

# EAC

# 5000



NVIDIA® Jetson AGX Orin™ Embedded AI Computing System

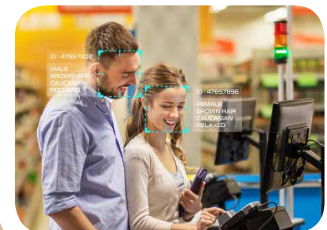


Automated Agricultural Machinery



- Advanced NVIDIA® Jetson AGX Orin™ platform delivers up to 275 TOPS AI performance
- The latest NVIDIA Ampere™ architecture, featuring with 2048 NVIDIA® CUDA® cores and 64 Tensor cores
- Supports 8 GMSL 1/2 automotive cameras with Fakra-Z connectors
- 1 PCIe Gen4 x8 expansion slot supports optional multiple 10GigE/PoE LAN/USB connections
- 2 Isolated CAN Bus support Flexible Data-rate, 2 COM RS-232/422/485
- 2 GigE LAN, 5 USB 3.1, 1 Digital Display supports 8K60
- Supports device remote management by Allxon
- DC 9V to 50V wide range power input, Ignition Power Control

Autonomous Mobile Robots



Real-Time Video Analytics



## Specifications

### System

|                |  |
|----------------|--|
| CPU            | <b>EAC-5000-R32</b> : 8-core Arm® Cortex®-A78AE v8.2 64-bit CPU<br><b>EAC-5000-R64</b> : 12-core Arm® Cortex®-A78AE v8.2 64-bit CPU  |
| GPU            | <b>EAC-5000-R32</b> : 1792-core NVIDIA Ampere™ architecture GPU with 56 Tensor Cores<br><b>EAC-5000-R64</b> : 2048-core NVIDIA Ampere™ architecture GPU with 64 Tensor Cores |
| DL Accelerator | 2x NVDLA Engines   |
| Memory         | <b>EAC-5000-R32</b> : 1 32GB LPDDR5 DRAM<br><b>EAC-5000-R64</b> : 1 64GB LPDDR5 DRAM   |
| OS             | Linux Ubuntu 20.04 with JetPack  |

### I/O Interface

|           |  |
|-----------|--|
| USB       | - 1 USB 3.1 Gen 2, supports up to 10Gbps<br>- 4 USB 3.1, support up to 5Gbps |
| Serial    | 2 COM RS-232/422/485   |
| CAN Bus   | 2 Isolated CAN Bus support CAN FD  |
| DIO       | 16 Isolated DIO (8 DI, 8 DO)   |
| Micro USB | - 1 Micro USB console debug port<br>- 1 Micro USB OS flash port              |
| Button    | - 1 Power Button<br>- 1 Force Recovery Button<br>- 1 Reset Button            |
| LED       | Power, SSD, 2 User Programmable  |
| SIM       | 2 SIM Card Socket  |
| Antenna   | 6 Antenna for WiFi/4G/5G/LTE/GPRS/UMTS                                       |

### Expansion

|      |  |
|------|--|
| PCIe | 1 PCIe Gen4 x8 Slot  |
| M.2  | - 1 M.2 Key B Socket (3042/3052, PCIe/USB3)<br>- 1 M.2 Key E Socket (2230, PCIe/USB) |

### Graphics

|              |   |
|--------------|---|
| Interface    | 1 Digital Display, up to 8K60   |
| Video Encode | <b>EAC-5000-R32</b> : 1x 4K @60, 3x 4K @30, 6x 1080p @60 (HEVC)<br><b>EAC-5000-R64</b> : 2x 4K @60, 4x 4K @30, 8x 1080p @60 (HEVC)  |
| Video Decode | <b>EAC-5000-R32</b> : 1x 8K @30, 4x 4K @30, 9x 1080p @60 (HEVC)<br><b>EAC-5000-R64</b> : 1x 8K @30, 7x 4K @30, 11x 1080p @60 (HEVC) |

### Camera

|      |  |
|------|--|
| GMSL | 8 Fakra-Z connectors for GMSL 1/2 automotive cameras |
|------|--|

### Storage

|      |                                    |
|------|------------------------------------|
| M.2  | 2 M.2 Key M Socket (2280, PCIe x4) |
| eMMC | 1 eMMC 5.1, 64GB                   |
| SD   | 1 Micro SD (External)              |

### Ethernet

|                |   |
|----------------|---|
| LAN 1 to LAN 2 | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector (Optional X-coded M12 Connector) |
|----------------|---|

