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4,654,520	8,078,511
8,901,705	4,346,501
6,805,210	6,688,570



IV320-RS

Full IP65 Rugged MXM AI Edge Computer



- AI Optimized IP65 Rugged GPU Computer
- Full IP65 sealed enclosure for harsh, wet and dusty environments.
- Design to meet EN50155 Rolling Stock
- Support Intel® 14/13/12th Gen. Raptor Lake-R/S, Alder Lake-S, Core i9/i7
- Up to 128GB DDR5 4400 MHz U-DIMM, non-ECC and ECC
- Support NVIDIA® RTX A4500 (16GB GDDR6, 5,888 CUDA); RTX A2000 (12GB GDDR6, 3,328 CUDA)
- Rugged waterproof M12 connectors
- IP65 2x 2.5" SATA SSD Easy Swap Tray ; 2 x 2.5" SATA SSD Internal
- Extended Operating Temperature -20°C to +60°C
- MIL-STD-810 Anti Vibration, Shock

Specifications

SYSTEM

CPU	Intel® 14 th Raptor Lake-R Core i9-14900T, 24C, 32T, 1.1/5.5GHz, 36M Cache, TDP 35W Intel® 14 th Raptor Lake Core i7-14700T, 20C, 28T, 1.3/5.2GHz, 33M Cache, TDP 35W.
Memory type	Up to 128GB UDIMM ECC/Non-ECC DDR5 4400MHz
CHIPSET	Intel® R680E Chipset
GPU	NVIDIA® RTX A4500/A2000
Expansion Slot	1 x PCIe 5.0 x 16 1 x PCIe4.0 x 4 1 x M.2 22110/2280 M-Key PCIe 3.0 x 4 2 x M.2 PCIe 4.0 x 4

DISPLAY

Display	1 x VGA (option) 1 x DP
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STORAGE

SATA	2 x 2.5" SSD, Hot Swappable SSD/HDD slot 2 x 2.5" SSD Internal
M.2	1 x 22110/2280 M key (PCIe 3.0 x 4)

ETHERNET

Ethernet	2 x 2.5G Ethernet Ports 2 x 10G Ethernet Ports
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TPM

TPM	Onboard TPM2.0
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FRONT I/O

X1	1 x VGA (Option 1 x DP)
X2,X3	(Each) 1 x 10Giga LAN , M12 waterproof connector
X4,X5	(Each) 1 x 2.5Giga LAN , M12 waterproof connector (Option) 1 x 2.5Giga / 1 x IPMI, M12 waterproof connector
X6	1 x USB, with M12 waterproof connector
X7	1 x COM, with M12 waterproof connector
Switch	1 x IP65 power button
SSD	2 x 2.5" Easy swap SSD Tray

REAR I/O

DC-IN 12V DC-IN (Option 48VDC for EN50155)

Others Antenna(Optional)

POWER

Power input 12V DC-IN (Option 48VDC for EN50155)

OPERATING SYSTEM

OS Windows® 10 64-bit / Linux (support by request)

PHYSICAL

Dimension (TBD)

Weight (TBD)

Chassis Aluminum Alloy

Heatsink Heatsink Aluminum Alloy, Corrosion Resistant

ENVIRONMENTAL

Green Product RoHS, WEEE compliance

Operating Temp. -20°C to +60°C

Storage Temp. -40°C to +85°C

Relative Humidity 5% to 95%, non-condensing

MIL-STD-810 SPECIFICATIONS (OPERATING)

Method 502.5 Procedure 2 Low Temperature -20°C, 4 hours, ±3°C

Method 501.5 Procedure 2 High Temperature +55°C, 4 hours, ±3°C

Method 507.5 Humidity 85%-95% RH without condensation, 24 hours/ cycle, conduct 10 cycles.

Method 514.6 Vibration 5-500Hz, Vertical 2.20Grms, 40mins x 3axis.

Method 516.6 Shock 20 Grms, 11ms, 3 axes.

