

Railway Computer



GT-92RL-H

EN50155 & EN45545 19" rack mount railway GPU computer including NVIDIA® 2000 ADA, supporting Intel® 14th/ 13th / 12th-Gen Core™ processor, 43V to 160V DC input with isolation



Key Features

- Compliant with EN 50155 mandatory tests and EN 45545-2
- Intel® 14th/ 13th/ 12th-Gen LGA1700 processor (35W/65W)
- Fanless GPU computer with NVIDIA® RTX 2000 ADA
- 2U 19" chassis for rack-mount or wall-mount
- 43V to 160V wide-range DC input via M12 K-Coded connector
- 9x GbE ports via M12 X-Coded connectors
- 1x M.2 2280 M key with PCIe-Gen 4x4 for NVMe storage
- 2x full-size mPCIe sockets for MVB modules
- -40°C to 55°C wide-temperature fanless operation

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Introduction

GT-92RL-H is a 19" rack mount, wide-temperature, fanless GPU computer that delivers excellent CPU and GPU performance by leveraging Intel® 14th/ 13th/ 12th-Gen platform and NVIDIA® RTX 2000 ADA. Thanks to its high-performance and flexible camera expansion, GT-92RL-H is ideal for multi-camera applications requiring real time responses, e.g., pantograph and track gauge monitoring, video analytics in train carriages, track object identification, and tunnel inspection, etc.

GT-92RL-H has a proven thermal design to guarantee reliable system operation from -40°C to 55°C. It features a passive-cooling design for the system and 70W GPU card. Supporting eight GigE cameras (or IP cameras) and four USB3 cameras, GT-92RL-H is ideal for various vision-based AI applications on rolling stocks with its 110V DC input design and EN 50155/ EN 45545 certifications. It also provides flexible data storage options, including one M.2 2280 Gen4x4 NVMe providing up to 7000 MB/s extreme read/write speeds and two 2.5" SATA HDD/SSD to expand storage capacity.

With performance enhancements and comprehensive I/Os, GT-92RL-H is the perfect edge AI inference platform for rolling stock applications.

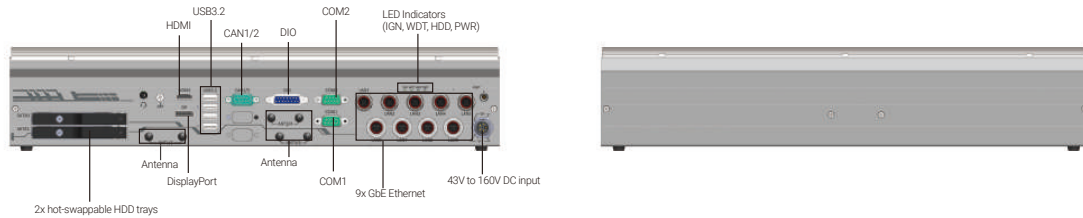
Specifications

System Core		Storage Interface	
Processor	Supporting Intel® 14th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP) - Intel® Core™ i9-14900/ i9-14900T - Intel® Core™ i7-14700/ i7-14700T - Intel® Core™ i5-14500/ i5-14400/ i5-14500T - Intel® Core™ i3-14100/ i3-14100T	Supporting Intel® 12th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP) - Intel® Core™ i9-12900E/ i9-12900TE - Intel® Core™ i7-12700E/ i7-12700TE - Intel® Core™ i5-12500E/ i5-12500TE - Intel® Core™ i3-12100E/ i3-12100TE - Intel® Pentium® G7400E/ G7400TE - Intel® Celeron® G6900E/ G6900TE	SATA HDD 2x hot-swappable HDD trays for 2.5" HDD/ SSD installation, supporting RAID 0/ 1
	Chipset	Intel® R680E platform controller hub	M.2 NVMe 1x M.2 2280 M key NVMe socket (PCIe Gen4x4) for NVMe SSD
Graphics	Integrated Intel® UHD Graphics 770 (32EU)	Internal Expansion Bus	
Acceleration GPU	NVIDIA® RTX 2000 ADA	Mini PCI Express 2x full-size mini PCI Express socket with SIM slot	Power Supply
Memory	Up to 64 GB ECC/ non-ECC DDR5 4800 SDRAM (two SODIMM slots)	DC Input 43V to 160V DC input (M12 K-coded)	Mechanical
AMT	Supports Intel vPro®/ AMT 16.0	Dimension 440mm (W) x 250mm (D) x 88mm (H) (excl. rack-mount bracket)	Weight 8.0 kg
TPM	Supports dTPM 2.0	Mounting Rack-mounting (optional) and wall-mounting (optional)	Environmental
I/O Interface		Operating Temperature with 35W CPU -40°C ~ 55°C ^[1] with 65W CPU -40°C ~ 35°C ^[1]	Storage Temperature -40°C to 85°C
Ethernet	1x GbE Ethernet by Intel I219-LM via M12 x-coded connector(with WoL) 8x GbE Ethernet by Intel I350-AM4 via M12 x-coded connectors	Humidity 10% to 90% , non-condensing	Vibration EN 50155:2017/ IEC 61373, Category I, Class B - Body mounted
PoE+	None	Shock EN 50155:2017/ IEC 61373, Category I, Class B - Body mounted	EMC EN 50121 (EN 50155 EMC) CE/FCC Class A, according to EN 55032 & EN 55035
CAN Bus	2x isolated CAN 2.0 port, supporting SocketCAN in Linux	EN 50155 All mandatory sections of EN 50155:2017 (110V)	EN 50155
USB	4x USB 3.2 Gen2x1 (10 Gbps) ports in type-A connectors	EN 45545 EN 45545-2 (Fire protection on railway vehicles)	EN 45545
Video Port	1x HDMI 1.4, supporting 4096x2160 resolution 1x DisplayPort, supporting 4096 x 2304 resolution	[1] For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.	
Serial Port	2x isolated 3-wire RS232/ 422/ 485 port (COM1/ COM2)		
Isolated DIO	4-CH isolated DI and 4-CH isolated DO		
Audio	1x 3.5 mm jack for mic-in and speaker-out		

