1.2 Specifications

Platform	• ATX Form Factor • Solid Capacitor design • 2oz Copper PCB
CPU	• Supports AMD AM4 socket Ryzen™ 2000 and 3000 series processors • Digi Power design • 10 Power Phase design
Chipset	• AMD X570
Memory	• Dual Channel DDR4 Memory Technology • 4 x DDR4 DIMM Slots • AMD Ryzen series CPUs (Matisse) support DDR4 4066+ (OC)/3466(OC)/3200/2933/2667/2400/2133 ECC & non-ECC, un-buffered memory* • AMD Ryzen series CPUs (Pinnacle Ridge) support DDR4 3466+(OC)/3200(OC)/2933/2667/2400/2133 ECC & non-ECC, un-buffered memory* • AMD Ryzen series CPUs (Picasso) support DDR4 3466+ (OC)/3200(OC)/2933/2667/2400/2133 non-ECC, un-buffered memory* * For Ryzen Series CPUs (Picasso), ECC is only supported with PRO CPUs. * Please refer to Memory Support List on ASRock's website for more information. (http://www.asrock.com/) * Please refer to page 22 for DDR4 UDIMM maximum frequency support. • Max. capacity of system memory: 128GB • 15µ Gold Contact in DIMM Slots
Expansion Slot	**AMD Ryzen series CPUs (Matisse)** • 2 x PCI Express 4.0 x16 Slots (PCIE1/PCIE3: single at x16 (PCIE1); dual at x16 (PCIE1) / x4 (PCIE3))*

English

AMD Ryzen series CPUs (Pinnacle Ridge)

- 2 x PCI Express 3.0 x16 Slots (PCIE1/PCIE3: single at x16 (PCIE1); dual at x16 (PCIE1) / x4 (PCIE3))*

AMD Ryzen series CPUs (Picasso)

- 2 x PCI Express 3.0 x16 Slots (PCIE1/PCIE3: single at x8 (PCIE1); dual at x8 (PCIE1) / x4 (PCIE3))*

* Supports NVMe SSD as boot disks

- 2 x PCI Express 4.0 x1 Slots
- Supports AMD Quad CrossFireX™ and CrossFireX™
- 1 x M.2 Socket (Key E), supports type 2230 WiFi/BT module
- 15µ Gold Contact in VGA PCIe Slot (PCIE1)

Graphics

- Integrated AMD Radeon™ Vega Series Graphics in Ryzen Series APU*

* Actual support may vary by CPU

- DirectX 12, Pixel Shader 5.0
- Shared memory default 2GB. Max Shared memory supports up to 16GB.

* The Max shared memory 16GB requires 32GB system memory installed.

- Dual graphics output: support HDMI and DisplayPort 1.2 ports by independent display controllers
- Supports HDMI 2.0 with max. resolution up to 4K x 2K (4096x2160) @ 30Hz
- Supports DisplayPort 1.2 with max. resolution up to 4K x 2K (4096x2160) @ 60Hz
- Supports Auto Lip Sync, Deep Color (12bpc), xvYCC and HBR (High Bit Rate Audio) with HDMI 2.0 Ports (Compliant HDMI monitor is required)
- Supports HDCP 2.2 with HDMI 2.0 and DisplayPort 1.2 Ports
- Supports 4K Ultra HD (UHD) playback with HDMI 2.0 and DisplayPort 1.2 Ports
- Supports Microsoft PlayReady®

