



CPT200x3

FANLESS IP66 IN-VEHICLE COMPUTER
WITH INTEL® RAPTOR LAKE-S REFRESH
14/13TH GEN SOCKET PROCESSOR



- Intel® Raptor Lake-S Core™ i Processor
- NVIDIA L4 GPU
- DDR5-4800 SO-DIMM up to 96G (non-ECC /ECC)
- 4 x 2.5GbE LAN w/M12
- 2 x RS232/422/485 w/M12
- 4 x RJ45 Intel i210-IT GbE LAN with PoE+ w/M12
- 2 x CANBus 2.0B, 8-bit Isolated DIDO w/M12
- 2 x 10GbE LAN w/M12
- 1 x DC-IN w/M12
- M20 Connectors: 1 x USB 3.0, 1 x MiniDP
- 2 x Internal 2.5" SSD Tray
- Operating Temperature -20°C to 60°C
- MIL-STD-810 Standards for Shock, Vibration and Wide Temperatures

Introduction

The IP66 Fanless In-Vehicle GPU Computer CPT200X3 Series is engineered for mission-critical edge applications that demand both performance and durability. Equipped with the latest Intel® Raptor Lake-S Core™ i Processor and NVIDIA L4 GPU with supporting up to 96GB of DDR5-4800 SO-DIMM, it provides the computing power required for real-time AI workloads, machine vision, and autonomous control. Its rugged, fanless design ensures reliable, silent operation in even the most challenging environmental conditions.

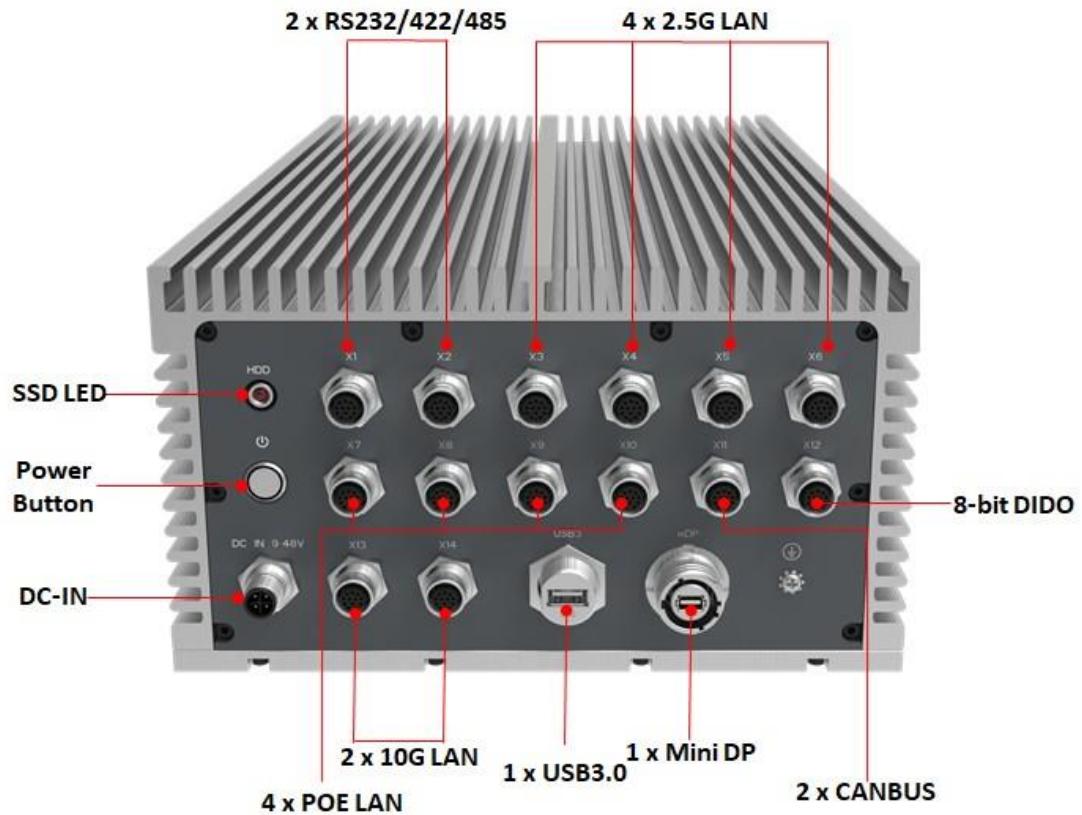
Designed for autonomous electric mining trucks, robotic arms, and other industrial automation systems, the CPT200X3 provides a robust platform for next-generation smart machinery. With IP66-rated protection, it withstands dust, water, and extreme conditions, and the MIL-STD-810 standards ensures resilience against shock, vibration, and wide temperature ranges from -20°C to 60°C.

Connectivity and flexibility are at the heart of the CPT200X3. Equipped with M12 connectors, it offers 4 x 2.5GbE LAN, 2 x RS232/422/485, 4 x PoE LAN, 2 x 10G LAN, and 2 x CANBUS/8 Bit DIDO, along with 1x USB3.0 and 1 x MiniDP w/M20 for high-resolution display output. It also supports dual 2.5" SSD trays, enabling high-capacity, fast-access storage for data-intensive applications such as sensor fusion, video analytics, and AI inference at the edge.

With its rugged construction, advanced processing capabilities, and versatile connectivity, the CPT200X3 series delivers a robust solution for industrial in-vehicle GPU computing. Whether powering autonomous fleets in mining operations or enabling high-precision robotics in factories, the CPT200X3 series is built to deliver reliability, efficiency, and performance under the most demanding conditions.

