X99A TOMAHAWK

(MS-7A54v1.0)
ATX Motherboard

Motherboard Components Overview

JPWR2
PUMPFAN1
CPUFAN1
JPWR1
SYSFAN1
JUSB1
PCI_E1
U2_1
PCI_E2
JUSB2
JBAT1
PCI_E3
J1
SATA1_2
PCI_E4
SATA3_4
SATA7_8
M2_1
SYSFAN2
PCI_E5
JSPI1
SATA9
J2
SYSFAN3
JLED1
JFP1
JCI1
JFP2
JAUD1
JTPM1
JUSB3
SE1_65
SATA10
JUSB4

Rear I/O Panel

PS/2 Port
CLR_CMOS1
USB 3.1 (Gen2)
LAN Port
CS-Out
Line-In
RS-Out
Line-Out
Mic

USB 2.0 Ports
USB 3.1 (Gen2) Type-C
USB 3.1 (Gen1)
USB 3.1 (Gen1)
USB 2.0 Ports
Optical S/PDIF-Out
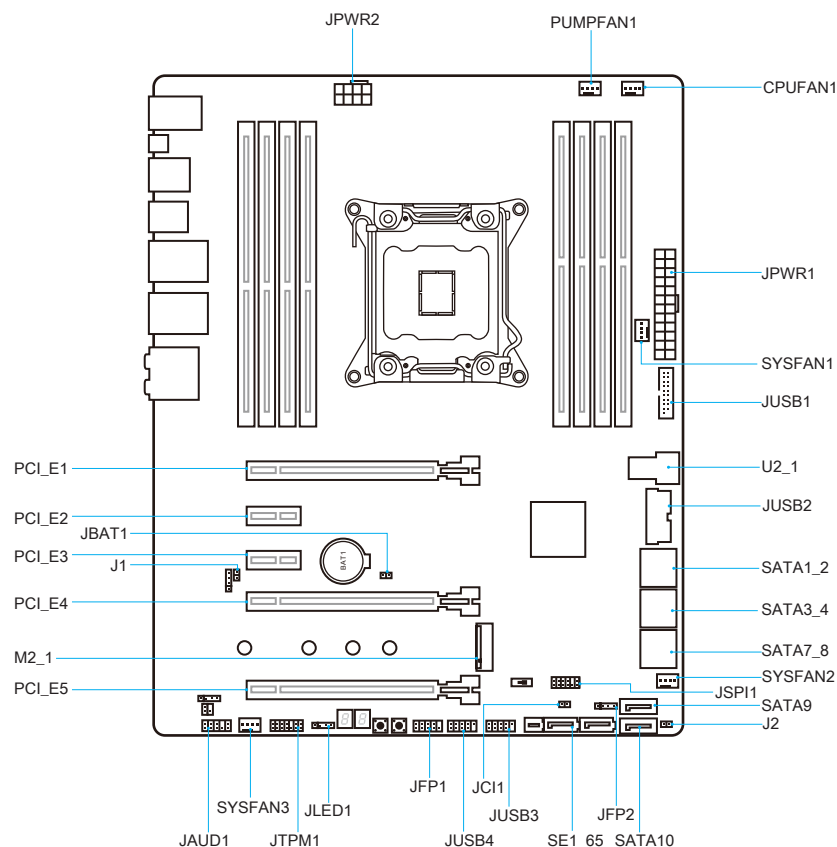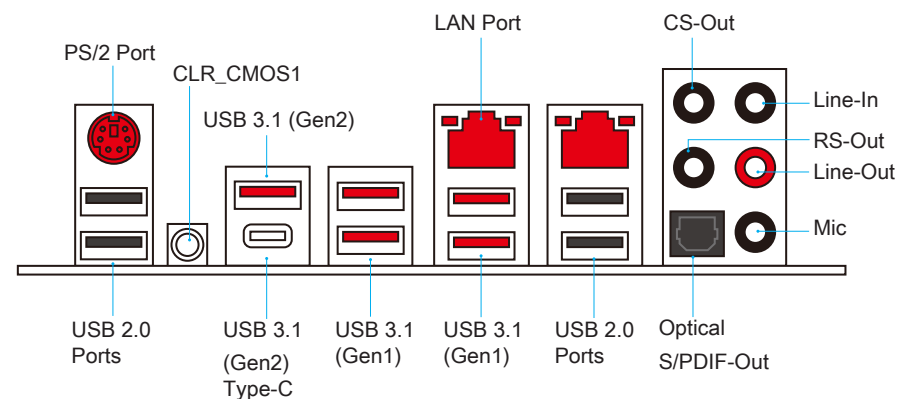
Motherboard Specification

CPU Support
- Supports New Intel® Core™ i7 Processors Extreme Edition for LGA 2011-3 Socket

