Integrate AI into IOT applications

Open the door to faster deployments of Inference Systems with the TANK AIoT Dev. Kit via the Intel® Distribution of OpenVINO™ toolkit & Intel® Media SDK.

The TANK AIoT Dev. Kit features rich I/O and dual PCIe slots (x16) to support add-ons like the Acceleration cards (Mustang-F100-A10 & Mustang-V100-MX8) or the PoE card to enhance performance and function for various applications.

TANK-AIoT Dev. Kit

- 6th/7th Gen Intel® Core™/Xeon® processor platform with Intel® Q170/C236 chipset and DDR4 memory
- Pre-install OpenVINO™ toolkit for AI inference acceleration
- Support Intel® CPU, GPU, FPGA, VPU acceleration

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TANK AIoT Developer Kit

Feature
- 6th/7th Gen Intel® Core™/Xeon® processor platform with Intel® Q170/C236 chipset and DDR4 memory
- Dual independent display with high resolution support
- Rich high-speed I/O interfaces on one side for easy installation
- On-board internal power connector for providing power to add-on cards
- Great flexibility for hardware expansion
- Pre-installed Ubuntu 16.04 LTS
- Pre-installed Intel® Distribution of Open Visual Inference & Neural Network Optimization (OpenVINO™) toolkit, Intel® Media SDK, Intel® System Studio and Arduino® Create

Specifications

<table>
<thead>
<tr>
<th>Model Name</th>
<th>TANK AIoT Dev. Kit</th>
</tr>
</thead>
</table>

- **Chassis**
  - Color: Black C + Silver
  - Dimensions (WxDxH): 121.5 x 255.2 x 205 mm (4.7” x 10” x 8”)
  - System Fan: Fan
  - Chassis Construction: Extruded aluminum alloys
  - Weight (Net/Gross): 4.2 kg (9.26 lbs)/6.3 kg (13.89 lbs)

- **Motherboard**
  - Intel® Xeon® E3-1288LV5 2.4GHz (up to 3.4 GHz, Quad Core, TDP 35W)
  - Intel® Core™ i7-7700T 2.9GHz (up to 3.8 GHz, Quad Core, TDP 35W)
  - Intel® Core™ i5-7500T 2.7GHz (up to 3.3 GHz, Quad Core, TDP 35W)
  - Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4GHz, quad-core, TDP 35W)
  - Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3GHz, quad-core, TDP 35W)

- **Chipset**
  - Intel® Q170/C236 with Xeon® E3 only

- **System Memory**
  - 2 x 260-pin DDR4 SO-DIMM, 8 GB pre-installed (for i5/i5KBL/i7 sku)
  - 16 GB pre-installed (for i7KBL sku)
  - 32 GB pre-installed (for E3 sku)

- **Hard Drive**
  - 2 x 2.5” SATA 6Gb/s HDD/SSD bay, RAID 0/1 support (1x 2.5” 1TB HDD pre-installed)

- **USB**
  - USB 3.1 Gen 1: 4
  - USB 2.0: 4

- **Ethernet**
  - 2 x RJ-45
  - LAN1: Intel® I219LM PCIe controller with Intel® vPro™ support
  - LAN2 (IRIS): Intel® I210 PCIe controller

- **COM Port**
  - 4 x RS-232 (2 x RJ-45, 2 x DB-9 w/2.5KV isolation protection)
  - 2 x RS-232/422/485 (DB-9)

- **Digital I/O**
  - 8-bit digital I/O, 4-bit input / 4-bit output

- **Display**
  - 1 x VGA
  - 1 x HDMI/DP
  - 1 x iDP (optional)

- **Resolution**
  - VGA: Up to 1920 x 1200@60Hz
  - HDMI/DP: Up to 3840x2160@30Hz / 4096x2304@60Hz

- **Audio**
  - 1 x Line-out, 1 x Mic-in

- **TPM**
  - 1x Infineon TPM 2.0 Module

- **Backplane**
  - 2 x PCIe x8

- **PCIe Mini**
  - 1 x Half-size PCIe Mini slot
  - 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)