MIL-STD-810 SPECIFICATIONS (NONE-OPERATING)

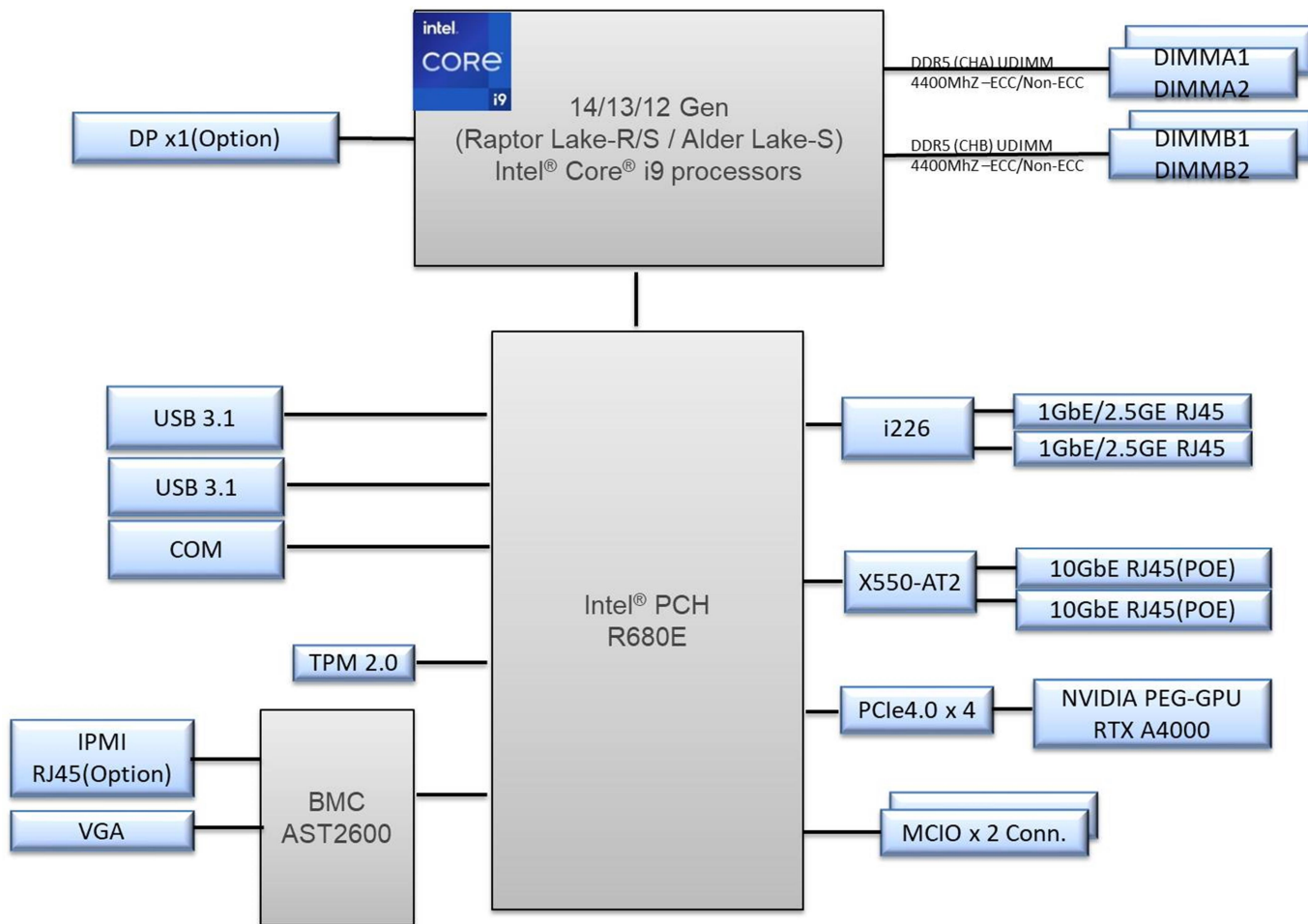
Method 502.5 Procedure 1 Low Temp. Storage 33°C, 4 hours, change rate: ≤ 20°C/ Hour -15°C, 72hours (By request)

Method 501.5 Procedure 1 High Temp. Storage +71°C, 4 hours, change rate: ≤ 20°C/ Hour +63°C, 240 hours (By request)

Method 514.6 Vibration 5-500Hz, Vertical 2.20Grms, 40mins x 3axis.

Method 516.6 Shock 20 Grms, 11ms, 3 axes.

Block Diagram



Ordering Information

Model	IV320-RS-R45	IV320-RS-R20
CPU	i9-14900T	i7-14700T
GPU	RTX A4500	RTX A2000
Memory	UDIMM DDR5 Up to 128G	
Storage	Up to 4 x SATAIII SSD	
USB	1 x USB	
LAN	2 x 10G / 2 x 2.5G	
COM	1 x COM	
Power	12V DC-IN (Option 48VDC for EN50155)	