



LAND



SEA



AIR

CPT100M

**FANLESS EMBEDDED IP66 WATER-PROOF SYSTEM
WITH INTEL METEOR LAKE-U 14TH GEN
BGA PROCESSOR**



- Intel® Meteor Lake U Core™ Ultra 7 155U / Ultra 5 125U Processors
- 1 x DDR5 SO-DIMM and Support Up to 48GB
- 1 x MiniDP w/D38999
- 4 x 2.5G POE LAN w/M12 Connectors
- 2 x USB 2.0 w/ M12
- 1 x RS232/422/485 w/M12
- 8V~26V Wide Voltage Power Input w/M12
- IP66/MIL-STD-810G/ EN50155 Standards
- Operation Temperature: -30°C~70°C

Introduction

Engineered for edge intelligence, the IP66-rated CPT100M fanless embedded system combines high-speed connectivity with versatile I/O through robust M12 connectors. Featuring 1 x DDR5 SO-DIMM supporting up to 48GB, it provides the memory bandwidth required for data-intensive AI workloads. Four PoE-enabled 2.5G LAN ports via M12 connectors deliver both data and power to cameras, sensors, and other devices, enabling seamless deployment of AI-driven applications such as intelligent surveillance and environmental monitoring. The system also integrates six waterproof SMA antennas and a GND port for enhanced connectivity.

Designed for extreme environments, the CPT100M meets the stringent MIL-STD-810G, EN 50155, and IP66 standards, ensuring durability against wide temperature ranges, shock, vibration, dust, and water. With 20G shock resistance and strong electromagnetic compatibility (EMC), it is mission-ready for rail, industrial, outdoor, and transportation deployments. Its rugged build and versatile I/O make the CPT100M a reliable, high-performance platform for critical AI, surveillance, and industrial applications in harsh conditions.

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

MiniDP	Resolution up to 4096 x 2304 @60Hz
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STORAGE

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

M.2	1 x M.2 M key 2280 (PCIe4.0x4,SATAIII) w/OS Storage 1 x M.2 B key 2242/3042/3052 (PCIex1,USB,SATAIII) w/4G,5G 1 x M.2 E key 2230 (PCIe x1,USB)
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FRONT I/O

COM	1 x RS232/422/485 w/1 x M12
USB	2 x USB2.0 w/ 1 x M12
POE	4 x 2.5G LAN PoE w/4 x M12
Display	1 x MiniDP w/1 x D38999
Power Input	1 x DC-IN w/1 x M12
LED	1 x SSD LED
Power Button	1 x w/indicator Power Button

REAR I/O

SMA (Option)	6 x Waterproof SMA Antenna Connector
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POWER REQUIREMENT

Power Input	DC-IN 8~26V
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APPLICATIONS, OPERATING SYSTEM

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

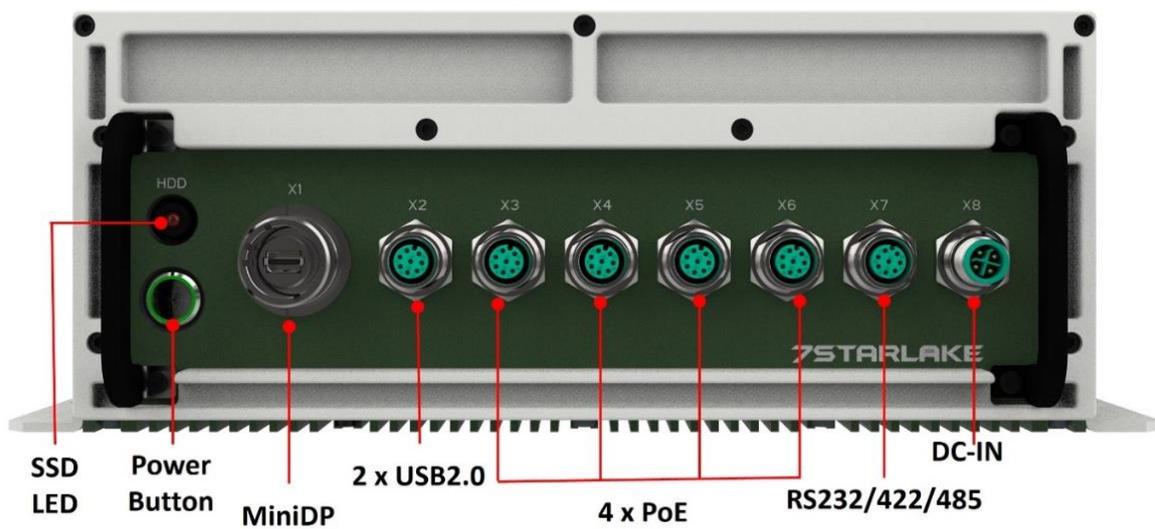
Dimensions (W x D x H)	250 x 250 x 105 mm
Chassis	Aluminum
Heatsink	Aluminum Alloy, Corrosion Resistant
Finish	Anodic aluminum oxide
Waterproof Rating	IP66
Green Product	RoHS
Operating Temperature	-30°C to 70°C
Storage Temperature	-40°C to 85°C
Relative Humidity	5% to 95%, non-condensing
EMC (Design to Meet)	CE and FCC

