

Edge AI Solution Services

Digital Rail

- In-Vehicle Solutions
- Wayside Solutions
- In-Station Solutions

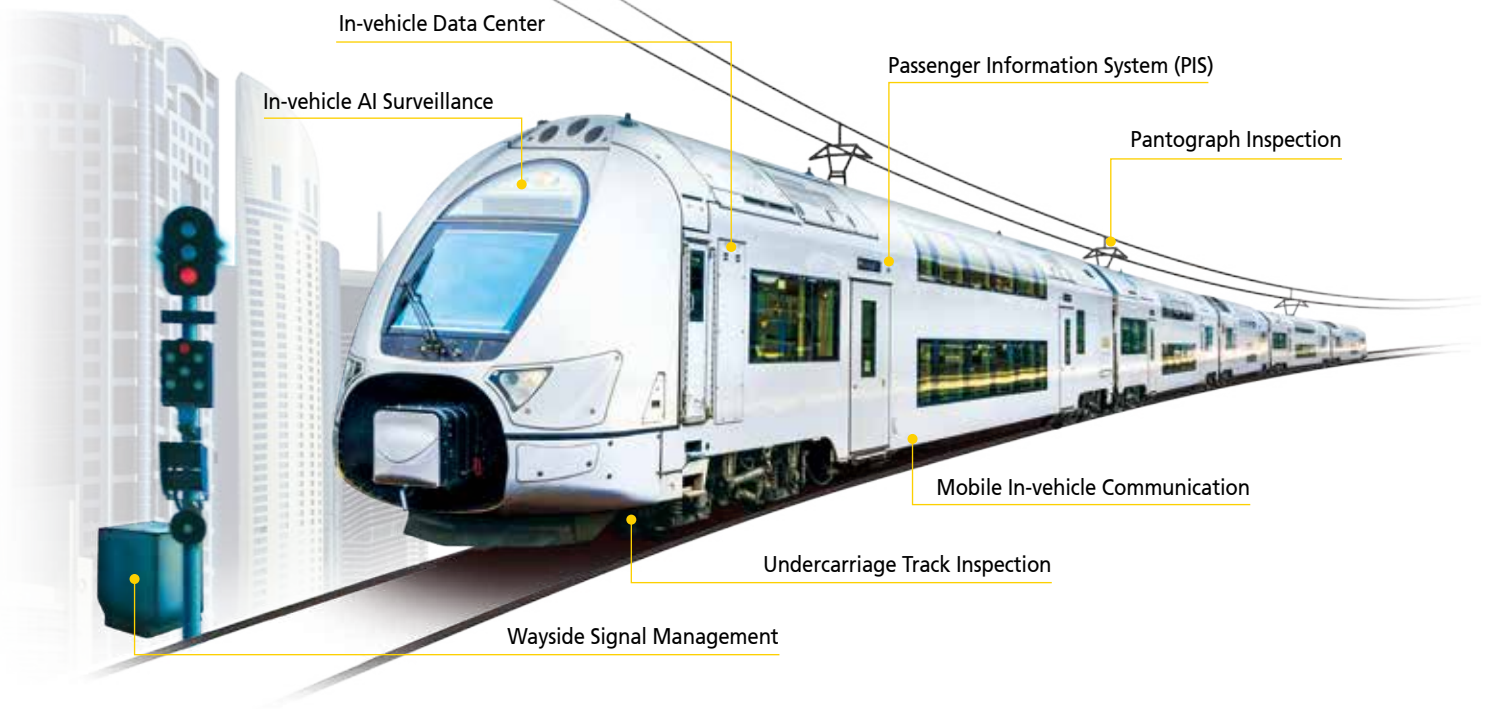


intel
partner
Gold
IoT Solutions

Vecow

Secured Digital Rail Solutions Made Possible

Vecow offers smart computing engines for Rolling Stock, Wayside Inspection, Public Security and any railway applications in harsh environments. With outstanding performance, non-stop mobile availability, user-friendly manageability, secured power protection, trusted system reliability for in-vehicle operation, and compact integrated features. Vecow advanced embedded platforms make new generation secured digital rail solutions possible.



Trusted and Rugged Computing Engines



EN50155:2017 Certified

European Union railway standards for in-vehicle computers



Rugged M12 Connections

Multiple X-coded/A-coded M12 connections support PoE+, USB, or Power for Rolling Stock operation



Seamless Mobile Availability

Multiple 5G/WiFi/4G/3G/LTE/GPRS/UMTS connection serves non-stop wireless data delivery during international trip



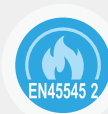
Wide Range Power Input

Max 16V to 160V wide range DC power input with 4kV isolation for Rolling Stock operation



Ignition Control

16-mode ignition power control for in-vehicle operation



EN45545-2 Fire Protection

European Union fire safety standards for railway components



Extended Operating Temperature

Fanless design serves trusted system reliability especially for outdoor environments



Leading System Performance

Max 10G high-speed data transfer supporting real-time computing in the edge.



