Compact medical PC & Kitting service

Comprehensive AI reading support for colonoscopy solution

LPIXEL Inc. Case Study

GPU with Medical PC for AI reading support

IEI provides medical design, procurement and assembly

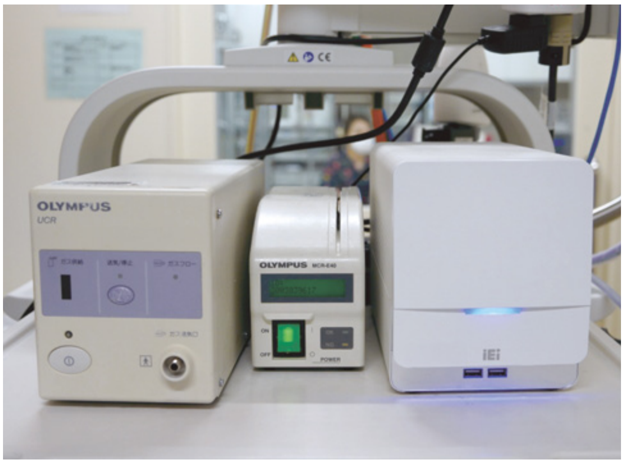
- We are developing an AI image diagnostic assistive technology that detects polyps during colonoscopy and assists physicians in diagnosis.
- After developing diagnostic support software, they were looking for hardware (PC) to use in a formal release.
- One of the key requirements was that it be small enough to fit inside the cart in which the colonoscopy system is mounted, while incorporating both the GPU and capture board.
- HTB-210 is compact, yet can accommodate the GPU and capture board, and fits in an colonoscopy cart without sacrificing performance.
- And, QNAP Japan undertook the total procurement and assembly (kitting) of GPU and capture board on behalf of the client, thereby saving internal resources and consolidating procurement to a single source.

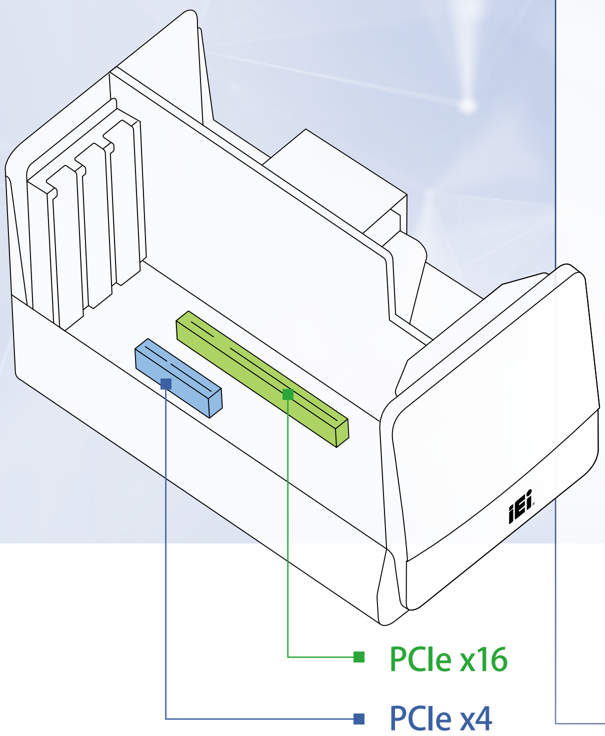
Issues

- Prototype in RD phase uses gaming PC.
- Equipped with GPU and SDI capture board, and connect to colonoscopy system display.
- Large PC had used because this system need 3 slots spaces of PCI express.
- Large PC were not preferred because of limited space for colonoscopy rooms.
- PC/GPU/Capture board had procured from different sources.

Solutions

- LPIXEL selected the HTB-210-Q470, because it is the most compact product with the necessary specifications.
- Attractively sized to fit inside a cart equipped with a colonoscopy system.
- Procurement of GPU and capture board from other vendors, and assembly services.





HTB-210-Q470

Intel® Core™ i7-10700 / i5-10500

- Dimension (LxWxH)
  140 x 306.7 x 171 mm
- System Memory
  2 x DDR4 SO-DIMM
- Storage
  1 x 2.5" SATA HDD/SSD
  1 x M.2 2280 M key
- Display
  1 x HDMI up to 4096 x 2304 @30Hz
- PCIe
  1 x PCIe 3.0 x4 slot
  1 x PCIe 3.0 x16 slot
- OS Supported
  Windows 11, Windows 10, Linux

Results

HTB-210 is currently in use at medical institutions in Japan, installed in a cart equipped with a colonoscopy system.
The capture board in HTB-210 captures colonoscopy video at 30 fps, and the captured frames are analyzed by AI, and then the results are displayed on the monitor in real time.
HTB-210 is small enough to be installed inside a colonoscopy cart, in addition to running the developed AI software stably. Because it does not interfere with the colonoscopist, it is easier to have AI imaging support software installed.
QNAP Japan also take care of procurement and assembly (kitting), so even when expanding business, it is able to procure hardware with minimal use of limited internal resources.

“ HTB-210 is compact with expandability, including GPU and capture board, allowing to operate AI diagnostic imaging support software without interfering with medical practice.”

– Akihiro Fukuda, COO (Director), LPIXEL Inc.

LPIXEL provides "EIRL" that is the AI medical image diagnostic support technology, and "IMACEL" that is an image analysis AI for the drug discovery process.

LPIXEL Inc.

Founded March 4, 2014
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About QNAP Japan

IEI was founded in 1997, and now has a global presence with more than 1,400 employees worldwide.
QNAP Japan (QNAP K.K.) was established in 2014 as the Japanese subsidiary of the IEI Group, providing sales and technical support for IEI and QNAP products.

Process Estimation → Procurement → Payment → Delivery → Receive

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