

# EAC

# 5000



NVIDIA® Jetson AGX Orin™ Embedded AI Computing System

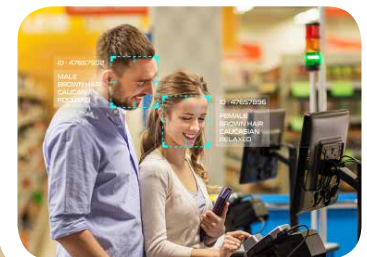


Automated Agricultural Machinery



- 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



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# 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)<br>- 1 M.2 Key E Socket (2230) |

## Graphics

|              |   |
|--------------|---|
| Interface    | 1 Digital Display, up to 8K60   |
| Video Encode | <b>EAC-5000-R32</b> : 1x 4K @60, 3x 4K @30, 6x 1080p @60, 12x 1080p @30 (HEVC)<br><b>EAC-5000-R64</b> : 2x 4K @60, 4x 4K @30, 8x 1080p @60, 16x 1080p @30 (HEVC)                        |
| Video Decode | <b>EAC-5000-R32</b> : 1x 8K @30, 2x 4K @60, 4x 4K @30, 9x 1080p @60, 18x 1080p @30 (HEVC)<br><b>EAC-5000-R64</b> : 1x 8K @30, 3x 4K @60, 7x 4K @30, 11x 1080p @60, 22x 1080p @30 (HEVC) |

## Camera

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

## Storage

|      |                           |
|------|---------------------------|
| M.2  | 2 M.2 Key M Socket (2280) |
| 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                      |
| OOB Management   | Remote Power On/Off and Remote Reset Control (Optional) |

## 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   |

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# Order Information

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

## 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  |
| OOB Module         | On-board Out-of-Band Management Module  |

# Dimensions & Drawing

Unit : mm (inch)