Surge Protection

Max 500V surge protection to secure system operation



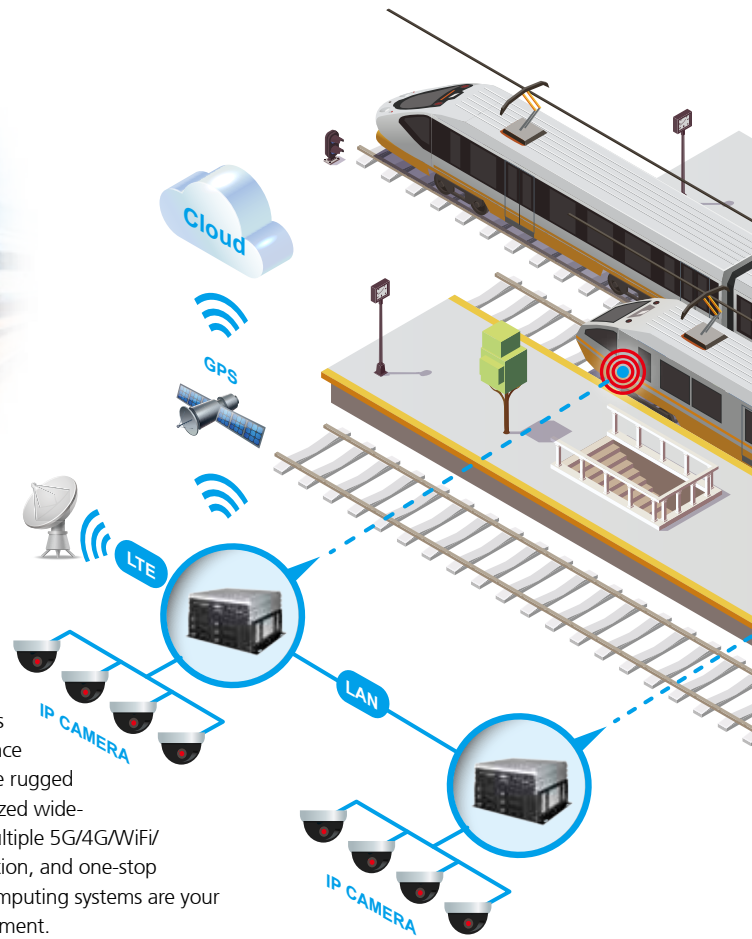
One-Stop Solution Service

Vecow provide one-stop solution service to meet your project requirements

Vecow Computer

In-Vehicle Computing Solutions

Vecow in-vehicle computing systems are trusted and rugged engines for rolling stock operation over high-speed and long-distance trip. Fully EN50155:2017, EN45545-2 fire protection, EN50121, CE, and FCC regulations are certification standards that Vecow values. Our innovative design competence integrates advanced and necessary features into one compact system: multiple rugged & high-speed I/O, fanless designs for in-vehicle and outdoor operation, optimized wide-range power input and protection features to secure in-vehicle operations, multiple 5G/4G/WiFi/BT/LTE/GPRS/UMTS connections that allow for always-on wireless communication, and one-stop solution service facilitates versatile in-vehicle applications. Vecow in-vehicle computing systems are your smart and powerful solution for any rolling stock applications in harsh environment.



Workstation-grade Platform (Intel® Xeon®/Core™ i9/i7/i5/i3 Processor)



IVX-1000 ICY

Fanless AI Inference Workstation

- 8 M12 2.5G LAN with 4 PoE*, 6 SSD Tray, TSN
- Optional MXM Graphics, EN50155 & EN45545
- DC 16V to 160V, 4kV Isolation, UPS



EVS-2000 LIQ

Fanless Liquid Cooling AI Inference

- Supports MXM Graphics Card
- Liquid Cooling Solution for fanless operation, max 110W TDP MXM
- PCIe x4, DC 9V to 50V, Ignition Control



GPC-1000MX

Dual GPU Flexible AI Inference

- 1500W for max dual 3-slot Graphics Card
- 4 PCIe, 12 M12 : 4 GigE LAN, 4 COM, 2 CAN Bus
- DC 12V to 55V, Ignition Control



