

## Ruby R5 – AMD® Ryzen™ R5-4500U

### High Speed Performance

Featuring the new AMD Ryzen™ 4000 mobile processor with Radeon™ Vega graphics, and support for high-speed 3200MHz DDR4 memory, Ruby is a new performance-driven small form factor PC. At home, stream 4K video, play games, or finish your homework. At work, Ruby keeps you productive -- perfect for content creation, multitasking, and video conferencing. The Ryzen-based processors and high-speed memory remove bottlenecks keeping you on task or helping you relax while tucked behind a TV or monitor via the included VESA plate.

### Feature Rich for Versatility

Ruby supports up to four displays simultaneously, with up to 4K resolution at 60Hz for each monitor. Dual ethernet with 2.5Gbps and 1Gbps speeds allow you to connect to multiple networks, with one port providing DASH support for remote management of your mini.

Ruby also features TPM for sensitive communications where encryption is required. Take advantage of Intel® Wi-Fi 6 (802.11ax) with high-speed connectivity enhanced for efficient bandwidth usage in environments with many connected devices. Ruby has ample accommodation for all your peripheral devices with four front 10Gbps SuperSpeed USB ports plus two rear Hi-Speed USB Type-A ports. And if six USB ports is not enough, add a functional lid to your configuration for more I/O connections.

### Efficiency by Design

Ruby, built on AMD Zen 2 architecture, provides greater system performance over previous generations with advanced hyperthreading technologies driving faster speeds and enhanced graphics. Cloud computing, immersive gaming, and streaming all demand increasing computing performance with optimal energy efficiency. From the very beginning, AMD engineers designed their "Zen 2" core to meet those demands with more core throughput, larger caches, and powerful multi-threading capabilities.

### Highlighted features

- AMD® Ryzen™ R5-4500U CPU
- AMD® Radeon™ Vega 6 Graphics
- Two DDR4-3200 SO-DIMM Sockets
- M.2 slot supports PCI or SATA SSDs
- Secondary M.2 slot supports SATA SSDs
- 1x DP 1.4 (4K@60Hz)
- HDMI 2.0a (4K@60Hz)
- Two DP 1.4 via USB-C ports
- Dual Ethernet:
  - 1x 10/100/1000/2500 Mbps;
  - 1x 10/100/1000 Mbps (DASH)
- Intel® Wi-Fi 6
- Intel® Bluetooth 5.1
- Two USB 3.2 Gen 1 Type-A ports
- Two USB 3.2 Gen 2 Type-C ports
- Two USB 2.0 ports
- Audio combo mic in / line out
- TPM down (Infineon 2.0)
- Audio combo mic in / line out
- 19VDC 90W power supply adapter
- Kensington lock slot
- VESA mount kit included
- Extended Support Service (1-, 3-yr)

### Customization

- Supports DDR4 RAM 4GB-64GB
- Supports Primary M.2 PCIe and SATA SSD 128GB-8TB
- Supports Secondary M.2 SATA SSD 128GB-2TB
- Replaceable lid
- DIN or VESA mountable



### Simply NUC Services

You can order this NUC in your various configurations, as well as your corporate OS Image loaded and ready to deploy.

## Technical Specifications

<p><b>Processor</b></p> <ul style="list-style-type: none"> <li>• AMD® Ryzen™ R5-4500U CPU (2.3GHz, 4.0GHz Turbo, 6C/6T, 25W)</li> </ul>	<p><b>Graphics</b></p> <ul style="list-style-type: none"> <li>• AMD® Radeon™ Vega 6 Graphics, up to 1.5GHz</li> <li>• DisplayPort 1.4 (Supports up to 4k @60Hz)</li> <li>• One HDMI 2.0a port (Supports up to 4k @60Hz)</li> <li>• Two USB Type-C ports with DisplayPort 1.4 (Supports up to 4k @60Hz)</li> </ul>	<p><b>System Memory</b></p> <ul style="list-style-type: none"> <li>• Two DDR4-3200 SO-DIMM sockets, 64GB Max, 1.2V</li> </ul>
<p><b>Storage Capabilities</b></p> <ul style="list-style-type: none"> <li>• M.2 socket supporting 22x80 M.2 SSDs, SATA or PCIe, 8TB Max</li> <li>• Secondary M.2 socket supporting 22x80 M.2 SSDs, SATA, 2TB Max</li> </ul>	<p><b>Peripheral Connectivity</b></p> <ul style="list-style-type: none"> <li>• 10/100/1000/2500 Mbps</li> <li>• 10/100/1000 Mbps RJ45 Ethernet (DASH)</li> <li>• Two USB 3.2 Gen 2 Type-A ports</li> <li>• Two USB 3.2 Gen 2 Type-C ports</li> <li>• Two USB 2.0 ports</li> <li>• One HDMI 2.0a port</li> <li>• One DisplayPort 1.4</li> <li>• Intel® Wi-Fi 6 AX200 (802.11ax) with Bluetooth 5.1</li> </ul>	<p><b>Mechanical Chassis Size</b></p> <ul style="list-style-type: none"> <li>• 4.5" x 4.5" x 1.9"</li> <li>• 115 x 115 x 49 mm</li> </ul>
<p><b>Audio</b></p> <ul style="list-style-type: none"> <li>• Up to 7.1 surround via HDMI</li> <li>• Front Audio: mic in / line out</li> </ul>	<p><b>Baseboard Power Requirements</b></p> <ul style="list-style-type: none"> <li>• 19V, 90W AC-DC power adapter with detachable power cord</li> </ul>	<p><b>Expansion Capabilities</b></p> <ul style="list-style-type: none"> <li>• M.2 socket for SATA drive</li> <li>• Replacable lid</li> <li>• Two USB 2.0 Headers</li> <li>• One Serial Header</li> </ul>

## Certification and Regulations

<p><b>Product Safety Regulations and Standards</b></p> <ul style="list-style-type: none"> <li>• IEC 62368-1</li> <li>• EN 62368-1</li> <li>• CAN/CSA 62368-1</li> </ul>	<p><b>EMC/RF Regulations and Standards</b></p> <ul style="list-style-type: none"> <li>• FCC CFR Title 47, Chapter I, Part 15, Subpart B</li> <li>• EN 55024</li> <li>• EN 55032</li> <li>• EN 55035</li> <li>• CISPR 32</li> <li>• ICES-003</li> <li>• ETSI EN.301 489-1</li> <li>• ETSI EN.301 489-17</li> </ul>	<p><b>Environmental Regulations</b></p> <ul style="list-style-type: none"> <li>• RoHS Compliant</li> <li>• REACH Compliant</li> </ul>
<p><b>Environment Operating Temp</b></p> <ul style="list-style-type: none"> <li>• 0° C to +35° C</li> <li>• Non-condensing Humidity</li> </ul>	<p><b>Certified Operating Systems</b></p> <ul style="list-style-type: none"> <li>• Windows 10 Pro Home, IoT</li> <li>• Ubuntu</li> </ul>	