Concepion®-jXa-v4-Q670E

Extreme compact and fanless high performance measurement system for ADAS development in vehicles

Features

- *High-Performance with Intel® Core™ i CPUs 12th/13th/14th Generation*

- *Incl. Wi-Fi/Bluetooth, GNSS/LTE*

- *Two 2.5″ shuttles with hot-swap function*

- *Passive cooling for flexible and quiet use*

- *Resistant to shocks and vibrations*

- *USB-C & 3x 2.5 GBit LAN for fast data transfer*

Configuration example
Further configurations on request!

Mainboard:
Industrial Mainboard (mini-ITX), 24/7 operation, long-term available

Processor:
Intel® Core™ i 12th/13th/14th Generation
Intel® Pentium® / Celeron®
(up to 35 Watt)
Chipset: Intel® Q670E
Intel® Turbo-Boost: Depends on the selected configuration

Graphic:
Onboard Intel® UHD 730/770
(depends on CPU)

Memory:
2x DDR5 SO-DIMM, max. 64GB

Drive Bays:
2x 2.5" (in removable frame)

I/O:
1x 1 GBit LAN (RJ45)
3x 2.5 GBit LAN (RJ45), vPro support
2x USB 3.2 (Gen 2)
1x USB 3.2 (Gen 1)
1x USB-C 3.2 (Gen 2)
6x USB 2.0
1x RS-232/422/485
3x DisplayPort 1.4
1x HDMI 2.0
2x Audio (Line-In, Line-Out)
2x PS/2 (Mouse and Keyboard)
Internal
1x USB-A 3.2 (Gen 2)
1x GPIO Header (8 Bit), 3.3 Volt

Features:
Watchdog Timer, iAMT
SPI TPM Header, Onboard PTT (dTPM)

Operating System:
Microsoft® Windows® 10/11, Linux®

Power Supply:
11 ~ 32 VDC, 95 Watt, M2-ATX
XLR connector (Neutrik) four-pin
with ignition pin, XLR conn. incl.
Optional
ext. power supply 100 ~ 264 VAC
XLR angled plug 90°

Expansions:
Additional expansions
for automotive applications
(Ethernet, CAN, LIN®, etc.)

Communication:
Wi-Fi/Bluetooth
Intel® M.2 Module, 802.11ax Dual
Band, Bluetooth® 5.1
GNSS/LTE
Support for GPS, GLONASS, BeiDou,
Galileo, QZSS
Micro SIM slot for 3G/4G
(On request: 5G with additional
antennas)

Mechanical:
Chassis
1 mm sheet steel, powder coated
Heat sink extruded aluminum
profile
Dimensions (W x H x D)
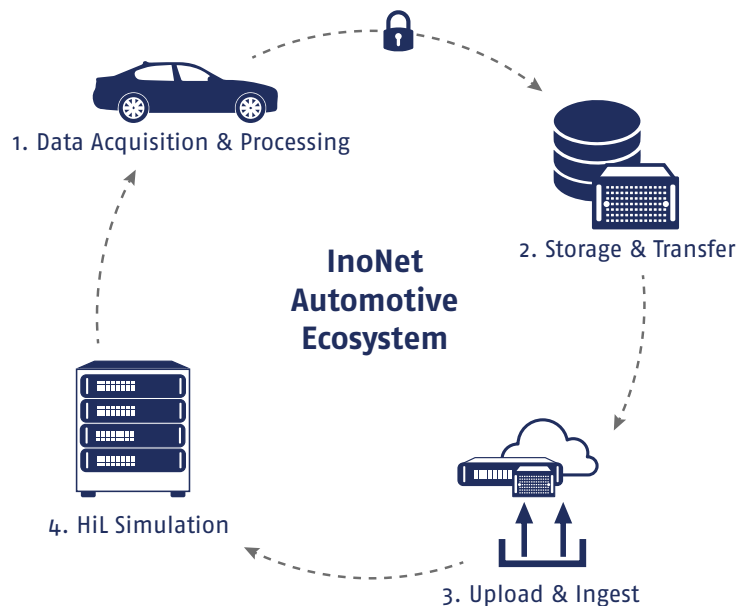200 x 126 x 206 mm
Cooling
Passive

Environment:
Operating Temperature
-10° ~ 55° C
Shock
5 g / 2 ms
Vibration (operation)
0.6 g (10 – 200 Hz)
Storage Temperature
-20° ~ 70° C
Relative Humidity (operation)
10 ~ 90 % (non condensing)
IP Protection
IP20

The InoNet Automotive Computing Ecosystem
The complete range of hardware solutions for the automotive industry

The challenge in ADAS and AD development

The development of driver assistance systems (ADAS) and autonomous driving automobiles entails an increased effort due to testing and validation of complex hardware and software with multiple test procedures. The extremely complex computational processes should be outsourced to HiL, SiL and ViL, if possible, in order to achieve faster, more cost-efficient and reproducible validation. On the way from autonomous driving level 3 to 5, the data volumes increase exponentially. In addition to this, the hardware in the vehicle is exposed to increased temperature, stronger shocks and vibrations during test operations and must withstand these environmental conditions in reliable continuous operation.

1. Data Acquisition & Processing

2. Storage & Transfer

InoNet Automotive Ecosystem

3. Upload & Ingest

4. HiL Simulation

The solution from InoNet

InoNet systems offer tremendous computing power and ruggedness to industrial standards and are optimally designed for use in vehicles. They can easily withstand increased temperatures, shocks and vibrations and are all equipped with wide-range power supplies (with ignition signal support, terminal 15). The scalable data volume make the In-Vehicle PCs ideal for high-speed data logging applications. Thanks to the use of hard disks in the removable frame as well as in the QuickTray®, data carriers can be exchanged quickly and without tools. AI applications can also be developed and tested both inside and outside the vehicle by using the latest GPU generations with the highest performance.

InoNet Competences and Services

Consulting   Development   Testing   Customization   Manufacturing   Certifications

UL CE ISO 9001

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