EAC-5000

NVIDIA® Jetson AGX Orin™ Edge AI

- NVIDIA Ampere : 2048 CUDA cores, 64 Tensor cores, max 275 TOPS
- 8 GMSL, 2 Isolated CAN Bus
- PCIe x8, DC 9V to 50V, Ignition Control

Power-efficient Platform (Intel® Core™ i7/i5/i3 Processor)



RMS-1100

1U Rackmount Fanless System

- 8 GigE LAN with 6 X-coded M12, 2 SSD Tray
- DC 16V to 160V, Ignition Control
- Fanless -40°C to 55°C



ARS-2000M

M12 Fanless Expandable System

- 3 GigE LAN with 2 M12 PoE*, PCI/PCIe x4
- DC 6V to 36V, Ignition Control
- Fanless -40°C to 85°C



SPC-7000W

5G Ready Ultra-Compact Fanless System

- 2.5GigE LAN, GigE LAN, Intel vPro®, TSN
- DC 16V to 160V, Ignition Control
- Fanless -25°C to 65°C



ABP-3000

5G Ready, Ultra-Slim Fanless System

- 4 GigE LAN with 2 PoE*, 4 10G USB
- DC 9V to 50V, Ignition Control
- Fanless -40°C to 70°C

Entry-level Platform (Intel Atom®, Arm)



SPC-4020A

Ultra-Compact Fanless System

- 2 Isolated COM
- 9V to 36V DC, Ignition Control
- Fanless -40°C to 75°C



VAC-1100

Fanless AI Computing System

- 24-core Arm Cortex-A53 + Hailo-8™ AI Processor, up to 26 TOPS
- Fanless -40°C to 70°C, DC 9V to 55



EIC-2000

Industrial-grade AI Computing System

- Quad-core Arm Cortex-A53, up to 2.3 TOPS
- 2 GigE LAN, TSN supported
- DC 9V to 55, CAN FD



VIG-120M

Industrial-grade Wireless IoT Gateway

- 2 M12 LAN, 2 CAN Bus, DC 6V to 40V
- Fanless -25°C to 70°C
- Optional supports NB-IoT module

Vision Solutions for Rolling Stock and

Wayside Computing Solutions

Vecov wayside computing systems are robust and flexible engines for railway operation over the infrastructure. This fanless operation supports an extended temperature range of 40°C to 85°C with outstanding system reliability in harsh environments. The Small Form Factor design makes advanced computer vision solutions possible even when space is limited, such as in current railway infrastructure. Multiple PCI/PCIe/M.2 expansions support flexible availability for real-time communication, real-time inference, alarm system, remote control & backup, and any infrastructure management tasks. Vecov wayside computing system is your trusted and flexible solution for any railway traffic and rail trail management applications.



Workstation-grade Platform (Intel® Xeon®/Core™ i9/i7/i5/i3 Processor)



ECX-3000

5G Ready Compact & Fanless

- Max 8 2.5G LAN with 4 PoE*, 4 M.2 SSD Tray
- DC 9V to 50V, Ignition Control
- Intel® vPro, TSN, TPM 2.0



ECX-3000MX PEG

Rugged Expandable AI Inference

- 200W for Graphics Card or AI Accelerator
- 5 2.5G LAN with 4 M12 PoE*, USB 3.2 Gen 2x2 Type-C, 4 PCIe
- DC 12V to 50V, Ignition Control



RCX-2400 PEG

Robust Expandable AI Inference

- 750W for 3-slot Graphics Card
- 3 PCIe, 4 SSD Tray, 2 GigE LAN, Intel® vPro, TSN
- DC 9V to 55V, Ignition Control

Power-efficient Platform (Intel® Core™ i7/i5/i3 Processor)



ARS-2000

Compact Fanless Expandable System

- 3 GigE LAN with 2 PoE*, PCI/PCIe x4
- 6V to 36V DC-in, Ignition Control
- Fanless -40°C to 85°C



SPC-7100

Ultra-Compact Fanless System

- 2.5GigE LAN, GigE LAN, Intel vPro®, TSN
- DC 9V to 55V, Ignition Control
- Fanless -40°C to 75°C



EAC-2000

NVIDIA® Jetson Xavier™ NX AI Inference

- NVIDIA Volta : 384 NVIDIA CUDA cores, 48 Tensor cores
- 4 GigE LAN with 2 PoE*, 5G Ready
- DC 9V to 50V, Ignition Control, Fanless -20°C to 70°C

Entry-level Platform (Intel Atom®, Arm)