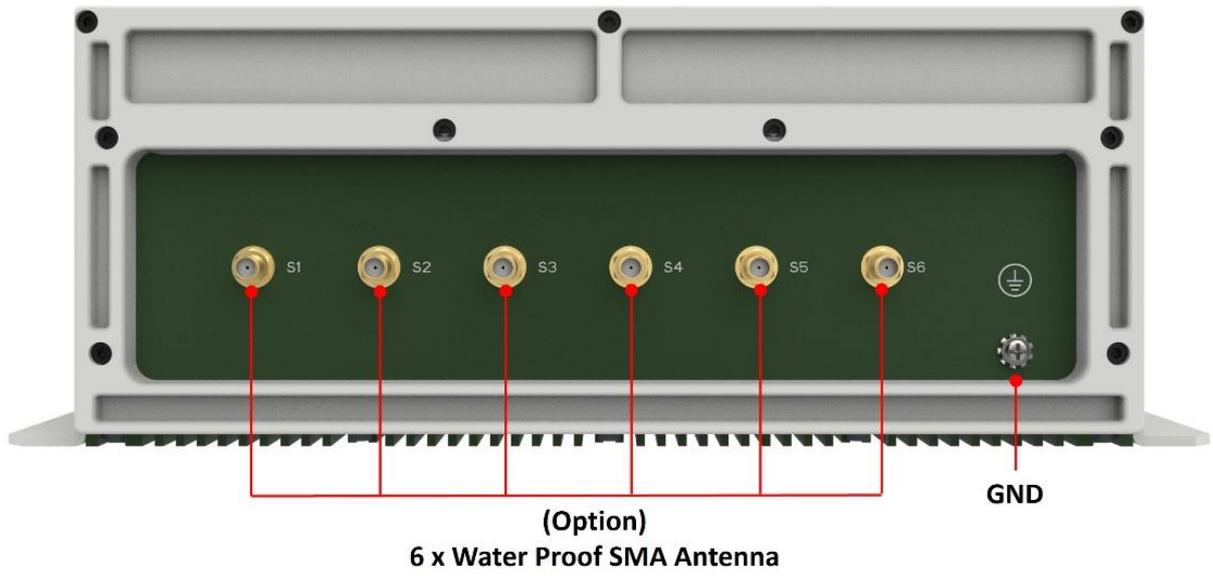
MIL-STD-810G ENVIRONMENT TESTING STANDARDS (DESIGN TO MEET)

