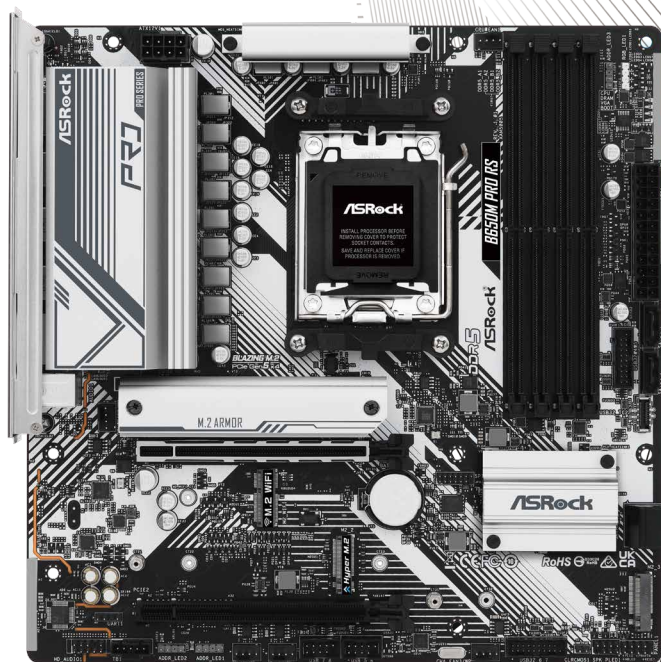


B650M PRO RS



PRODUCT BRIEF :

- Supports AMD Socket AM5 Ryzen™ 8000 and 7000 Series Processors
- 8+2+1 Power Phase, Dr.MOS
- Supports DDR5 7200+ MHz (OC)
- 1 PCIe 4.0 x16, 1 PCIe 3.0 x16, M.2 Key E for WiFi
- Integrated AMD RDNA™ 2 Graphics
- Graphics Output Options: HDMI, DisplayPort
- Realtek ALC897 7.1 CH HD Audio Codec, Nahimic Audio
- 4 SATA3, 1 Blazing M.2 (PCIe Gen5 x4), 1 Hyper M.2 (PCIe Gen4 x4), 1 M.2 (PCIe Gen4 x2)
- 1 USB 3.2 Gen2 Type A+C (Rear), 1 USB 3.2 Gen1 Type-C (Front), 6 USB 3.2 Gen1 Type-A (2 Rear, 4 Front)
- Dragon 2.5G LAN
- Supports ASRock Auto Driver Installer, BIOS Flashback

I/O OVERVIEW



DR. MOS

Intelligently delivering higher current for each phase, thus providing improved thermal result and superior performance.

Dr.Mos

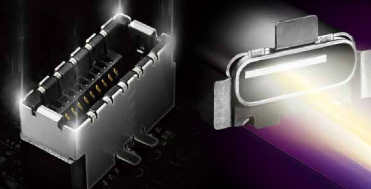
BLAZING M.2 + MULTI-LAYER HEATSINK

Supports PCIe 5.0 SSD with a breathtaking data transfer rate.



USB 3.2 TYPE-C (FRONT + REAR)

Providing a blazing fast data transfer interface with reversible USB Type-C design that fits the connector either way.



M.2 (KEY E) FOR WiFi

Users may upgrade wireless module by M.2 (Key E) slot.



*WiFi Module is not included.

NAHIMIC AUDIO

Optimized to who is looking for an outstanding sound experience in high definition.



PRE-INSTALLED I/O SHIELD

ASRock pre-installs the I/O shield for you as an assembly helper to speed up the set-up process.



DRAGON 2.5Gbps LAN

Enjoy the faster connectivity experience for gaming, file transfers and backups.