Audio	• 7.1 CH HD Audio with Content Protection (Realtek ALC1200 Audio Codec) • Premium Blu-ray Audio support • Supports Surge Protection • ELNA Audio Caps • PCB Isolate Shielding • Individual PCB Layers for R/L Audio Channel
LAN	• Gigabit LAN 10/100/1000 Mb/s • GigaLAN Intel® I211AT • Supports Wake-On-LAN • Supports Lightning/ESD Protection • Supports Energy Efficient Ethernet 802.3az • Supports PXE
Rear Panel I/O	• 3 x Antenna Ports (on I/O Panel Shield) • 1 x PS/2 Mouse/Keyboard Port • 1 x HDMI Port • 1 x DisplayPort 1.2 • 1 x USB 3.2 Gen2 Type-A Port (10 Gb/s) (Supports ESD Protection) • 1 x USB 3.2 Gen2 Type-C Port (10 Gb/s) (Supports ESD Protection) • 6 x USB 3.2 Gen1 Ports (Supports ESD Protection) • 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED) • HD Audio Jacks: Line in / Front Speaker / Microphone
Storage	• 8 x SATA3 6.0 Gb/s Connectors, support RAID (RAID 0, RAID 1 and RAID 10), NCQ, AHCI and Hot Plug • 1 x Hyper M.2 Socket (M2_1), supports M Key type 2230/2242/2260/2280/22110 M.2 PCI Express module up to Gen4x4 (64 Gb/s) (with Matisse) or Gen3x4 (32 Gb/s) (with Pinnacle Ridge and Picasso)* • 1 x Hyper M.2 Socket (M2_3), supports M Key type 2230/2242/2260/2280/22110 M.2 SATA3 6.0 Gb/s module and M.2 PCI Express module up to Gen4x4 (64 Gb/s) (with Matisse) or Gen3x4 (32 Gb/s) (with Pinnacle Ridge and Picasso)* * Supports NVMe SSD as boot disks * Supports ASRock U.2 Kit

Connector

- 1 x COM Port Header
- 1 x TPM Header
- 1 x SPI TPM Header
- 1 x Power LED and Speaker Header
- 2 x RGB LED Headers

* Support in total up to 12V/3A, 36W LED Strip

- 1 x Addressable LED Header

* Supports in total up to 5V/3A, 15W LED Strip

- 1 x CPU Fan Connector (4-pin)

* The CPU Fan Connector supports the CPU fan of maximum 1A (12W) fan power.

- 1 x CPU/Water Pump Fan Connector (4-pin) (Smart Fan Speed Control)

* The CPU/Water Pump Fan supports the water cooler fan of maximum 2A (24W) fan power.

- 3 x Chassis/Water Pump Fan Connectors (4-pin) (Smart Fan Speed Control)

* The Chassis/Water Pump Fan supports the water cooler fan of maximum 2A (24W) fan power.
* CPU_FAN2/WP, CHA_FAN1/WP, CHA_FAN2/WP and CHA_FAN3/WP can auto detect if 3-pin or 4-pin fan is in use.

- 1 x 24 pin ATX Power Connector
- 1 x 8 pin 12V Power Connector
- 1 x Front Panel Audio Connector
- 1 x AMD LED Fan USB Header
- 1 x Thunderbolt AIC Connector (5-pin) (Supports ASRock Thunderbolt AIC Card only)
- 1 x USB 2.0 Header (Supports 2 USB 2.0 ports) (Supports ESD Protection)
- 2 x USB 3.2 Gen1 Headers (Support 4 USB 3.2 Gen1 ports) (Supports ESD Protection)

BIOS Feature

- AMI UEFI Legal BIOS with GUI support
- Supports “Plug and Play”
- ACPI 5.1 compliance wake up events
- Supports jumperfree
- SMBIOS 2.3 support
- CPU, CPU VDDCR_SOC, DRAM, VPPM, PREM VDD_CLDO, PERM VDDCR_SOC, +1.8V, VDDP, VDDG, CPU Load-Line Calibration, CPU VDDCR_SOC Load-Line Calibration Voltage Multi-adjustment

Hardware Monitor	• Temperature Sensing: CPU, CPU/Water Pump, Chassis, Chassis/Water Pump Fans • Fan Tachometer: CPU, CPU/Water Pump, Chassis, Chassis/Water Pump Fans • Quiet Fan (Auto adjust chassis fan speed by CPU temperature): CPU, CPU/Water Pump, Chassis, Chassis/Water Pump Fans • Fan Multi-Speed Control: CPU, CPU/Water Pump, Chassis, Chassis/Water Pump Fans • Voltage monitoring: +12V, +5V, +3.3V, CPU Vcore, CPU VDDCR_SOC, DRAM, PREM VDDCR_SOC, +1.8V, VDDP
OS	• Microsoft® Windows® 10 64-bit
Certifications	• FCC, CE • ErP/EuP ready (ErP/EuP ready power supply is required)

** For detailed product information, please visit our website: http://www.asrock.com*

Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, applying Untied Overclocking Technology, or using third-party overclocking tools. Overclocking may affect your system's stability, or even cause damage to the components and devices of your system. It should be done at your own risk and expense. We are not responsible for possible damage caused by overclocking.