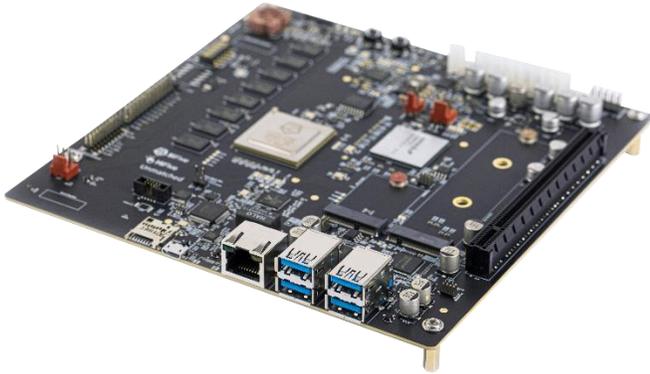


HiFive™ Unmatched



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

CPU	SiFive FU740-C000 <ul style="list-style-type: none"> • Operating Frequency @ 1.2 GHz • Dual-issue in-order 64-bit execution pipeline • Quad-core 64-bit SiFive U74 <ul style="list-style-type: none"> ○ RV64GC (RV64IMAFDC) ○ 32KB I-Cache / 32KB D-Cache per core • Embedded 64-bit SiFive S7 Core <ul style="list-style-type: none"> ○ RV64IMAC ○ 16KB I-Cache / 8KB DTIM • 2 MB Coherent Banked L2-Cache
System Memory and Storage	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)
Networking	Ethernet – 10/100/1000 Mbps Optional Wi-Fi / BLE via Wi-Fi / BLE M.2 Key E (2230) Module (Not Included)
Internal Connections	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)
External Connections	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)
Power	
Type	ATX / Mini-ITX / SFX Power Supply with 24-Pin Power Output Connector
Wattage ⁽¹⁾	150 W (Fully Loaded ⁽²⁾ and PCIe Card Not Requiring External Power Source)
Battery (Not Included)	CR1220 3V Lithium Coin Cell
Cooling ⁽³⁾	1x Pre-Installed CPU Fan (Always ON) 2x 3-Pin Header (Supports PWM Control) for Chassis / System Fan (Not Included)
Operating Conditions ⁽⁴⁾	
Ambient Temperature	+5 °C (41 °F) to +45 °C (113 °F)
Humidity	93% Relative Humidity Non-Condensing
Airflow	Minimum 450 LFM (air direction across the board)
Non-Operating Conditions	-40 °C (-40 °F) to 70 °C (158 °F) @ 93% Relative Humidity Non-Condensing
Compliance	RoHS 10, SVHC 211 (REACH), WEEE, CA Prop 65, China RoHS FCC / CE Class A Safety per IEC 62368-1:2014 (Second Edition)
Physical	
Dimensions	170 mm (6.7 in) x 170 mm (6.7 in) x 40 mm (1.6 in)
Weight	8 oz.
Installation ⁽⁵⁾	Mini-ITX enclosure constructed of non-combustible or V-1 Class material
Limited Hardware Warranty ⁽⁶⁾	12 Months

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