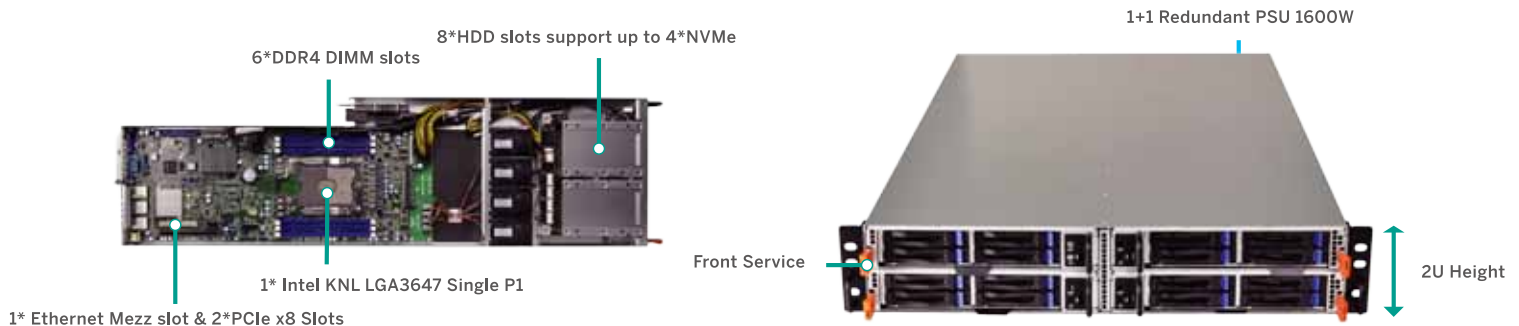




When Everything Goes Parallel

2U4N-F/X200 : 4 Knights Landing in 2U Form Factor

2U4N-F/X200



ASRock® Rack



System

Form Factor	2U Rackmount
Chassis Model	2U4N-F
Dimensions	750mm X 448mm X 86mm
Support MB	Half, 16."x6.5" (X200D6HM x 4)

Front Panel

Buttons	- Power On/Standby button(per node) - System reset button(per node)
LEDs	-HDD Act/Err/Locat LED -Power LED (Front Panel per Node) -UID LED (Front Panel per Node)
I/O Ports	- 1 x USB 2.0 ports(per node)

External Drive Bay

Drive Bay	-4x 2.5" HDD/SSD per node (all SATA/SAS or 2x NVME + 2x SATA/SAS)
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Power Supply

Output Watts	2 (1+1) 1600W Redundant
Efficiency	Platinum

System Fan

Front	40x56mm x16
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MB Physical Status

Form Factor	-Half width,
Dimensions	-16"x6.5"

Processor System

CPU	-Intel® Xeon® PHI X200 Series Processors
Socket	-Single Socket P1
Chipset	-Intel® C612

System Memory

Capacity	-6 DIMM slots
Type	-Dual Channel memory technology
DIMM Size	-Supports DDR4 2400/21336 LR/R DIMM
Voltage	-1.2V

Expansion Slot

PCIe 3.0 x8	-2(PCIe1:X8, PCIe2:X8(EE)/x24(ME))
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Storage

SATA Controller	-10x SATA3 (from 2x miniSAS HD V type by 4x SATA3&4 sSATA, 1 SATA 7P + 1 SATA 7p share to M.2)
Additional Storage Interface	-2 X OCuLink (PCIe X4/ per OCuLink from CPU)

Ethernet

Interface	-1000/100/10 Mbps by Intel® i350 - 2 x RJ45 GLAN by Intel® i350 - 1 x RJ45 Dedicated IPMI LAN port - Supports Wake-On-LAN
LAN controller	- Supports Energy Efficient Ethernet 802.3az - Supports Dual LAN with Teaming function - Supports PXE - LAN1 Supports NCSI

2U4N-F/X200 Key Application

Big Data Analysis. Machine Learning. Deep Learning. Life Science. Energy. Finance and Defense. Rendering

Management

BMC Controller	- ASPEED AST2400
IPMI Dedicated GLAN	- 1 x Realtek RTL8211E for dedicated management GLAN
Features	- Watch Dog - NMI

Graphics

Controller	- ASPEED AST2400
VRAM	- DDR3 16MB

Rear Panel I/O

VGA Port	-1(D-sub)
USB 3.0 Port	-2
Lan Port	- 2 + 1 (IPMI) Lan port (RJ45) - LAN Ports with LED (ACT/LINK LED and SPEED LED)
Dedicate LAN	-1
UID Buttom/LED	-1
Serial port	-1(COM PORT)

Internal Connector

Auxiliary Panel Header	-1
TPM Header	-1
IPMB Header	-1
COM Header	-1
Buzzer	-1
Fan Header	-2x CPU Fan, 2x system Fan (4-pin)
Type A USB 3.0 Port	-1
USB 3.0 Header	-1 (support 2 USB 3.0)

System BIOS

BIOS Type	- 128Mb AMI UEFI Legal BIOS - Plug and Play (PnP)
BIOS Features	- ACPI 2.0 Compliance Wake Up Events - SMBIOS 2.8 Support - ASRock Rack Instant Flash

