

NVIDIA H100 80GB PCIe



Product Specifications

Table 1 through Table 3 the product, memory, and software specifications for the NVIDIA H100 PCIe card.

Table 1. Product Specifications

Specification	NVIDIA H100
Product SKU	P1010 SKU 200 NVPN: 699-21010-0200-xxx
Total board power	PCIe 16-pin 450 W or 600 W power mode: • 350 W default • 350 W maximum • 200 W minimum PCIe 16-pin 300 W power mode: • 310 W default • 310 W maximum • 200 W minimum
Thermal solution	Passive
Mechanical form factor	Full-height, full-length (FHFL) 10.5", dual-slot
GPU SKU	GH100-200
PCI Device IDs	Device ID: 0x2331 Vendor ID: 0x10DE Sub-Vendor ID: 0x10DE Sub-System ID: 0x1626
GPU clocks	Base: 1,125 MHz Boost: 1,755 MHz
Performance states	P0
VBIOS	EEPROM size: 8 Mbit UEFI: Supported



Specification	NVIDIA H100
PCI Express interface	PCI Express Gen5 x16; Gen5 x8; Gen4 x16 Lane and polarity reversal supported
Multi-Instance GPU (MIG)	Supported (seven instances)
Secure Boot (CEC)	Supported
Zero Power	Not supported
Power connectors and headers	One PCIe 16-pin auxiliary power connector
Weight	Board: 1200g grams (excluding bracket, extenders, and bridges) NVLink bridge: 20.5 grams per bridge (x 3 bridges) Bracket with screws: 20 grams Enhanced straight extender: 35 grams Long offset extender: 48 grams Straight extender: 32 grams

Table 2. Memory Specifications

Specification	Description
Memory clock	1,593 MHz
Memory type	HBM2e
Memory size	80 GB
Memory bus width	5,120 bits
Peak memory bandwidth	2,000 GB/s

Table 3. Software Specifications

Specification	Description ¹
SR-IOV support	Supported -- 32 VF (virtual functions)
BAR address (physical function)	BAR0: 16 MiB ¹ BAR1: 128 GiB ¹ BAR3: 32 MiB ¹
BAR address (virtual function)	BAR0: 5 MiB, (256 KiB per VF) ¹ BAR1: 80 GiB, 64-bit (4 GiB per VF) ¹ BAR3: 640 MiB, 64-bit (32 MiB per VF) ¹
Message signaled interrupts	MSI-X: Supported MSI: Not supported
ARI Forwarding	Supported
Driver support	Linux: R520 or later Windows: R520 or later



Specification	Description ¹
Secure Boot	Supported
CEC Firmware	Version 2.0025 or later
NVFlash	Version 5.792 or later
NVIDIA® CUDA® support	x86: CUDA 11.8 or later Arm: CUDA 12.0 or later
Virtual GPU software support	Supports vGPU 15.0 or later: NVIDIA Virtual Compute Server Edition
NVIDIA AI Enterprise	Supported with VMWare
NVIDIA certification	NVIDIA-Certified Systems™ TBD or later
PCI class code	0x03 – Display Controller
PCI subclass code	0x02 – 3D Controller
ECC support	Enabled
SMBus (8-bit address)	0x9E (write), 0x9F (read)
IPMI FRU EEPROM I2C address	0x50 (7-bit), 0xA0 (8-bit)
Reserved I2C addresses	0xAA, 0xAC
SMBus direct access	Supported
SMBPBI	Supported

Note:

¹The KiB, MiB, and GiB notation emphasize the “power of two” nature of the values. Thus,

- 256 KiB = 256 x 1024
- 16 MiB = 16 x 1024²
- 64 GiB = 64 x 1024³

Thermal Specifications

Table 4 provides the PCIe reported temperatures and Table 5 provides the thermal specifications for the NVIDIA H100 PCIe card.

Table 4. H100 PCIe Reported Temperatures

Specification	Units	Description
T _{AVG}	°C	Average temperature of all internal GPU sensors
T _{LIMIT}	°C	GPU and HBM temperature limit – current distance in degrees C from software slowdown event
T _{HBM}	°C	Maximum temperature of all HBM sensors

