

ASUS PRO WS WRX90E-SAGE SE

Asus Pro WS WRX90E-SAGE SE AMD WRX90 Chipset Ryzen Threadripper sTR5 Socket EEB
Motherboard

Product Overview

Asus Pro WS WRX90E-SAGE SE, AMD Socket sTR5 for Ryzen Threadripper PRO 7000 WX-Series*, Memory: 8 x DIMM, DDR5, Expansion Slots: 6 x PCIe 5.0 x16 slots, 1 x PCIe 5.0 x 8 slot, Storage: 4 x M.2 slots, 2 x SlimSAS ports and 4 x SATA, Onboard VGA Output Available: 2 x USB4 (support Type-C)



Specifications

Features:

A Workstation wonderland

The Pro WS WRX90E-SAGE SE motherboard offers elite speed, compatibility and stability tailored to content creation, software development, machine learning and more. Thirty-two power stages fuel AMD Ryzen™ Threadripper™ PRO 7000 WX-series processors with up to 96 cores, while supporting up to 2 TB of R-DIMM DDR5 modules, delivering the performance potential that professionals need for cutting-edge applications. With onboard PCIe® power connectors offering additional support for multiple graphics cards, active cooling on the VRM heatsinks, USB 40Gbps ports, SlimSAS and onboard BMC, the Pro WS WRX90E-SAGE SE comes prepared for a wide array of scenarios and industries.

ULTRAFAST CONNECTIVITY Multi-GPU Support

The Pro WS WRX90E-SAGE SE motherboard features seven PCIe 5.0 x16 slots that provide flexible system configurability and expandability. With high-powered graphics cards, it can bring enhanced performance in modelling, simulation and rendering applications.

Intel® X710-AT2 dual 10 Gb Ethernet

Featuring dual onboard 10G LAN ports powered by the cutting-edge Intel® X710-AT2 Ethernet controller, the Pro WS WRX90E-SAGE SE makes short work of multi-terabyte transfers and provides server-grade connectivity with low-latency.

1 Gb Ethernet Dedicated to BMC

The Pro WS WRX90E-SAGE SE features an Ethernet port to provide fast data transfers simultaneously for 1 Gbps internet streaming to the onboard baseboard management controller.

USB 20Gbps with USB Type-C®

The front panel connectors offer a transfer rate of up to 20 Gbps.

Embrace Next-Generation USB4®

The USB Type-C port in the rear offers a DisplayPort™ alt mode with support for up to 8K resolution at 60 Hz, providing great compatibility for Type-C monitors and portable displays which are getting popular among creators. * The MiniDP In port at the back panel needs to be connected to a discrete graphics card via the bundled MiniDP to DP cable.

M.2 PCIe 5.0 slots

The Pro WS WRX90E-SAGE SE includes up to four onboard M.2 slots. Users working with massive files can RAID together multiple NVMe devices for massive I/O bandwidth and speedy data transfers.

SlimSAS slot

The Pro WS WRX90E-SAGE SE motherboard also features two SlimSAS ports for connecting industrial SSD drives, servers and networking equipment.

CPU AND MEMORY OVERCLOCKING READY

For AMD TR5 series workstations, we offer CPU and DRAM overclocking options. To fully leverage the performance of these processors, ASUS has incorporated an innovative dual PSU design on the Pro WS WRX90E-SAGE SE motherboard. Along with robust power delivery and advanced cooling modules, this motherboard exhibits enhanced stability during overclocking. Hardware switches and optimized BIOS options provide overclocking enthusiasts with greater convenience when pushing their systems to the limit. You may further boost your memory performance by enabling EXPO settings. The comprehensive synergy of EXPO and ECC R-DIMM further combines exceptional performance with outstanding stability, setting a new standard for workstation computing.

Power Stages in VRM Area

The Pro WS WRX90E-SAGE SE voltage regulator module setup is comprised of (16*2)+3+3+3 power stages, delivering the power and efficiency that the latest AMD Ryzen™ Threadripper™ PRO 7000 WX-Series processors demand, with stability for extreme overclocking.

Active VRM Cooling Solutions

The extruded aluminum heatsinks on the MOSFETs and chokes contain active cooling to greatly enhance thermal efficiency.

ProCool II Connectors

ProCool II connectors ensure a snug and reliable connection to the 12V CPU input. This second generation features improved heat dissipation and a metal shroud.

Onboard PCIe Power Connectors

Two additional 8-pin PCIe cable connectors built into the motherboard can ensure power output stability when multiple graphic cards need to be installed.

ECC R-DIMM Memory Support

The Pro WS WRX90E-SAGE SE motherboard boasts a robust design featuring eight R-DIMM DDR5 memory module slots with ECC support, to improve the prevention of system crashes and data corruption, thereby ensuring that a workstation remains reliable and responsive for professional demands.

REMOTE CONTROL SOLUTIONS

Pro WS WRX90E-SAGE SE workstation motherboard features compatibility with BMC connections, and it is bundled with ASUS Control Center Express software to provide comprehensive in-band and out-of-band management features for businesses and industries.

