CPT100

FANLESS EMBEDDED SYSTEM WITH INTEL® METEOR LAKE-U PROCESSOR
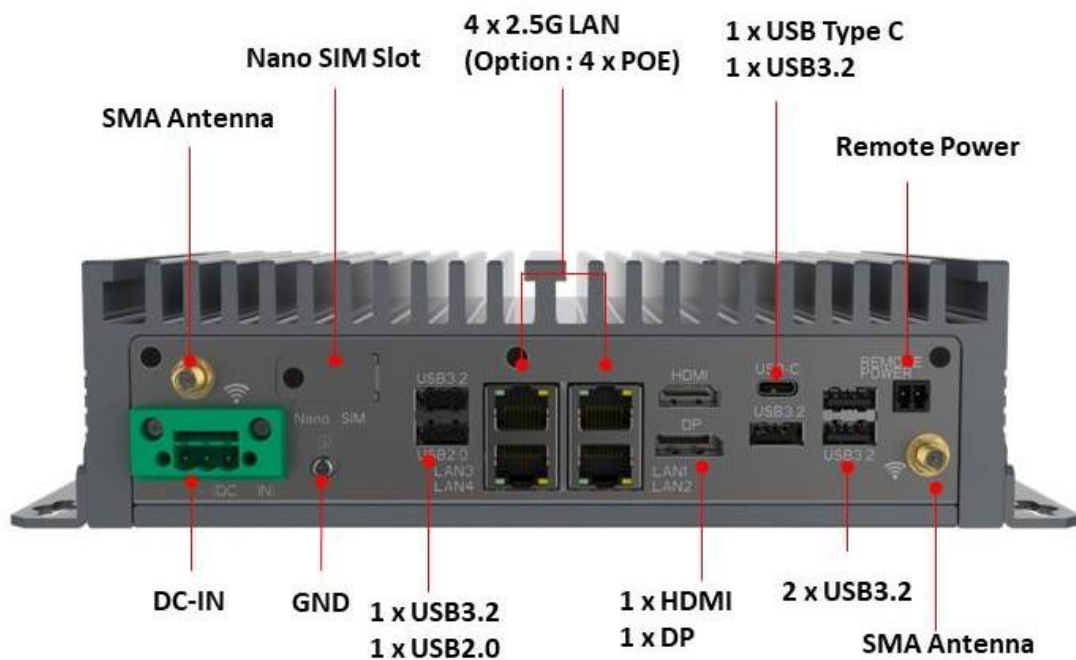
STAR LAKE

14th Meteor Lake

- Intel® Meteor Lake U Core™ Ultra 7 155U / Ultra 5 125U processors
- 1 x DDR5 SO-DIMM up to 48GB
- Supports Triple Displays for HDMI, DisplayPort, and Type-C (DP Alt Mode)
- 4 x Intel® i226-LM 2.5G LAN
- 4 x PoE on 2.5G LAN (Optional)
- 3 x USB 2.0, 4 x USB 3.2 Gen2, 1 x USB Type C, and 4 x COM
- 8V~26V wide voltage power input
- Operation Temperatures -20°C~60°C
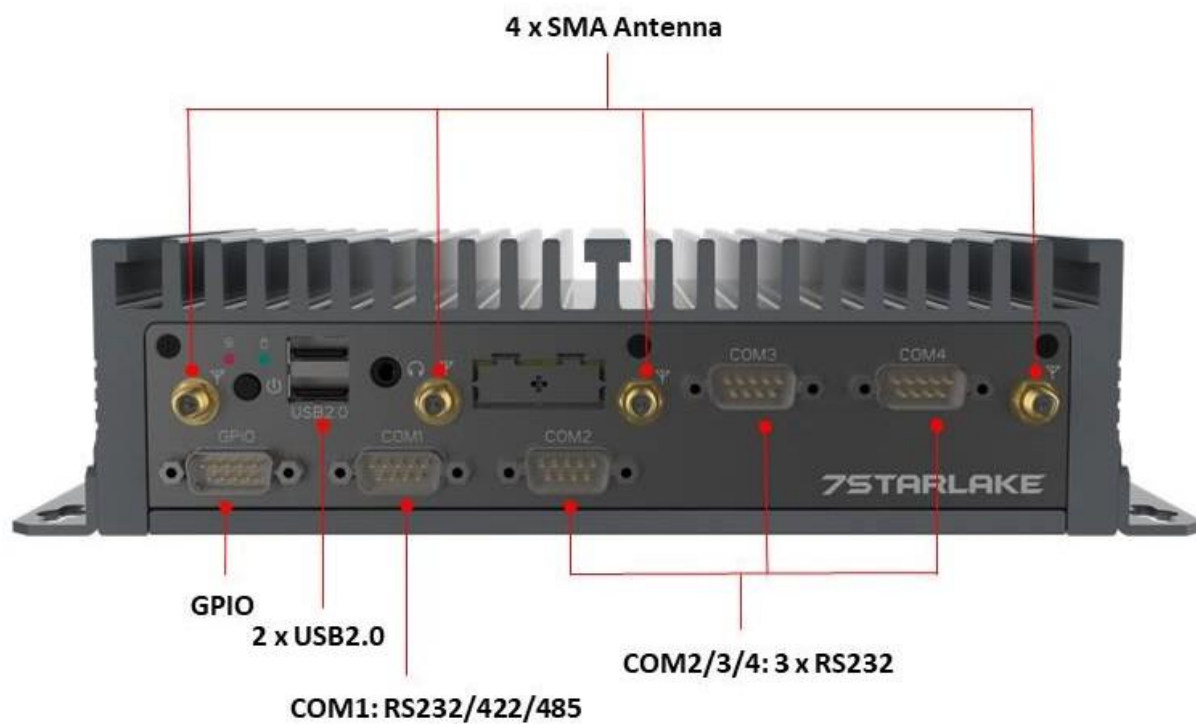- MIL-STD-810 Military Standards