- **Power**
  - Power Input: DC Jack: 9 V~36 V DC
  - Terminal Block: 9 V~36 V DC
  - Power Consumption: 19 V@3.68 A (Intel® Core™ i7-6700TE with 8 GB memory)
  - Internal Power output: 5V@3A or 12V@3A

- **Reliability**
  - Mounting: Wall mount

- **Operating Temperature**
  - Xeon® E3 -20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing
  - i7-7700T -20°C ~ 35°C with air flow (SSD), 10% ~ 95%, non-condensing
  - i5-7500T -20°C ~ 45°C with air flow (SSD), 10% ~ 95%, non-condensing
  - i7-6700TE -20°C ~ 45°C with air flow (SSD), 10% ~ 95%, non-condensing
  - i5-6500TE -20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing

- **Operating Vibrations**
  - MIL-STD-810G 514.6 C-1 (with SSD)

- **Safety/EMC**
  - CE/FCC/RoHS

- **Supported OS**
  - Win10/Linux Ubuntu 16.04 LTS

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**Ordering Information**

<table>
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<tr>
<th>Part No.</th>
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<tbody>
<tr>
<td>TANK-870AI-E3/32G/2A-R11</td>
<td>Ruggedized embedded system with Intel® Xeon® E3-1268LV5 2.4GHz, (up to 3.4 GHz, Quad Core, TDP 35W), 32 GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, 2.5&quot; 1TB HDD , TPM 2.0 , 9~36V DC, 120W AC DC power adaptor , RoHS</td>
</tr>
<tr>
<td>TANK-870AI-i7KBL/16G/2A-R11</td>
<td>Ruggedized embedded system with Intel® Core™ i7-7700T 2.9GHz, (up to 3.8 GHz, Quad Core, TDP 35W), 16 GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, 2.5&quot; 1TB HDD , TPM 2.0 , 9~36V DC, 120W AC DC power adaptor , RoHS</td>
</tr>
<tr>
<td>TANK-870AI-i5KBL/8G/2A-R11</td>
<td>Ruggedized embedded system with Intel® Core™ i5-7500T 2.7GHz, (up to 3.3 GHz, Quad Core, TDP 35W), 8GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, 2.5&quot; 1TB HDD , TPM 2.0 , 9~36V DC, 120W AC DC power adaptor , RoHS</td>
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<td>Ruggedized embedded system with Intel® Core™ i7-6700TE 2.4GHz, (up to 3.4 GHz, Quad Core, TDP 35W), 8GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, 2.5&quot; 1TB HDD , TPM 2.0 , 9~36V DC, 120W AC DC power adaptor , RoHS</td>
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**AI Accelerator Card Options**

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<tr>
<td>Mustang-F100-A10-R10</td>
<td>PCIe FPGA Highest Performance Accelerator Card with Arria 10 1150GX support DDR4 2400Hz 8GB, PCIe Gen3 x8 interface, RoHS</td>
</tr>
<tr>
<td>Mustang-V100-MX8-R10</td>
<td>Computing Accelerator Card with 8 x Movidius Myriad X MA2485 VPU, PCIe Gen2 x4 interface, RoHS</td>
</tr>
</tbody>
</table>

**Packing List**

- 1 x Chassis Screw
- 1 x 120W Adapter
- 1 x Mounting Bracket
- 1 x Power Cord
- 1 x QSG

**Fully integrated I/O**

- **Power Switch**
  1. Long-press 2 sec. to power on
  2. Long-press 5 sec. to power off

- **LED**
- **4 x USB 2.0**
- **2 x GbE LAN**
- **2 x RS-232**
- **4 x USB 3.1 Gen 1**
- **2 x RS-232/422/485**
- **DIO**
- **2 x Expansion Slots**
- **Audio**
- **Power2 (DC Jack)**

**Dimensions (Unit:mm)**