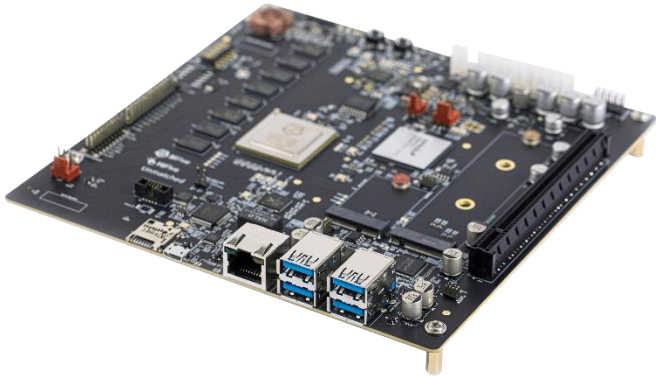


## HiFive™ Unmatched



The HiFive Unmatched from SiFive is a RISC-V Linux development platform in a PC form factor. Powered by the SiFive® Freedom U740 RISC-V SoC and targeted for creating RISC-V applications, the platform features 16 GB of 64-bit DDR4 memory operating up to 1866 MT/s and high-speed interconnects with 8-lane PCIe Gen 3 operating at 7.8 GB/s, Gigabit Ethernet, and USB 3.2 Gen 1. Software development is supported with Freedom U-SDK from SiFive, which provides a fast and convenient software environment to quickly build and modify a custom Linux distribution for this RISC-V PC.



## Technical Information

<b>CPU</b>	SiFive FU740-C000 <ul style="list-style-type: none"> <li>• Operating Frequency @ 1.2 GHz</li> <li>• Dual-issue in-order 64-bit execution pipeline</li> <li>• Quad-core 64-bit SiFive U74               <ul style="list-style-type: none"> <li>◦ RV64GC (RV64IMAFDC)</li> <li>◦ 32KB I-Cache / 32KB D-Cache per core</li> </ul> </li> <li>• Embedded 64-bit SiFive S7 Core               <ul style="list-style-type: none"> <li>◦ RV64IMAC</li> <li>◦ 16KB I-Cache / 8KB DTIM</li> </ul> </li> <li>• 2 MB Coherent Banked L2-Cache</li> </ul>
<b>System Memory and Storage</b>	On-board 16 GB 64-bit DDR4 @ 1866 MT/s On-board 32 MB QSPI NOR Flash Optional microSD Card Optional Solid-State Drive via NVMe SSD M.2 Key M (2230/2260/2280) Module (Not Included)
<b>Networking</b>	Ethernet – 10/100/1000 Mbps Optional Wi-Fi / BLE via Wi-Fi / BLE M.2 Key E (2230) Module (Not Included)
<b>Internal Connections</b>	1x PCI Express Gen3 x8 via PCI Express x16 Connector 1x M.2 Key M Connector (PCIe x4) 1x M.2 Key E Connector (PCIe x1, USB 2.0) 1x 2-Pin JTAG Selection Header 1x 10-Pin JTAG Header 1x 2-Pin CPU Fan Header (Always ON / 12V Supply) 2x 3-Pin System Fan Header (PWM Controlled / 12V Supply)

	1x 10-Pin Chassis Front Panel Header (5V Supply) 1x CR1220 Battery Holder for Real-Time Clock 1x 20-Pin Power Measurement Header 4x 8-Pin SPI Flash Programming Header (Factory Use Only)
<b>External Connections</b>	1x microSD Card Connector 1x RJ45 Connector 1x micro-USB 2.0 Connector 2x Stacked USB 3.2 Gen 1 Type A Connectors (charging support up to 1A)
<b>Power</b>	
<b>Type</b>	ATX / Mini-ITX / SFX Power Supply with 24-Pin Power Output Connector
<b>Wattage <sup>(1)</sup></b>	150 W (Fully Loaded <sup>(2)</sup> and PCIe Card Not Requiring External Power Source)
<b>Battery (Not Included)</b>	CR1220 3V Lithium Coin Cell
<b>Cooling <sup>(3)</sup></b>	1x Pre-Installed CPU Fan (Always ON) 2x 3-Pin Header (Supports PWM Control) for Chassis / System Fan (Not Included)
<b>Operating Conditions <sup>(4)</sup></b>	
<b>Ambient Temperature</b>	+5 °C (41 °F) to +45 °C (113 °F)
<b>Humidity</b>	93% Relative Humidity Non-Condensing
<b>Airflow</b>	Minimum 450 LFM (air direction across the board)
<b>Non-Operating Conditions</b>	-40 °C (-40 °F) to 70 °C (158 °F) @ 93% Relative Humidity Non-Condensing
<b>Compliance</b>	RoHS 10, SVHC 211 (REACH), WEEE, China RoHS FCC / CE Class A Safety per IEC 62368-1:2014 (Second Edition)
<b>Physical</b>	
<b>Dimensions</b>	170 mm (6.7 in) x 170 mm (6.7 in) x 40 mm (1.6 in)
<b>Weight</b>	8 oz.
<b>Installation <sup>(5)</sup></b>	Mini-ITX enclosure constructed of non-combustible or V-1 Class material
<b>Limited Hardware Warranty <sup>(6)</sup></b>	Six-months from the day product is shipped from warehouse

## Notes

- 1) For PCIe cards requiring external power source, the PSU Wattage should be as per card requirements.
- 2) Fully Loaded implies Board + PCIe Card (not requiring external power source) + M.2 Wi-Fi Module + M.2 NVME SSD Module + SD Card + Quad-USB and Ethernet Connectors Loaded + Both Chassis Fans.
- 3) SiFive FU740 has pre-installed heatsink with a Sunon 25 mm x 25 mm x 10 mm, 3.5 CFM CPU Fan.
- 4) Ambient Temperature inside the enclosure must not exceed the recommended maximum temperature.
- 5) Enclosure must be selected to accommodate installation of Chassis Fans to provide the recommended airflow.
- 6) Any changes to the hardware without SiFive Approval will void the warranty. SiFive will not be responsible for any bodily injury or any other damage caused due to such change.

## Product Ordering Information

Ordering Code	Packing List
HF105-000	HiFive Unmatched Board 32 GB SD Card with SiFive Freedom-U-SDK Linux Distribution Mini-ITX Compliant Rear Panel I/O Shield Cat5e Ethernet Cable (2 m) USB Type A to micro-USB Type B Cable (1.5 m) Chassis Mounting Screw Package (4x M4 Screws and 4x Stand-Offs) M.2 Module Mounting Screw Package (4x M2.5 Screws and 4x Washers) Index Card with QR Code to access HiFive Unmatched Getting Started Guide
HF105-OEM	HiFive Unmatched Board 32 GB SD Card with SiFive Freedom-U-SDK Linux Distribution

## Purchase Information



**CROWD SUPPLY**

**mouser.com**

## Further Information

Contact: [sales@sifive.com](mailto:sales@sifive.com)

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