Appearance

CPT200X3 Front IO



CPT200X3 Series Rear IO



Specifications

SYSTEM

| | |
|----------------|---|
| CPU | 14th/13th/12th Gen Intel® Raptor Lake-S/Alder Lake-S Core i9/i7/i5/i3/Celeron/Pentium (Up to 35W) |
| Chipset | Intel® R680E |
| GPU | 1 x NVIDIA L4 |
| Memory type | 2 x 262-pin SO-DIMM / DDR5 4800 MHz / Max. 96 GB (Non-ECC/ ECC) |
| Storage Device | 2 x 2.5" Internal SSD Tray |

EXPANSION

| | |
|-----|---|
| M.2 | 1 x M.2 M key 2242/2260/2280 (PCIe4.0x4,SATAIII) w/OS Storage |
| | 1 x M.2 B key 3042/3052/2260 (PCIe1,USB,SATAIII) w/4G,5G |
| | 1 x M.2 E key 2230 (PCIe1,USB) w/Wi-Fi, BT |
| | 1 x mPCIe (PCIe1,USB,SATAIII) |

FRONT I/O

| | |
|-------------|-----------------------------|
| COM | 2 x RS232/422/485 w/2 x M12 |
| LAN | 4 x 2.5GbE LAN w/4 x M12 |
| LAN | 2 x 10GbE LAN w/4 x M12 |
| PoE | 4 x PoE LAN w/4 x M12 |
| CANBUS | 2 x CANBUS w/1 x M12 |
| DIDO | 1 x 8-bit DIDO w/1 x M12 |
| USB3.0 | 1 x USB3.0 w/1 x M20 |
| Display | 1 x MiniDP w/ 1 x M20 |
| Power Input | 1 x DC-IN w/ 1 x M12(9~48V) |

REAR I/O

| | |
|------------------|-------------------------------|
| (Option) Antenna | 6 x Water-proof SMA Connector |
|------------------|-------------------------------|

POWER REQUIREMENT

| | |
|-------------|-------------|
| Power Input | DC-IN 9~48V |
|-------------|-------------|

OPERATING SYSTEM

| | |
|------------------|---|
| Operating System | Windows 10/11 64Bit Linux (support by request) |
|------------------|---|

PHYSICAL & ENVIRONMENT

| | |
|------------------------|----------------------------------|
| Dimensions (W x D x H) | 248 x 425 x 141.2 mm |
| IP | IP66 designed to meet |
| Green Product | RoHS designed to meet |
| Operating Temperature | 35W TPD Processor: -20°C to 60°C |
| Storage Temperature | -40°C to 85°C |
| Relative Humidity | 5% to 95%, non-condensing |
| EMC | CE and FCC designed to meet |

MIL-STD-810 ENVIRONMENT TESTING STANDARDS

| | |
|---|--|
| Method 501, Operational Temperature, High | Procedure II: +60°C, two-hour dwell, four cycles |
| Method 501, Storage Temperature, High | Procedure I: +70°C, two-hour dwell, four cycles |
| Method 502, Operational Temperature, Low | Procedure II: -20°C, two-hour dwell, four cycles |
| Method 502, Storage Temperature, Low | Procedure I: -30°C, two-hour dwell, four cycles |
| Method 514, Vibration | Category 24/Non-Operating (Category 20 & 24, Vibration) |
| Method 514, Vibration | Category 20/Operating (Category 20 & 24, Vibration) |
| Method 516, Shock | Procedure V Non-Operating (Mechanical Shock) |
| Method 516, Shock | Procedure I Operating (Mechanical Shock) |
| Method 507, Humidity | Procedure II: exposure to 10 cycles of 95% relative humidity at temperatures of 30 °C to 60 °C with conformal coating (optional) |

Ordering Information

CPT200X3

Fanless Embedded In-Vehicle GPU System with Intel® 14/13/12th Gen Core™ i9/i7/i5/i3 Processor up to 65W , 96G SO-DIMM DDR5 4800MHz, 4 × 2.5GbE RJ45 w/M12, 2 × RS232/422/485 w/M12, 1 × miniDP w/M20, 1 × USB3.0 w/M20, 2 × 10G w/M12, 4 × POE w/M12, 2 × CANBUS/8 Bit DIDO w/M12, 2 × Internal SSD Tray, 1 × 72W NVIDIA L4, 1 × DC-IN w/M12, 9~48V, Operating Temperature -20°C to +60°C

| Model | CPT200X3-i5-R1 | CPT200X3-i5-R2 | CPT200X3-i7-R1 | CPT200X3-i7-R2 | CPT200X3-i9-R1 | CPT200X3-i9-R2 |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| CPU | i5-14501TE | i5-13500TE | i7-14701TE | i7-13700TE | i9-14901TE | i9-13900TE |
| Function | | Q'ty | | Item | | Have Y / N |
| 2.5GbE LAN | | 4 | | X3~X6 w/M12 | | Y |
| GbE POE | | 4 | | X7~X10 w/M12 | | Y |
| 10GbE LAN | | 2 | | X13~X14 w/M12 | | Y |
| RS232/422/485 | | 2 | | X1~X2 w/M12 | | Y |
| CANBUS(1 to 2) | | 1 | | X11 w/M12 | | Y |
| 8-bit DIDO | | 1 | | X12 w/M12 | | Y |
| MiniDP | | 1 | | Mini DP w/M20 | | Y |
| USB3.0 | | 1 | | USB3.0 w/M20 | | Y |

This datasheet is for marketing purposes only and does not constitute a warranty. All specifications, dimensions, and data are subject to change without notice. For the latest specifications and updates, please contact your 7STARLAKE representatives.