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

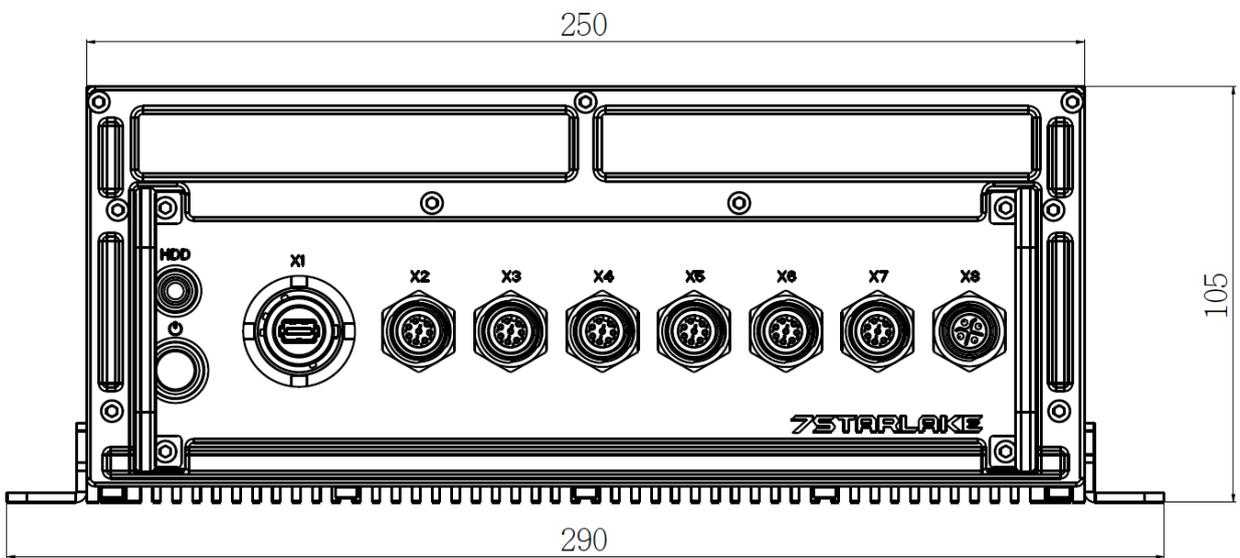
Method 502, Operational Temperature, low	Procedure II: -20°C, two-hour dwell, four cycles
Method 502, Storage Temperature, low	Procedure I: -30°C, two-hour dwell, four cycles
Method 514, Vibration	Category 24/Non-Operating (Category 20 & 24, Vibration)
Method 514, Vibration	Category 20/Operating (Category 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)