SPC-6000

Ultra-Compact Fanless System

- 2.5GigE LAN supports TCC and TSN
- DC 12V, Ignition Control
- Fanless -40°C to 70°C



PBC-1000

Ultra-Slim Fanless System

- 2 GigE LAN, 2 USB, 2 COM
- 5G Ready, DC 12V
- Fanless -40°C to 70°C



AIC-110

Industrial-grade Wireless IoT Gateway

- 2 LAN, 1 USB, 2 COM, 2 CAN Bus, Isolated DIO
- 4G/LTE/WiFi/BT/GPRS/UMTS/L0RaWAN
- DC 9V to 50V, Fanless -25°C to 70°C

Railway Networks



In-station Computing Solutions

Vecow in-station computing systems are high-performance and reliable engines for busy in-station daily operation. Max 10Gbps data transfer makes low data latency possible, multiple 10G/2.5G PoE+ connections make for less system setup effort with simplified system infrastructure. Embedded with 200+ pre-trained models, the VHub AI developer solution is ready for inference applications and has high storage capacity with data protection functions that secures stable system operation in the edge. Vecow in-station computing system is your smart and compact solution for any mission-critical Edge AI applications in the station.



Workstation-grade Platform (Intel® Xeon®/Core™ i9/i7/i5/i3 Processor)



EVS-2000

Fanless & Compact AI Inference

- NVIDIA® RTX™/Quadro® MXM Graphics
- 2 GigE LAN, PCIe x4
- DC 9V to 50V
- Ignition Control



IVX-1000

EN50155 & EN45545 Fanless AI Inference

- 8 M12 2.5GigE LAN with 4 PoE*, 2 SSD Tray, Intel vPro®, TSN
- Optional MXM Graphics
- DC 16V to 160V, 4kV Isolation, 0.5kV Surge



ECX-3071X

10G LAN High-speed Computing

- 2 10G LAN, 5 2.5GigE LAN with 4 PoE*
- 4 PCIe, 12 M12 : 4 GigE LAN, 4 COM, 2 CAN Bus
- DC 9V to 50V, Ignition Control



ECX-2071

10G SFP+ Fanless Computing

- 2 10G SFP+, 6 GigE LAN with 4 PoE*
- Max 6V to 50V DC, Ignition Control
- Fanless -40°C to 55°C

Power-efficient Platform (Intel® Core™ i7/i5/i3 Processor)



SPC-7000

5G Ready, Ultra-Compact Fanless System

- 2.5GigE LAN, TSN supported
- 2 COM, 4 USB, SUMIT A, B
- 9V to 55V DC, Ignition Control



ABP-3000 AI

Ultra-Slim Fanless AI Inference

- Hailo-8™ AI Accelerator, max 26 TOPS
- 4 GigE LAN with 2 PoE*, 5G Ready
- DC 9V to 50V, Ignition Control



MTC-9000

FHD Multi-Touch Fanless Computing

- 21.5" 1920 x 1080 (16:9) Full HD
- 2.5GigE LAN, GigE LAN, Intel vPro®, TSN
- IP65 Protection, DC 9V to 55V



EAC-3000

NVIDIA® Jetson AGX Xavier™ AI Inference

- NVIDIA Volta : 512 CUDA cores, 64 Tensor cores
- 5 GigE LAN with 4 PoE*, 8 GMSL
- DC 9V to 50V, Ignition Control

Entry-level Solution (Intel Atom®, Arm)



ESP-1000

8-port Layer 2 LAN Switch

- 6 10/100/1000 Base-T(X), 2 100/1000 Base SFP
- 2.5GigE LAN supports TCC and TSN
- DC 9V to 55V, Fanless -40°C to 70°C



AIC-100

Industrial-grade Wireless IoT Gateway

- 2 LAN, 1 USB, 2 COM, Isolated DIO
- 4G/LTE/WiFi/BT/GPRS/UMTS/L0RaWAN
- DC 9V to 50V, Fanless -25°C to 70°C



VIG-110

Industrial-grade Wireless IoT Gateway

- 2 LAN, 4, COM, 8 GPIO
- Optional supports NB-IoT module
- Fanless -25°C to 70°C

One-Stop **AIoT Solution Service**

VHub Platform



Fully Integrated Ecosystem

- Dedicated Project Team
- Seasoned AIoT Solution Experts
- Less Project TCO



Global Partnership Engagement

- Worldwide Solution Providers Collaboration
- Co-marketing Events Engagement
- Win-win Cooperation



Optimized Accelerate Platform

- Flexible Hardware + Software Solution
- System-ready Solution Aggregator
- Leading Compatibility



VHub

Faster Time-to-Market

Vecow

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