### Power

|                  |   |
|------------------|---|
| Power Input      | DC 9V to 50V                                |
| Power Interface  | 3-pin Terminal Block : V+, V-, Frame Ground |
| Ignition Control | 16-mode Software Ignition Control           |
| Remote Switch    | 3-pin Remote Switch Terminal Block          |

### Out-of-Band Management

|                   |  |
|-------------------|--|
| MCU               | Nuvoton NUC980                                       |
| Interface         | OOB LAN, 10/100Mb Ethernet LAN, RJ45 Connector       |
| Remote Management | Support Remote Power ON/OFF, Reset and Power Cycling |

### Mechanical

|            |   |
|------------|---|
| Dimensions | 260 mm x 182 mm x 69 mm (10.23" x 7.16" x 2.72")    |
| Weight     | 3.8 kg (8.39 lb)                                    |
| Mounting   | - Wallmount<br>- DIN Rail and VESA Mount (Optional) |

### Environment

|                   |   |
|-------------------|---|
| Operating Temp.   | <b>30W TDP Mode</b> : -20°C to 70°C (-4°F to 158°F)<br><b>MAXN TDP Mode</b> : -20°C to 55°C (-4°F to 131°F) |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)  |
| Humidity          | 5% to 95% Humidity, non-condensing  |
| Relative Humidity | 95% @70°C   |
| Shock             | Operating, MIL-STD-810G, Method 516.7, Procedure I  |
| Vibration         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4  |
| EMC               | CE, FCC, EN50155, EN50121-3-2   |

\* All product information may subject to change without prior notice.  
\* The rights of all brand names, product names and trademarks belong to their respective owners.  
Copyright © 2023 Vecow Co., Ltd. All rights reserved.

## Order Information

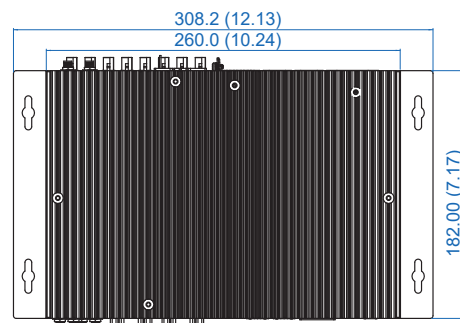
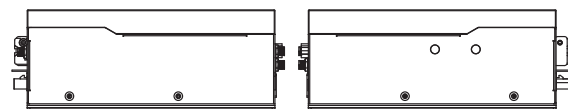
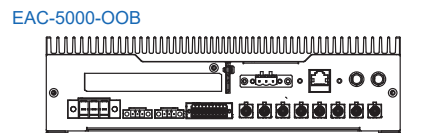
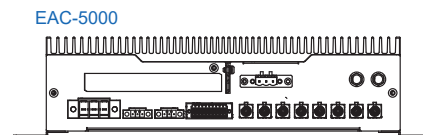
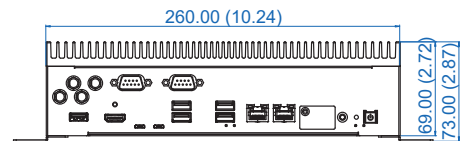
| Model Name   | Platform        | RAM  | LAN | USB 3.1 | Serial | Iso. CAN | Iso. DIO | PCIe Slot | GMSL | SIM | M.2 | OOB |
|--------------|-----------------|------|-----|---------|--------|----------|----------|-----------|------|-----|-----|-----|
| EAC-5000-R32 | Jetson AGX Orin | 32GB | 2   | 5       | 2      | 2        | 16       | 1         | 8    | 2   | 4   | N   |
| EAC-5000-R64 | Jetson AGX Orin | 64GB | 2   | 5       | 2      | 2        | 16       | 1         | 8    | 2   | 4   | Y   |

### Accessories

|                    |   |
|--------------------|---|
| PWA-160WB-WT       | 160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| PWA-180WB          | 180W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block                                  |
| PWA-280WB-WT       | 280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| VESA Mount         | VESA Mounting Kit   |
| DIN-RAIL           | DIN Rail and VESA Mounting Kit  |
| GMSL Camera Kit    | GMSL Camera with Fakra-Z connector  |
| M.2 Storage Module | M.2 Key M/Key B PCIe Storage Module   |
| 5G Module          | 5G Module with Antenna  |
| 4G Module          | 4G/GPS Module with Antenna  |
| WiFi & Bluetooth   | WiFi & Bluetooth Module with Antenna  |

## Dimensions & Drawing

Unit : mm (inch)



## 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.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508  
Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050  
Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28  
Business Registration Number: 07699660