

























Partner Presentation

Scalable and Expandable Vision AI Solution

Wilson Wu, IEI



Edge AI Computing Opportunity

| Industry | % of total edge use cases | 2025 hardware value, ¹ \$billion | Industry | % of total edge use cases | 2025 hardware value, ¹ \$billion |
|---|---------------------------|--|---|---------------------------|--|
|  Travel, transport, and logistics | 24 |  ~35-43 |  Advanced industries | 10 |  ~5-13 |
|  Cross-vertical | 9 |  ~32-40 |  Healthcare | 10 |  ~5-13 |
|  Retail | 10 |  ~20-28 |  Infrastructure | 6 |  ~4-11 |
|  Media and entertainment | 1 |  ~17-25 |  Chemicals and agriculture | 5 |  ~4-11 |
|  Public sector and utilities | 10 |  ~16-24 |  Banking and insurance | 1 |  ~2-7 |
|  Global energy and materials | 13 |  ~9-17 |  Consumer | 4 |  ~1-5 |

Total: ~\$175 billion- \$215 billion

<https://www.i-scoop.eu/edge-computing-explained/>

TANK-XM811 AIoT Dev. Kit

Scalable and Expandable Edge Computing Solution



➤ Launch Date : Q1, 2022

Features

- Intel® R680E Chipset with 12th Generation Intel® Core™ CPU (Codename Alder Lake)
- Dual independent display
- Dual 2.5 GbE LAN
- Rich I/O Design with eight USB 3.2 Gen 2 ports and six COM ports for RS-232/422/485
- Modular chassis design for hardware expansion



Application

- Video surveillance
- Oil station
- Factory automation
- AI inference system

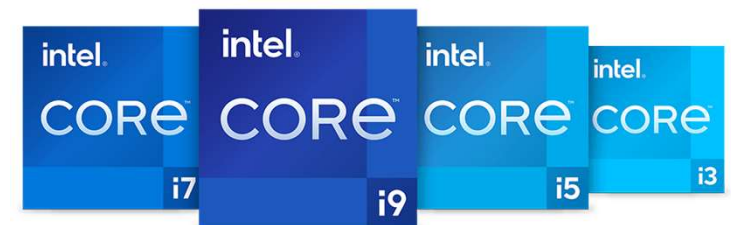
Certificated by Intel® Edge Software Device Qualification (Intel® ESDQ)

Powered by 

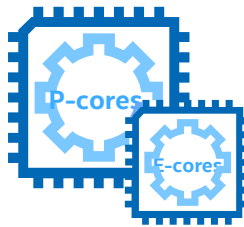
12th Generation Intel® Core™ processor

The IEI TANK-XM811 AIoT Dev. Kit is equipped with 12th generation Intel® Core™ processor and Intel® R680E chipset. This new processor is using Intel® 7 process technology and offering up to 16 cores and 24 threads with Intel® Hybrid Technology for outstanding multi-threaded performance.

- 1st Intel® Core™ Processor on the Intel® 7 process technology
- Up to 16 Cores / 24 Threads for outstanding Multi Threaded performance
- Support PCIe 4.0 and Intel® Wi-Fi 6E for high speed of data and network transmission



