

Vecow Solutions

Powering Next-Gen Intelligent Industrial
& Edge Automation



Vecow

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EMBEDDED SYSTEMS
SOLUTIONS

ECX Fanless Systems for Seamless Integrated Intelligent Automation Solutions

Vecow's fanless robust embedded systems and GPU computing systems with PCIe/PCI expansion available, multiple COM RS-232/422/485 connections, isolated DIO, multiple GigE LAN ports, EtherCAT supported, high scalability, user-friendly interface, and rugged reliability are practical all-in-one solution provider for integrated smart manufacturing.



Factory Automation

Intelligent Vending

Intelligent Transportation System (ITS)

AMR/AGV

In-vehicle Computing

Vecow ECX-3000 series powered by 14th Gen Intel® Core™ i9/i7/i5/i3 Processors, is a high-performance workstation-grade fanless computing platform with Intel® UHD Graphics with Intel® Xe Architecture designed for industrial automation and edge AI applications.



Key Features

- ✓ Up to 24-core Intel® Core™ (14th/13th/12th Gen) CPUs, up to 65W TDP
- ✓ 4x PoE+ (2.5G), 4x 2.5G LAN, 1G LAN, 6x USB 3.2 Gen 2.
- ✓ Fanless -40°C to 75°C operation with 9V-50V wide-range DC input.

Applications

- ✓ Edge AI and Deep Learning Inference
- ✓ Autonomous Mobile Robots (AMR/ AGV)
- ✓ Smart Factory Automation Systems
- ✓ Machine Vision and Robotic Control
- ✓ In-Vehicle and Intelligent Transportation

MTC Fanless Systems for Industrial Multi-Touch Panel PCs & Displays

Vecow provides rugged HMI solutions designed for harsh industrial environments with fanless operation, sunlight-readable capacitive multi-touch displays, and wide-temperature support. Featuring Intel® Core™ processors, IP65-certified front panel protection, and M.2 expansion for 5G/Wi-Fi connectivity.



Smart Manufacturing

Intelligent Surveillance

Factory Automation

Self-service

Health care

The Vecow MTC-series is powered by Intel® 8th-11th Gen Core™ i7/i5/i3/Atom processor and features leading performance and innovative power management functions.

- ✓ Panel size: 10.1" to 21.5" Full HD displays, all-in-one design.
- ✓ Supports projected capacitive multi-touch screens.
- ✓ Fanless design supports -5°C to 55°C operating temperature.
- ✓ Supports DC 9V to 35V wide range power input.
- ✓ Flexible connectivity with GigE LAN, 2.5G LAN, USB, COM ports.
- ✓ Supports Panel Mount, VESA Mount, Desktop Stand.

Applications:

- ✓ Intelligent Automation
- ✓ Machine Vision.
- ✓ In-Vehicle Dash Systems.
- ✓ AMR/AGV.



EAC Series for Performance Driven Compact Edge AI Solutions

Vecow EAC Series serves flexible configurations supports multiple 5G/4G/LTE/WiFi/BT/GPS technologies and compact storage expansions through M.2 PCIe NVMe SSD and Micro SD.



MR



AOI



In-Vehicle Computing



Real-time Video Analytics

NVIDIA Jetson Orin NX



EAC-6000 Series

NVIDIA Jetson Orin NX / Nano



EAC-4000 Series

NVIDIA Jetson AGX Orin



EAC-5000 Series

Vecow EAC Series Powered by the NVIDIA Jetson™ platform is a good fit for Edge AI applications.

- ✓ 275 TOPS of accelerating AI performance
- ✓ DC 9V to 50V wide-range power input
- ✓ Fanless design with an extended operating temperature range from -20°C to 70°C
- ✓ Versatile I/O interfaces: GigE LAN, PoE+, USB, Isolated CAN/DIO, Ignition Control Protection and, GMSL cameras
- ✓ Facilitates AI vision applications
 - In-Vehicle Computing
 - Mobile Robots, Robotic control
 - Traffic Vision, Machine Vision, Intelligent Video Analytics
 - Advanced AOI

VTS Series for Sensor Fusion – Time Sync Technology

Vecow's Time Sync Boxes provides a multi-channel Time of Day (ToD) and Pulse Per Second (PPS) output for external multi-sensors, a PTP/gPTP Gigabit Ethernet port, and one Gigabit Ethernet port for ROS 2/DDS pub/sub output. It includes a dual GNSS antenna for robot heading and integrates Xsens MTi-670 high-precision 9-axis IMU.