Introduction

Engineered with high-speed connectivity and versatile I/O, the CPT100 fanless embedded system supports a wide range of edge workloads. Equipped with 1 x DDR5 SO-DIMM supporting up to 48GB, it delivers the memory bandwidth needed for data-intensive AI processing. Triple-display output via HDMI, DisplayPort, and Type-C (DP Alt Mode) provides flexible visualization for monitoring and control, while four PoE-enabled 2.5G LAN ports allow simultaneous connection and power for cameras, sensors, and other devices. Additional expansion through multiple USB and COM ports ensures broad compatibility with diverse peripherals, making the CPT100 purpose-built for AI-driven solutions, intelligent surveillance, and environmental monitoring.

Built for challenging conditions, the CPT100 meets the stringent MIL-STD-810 standards, ensuring resilience against extreme temperatures, shock and vibration. Withstanding 20G shock and equipped with strong electromagnetic compatibility (EMC), it is mission-ready for rail, industrial, outdoor, and transportation applications. With its rugged design and certifications, the CPT100 delivers reliable, high-performance operation for critical AI, surveillance, and industrial workloads in harsh environments.

Appearance

4 x SMA Antenna

GPIO

2 x USB2.0

COM1: RS232/422/485

COM2/3/4: 3 x RS232

Specifications

System

High Performance Processor	Intel® Meteor Lake U Core™ Ultra 7 155U / Ultra 5 125U Processor
Memory type	DDR5 4800 MHz / 1 x 262-pin SO-DIMM / Max. 48GB (Non-ECC)
Chipset	Intel® SoC Integrated
Graphics	Intel® Iris Xe Graphics

Display

DP	Resolution up to 4096 x 2304 @60Hz
HDMI	Resolution up to 4096 x 2304 @60Hz

Storage

HDD/SDD	1 x 2.5" Solid State Disk (SSD) 1 x M.2 M Key 2280 NVMe/SATA SSD Slot

Ethernet

Ethernet	4 x Intel® I226-LM 2.5Giga LAN (Optional 4 x PoE)

Front I/O

COM	3 x RS232 ; 1 x RS232/422/485
USB	2 x USB2.0
GPIO	8 bit GPIO(4in/4out) in DB9 type
SMA	2 x SMA Antenna
Line-Out	1 x Line-Out
LED	1 x SSD LED
Power Button	1 x w/indicator Power Button

Rear I/O

DisplayPort	1 x DP
HDMI	1 x HDMI
Ethernet	4 x 2.5GbE RJ45
USB	4 x USB3.2 ; 1 x USB2.0 ; 1 x USB Type C
SIM	1 x Nano SIM slot w/Cover
Power Input	1 x 3-pin Terminal Block Power Input

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Remote Power	1 x 2-pin Terminal Block Remote Power on / off
SMA	2 x SMA Antenna

Power Requirement

Power Input	DC-IN 8~26V

Applications, Operating System

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

Physical

Dimensions (W x D x H)	220 x 150 x 64.2 mm
Chassis	Aluminum
Heatsink	Aluminum Alloy, Corrosion Resistant
Finish	Anodic aluminum oxide

Environmental

Green Product	RoHS (designed to meet)
Operating Temperature	-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

CPT100-125U

Fanless Embedded System with Intel® Core Ultra 5 125U Meteor Lake-U Processor (Up to 15W, Turbo up to 57W), 1 x DDR5 4800MHz SO-DIMM up to 48GB, 1 x DisplayPort, 1 x HDMI, 4 x USB3.2, 2 x USB2.0, 4 x LAN (Optional: 4 x POE), 1 x GPIO , 4 x COM , 6 x SMA Antenna ,8~26V DC-IN, Operating Temperature: -20°C ~+60°C

CPT100-155U

Fanless Embedded System with Intel® Core Ultra 7 155U Meteor Lake-U Processor (Up to 15W, Turbo up to 57W), 1 x DDR5 4800MHz SO-DIMM up to 48GB, 1 x DisplayPort, 1 x HDMI, 4 x USB3.2, 2 x USB2.0, 4 x LAN (Optional: 4 x PoE), 1 x GPIO, 4 x COM, 6 x SMA Antenna, 8~26V DC-IN, Operating Temperature: -20°C ~+60°C

Model	CPU	Memory	SSD1 (OS)	SSD2 (Storage)	PoE
CPT100-125U-8GNP	Core Ultra 5 125U	8GB	256GB	1TB	4 x LAN
CPT100-125U-16GNP		16GB			
CPT100-125U-32GNP		32GB			
CPT100-125U-48GNP		48GB			
CPT100-125U-8GP		8GB			4 x PoE
CPT100-125U-16GP		16GB			
CPT100-125U-32GP		32GB			
CPT100-125U-48GP		48GB			
CPT100-155U-8GNP	Core Ultra 7 155U	8GB	512GB	2TB	4 x LAN
CPT100-155U-16GNP		16GB			
CPT100-155U-32GNP		32GB			
CPT100-155U48GNP		48GB			
CPT100-155U-8GP		8GB			4 x PoE
CPT100-155U-16GP		16GB			
CPT100-155U-32GP		32GB			
CPT100-155U-48GP		48GB			