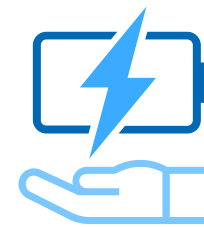
➤ Benefits of Intel® Hybrid Technology



- Intel® Hybrid Technology

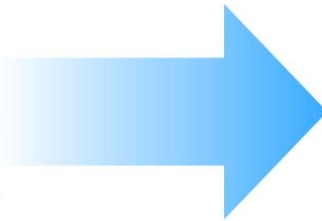
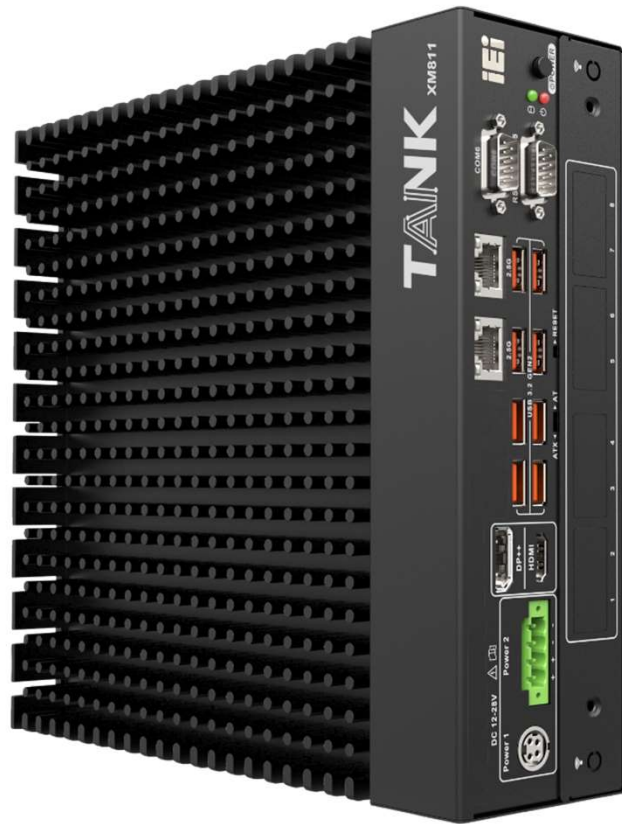


- Improving IoT Workflow



- Saving Power

Main System



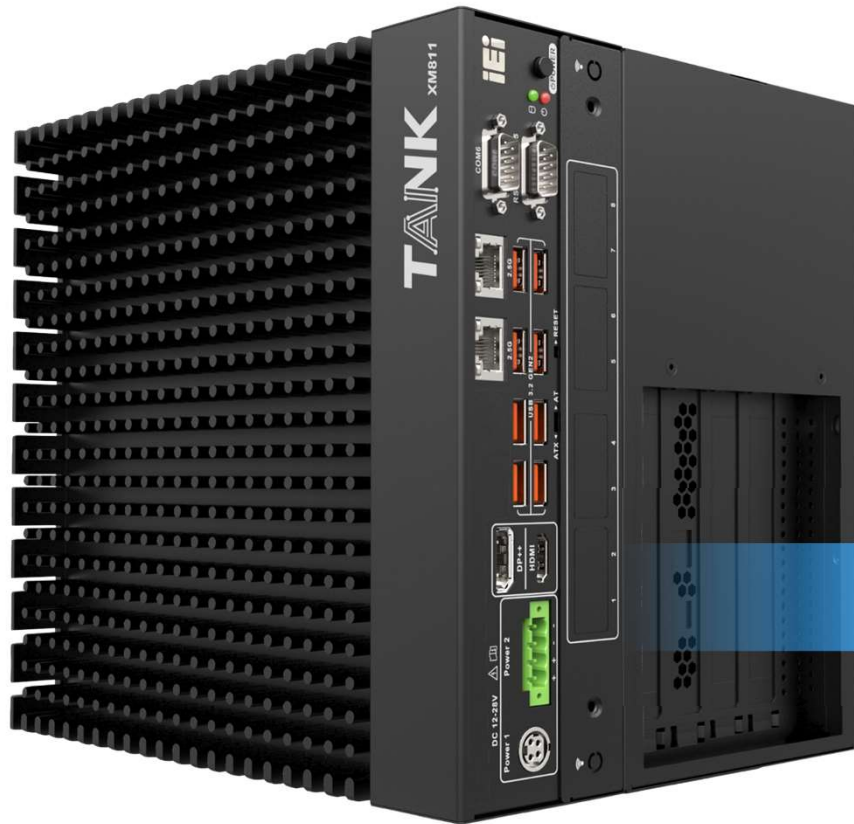
| | |
|-------------------------------------|--|
| Main Body SKU | N/A |
| 2-slot SKU (Support FHHL) | 2 x PCIe x8 |
| 4-slot SKU (Support FHHL) | 1 x PCIe x16 2 x PCIe x4 1 x PCIe x1 |

2-Slot Chassis



| | |
|-------------------------------------|--|
| Main Body SKU | N/A |
| 2-slot SKU (Support FHHL) | 2 x PCIe x8 |
| 4-slot SKU (Support FHHL) | 1 x PCIe x16 2 x PCIe x4 1 x PCIe x1 |