Vecow VTS-1000, a compact, rugged in-vehicle Time Sync Box powered by Xilinx Zynq® UltraScale+™ MPSoC, brings accuracy and reliability to synchronizing time-sensitive data.

- ✓ Features three key technologies - Time Winding, Time Stamping, and Time Keeping - to enhance multi-sensor synchronization
- ✓ Multi-channel PPS Time Sync and Frame Out for cameras, Lidars, Radars, and IMU
- ✓ 2 X-coded M12 GigE LAN with 1 Network Sync LAN support PTP/gPTP Protocol
- ✓ DC 5V to 60V wide range power input, Fanless -20°C to 75°C operation
- ✓ Facilitates Time Sync Requirements in
 - Autonomous work vehicles
 - 3D mapping
 - Unmanned surface vehicles
 - Embedded applications requiring multi-sensor synchronization.



VTS-1200
Rugged in-vehicle Time Sync Box

Jetson and Intel Based Platform Solutions for Autonomous Mobile Robots (AMRs)

Vecow EAC Series serves flexible configurations supports multiple 5G/4G/LTE/WiFi/BT/GPS technologies and compact storage expansions through M.2 PCIe NVMe SSD and Micro SD.



Real-time Artificial Intelligence (AI) Computing

Vecow Fanless Embedded System delivers outstanding system productivity to handle real-time artificial intelligence (AI) computing tasks.

- ✓ **Arm-based Edge AI Computing:** NVIDIA Jetson Platform - EAC Series delivers server-class performance with up to 275 TOPS of accelerating AI performance at a small form factor.
- ✓ **Workstation-grade Platform:** Intel® Core™ Ultra, Intel® Xeon®/Core™ i9/i7/i5/i3 processor with DDR5/DDR4 ECC/Non-ECC memory.
- ✓ **High-speed System Operation:** Multiple 10GigE LAN (10Gbps), 10G SFP+ LAN (10Gbps), 2.5G LAN (2.5Gbps), PCIe 4.0 (16GT/s), SATA III (6Gbps), USB 3.2 (10Gbps), PoE+ (1Gbps) and GigE LAN (1Gbps).
- ✓ **Seamless Wireless Data Transfer:** Supports multiple WiFi 6, 5G, LTE, GPRS or UMTS.

All-in-one Compact Solution



- ✓ **Small Form Factor:** Limited space integrates workstation-grade 6-core processor and chipset, max 9 GigE LAN, 6 USB 3.1, 4 COM, 2 SSD trays, SIM sockets, CFast socket, M.2 sockets, remote management and smart system protection functions.
- ✓ **Versatile Product Configurations:** Multiple high-reliable GigE LAN support IEEE 802.3at PoE+ and iAMT, front-access 2.5" SSD/HDD trays support up to 4TB, Isolated DIO.
- ✓ **Flexible Expansion Functions:** Multiple PCI/PCIe or full-function SUMIT A, B for multiple 10GigE LAN, 10G SFP+, SIM sockets, GigE LAN, GigE Fiber LAN, PoE LAN or Video Capture expansion functions.

Trusted System Reliability in Harsh Environments.



- ✓ **Fanless design for Wide-range Operating Temperature:** High-reliable fanless design, -40°C to 75°C extended temperature for workstation-grade system operation.
- ✓ **Smart Power Protection:** 6V to 36V DC-in with 80V Surge Protection, Ignition Power Control.
- ✓ **Qualified Standards:** E13, EN50155, EN50121, CE & FCC Certification.

NVIDIA Jetson AGX Orin



EAC-5100



RAC-1000



EAC-6000

AI Computing Systems



EVS-3200



TGS-1500



ECX-3200 PEG

High-Performance Fanless Systems



ECX-3000



VCM-1000



HEC-1000

Ultra-Compact Embedded Systems



ECS-4700



SPC-9000



RES-5000

Time Sync Box



VTS-1200GU



VTS-1200



VTS-1100

