VTC 7251-IMIoT

Intel® Movidius™ AI Edge Vehicle Solution
with Intel® Core™ 8th Gen CPU





Main Features

- Built-in Intel® Movidius™ Myriad-X mPCIe deep learning accelerator module
- Intel® Core™ 8th Gen desktop, i7-8700T, up to 4 GHz, 6 Core
- 4 x Independent 10/100/1000 Mbps PoE 802.3af/at, total 60W
- 1 x VGA and 1 x HDMI video output
- 2 x External SSD and 2 x mSATA (BIOS selection) for RAID 0, 1
- 3 x WWAN module slot, each for 2 x external SIM socket
- 4 x mini-PCIe slot and 1 x M.2 B key slot
- CE/FCC/E mark

Product Overview

NEXCOM mobile surveillance system VTC 7251-IMIoT accomplishes operational efficiency of public transportation and service. Based on the 8th generation Intel® Core™ processors i7-8700T, VTC 7251-IMIoT provides an integral solution incorporating high computing power, 4 port of independent PoE, wireless communication (3 x WWAN + 6 x SIM) and GNSS tracking with optional Dead Reckoning (DR) support to record in-vehicle activities, locations, high quality videos, driving patterns, and vehicle diagnostics for buses and patrol vehicles achieving better measures for safety and management.

Specifications

CPU

- Intel® Core™ 8th Gen i7-8700T, up to 4 GHz, 35W, 6 Core
  - Compatible Intel® Core™ 9th Gen (Coffee Lake Refresh)

Chipset

- Intel® Q370 platform controller hub

Myriad-X mPCIe Deep Learning Accelerator Module

- 1 or 2 Myriad X MA2485 VPU
- Per VPU with
  - Up to 1 TOPS
  - 16 programmable 128-bit VLIW vector processors
  - CPUs 2 x LEON 4 cores (RISC; SPARC V8)
  - On-chip accelerators 20+ image/vision processing accelerator Neural compute engine (DNN accelerator)
  - Neural network capability neural compute engine
- Operating voltage: 3.3V +/- 10 %
- Dimensions: 51mm x 30mm x 2.5 mm

Memory

- 2-Channel 204-pin DDR4 SO-DMIM sockets up to 32GB/channel (64GB for two channels, non-ECC up to 2666 MHz), default 4GB + 4GB industrial grade memory

Video Output

- Chipset Intel® UHD Graphics 630
- 1 x HDMI 1.4b up to 4096 x 2160 @ 30Hz
- 1 x VGA up to 1920 x 1200 @ 60Hz

Storage

- 2 x 2.5" SATA 3.0 external SSD (compatible with 15mm height), RAID 0/1 supported
- 2 x mSTAT 3.0 (BIOS selection)

Expansion

- 1 x Full size mini-PCIe socket (USB 2.0, PCIe 3.0 & SATA 3.0 (BIOS selection))
- 1 x Full size mini-PCIe socket (USB 2.0, PCIe 3.0 & SATA 3.0 (BIOS selection))
- 1 x Full size mini-PCIe socket (USB 2.0), optional M.2 key B (USB 2.0, USB 3.0)
- 1 x Full size mini-PCIe socket (USB 2.0), optional M.2 key B (USB 2.0, USB 3.0)
- 1 x M.2 key B (USB 2.0, USB 3.0)

GNSS and On Board Sensor

- 1 x Default U-blox NEO-M8N GNSS module for GPS/Gloness/QZSS/ Galileo/Beidou
- Optional modules with dead reckoning available
- TPM 2.0 by Infineon SLB9665TT2 (BOM option)
- G Sensor (3-axis, 10-bit resolution)