Hardware Monitor

Temperature	- CPU Temperature Sensing - System Temperature Sensing - Card Side Temperature Sensing
Fan	- CPU/Rear/Front Fan Tachometer - CPU Quiet Fan (Allow CPU Fan Speed Auto-Adjust by CPU Temperature) - CPU/Rear/Front Fan Multi-Speed Control
Voltage	- Voltage Monitoring: CPU1/2, VCCM_AB/CD/EF/GH, +1.50_ PCH, 3V/5V/12V, +1.05V_ PCH, +BAT, 3VSB, 5VSB

Environment

Temperature	- Operation temperature: 10°C ~ 35°C / Non operation temperature: -40°C ~ 70°C
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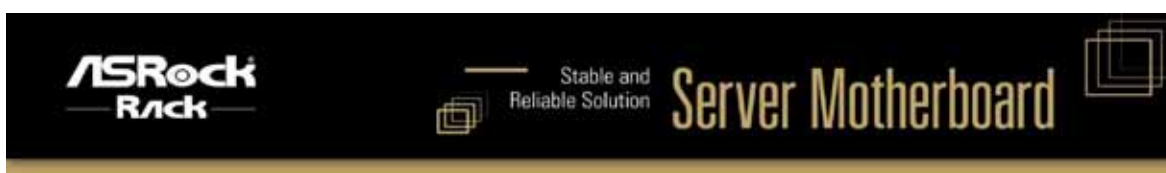


TR-KNL



Product Brief

- Pedestal chassis support 11 x 3.5" or 2.5" HDD and 600W Single PSU
- single Socket FC-LGA/MCP 3647 support Intel® Xeon Phi® Knights Lancing Processors
- Supports six DDR4 2133/2400 R/LR DIMM and 3DS
- Supports 10 x SATA3 6.0 Gb/s by Intel C610 Series
- Supports 1 PCIe3.0x16, 1 PCIe3.0x8
- ASPEED 2400. Integrated IPMI 2.0 and KVM with Dedicated LAN
- Supports 2 x GLAN (Intel i210) and additional Mezzanine card to support 2 x 10G



Product Specifications

System	
Form Factor	Pedestal
Chassis Model	IW-PL052
Dimensions	560 x 200 x 430 mm(22" x 7.9" x 16.9")
Support MB	CRB-KNLMB (SSI EEB, 12"x13")
External Drive Bay	
Internal Side	3.5" or 2.5" x 5 SATA HDD (6Gb/s)
External Side	3.5" or 2.5" x 6 SATA HDD (6Gb/s)
Power Supply	
Type	Single
Output Watts	600 W
Efficiency	Platinum
System Fan	
Fan	120 x 25 mm Fan x3
MB Physical Status	
Form Factor	SSI EEB
Dimensions	12" x 13"(30.5 cm x 33.0 cm)
Processor System	
CPU	Intel® Xeon Phi™ x200 Product Family
Socket	single Socket FC-LGA/MCP 3647
Chipset	Intel® C610 Series
System Memory	
Capacity	6 DIMM slots
Type	Single Channel memory technology Supports 2133/2400 R/LR DIMM and 3DS
Voltage	1.2V
Expansion Slot	
PCIe 3.0 x 16	1 slot
PCIe 3.0 x 8	1 slot(share with Mezzanine)
Storage	
SATA Controller	Intel® C610 series : 10 x SATA3 6.0 Gb/s
Mezzanine	x8 for storage (share with PCIe slot 2)
Ethernet	
Interface	1000 /100 /10 Mbps
LAN	2 x RJ45 GLAN by Intel® i210
	1 x RJ45 Dedicated IPMI LAN port
	- Supports Wake-On-LAN
	- Supports Energy Efficient Ethernet 802.3az
	- Supports Quad LAN with Teaming function
	- Supports PXE
Management	
BMC Controller	ASPEED AST2400
IPMI Dedicated GLAN	- 1 x Realtek RTL8211E for dedicated management GLAN
Features	- Watch Dog
	- NMI
Graphics	
Controller	ASPEED AST2400

VRAM	DDR3 16MB
Rear Panel I/O	
VGA Port	1 x D-Sub
USB 3.0 Port	2
Lan Port	2 + 1 (IPMI) Lan port (RJ45) LAN Ports with LED (ACT/LINK LED and SPEED LED)
Serial Port	1 (COM1)
UID	1
Internal Connector	
Auxiliary Panel Header	1 (includes chassis intrusion, location button & LED, front LAN LED, system event LED)
TPM Header	1
IPMB Header	1
Fan Header	8x system Fan (4-pin)
ATX Power	1 (24-pin) + 2 (8-pin)
USB 3.0 Header	1 (support 2 USB 3.0)
USB 2.0 Header	2 (support 4 USB 2.0)
Type A USB 2.0 Port	1
Buzzer	1
Mezzanine	2
System BIOS	
BIOS Type	64Mb AMI UEFI Legal BIOS with GUI support
BIOS Features	Plug and Play (PnP)
	ACPI 2.0 Compliance Wake Up Events
	SMBIOS 2.8.0 Support
	ASRock Rack Instant Flash
Hardware Monitor	
Temperature	CPU Temperature Sensing System Temperature Sensing
Fan	CPU/Rear/Front Fan Tachometer CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) CPU/Rear/Front Fan Multi-Speed Control
Voltage	Voltage Monitoring: +12V, +5V, +3V, CPU Vcore, DRAM, 1.05V_PCH, 1.5V_PCH+BAT, 3VSB, 5VSB
Environment	
Temperature	Operation temperature: 10°C ~ 30°C / Non operation temperature: 0°C ~ 70°C