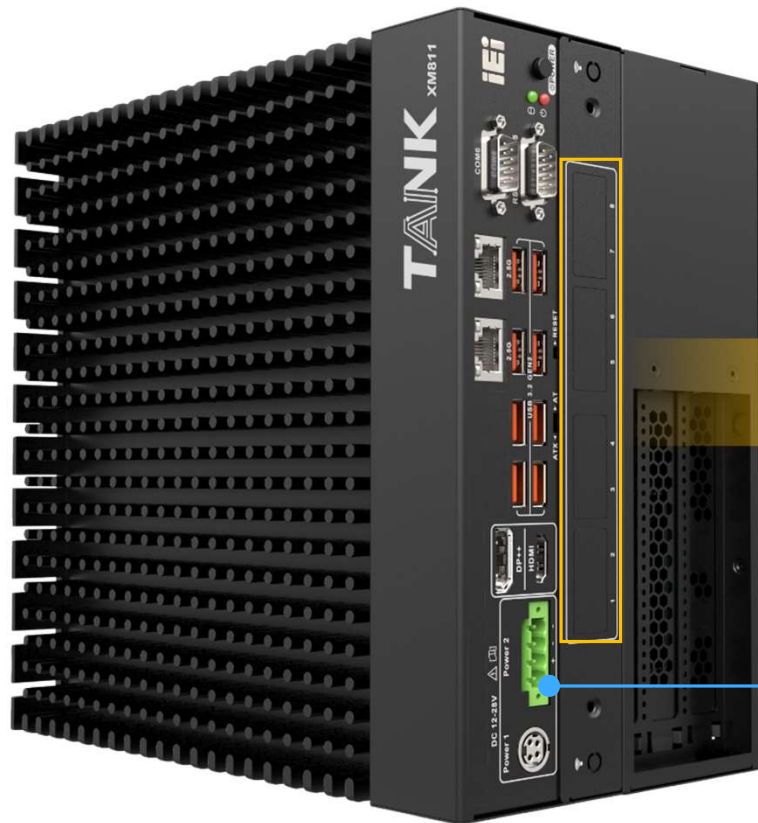
4-Slot Chassis



| | |
|-------------------------------------|-------------|
| Main Body SKU | N/A |
| 2-slot SKU (Support FHHL) | 2 x PCIe x8 |

| | |
|-------------------------------------|--|
| 4-slot SKU (Support FHHL) | 1 x PCIe x16 2 x PCIe x4 1 x PCIe x1 |
|-------------------------------------|--|

Flexible I/O Board (Optional)



| I/O Board | Expansion Slot |
|----------------------|---|
| TXIOB-81A-R10 | 1 x M.2 A-Key 2230 2 x M.2 B-Key 3042/52/80 1 x Full-size Mini PCIe |
| TXIOB-81B-R10 | 8 x I225V 2.5G PoE LAN (IEEE802.3 af, total 60w) |

DC-in: 12 ~ 28V

Defect Classification of AOI

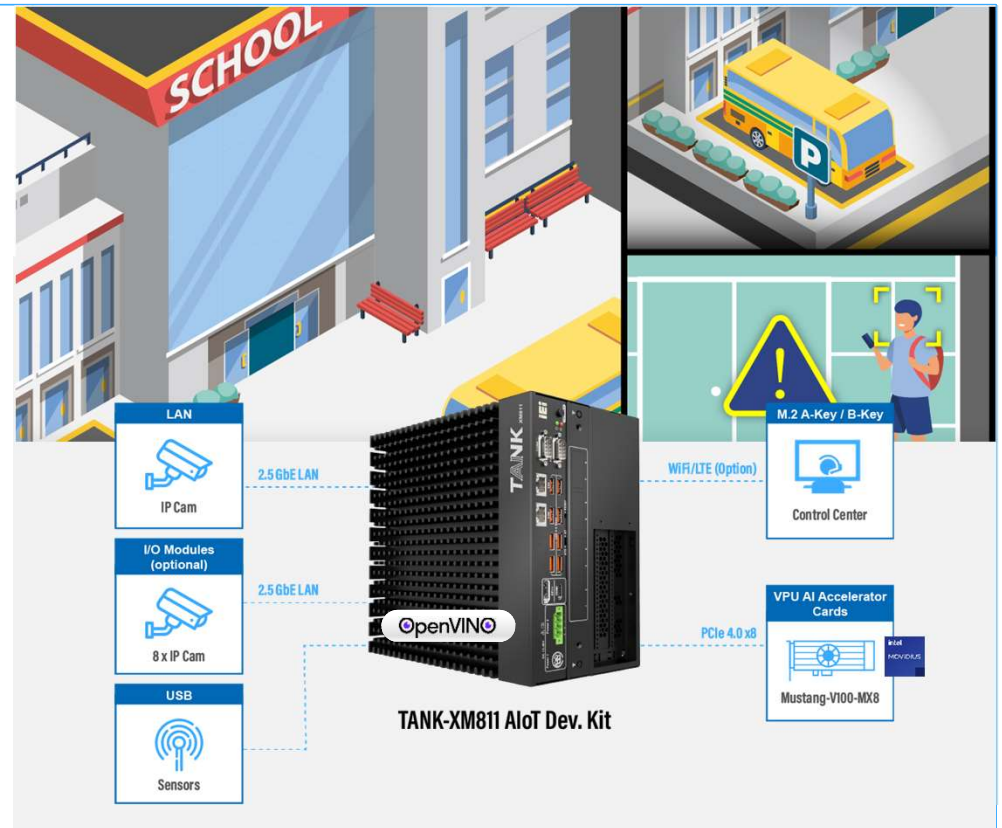
Vision AI enables to support production flow of pilot run in a more accurate, automatic and intelligent way. It is particularly applied in automated optical inspection (AOI) for collaborating with robotics, IP cam or AGV applications to enhance production efficiency, quality, and safety.

