB 3.1 Gen 2 (10GT/s) ports
- 1x HDMI™ port
- 1x Clear CMOS button
- 1x LAN (RJ45) port
- 1x DVI-D port
- 1x Optical S/PDIF OUT connector

- 5x OFC audio jacks

### Internal Connectors
- 1x 24-pin ATX main power connector
- 1x 8-pin ATX 12V power connector
- 6x SATA 6Gb/s connectors
- 1x USB 2.0 connector (supports additional 2 USB 2.0 ports)
- 2x USB 3.1 Gen1 connector (supports additional 4 USB 3.1 Gen1 ports)
- 2x 4-pin CPU fan connectors
- 3x 4-pin system fan connectors
- 1x Clear CMOS jumper
- 1x Front panel audio connector
- 2x System panel connectors
- 1x TPM module connector
- 1x Chassis Intrusion connector
- 1x System panel connector
- 1x TPM module connector
- 1x Chassis Intrusion connector
- 1x thunderbolt (x4) connector

### I/O Controller
- NUVOTON NCT6793 Controller Chip

### Hardware Monitor
- CPU/System temperature detection
- CPU/System fan speed detection
- CPU/System fan speed control

### BIOS Features
- 1x 128 Mb flash
- UEFI AMI BIOS
- ACPI 5.0, PnP 1.0a, SM BIOS 2.7, DMI 2.0
- Multi-language

### Special Features
- DDR4 Boost Support
- PCI Express 3.0 Support
- USB 3.1 Gen2 (10 Gb/s) Ready
- EZ Debug LED

- 12 Red LEDs indicator
- Smart Fan Control
- OBS
- Game Boost
- SteelSeriesEngine 3

### Enthusiast GAMING features
- Audio Boost 3
- GAMING APP
- Optimized Thermal Design
- Gaming LAN Manager (Powered By cFosSpeed)

### MSI Exclusive features
- Click BIOS 5
- Military Class 4
- Command Center
- Live Update 6
- Fast Boot
- M-Cloud

### Form Factor
- ATX Form Factor
- 30.4 cm x 24.4 cm

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These specification is subject to change without prior notice.