ASUS Control Center Express

The Pro WS WRX90E-SAGE SE comes with ASUS Control Center Express, real-time IT monitoring and management software designed for business that improves productivity and enhances security and can help prevent unauthorized access and data leaks.

Chipset Cooling

A dedicated chipset heatsink draws heat away to maintain optimum operating temperatures, and it comes with an active fan to enhance thermal efficiency.

10 Gb LAN Cooling

An optimally located and extended heatsink on the 10 Gb Ethernet controller ensures stable high-speed networking performance.

M.2 Heatsinks with Active Fan

An active fan provides an additional cooling method to M.2 slots. All four M.2 slots come with large heatsinks to keep NVMe storage at the optimal operating temperature for consistent performance and reliability. M.2 thermal pads on select slots go even further to ensure peak performance for next-gen drives.

Thorough and Flexible Way to Adjust the Fans

The Pro WS WRX90E-SAGE SE offers advanced fan control, configurable via an IPMI web UI, Q-FAN in the UEFI BIOS*, or Fan Xpert 4 in Armoury Crate for Windows*

Multiple Temperature Source

Each header can be connected to a 3A-12V high speed fan and set to monitor and react to three user-configurable thermal sensors for workload-based cooling. All settings can be easily managed by Fan Xpert 4, UEFI and IPMI web interfaces.

PCIe Q-release Slim

The new design of Q-release Slim allows users to remove the graphics card by tilting the card in its slot. This design also keeps the original method of removing the graphics card by pushing down on the retention clip.

SafeSlot & SafeDIMM

PCIe 5.0 is 2x faster than PCIe 4.0, so ASUS adapted its SMT manufacturing process to ensure the highest data speeds for its SafeSlot design. SafeSlot is a reinforced metal sheath added to a PCIe slot to keep an expansion card firmly installed. Meanwhile, strong ASUS SafeDIMM sheathes support and protect memory modules on ASUS Pro series workstation motherboards, empowering users to insert modules with speed, accuracy and confidence.

Built for around-the-clock operation

Optimized for 24/7 operation, the Pro WS WRX90E-SAGE SE WIFI motherboard is tested to work at up to 45 degreesC and 80% humidity, ensuring it can handle diverse operating environments.

Built for Firm Protection

The back-plate on the back of the motherboard provides protection for adjacent electrical components and circuits.

Specifications:

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Specifications	
Product Code	ASUS PRO WS WRX90E-SAGE SE
Model	Pro WS WRX90E-SAGE SE
CPU	AMD Socket sTR5 for Ryzen Threadripper PRO 7000 WX-Series
Chipset	AMD WRX90 Chipset

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Product Specification Sheet

Memory	8 x DIMM slots, DDR5, ECC Registered Memory
	8 Channel Memory Architecture
	*Supported memory types, data rate (speed), and number of DRAM modules vary depending on the CPU and memory configuration
Expansion Slots	AMD Ryzen Threadripper PRO 7000 WX-Series Processors
	6 x PCIe 5.0 x16 slots
	1 x PCIe 5.0 x16 slot (x8 mode)
Storage	Total supports 4 x M.2 slots, 2 x SlimSAS ports and 4 x SATA 6Gb/s ports
	AMD Ryzen Threadripper PRO 7000 WX-Series Processors
	M.2_1 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 5.0 x4 mode)
	M.2_2 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 5.0 x4 mode)
	M.2_3 slot (Key M), type 2242/2260/2280 (supports PCIe 5.0 x4 mode)
	M.2_4 slot (Key M), type 2242/2260/2280 (supports PCIe 5.0 x4 mode)
	AMD WRX90 Chipset
	2 x SlimSAS slots support PCIe 4.0 x4 mode NVMe device
	4 x SATA 6Gb/s ports
	* AMD RAIDXpert2 Technology supports both PCIe RAID 0/1/5/10 and SATA RAID 0/1/5/10.
Ethernet	1 x Realtek 1Gb Ethernet (Dedicated management LAN for AST2600)
	1 x Intel dual 10Gb Ethernet
	ASUS LANGuard
USB	Rear USB (Total 9 ports)
	2 x USB 40Gbps (USB4) with ASMedia ASM4242 controller ports (2 x USB Type-C)
	6 x USB 10Gbps ports (6 x Type-A)
	1 x USB 2.0 ports (2 x Type-A)
	Front USB (Total 7 ports)
	1 x USB 20Gbpsconnector (supports USB Type-C)
	1 x USB 5Gbps header supports 2 additional USB 5G ports
	2 x USB 2.0 headers support additional 4 USB 2.0 ports