The TANK AIoT Dev. Kit features rich I/O ports for connecting with numerous edge devices, and dual PCIe 4.0 x8 slots for providing fast signal transmission speed with add-ons like the Mustang-V100-MX8 AI accelerator cards, graphic cards or PoE cards to optimize the defects detect performance. The higher the accuracy of defects classification, the less cost will be spent on review and repair stations.



AI Surveillance Management in Campus Safety

By identifying and classifying objects in the security video stream, such as people, animals, or vehicles, the system tracks moving objects and triggers an alarm only if that particular object poses a threat, reducing false alarms and making it ideal for low-density areas. The TANK AIoT Dev. Kit features rich USB ports for connecting with various sensors and devices, and adds extra PoE module card supporting up to 10 IP cams in one hardware. This solution can well apply in perimeter intrusion detection systems (PIDSs), crowd management, parking area security and access control in the campus.



IEI & Intel® DevCloud Solution

The IEI x Intel® DevCloud for the Edge allows you to actively prototype and experiment with AI workloads for computer vision on Intel hardware. You have full access to hardware platforms hosted in Intel® cloud environment, designed specifically for deep learning.

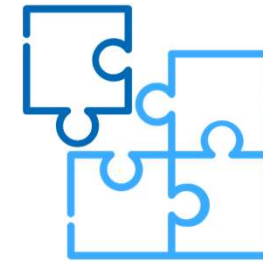
Develop your computer vision applications using the IEI x Intel® DevCloud, which includes a preinstalled and preconfigured version of the Intel® Distribution of OpenVINO™ toolkit. Access reference implementations and pre-trained models to help explore real-world workloads and hardware acceleration solutions.



- **Improve the AI solution developer experience**



- **Mature ecosystem enhancements**

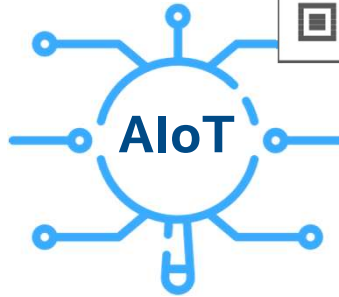


- **New innovative products and features/services**

Explore Edge Computing and Learn More Vision AI with IEI x Intel®



- TANK-XM811 AIoT Dev. Kit



- IoT Development



- IEI & Intel® DevCloud Solution

Call to Action

For more information on TANK-XM811 AIoT Developer Kit, please refer to the following links:

- Product page: <https://www.ieiworld.com/tank-xm811/en/>
- Datasheet: https://www.ieiworld.com/_attach_file/filehub/402.pdf
- Purchase page: http://eshop.usa.ieiworld.com/usa/items.php?CA=2&sub_CA=24

Explore this page to find out more Developer Kits powered by 12th Generation Intel® Core™ Processors:

<https://www.intel.com/content/www/us/en/developer/topic-technology/edge-5g/hardware/12th-gen-core-dev-kit.html>

The background features a complex, abstract pattern of thin, overlapping lines in shades of blue, purple, and gold, creating a sense of motion and depth. A solid teal rectangular box is positioned on the left side of the image, containing the text.

Thank you
for watching!

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