

ITG-100AI

- Ultra Compact Size
- Fanless DIN-Rail Embedded System
- Intel Vision Accelerator Design for AI Deep Learning

New



Features

- Intel® Atom™ x5-E3930 1.3GHz (up to 1.8 GHz)
- Two GbE LAN ports
- Two RS-232/422/485
- M.2 A-key slot for expansion
- Pre-installed a Mustang-MPCIe-MX2 that has two Intel Myriad X VPU for AI deep learning workload consolidation



Application

The ITG-100AI is pre-installed with a Mustang-MPCIe-MX2 AI accelerator card, which includes two Intel® Movidius™ Myriad™ X VPU, to provide a flexible AI inference solution.

VPU is short for vision processing unit. It can run AI faster, and is well suited for low power consumption applications such as surveillance, retail and transportation. With the advantage of power efficiency and high performance to dedicate Deep Neural Networks (DNN) topologies, it is perfect to be implemented in AI edge computing device to reduce total power usage, providing longer duty time for the rechargeable edge computing equipment.



Surveillance



Retail



Transportation

Key Features of Intel® Movidius™ Myriad™ X VPU

- Native FP16 support
- Rapidly port and deploy neural networks in Caffe and Tensorflow formats
- End-to-End acceleration for many common deep neural networks
- Industry-leading Inferences/S/Watt performance

Ultra-compact Size

Space limitation is one of the constraints commonly seen in today's industrial environment. Under tight restrictions, the ITG-100AI not only provides palm-sized design to meet the space requirement, but also comes with adequate basic I/O interfaces for various applications.

10X Higher Performance
1 Trillion operations per second

1 TOPS
1 Trillion operations per second of dedicated neural networks compute

Movidius MA2485 Myriad X

ULTRA Low power



Specifications

Model Name	ITG-100AI		
AI Accelerator Card	Model Name	Mustang-MPCIE-MX2	
	Main Chip	2 x Intel® Movidius™ Myriad™ X MA2485 VPU	
	Supported Topology	AlexNet, GoogleNetV1/V2, Mobile_SSD, MobileNetV1/V2, MTCNN, Squeezenet1.0/1.1, Tiny Yolo V1 & V2, Yolo V2, ResNet-18/50/101	
Chassis	Color	Blue & Silver	
	Dimensions (WxDxH)(mm)	137 x 102.8 x 49.4	
	System Fan	Fanless	
Motherboard	Chassis Construction	Extruded aluminum alloy	
	CPU	Intel® Atom™ x5-E3930 1.3 GHz (up to 1.8 GHz, dual-core, TDP 6.5W)	
	Chipset	SoC	
Storage	System Memory	1 x SO-DIMM DDR3L 1600/1867 (8GB pre-installed)	
	SATADOM	1 x 128GB pre-installed	
	eMMC	1 x eMMC5.0 (up to 32GB)(optional)	
I/O Interfaces	Micro SD	1 x Micro SD slot	
	USB	2 x USB 3.2 Gen1	
	Ethernet	2 x RJ-45: 2 x GbE by Intel® I211	
	COM Port	2 x RS232/422/485 with AFC (DB9/RJ45)	
	Display	1 x VGA (up to 1920 x 1080@60Hz)	
	Wireless	1 x 802.11a/b/g/n/ac (optional)	
	Other	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow)	
	Expansions	M.2	1 x 2230 A-key (PCIe x 1/USB 2.0)
	Power	Power Input	Terminal block: 9 ~ 36V DC
		Power Consumption	12V @ 1.2A (Intel® Atom™ E3930 with 8GB memory)
Reliability	Mounting	DIN-Rail	
	Operating Temperature	-20°C ~ 50°C with air flow, 10% ~ 95% non-condensing	
	Storage Temperature	-20°C ~ 70°C with air flow, 10% ~ 90% non-condensing	
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)	
	Weight (Net/Gross)	895g/ 1.7kg	
	Safety/EMC	CE/ FCC	
	Watchdog Timer	Programmable 1 ~ 255 sec/min	
	OS	Supported OS	Microsoft® Windows 10, Linux Ubuntu 16.04 LTS

