



HARSHPRO™ IP20 SERVER

Developed and manufactured in Singapore, the HarshPro IP20 Server is a powerful rugged server built for performance with an Intel® Xeon®¹ processor, multiple memory configurations, and high-capacity, high speed NVMe SSDs, enabling distributed cloud functionality and application containerization wherever you need it.

The server has an IP20 rack enclosure designed for industrial environments and is equipped with a Trusted Platform Module to protect the confidentiality, integrity and authenticity of the server.

HarshPro IP20 Server is designed to work standalone or clustered in remote locations. The server supports functionality commonly used in data centers including automated provisioning and remote management. The server can be expanded with multiple M.2 PCIe GPUs allowing for use in machine learning applications.

The baseboard management controller (BMC) supports popular remote management technologies like IPMI, PXE, Redfish®, and KVM over IP which allows it to be fully administered remotely down to the BIOS level.



HarshPro IP20 Server

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HARSHPRO IP20 SERVER SPECIFICATIONS²

System Chipset

CPU:	Intel® Xeon® D-1571 Intel® Xeon® D-1539 (Optional)
Base Frequency:	1.3 GHz
Max Turbo Frequency:	2.1 GHz
L3 Cache:	12 MB
Cores:	16
Threads:	32
BIOS:	AMI® APTIO-V® UEFI version 2.4 UEFI Platform Initialization version 1.3

Memory

Technology:	Dual channel 2400 MHz ECC DDR4
Slot:	4 x RDIMM (up to 32 GB per slot) or UDIMM (up to 16 GB per slot), 288 pins
Maximum Capacity:	128 GB (RDIMM), 64 GB (UDIMM)

Trusted Platform Module (TPM) 2.0

TPM Module:	Infineon
Chipset:	OPTIGA™ TPM SLM 9670
Cryptography:	RSA-1024, RSA-2048, SHA-1, SHA-256, ECC NIST P256, ECC BN256
Certifications:	CC EAL4+ (moderate) ; FIPS 140-2 level 2

Ethernet

Network Controllers:	1 GbE Intel® i210IT 10 GbE SFP+ Intel® SoC
Interfaces:	2 x PoE++ RJ45 (PoE 802.3bt Type 4) 2 x SFP+

² Specifications listed here may be subject to change



Input/Output Interfaces

Interfaces:	2 x USB2 4 x USB3.2 Gen 1
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Expansion Slots

M.2 PCIe ³ :	6 x M.2 M Key (6 x 22110 max) 1 x M.2 E Key (2242) (for WiFi)
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Storage

Technology:	M.2 NVMe
Slot:	6 x M.2 slots (256 GB/512 GB/1 TB/2 TB)
Maximum Capacity:	Up to 12 TB (6 x 2 TB)

Display

Interface:	KVM over IP
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LED and Switch

Button / LED:	Power switch & Power LED indicator
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Power

Power Supply:	90-264 VAC
Input Power:	50/60 Hz
Estimated Power Consumption:	120 W
POE++ ⁴ :	PD 71 W x 2

Environment

Motherboard Ambient Operating Temperature:	-20°C to 55°C ⁵
Server Ambient Operating Temperature:	-20°C to 55°C
Humidity:	10-90% RH (operating and non-operating)
Vibration:	5 Grms, 5-500 Hz, 3 Axes

³ Form factor supported: 2232/2240/2260/2280/22110

⁴ OE++ IEEE802.3bt Type 4 Class 8

⁵ Operating temperature band can increase with use of wideband operating temperature PSU & Fans



Shock:	50 Grms, half-sine 11 ms duration
IP rating:	IP20
Altitude:	Up to 15,000 ft above sea level

Mechanical

Dimensions:	19" rack 2U form factor 580 mm (L) x 430 mm (W) x 88.5 mm (H)
Weight:	9.6 kg
Cooling:	Fan cooled (includes air filters)

OS Support:	CentOS v7.4 Red Hat® Enterprise Linux® (RHEL) v7.4/7.5/7.6 Red Hat® Enterprise Linux® (RHEL) Atomic v7.4 Ubuntu v18.04 Windows Server 2012 R2 Windows Server 2016 Windows 10 Pro
Certifications ⁶ :	EMC, FCC, CE, WEEE, UL, RoHS3, REACH

⁶ Equipment pending certifications