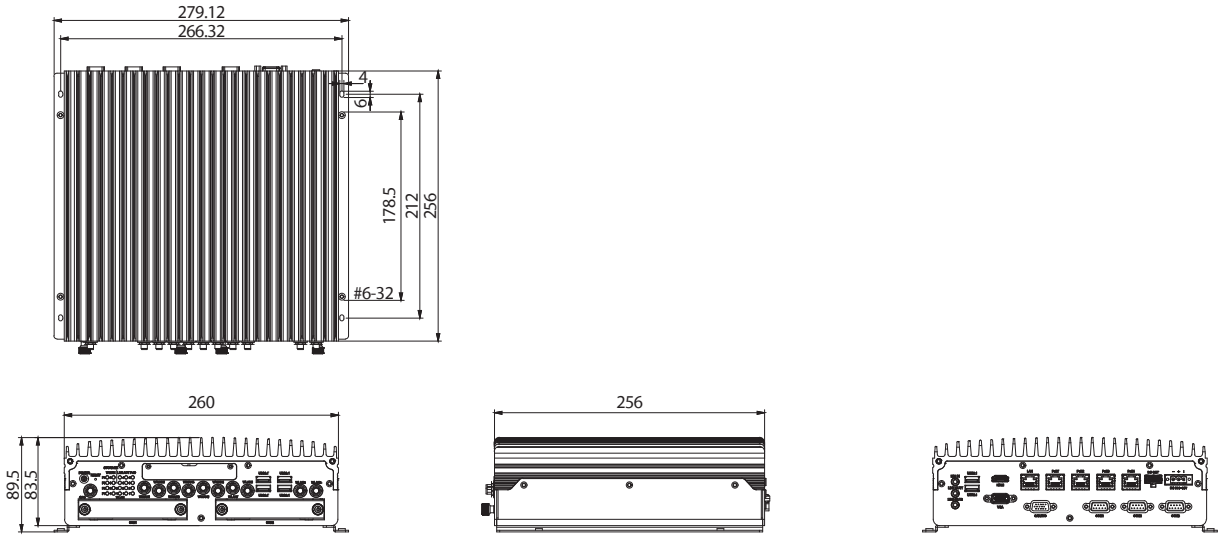
Power over Ethernet

- 4 x Independent LAN, 10/100/1000 Mbps I210-IT GbE, PoE 802.3af/ at, max. 60W
- 1 x LAN, 10/100/1000 Mbps I219 support iAMT and WOL

I/O Interface-Front

- 20 x LED indicators (including 4 x programmable LED)
- 4 x USB 3.1 type A (5V/1A)
- 6 x Externally accessible SIM card sockets (4 x WWAN + 8 x SIM, BOM option)

Dimension Drawing



- 1 x Reset button
- 1 x Power button with LED
- 2 x 2.5" external SSD
- 11 x SMA antenna hole (GPS/WWAN/WLAN)

I/O Interface-Rear

- 4 x RJ45 PoE 802.3af/at, max. 60W
- 1 x RJ45 LAN port, 10/100/1000 Mbps
- 1 x 3-pin terminal block for 9V~36VDC
- 1 x Connector (4 x 2) for 12VDC/2A output, power button, 2 x MDI
- 1 x Mic-in, 2 x Line-out
- 2 x DB9 for full RS232
- 1 x DB9 for full RS232/422/485 (RI, 5V/0.5A, 12V/0.5A)
- 1 x DB15
  - 1 x Isolated CAN Bus 2.0B
  - 1 x GPS DR (option)
  - 4 x DI and 4 x DO
- 2 x USB 3.1 type A (5V/1A)
- 1 x HDMI 1.4b
- 1 x VGA

Power Management & Software Support

- Power input 9~36VDC
- Cranking voltage: 6V~9V (< 30 seconds)
- Reverse protection, OCP & UVP
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level power on/off delay time by software
- 10~255 seconds WDT support, setup by software
- SDK (Windows/Linux) including utility and sample code

Operating System

- Windows 10
- Linux

Dimensions

- 260 x 256 x 83.5 (W x D x H) (mm)

Weight

- 4.2kg

Environment

- Operating temperatures
  - -30°C~60°C (w/ industrial SSD) with air flow
- Storage temperatures: -40°C~80°C
- Relative humidity: 90% (non-condensing)
- Vibration (random)
  - 2g@5~500 Hz (in operation, SSD)
- Vibration (SSD)
  - Operating: MIL-STD-810G, Method 514.6, Category 4, common carrier US highway truck vibration exposure
  - Storage: MIL-STD-810G, Method 514.6, Category 24, minimum integrity test
- Shock (SSD)
  - Operating: MIL-STD-810G, Method 516.6, Procedure I, functional shock=40g
  - Non-operating: MIL-STD-810G, Method 516.6, Procedure V, crash hazard shock test=75g

Certifications

- CE approval
- FCC Class A
- E13 mark

Order Information

- **VTC 7251-IMIoT (P/N: TBC)**
  Intel® Core™ 8th Gen i7-8700T, 2 x 4 GB industrial grade memory, Intel® Myriad-X mPCIe deep learning accelerator card, VGA & HDMI output, 2 x external SSD, 1 x LAN, 4 x PoE 802.3af/at (total 60W), 4 x mini-PCIe slot, 1 x M.2 slot, 6 x external SIM, 6 x USB 3.1, 2 x RS232 (full), 1 x full RS232/422/485, 4 x DI & 4 x DO

We reserve the right to change specifications and product descriptions at any time without prior notice.