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



IV320RH

Full IP65 Rugged MXM AI Edge Computer



- Full IP65 sealed enclosure for harsh, wet and dusty environments.
- Design to meet EN50155 Rolling Stock
- Support Intel® 13th Gen. Raptor Lake-H, Core i7-13800HE/HRE, 14C, 20T, 2.5/5.0GHz, 24M cache, TDP 45W
- Support Intel® 13th Gen. Raptor Lake-S, Core i9-13900TE; i7-13700TE
- Up to 64GB DDR5/DDR4 (option) SO-DIMM, non-ECC and ECC
- Supports NVIDIA® Quadro MXM RTX A4500 (16GB GDDR6, 5888 CUDA); RTX A1000 (4GB GDDR6, 2048 CUDA)
- Support NVIDIA® RTX A4000 (16GB GDDR6, 6144 CUDA); RTX A2000 (12GB GDDR6, 3328 CUDA)
- Rugged waterproof M12 connectors
- IP65 2x 2.5" SATA SSD Easy Swap Tray
- Extended Operating Temperature -20°C to +60°C
- Wide range 12V~36V DC-IN
- EN50155 48VDC (33.6V~62.4V)
- MIL-STD-810 Anti Vibration, Shock
- Dimensions : 250 x 325 x 100 mm (WxLxH)

Specifications

System

CPU	Intel® 13th Raptor Lake Core i7-13800HE/HRE, 14C, 20T, 2.5/5.0GHz, 24M Cache, TDP 45W Intel® 13th Raptor Lake Core i9-13900TE, 24C, 32T, 1.0/5.0GHz, 32M Cache, TDP 35W Intel® 13th Raptor Lake Core i7-13700TE, 16C, 24T, 1.1/4.8GHz, 30M Cache, TDP 35W.
Memory type	DDR5 4800MHz (DDR4 3200MHz option), Up to 64GB
CHIPSET	Intel® H610/Q670 Chipset
GPU	NVIDIA® MXM A4500/A1000, RTX A4000/A2000 (By option)
GRAPHICS	Intel® Iris® Xe Graphics (Intel® UHD Graphics by Option)
Expansion Slot	2x Full-size mini PCIe (1 with mSATA supported) -1 with mSATA/USB2.0/PCIeX1 support -1 with SIM/USB2.0/PCIeX1 support 1x 2280 M key (SATA only/NVMe x4 by option) 1x PCIe/104 (By Option) -4x PCIe x1, 1x PCIe x4, 5x USB2.0, 1x LPC, 1x SPI

Display

Display	2x DP outputs from COM Express®, 1x DVI from COM Express® 4x DP outputs from GPU(Port A/B/C/D)
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Storage

SATA	2x 2.5" SSD, Hot Swappable SSD/HDD slot
M.2	1x 2280 M key (SATA only)

Ethernet

Ethernet	2x 10/100/1000 Ethernet Ports
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Front I/O

X1	1x DVI/DP (option)
X2,X3	(Each) 1x Giga LAN , M12 waterproof connector
X4	1x USB , with M12 waterproof connector
X5	1x USB , with M12 waterproof connector
X6	1x COM, with M12 waterproof connector
X7	(reserved)
switch	1x IP65 power button

SSD	2x 2.5" Easy swap SSD Tray
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Rear I/O

DC-in	DC-IN (12V~36V)
others	Antenna

Power

Power input	12V ~36V DC-IN
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Operating System

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

Dimension	250(W) x 325 (L) x 100 (H)mm
Weight	(TBD)
Chassis	Aluminum Ally
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.

Ordering Information

Model	IV320RH-A10/45	IV320RS-9A40	IV320RS-7A20
CPU	i7-13800HE/HRE	i9-13900TE	i7-13700TE
GPU	MXM A1000/A4500	RTX A4000	RTX A2000
Memory	DDR5 Up to 64GB	DDR4 up to 64GB	
Storage	2x 2.5" SATA III SSD		
I/O			
USB	2x		
LAN	2x		
COM	1x		
Power	9V~36V DC-IN	12V DC-IN	

Dimensions

