

# EVS

# 3000 LIQ



Intel® Core™ i9/i7/i5/i3 Processor (14th Gen)  
Expandable Liquid Cooling AI Computing System



^ V2X, Traffic Vision



- Workstation-grade Platform: Intel® Core™ i9/i7/i5/i3 Processor (14th gen) running with Intel® R680E PCH supports max 65W TDP CPU
- Up to a 115W MXM GPU with 1 PCIe card expansion
- USB 3.2 Gen 2x2 offers a max speed of 20Gbps
- DC 9V to 55V wide range power input, Software Ignition
- Remote devices Out-Of-Band management powered by Allxon
- Innovative Liquid Cooling Solution serves 5°C to 65°C fanless

▼ Rolling Stock



^ In-vehicle Computing

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# Specifications

## System

|           |                                                                                                                                                                                                                                 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor | - 24-core Intel® Core™ i9/i7/i5/i3 Processor (14th gen, Raptor Lake-S Refresh)<br>- 24-core 13th Gen Intel® Core™ i9/i7/i5/i3 Processor (Raptor Lake-S)<br>- 16-core 12th Gen Intel® Core™ i9/i7/i5/i3 Processor (Alder Lake-S) |
| Chipset   | Intel® R680E                                                                                                                                                                                                                    |
| BIOS      | AMI                                                                                                                                                                                                                             |
| SIO       | IT8786E                                                                                                                                                                                                                         |
| Memory    | 2 DDR5 5600MHz SO-DIMM, up to 96GB (ECC/Non-ECC)                                                                                                                                                                                |
| OS        | Windows 11, Windows 10, Linux                                                                                                                                                                                                   |

## I/O Interface

|              |                                                                                                            |
|--------------|------------------------------------------------------------------------------------------------------------|
| Serial       | 2 COM RS-232/422/485 (ESD 8kV)                                                                             |
| USB          | - 4 USB 3.2 Gen 2 Type A<br>- 1 USB 3.2 Gen 2x2, USB Type-C supports max 20Gbps data transfer (15W, 5V/3A) |
| Isolated DIO | 32 Isolated DIO: 16 DI, 16 DO                                                                              |
| LED          | Power, HDD, OOB                                                                                            |
| SIM Card     | 1 External SIM Card Sockets                                                                                |

## Expansion

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| PCI/PCIe | 1 PCIe x16 Slot with x8 Signal                                                                           |
| M.2      | - 1 M.2 Key B Socket (2280/3042/3052, PCIe/USB 3, default/SATA)<br>- 1 M.2 Key E Socket (2230, PCIe/USB) |

## Graphics

|                    |                                                                                                                                                                 |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Graphics Processor | Intel® UHD Graphics 770/730 driven by Intel® X® Architecture                                                                                                    |
| Interface          | Up to 7 independent displays:<br>- 2 HDMI 2.1: Up to 4096 x 2304 @60Hz<br>- 1 DP: Up to 3840 x 2160 @60Hz<br>- 4 DP: Up to 7680 x 4320 @60Hz (By requested MXM) |

## Storage

|      |                                                                                 |
|------|---------------------------------------------------------------------------------|
| SATA | 2 SATA III (6Gbps) support S/W RAID 0, 1, with 2 Front-access 2.5" SSD/HDD Tray |
| M.2  | 1 M.2 Key M Socket (2280, PCIe x4)                                              |

## Audio

|                 |                                          |
|-----------------|------------------------------------------|
| Audio Codec     | Realtek ALC888S-VD, 7.1 Channel HD Audio |
| Audio Interface | 1 Mic-in, 1 Line-out                     |

## Ethernet

|       |                                      |
|-------|--------------------------------------|
| LAN 1 | Intel® I226 2.5GigE LAN supports TSN |
| LAN 2 | Intel® I226 2.5GigE LAN supports TSN |

## Power

|                  |                                            |
|------------------|--------------------------------------------|
| Power Input      | DC 9V to 55V                               |
| Power Interface  | 3-pin Terminal Block: V+, V-, Frame Ground |
| Ignition Control | 16-mode Software Ignition Control          |
| Remote Switch    | 3-pin 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 |

## Others

|                |                                                                               |
|----------------|-------------------------------------------------------------------------------|
| TPM            | Infineon SLB9670 supports TPM 2.0, SPI Interface                              |
| Watchdog Timer | Reset: 1 to 255 sec./min. per step                                            |
| Smart Mgmt.    | Wake on LAN, PXE supported                                                    |
| HW Monitor     | Monitoring temperature, voltages. Auto throttling control when CPU overheats. |