Detail Specification

Platform	- Micro ATX Form Factor: 9.6-in x 9.6-in, 24.4 cm x 24.4 cm - 2oz Copper PCB
Unique Feature	- Superb Productivity - PCIe Gen5 (M.2) - Dual Channel DDR5 - Rock-Solid Durability - 8+2+1 Power Phase, 50A Dr.MOS - Pre-Installed I/O Shield - Ultrafast Connectivity - 2.5G LAN - EZ Update - BIOS Flashback Button - ASRock Auto Driver Installer - EZ Troubleshooter - ASRock Post Status Checker
CPU	- Supports AMD Socket AM5 Ryzen™ 8000 and 7000 Series Processors* * The availability of expansion slots may vary by CPU. Please refer to PCIe/M.2 Bandwidth Table for details. (http://www.asrock.com/)
Chipset	- AMD B650
Memory	- Dual Channel DDR5 Memory Technology - 4 x DDR5 DIMM Slots - Supports DDR5 ECC/non-ECC, un-buffered memory up to 7200+(OC)* - Max. capacity of system memory: 192GB - Supports Extreme Memory Profile (XMP) and EXTended Profiles for Overclocking (EXPO) memory modules * Please refer to Memory Support List on ASRock's website for more information. (http://www.asrock.com/)
Expansion Slot	CPU: - 1 x PCIe 4.0 x16 Slot (PCIe1), supports x16 mode* - 1 x PCIe 3.0 x16 Slot (PCIe2), supports x4 mode* Chipset: - 1 x M.2 Socket (Key E), supports type 2230 WiFi/BT PCIe WiFi module * Supports NVMe SSD as boot disks - Supports AMD CrossFire™ - 15μ Gold Contact in VGA PCIe Slot (PCIe1)
Graphics	Integrated AMD RDNA™ graphics (Actual support may vary by CPU) - 1 x HDMI 2.1 TMDS/FRL 8G Compatible, supports HDR, HDCP 2.3 and max. resolution up to 4K 120Hz - 1 x DisplayPort 1.4 with DSC (compressed), supports HDCP 2.3 and max. resolution up to 4K 120Hz
Audio	- 7.1 CH HD Audio (Realtek ALC897 Audio Codec) - Nahimic Audio
LAN	- 2.5 Gigabit LAN 10/100/1000/2500 Mb/s - Dragon RTL8125BG - Supports Dragon 2.5G LAN Software - Smart Auto Adjust Bandwidth Control - Visual User Friendly UI - Visual Network Usage Statistics - Optimized Default Setting for Game, Browser, and Streaming Modes - User Customized Priority Control
USB	- 1 x USB 3.2 Gen2 Type-C (Rear) - 1 x USB 3.2 Gen2 Type-A (Rear) - 1 x USB 3.2 Gen1 Type-C (Front) - 6 x USB 3.2 Gen1 Type-A (2 Rear, 4 Front) - 8 x USB 2.0 (4 Rear, 4 Front) * All USB ports support ESD Protection

Rear Panel I/O	- 2 x Antenna Mounting Points - 1 x HDMI Port - 1 x DisplayPort 1.4 - 1 x USB 3.2 Gen2 Type-A Port (10 Gb/s) - 1 x USB 3.2 Gen2 Type-C Port (10 Gb/s) - 2 x USB 3.2 Gen1 Ports - 4 x USB 2.0 Ports - 1 x RJ-45 LAN Port - 1 x BIOS Flashback Button - HD Audio Jacks: Line in / Front Speaker / Microphone
Storage	CPU: - 1 x Blazing M.2 Socket (M2_1, Key M), supports type 2260/2280 PCIe Gen5x4 (128 Gb/s) mode* Chipset: - 1 x Hyper M.2 Socket (M2_2, Key M), supports type 2260/2280 PCIe Gen4x4 (64 Gb/s) mode* - 1 x M.2 Socket (M2_3, Key M), supports type 2260/2280 PCIe Gen4x2 (32 Gb/s) mode* - 4 x SATA3 6.0 Gb/s Connectors * Supports NVMe SSD as boot disks
RAID	- Supports RAID 0, RAID 1 and RAID 10 for SATA storage devices - Supports RAID 0, RAID 1 and RAID 10 for M.2 NVMe storage devices* * Requires additional M.2 NVMe expansion cards to support RAID 10
Connector	- 1 x SPI TPM Header - 1 x Power LED and Speaker Header - 1 x RGB LED Header* - 3 x Addressable LED Headers** - 1 x CPU Fan Connector (4-pin)** - 1 x CPU/Water Pump Fan Connector (4-pin) (Smart Fan Speed Control)**** - 3 x Chassis/Water Pump Fan Connectors (4-pin) (Smart Fan Speed Control)***** - 1 x 24 pin ATX Power Connector - 1 x 8 pin 12V Power Connector (Hi-Density Power Connector) - 1 x Front Panel Audio Connector - 1 x Thunderbolt AIC Connector (5-pin) (Supports ASRock Thunderbolt 4 AIC Card) - 2 x USB 2.0 Headers (Support 4 USB 2.0 ports) - 2 x USB 3.2 Gen1 Headers (Support 4 USB 3.2 Gen1 ports) - 1 x Front Panel Type C USB 3.2 Gen1 Header * Supports in total up to 12V/3A, 36W LED Strip ** Support in total up to 5V/3A, 15W LED Strip *** CPU_FAN1 supports the fan power up to 1A (12W). **** CPU_FAN2/WP supports the fan power up to 2A (24W). ***** CHA_FAN1~3/WP support the fan power up to 2A (24W). ***** CPU_FAN2/WP and CHA_FAN1~3/WP can auto detect if 3-pin or 4-pin fan is in use.
BIOS Feature	- 256Mb AMI UEFI Legal BIOS with GUI support
Software and UEFI	Software - ASRock Motherboard Utility (A-Tuning) - ASRock Dragon 2.5G LAN Software - ASRock Polychrome SYNC * These utilities can be downloaded from ASRock Live Update & APP Shop. UEFI - ASRock Full HD UEFI - ASRock Auto Driver Installer - ASRock Instant Flash
OS	- Microsoft® Windows® 10 64-bit / 11 64-bit
Certifications	- FCC, CE - ErP/EuP ready (ErP/EuP ready power supply is required)
Accessories	- 1 x User Manual - 2 x SATA Data Cables - 4 x Screws for M.2 Sockets - 1 x Standoff for M.2 Socket