Chipset
- Intel® X99 Express Chipset

Memory Support
- 8x DDR4 memory slots supporting up to 128GB
- Supports DDR4 2133/2400(OC)/2600(OC)/2800(OC)/3000(OC)/3200(OC)/3466(OC) MHz
- Quad channel memory architecture
- Supports ECC, RDIMM memory

Expansion Slots
- 3x PCIe 3.0 x16 slots (PCI_E1, PCI_E4~E5), support up to 3-way mode
- 2x PCIe 2.0 x1 slots (PCI_E2~3)

Multi-GPU Support
- Supports 3-Way AMD® CrossFire™

Technology
- Supports 3-Way NVIDIA® SLI™ Technology

Storage
- Intel® X99 Express Chipset
- 10x SATA 6Gb/s ports (2x ports reserved for SATA Express port)*
- SATA1~6 support RAID 0, RAID 1, RAID 5 and RAID 10
- SATA7~10 ports only support IDE mode and AHCI mode.
- Supports Intel® Smart Response Technology (Windows 7/ 8/ 8.1)
- 1x SATA Express port*
- 1x U.2 port
    * Supports PCIe 3.0 x4 NVMe storage
    ** SATAe port is backward compatible with SATA.
- 1x M.2 port, supports M.2 SATA 6Gb/s module* or M.2 PCIe module up to 32Gb/s speed**
- M.2 port supports 4.2cm/ 6cm/ 8cm/ 10cm

length module.

- M.2 PCIe module does not support RAID 0, RAID1, RAID 5 and RAID 10.
  * The SATA Express port/ SATA5~6 ports will be unavailable when installing the M.2 SATA interface module in the M.2 port.
  * The M.2 port will be unavailable when installing the PCIe device in U.2 (For the CPU that supports 28 PCIe lanes)
  ** Intel RST does not support PCIe M.2 SSD with Legacy ROM.

USB
- ASMedia® ASM1142 Chipset
  * 2x USB3.1 (Gen2) Type-A / Type-C ports (2 ports on the back panel
- ASMedia® ASM1074 Chipset
  * 4x USB 3.1 Gen1 (SuperSpeed USB) ports on the back panel
- Intel® X99 Chipset
  * 4x USB 3.1 Gen1 (SuperSpeed USB) ports (4 ports available through the internal USB connectors (JUSB1, JUSB2))
  * 8x USB 2.0 (High-speed USB) ports (4 ports on the back panel, 4 ports available through the internal USB connectors(JUSB3, JUSB4))

Audio
- Realtek® ALC1150 Codec
- 7.1-Channel High Definition Audio
- Supports S/PDIF output

LAN
- 1x Intel® I218LM Gigabit LAN controller
- 1x Intel® I210AT Gigabit LAN controller
  * Support Intel LAN Teaming Technology

Back Panel Connectors
- 1x PS/2 keyboard/ mouse combo port
- 4x USB 2.0 ports
- 1x Clear CMOS button
- 1x USB 3.1 Gen2 port

- 1x USB 3.1 Gen2 Type C port
- 4x USB 3.1 Gen1 ports
- 2x LAN (RJ45) ports
- 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
- 10x SATA 6Gb/s connectors
- 2x USB 2.0 connectors (supports additional 4 USB 2.0 ports)
- 2x USB 3.1 Gen1 connectors (supports additional 4 USB 3.1 Gen1 ports)
- 1x 4-pin CPU fan connector
- 1x 4-pin water-pump-fan connector
- 3x 4-pin system fan connectors
- 1x Front panel audio connector
- 1x TPM module connector
- 2x Front panel connectors
- 1x Chassis Intrusion connector
- 1 x RGB LED Pin Header

I/O Controller
- NUVOTON NCT6792D Controller Chip

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

BIOS Features
- 2x 128 Mb flash
- UEFI AMI BIOS
- ACPI 5.0, PnP 1.0a, SM BIOS 2.8
- Multi-language

Special Features
- DDR4 Boost Support
- Dual-Channel DDR4 UDIMM/RDIMM Memory Support
- Isolated DDR4 Circuit Design
- DDR4 XMP Ready

- PCI Express 3.0 Support
- 3-Way Nvidia SLI™ Support
- 3-Way AMD CrossFire™ Support
- USB 3.1 Gen2 Type-A Ready
- USB 3.1 Gen2 Type-C Ready
- SATA Express Support
- NVMe / AHCI Driver Support
- U.2 Support

Software
- Drivers
- COMMAND CENTER
- LIVE UPDATE 6
- FAST BOOT
- SUPER CHARGER
- GAMING APP
- M-CLOUD
- RAMDISK
- USB SPEED UP
- GAMING LAN MANAGER
- Intel® Extreme Tuning Utility
- Norton™ Internet Security Solution
- Google Chrome™,Google Toolbar, Google Drive
- SteelSeries Engine 3
- CPU-Z
- XSplit Gamecaster V2

Form Factor
- ATX Form Factor
- 30.48 cm x 24.38 cm

These specification is subject to change without prior notice.