## Mechanical

|            |                                                                                                                     |
|------------|---------------------------------------------------------------------------------------------------------------------|
| Dimensions | 280mm x 93.4mm x 215mm (11.02"x 3.68"x 8.46")                                                                       |
| Weight     | 5.7 kg (12.56 lb)                                                                                                   |
| Mounting   | - Wallmount by mounting bracket<br>- VESA Mount (Optional)<br>- DIN Rail Mount (Optional)<br>- Rackmount (Optional) |

## Environment

|                   |                                                             |
|-------------------|-------------------------------------------------------------|
| Operating Temp.   | 5°C to 65°C (41°F to 149°F)                                 |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)                              |
| Humidity          | 5% to 95% Humidity, non-condensing                          |
| Relative Humidity | 95% @65°C                                                   |
| Shock             | - IEC 60068-2-27<br>- SSD : 50G @wallmount, Half-sine, 11ms |
| Vibration         | - IEC 60068-2-64<br>- SSD : 5Grms, 5Hz to 500Hz, 3 Axis     |
| EMC               | CE, FCC, ICES, EN50155, EN50121-3-2                         |

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# Order Information

| Model        | Graphics MXM TDP | PCIe x8 Gen 4 | 2.5G LAN | USB 3.2 Gen 2 | SSD Tray |
|--------------|------------------|---------------|----------|---------------|----------|
| EVS-3100 LIQ | 115W             | 1             | 2        | 5             | 2        |

## CPU List

| Series       | CPU       | Cores | GHz | TDP (W) | CPU        | Cores | GHz | TDP (W) |
|--------------|-----------|-------|-----|---------|------------|-------|-----|---------|
| Intel® Core™ | i9-14900  | 24    | 5.8 | 65      | i9-14900T  | 24    | 5.5 | 35      |
|              | i7-14700  | 20    | 5.4 |         | i7-14700T  | 20    | 5.2 |         |
|              | i5-14500  | 14    | 5   |         | i5-14500T  | 14    | 4.8 |         |
|              | i3-14100  | 4     | 4.7 |         | i3-14100T  | 4     | 4.4 |         |
|              | i9-13900E | 24    | 5.2 |         | i9-13900TE | 24    | 5   |         |
|              | i7-13700E | 16    | 5.1 |         | i7-13700TE | 16    | 4.8 |         |
|              | i5-13500E | 14    | 4.6 |         | i5-13500TE | 14    | 4.5 |         |
|              | i3-13100E | 4     | 4.4 |         | i3-13100TE | 4     | 4.1 |         |
|              | i9-12900E | 16    | 5   |         | i9-12900TE | 16    | 4.8 |         |
|              | i7-12700E | 12    | 4.8 |         | i7-12700TE | 12    | 4.7 |         |
|              | i5-12500E | 6     | 4.5 |         | i5-12500TE | 6     | 4.3 |         |
|              | i3-12100E | 4     | 4.2 |         | i3-12100TE | 4     | 4   |         |

## Optional Software

|                   |                      |
|-------------------|----------------------|
| VHub AI Developer | AI Developer Kit     |
| VHub ROS          | AMR Developer Kit    |
| VHub EtherCAT     | I/O Control Platform |

## Accessories

|                    |                                                                                                                                                                                             |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LIQ DV KIT         | Liquid Cooling Development Kit                                                                                                                                                              |
| DDR5 48G           | Certified DDR5 48GB 5600MHz RAM                                                                                                                                                             |
| DDR5 32G           | Certified DDR5 32GB 5600/4800MHz RAM                                                                                                                                                        |
| DDR5 24G           | Certified DDR5 24GB 5600MHz RAM                                                                                                                                                             |
| DDR5 16G           | Certified DDR5 16GB 5600/4800MHz RAM                                                                                                                                                        |
| DDR5 8G            | Certified DDR5 8GB 5600/4800MHz RAM                                                                                                                                                         |
| PWA-160WB-WT       | 160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block (7.62mm pitch), Wide Temperature -30°C to +70°C                                                                        |
| PWA-180WB          | 180W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block (7.62mm pitch)                                                                                                         |
| PWA-280WB-WT       | 280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block (7.62mm pitch), Wide Temperature -30C to +70C<br>*Recommended when enable turbo mode (35W CPU), without expansion card |
| PWA-330WB          | 330W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block (7.62mm pitch)<br>*Recommended when enable turbo mode (65W CPU), without expansion card                                |
| TMK2-20P-100       | Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm                                                                                                                                 |
| TMK2-20P-500       | Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm                                                                                                                                 |
| TMB-TMBK-20P       | Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting                                                                                                               |
| DIN Rail           | DIN Rail Kit                                                                                                                                                                                |
| VESA Mount         | VESA Mounting Kit                                                                                                                                                                           |
| M.2 Storage Module | M.2 Key M 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)