Ordering Information

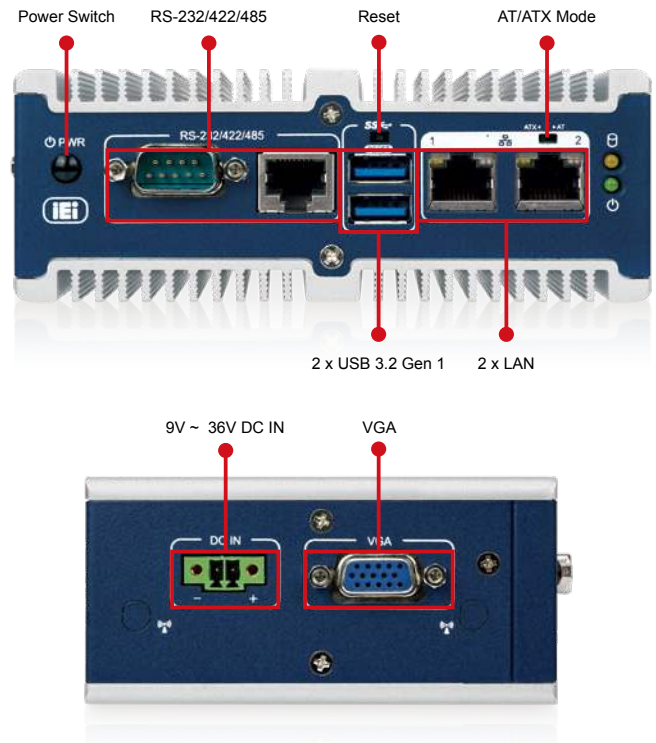
Part No.	Description
ITG-100AI-E1/8GB/S-R10	Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), 8GB DDR3L pre-installed memory, VGA, M.2, COM, 9-36V DC, Mustang-MPCIE-MX2 and RoHS

Options

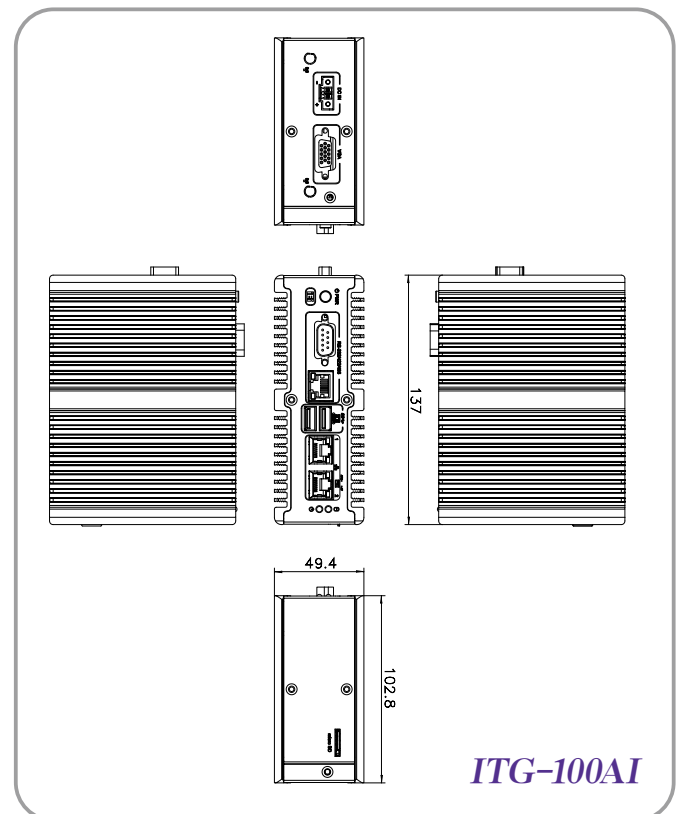
Item	Part No.	Description
Wi-Fi Module	27319-000009-RS*	Wireless Lan Module; Wireless LAN & Bluetooth M.2 Module; Sparklan; R9701810011; IEEE802.11a/b/g/n/ac; 2.412GHz~2.4835GHz, 5.15GHz~5.85GHz; M.2 2230; ;3.3V; 22*30*2.15mm; QCNFA364A; QC A6174A-5; 2x2 MIMO; Dual Band; WCBN808A-Q2; CCL; RoHS
Antenna	32505-000900-100-RS*	External Antenna; WLAN; RG 178; 108MM; TANK-700-QM67-R10; PEAK GAIN 2.0DBI; Exceltek; 2.4-2.5GHz/5.15-5.85GHz; REVERSE SMA PLUG; RoHS
RF Cable	32501-004000-100-RS*	RF; RF CABLE; LINE DIAMETER: 0.81mm; 250MM ;;; 50Ω; Sparklan; 0-6GHz; VSWR≤1.3; I-PEX MHF-4 Plug; REVERSE SMA JACK; NUT*1; WASHER*1; ;RoHS

* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

Fully Integrated I/O



Dimensions (Unit: mm)



Packing List

1 x Screw kit	1 x 36W power adapter
1 x Din-rail mounting bracket	1 x Power cable
1 x RJ-45 to DB-9 COM port cable	1 x Power Cord