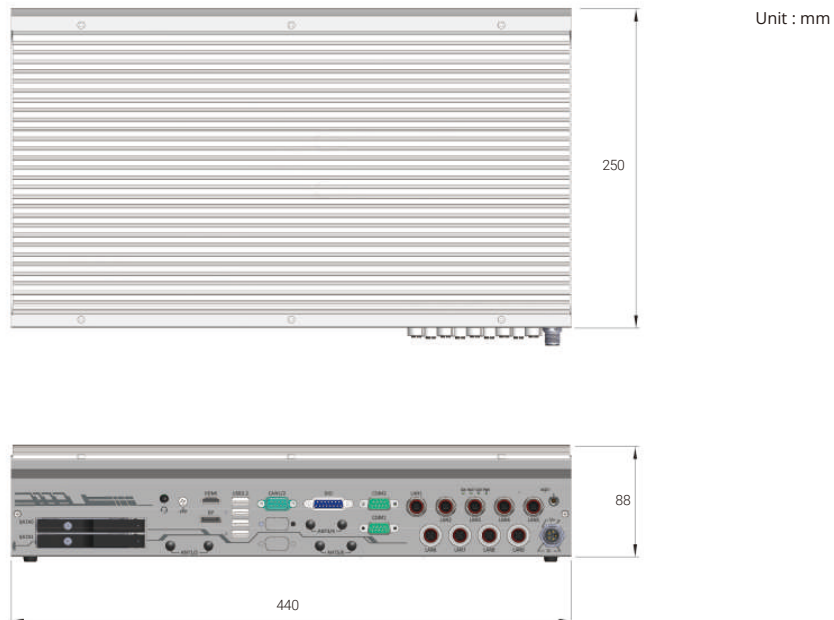


GT-92RL-H

Appearance



Dimensions



Ordering Information

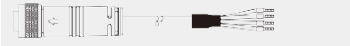


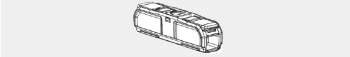
Model No.	Product Description
GT-92RL-H	EN50155 & EN45545 19" rack mount railway GPU computer including NVIDIA® 2000 ADA, supporting Intel® 14th/ 13th / 12th-Gen Core™ processor, 43V to 160V DC input with isolation

Optional Accessories

<i>Cbl-M12K5F-CordEnd4-180CM</i>	M12 K-Code Female 5P to Cord End Terminal 4P, Length:180cm
<i>Cbl-M12X8M-RJ45-CAT6A-500CM</i>	M12(8-pole-X-coded) to RJ45, CAT6A, Length: 500CM
<i>Cbl-DB9F-2DB9M-15CM</i>	DB9 (Female) to 2x DB9 (Male), Length: 15CM for CAN1/2
<i>AccsxBx-SplicingConnector</i>	Accessory box kits for Splicing Connector 2-Pole, included 10pcs
<i>Rmkit-GT92</i>	Rack-mount assembly for GT-92 series
<i>Wmkit-GT92</i>	Wall-mount assembly for GT-92 series
<i>mPCIe-M2B</i>	NGFF M.2 key B to mini-PCIe adapter with dual nano-SIM slots
<i>mPCIe-M2E</i>	NGFF M.2 key E to mini-PCIe adapter
<i>mPCIe-M2M</i>	NGFF M.2 key M to mini-PCIe adapter

All specifications and photos are subject to change without prior notice

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	AccsyBx-SplicingConnector	Accessory box kits for Splicing Connector 2-Pole, included 10pcs

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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