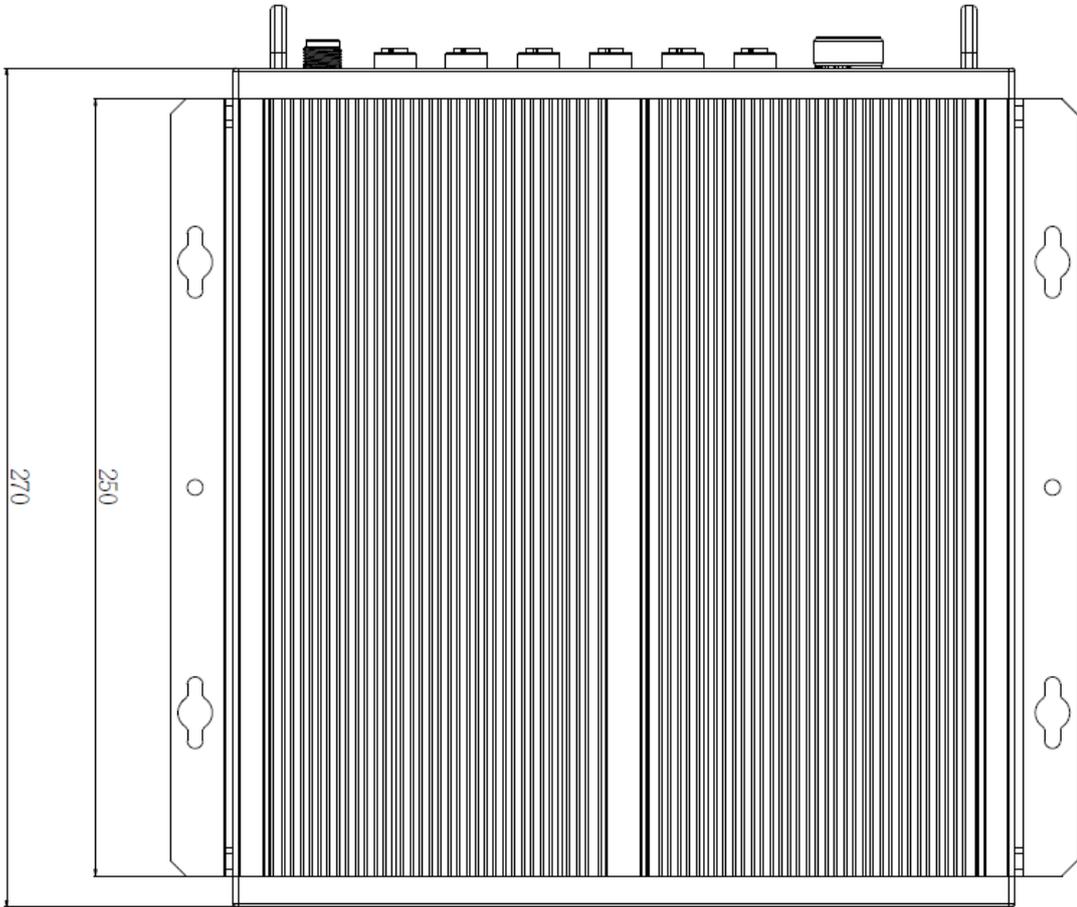
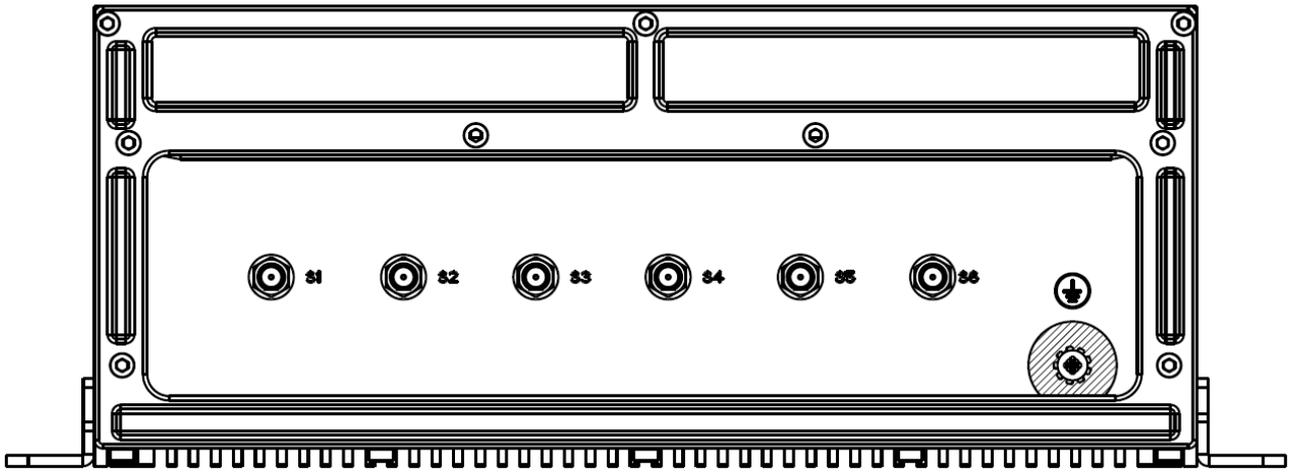
APPEARANCE





Dimension





Ordering Information

CPT100M-125U

IP66 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 MiniDP w/1 x D38999, 2 x USB2.0 w/1 x M12, 4 x PoE LAN w/4 x M12, 1 x RS232/422/485 w/1 x M12 , 6 x SMA Antenna w/waterproof ,8~26V DC-IN w/1 x M12, Operating Temperatures -30°C ~+70°C

CPT100M-155U

IP66 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 MiniDP w/1 x D38999, 2 x USB2.0 w/1 x M12, 4 x PoE LAN w/4 x M12, 1 x RS232/422/485 w/1 x M12 , 6 x SMA Antenna w/waterproof ,8~26V DC-IN w/1 x M12, Operating Temperatures -30°C ~+70°C

Model	CPU	Memory	SSD1 (OS)	SSD2 (Storage)	POE
CPT100M-125U-8GP	Core Ultra 5 125U	8GB	256GB	1TB	4 x PoE
CPT100M-125U-16GP		16GB			
CPT100M-125U-32GP		32GB			
CPT100M-125U-48GP		48GB			
CPT100M-155U-8GP	Core Ultra 7 155U	8GB	512GB	2TB	
CPT100M-155U-16GP		16GB			
CPT100M-155U-32GP		32GB			
CPT100M-155U-48GP		48GB			

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 representative.