Audio	Realtek ALC1220P Surround Sound High Definition Audio CODEC
	- Impedance sense for front and rear headphone outputs
	- Internal audio Amplifier to enhance the highest quality sound for headphone and speakers
	- Supports: Jack-detection, Multi-streaming, Front Panel Jack-retasking
	- High quality 120 dB SNR stereo playback output and 113 dB SNR recording input (Line-in)
	- Supports up to 32-Bit/192 kHz playback
	Audio Features
	- Premium audio capacitors
	- Dedicated audio PCB layers
	- Unique de-pop circuit
	*A chassis with an HD audio module in the front panel is required to support 5.1 Surround Sound audio output.
	* This motherboard will only support up to 5.1 Surround Sound due to the number of audio ports available on the motherboard.
Back Panel I/O Ports	2 x USB 40Gbps (USB4) with ASMedia ASM4242 controller ports (2 x USB Type-C)
	6 x USB 10Gbps ports (6 x Type-A)
	1 x USB 2.0 port (2 x Type-A)
	1 x VGA port
	2 x mini DisplayPort IN
	1 x Intel dual 10Gb Ethernet ports
	1 x Realtek 1Gb Ethernet port
	2 x Audio jacks
	1 x BIOS FlashBack button
	1 x Clear CMOS button

Internal I/O Connectors	Fan and Cooling related
	1 x 4-pin CPU Fan header
	1 x 4-pin CPU OPT Fan header
	1 x W_PUMP+ header
	5 x 4-pin Chassis Fan headers
	2 x 4-pin VRM Fan header (with VRM FAN onboard)
	1 x 4-pin M.2 Fan header (with M.2 FAN onboard)
	Power related
	1 x 24-pin Main Power connectors
	2 x 8-pin +12V Power connectors
	2 x 8-pin PCIe to CPU power connectors
	2 x 8-pin PCIe Power connector
	Storage related
	4 x M.2 slots (Key M)
	4 x SATA 6Gb/s ports
	2 x SlimSAS port
	USB
	1 x USB 20Gbps connector supports USB Type-C
	1 x USB 5Gbps header supports 2 additional USB 5Gbps ports
	2 x USB 2.0 headers support additional 4 USB 2.0 ports
	Miscellaneous
	1 x Chassis intrusion header
	1 x COM port header
	1 x FlexKey button
	1 x Front panel audio header (F_AUDIO)
	1 x LN2 mode jumper
	1 x M.2 slot (Key E)
	7 x Probelts measurement points
	1 x ReTry button
	1 x RSVD switch
	1 x Slow mode switch
	1 x Safe boot button
	1 x SPI TPM header (14-1 pin)
	1 x Start button
	1 x 10-1 pin system panel header
	1 x Thermal sensor header
Special Features	ASUS 5X PROTECTION III
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- DIGI+ VRM (- Digital power design with SPS)
- ESD Guards
- LANGuard
- Overvoltage protection
- SafeSlot
- Stainless-steel back I/O
ASUS Q-Design
- M.2 Q-Latch
- Q-Release Slim (with PCIe SafeSlot)
- Q-Code
- Q-Connector
- Q-DIMM
- Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green])
- Q-Slot
ASUS Thermal Solution
- M.2 heatsink backplate and onboard thermal pads
- M.2 heatsink
- Steel backplate
- VRM heatsink design with active fans
ASUS EZ DIY
- BIOS FlashBack button
- BIOS FlashBack LED
- Clear CMOS button
- ProCool II
- Pre-mounted I/O shield
- SafeSlot
- SafeDIMM
Bespoke Motherboard Design & Business Focused Features
- 24/7 Reliability
- Overcurrent Protection
BMC Related
1 x BMC switch
1 x BMC LAN fixed IP switch
1 x IPMI switch
1 x Message LED header
1 x microSD card socket
2 x LAN LED headers

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Product Specification Sheet

	1 x Location LED header
	1 x Location button header
	1 x PSU_SMB header
	1 x SMART_PSU switch
	1 x VGA switch
	1 x VGA header (Dedicated Management for AST2600)
	1 x VPP_I2C header
Software Features	ASUS Exclusive Software
	Armoury Crate
	- Fan Xpert 4
	ASUS CPU-Z
	Adobe Creative Cloud (Free Trial)
	Norton 360 for Deluxe (60 Days Free Trial)
	WinRAR (40 Days Free Trial)
	UEFI BIOS
	ASUS EZ DIY
	- ASUS CrashFree BIOS 3
	- ASUSTeK. EzFlash Utility
	FlexKey
	IT Management software supported
	- ASUS Control Center Express(ACCE)
BIOS	256 Mb Flash ROM, UEFI AMI BIOS(text-based)
Manageability	WOL by PME, PXE (UEFI mode)

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Product Specification Sheet

Accessories	Cables
	2 x PCIe 8-pin to CPU power cables
	1 x 24-pin power cable (Y cable)
	2 x Mini DisplayPort cables
	4 x SATA 6Gb/s cables
	1 x Thermistor cable pack
	Miscellaneous
	1 x Q-connector
	1 x M.2 Q-Latch package
	1 x AMI license sticker
	4 x M.2 rubber packages
	1 x Screw package for M.2 Key E
	Documentation
	1 x ACC Express Activation Key Card
	1 x Quick start guide
Operating System	Windows 11
	Windows 10 64-bit
Form Factor	EEB Form Factor
	12 inch x 13 inch
	(30.5 cm x 33 cm)

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page:

<https://www.comx-computers.co.za/ASUS-PRO-WS-WRX90E-SAGE-SE-Asus-Pro-WS-WRX90E-SAGE-Buy-p-310725.php>

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