

Advance Image/Video Processing Lab

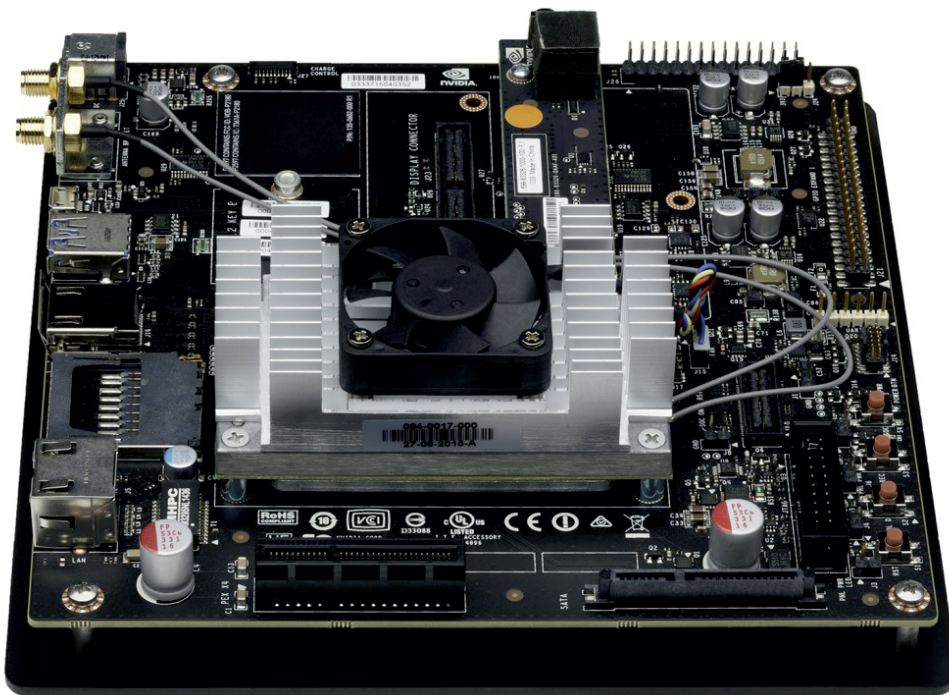
for Research & Skilling

Edutech offers a complete Advance Image/Video Processing Lab to demonstrate working with multi core GPU environment for Research & Advance Learning.

Features:

- Lab focuses on getting started with the use of graphic libraries for advance image and video processing, CUDA Programming etc.
- Pre-requisite lab solution for learners looking for advance computer graphics, virtual reality, Artificial Intelligence, advance robotics, Machine learning, deep learning, mobile computing, gaming etc.
- Lab contains embedded GPU kit from NVIDIA along with Edutech Learning Resources and accessories.

Advance Image/Video Processing GPU kit



Features of Kit

- Hexa Core CPU
- 256-core Pascal GPU
- 8GB LPDDR4, 128-bit interface
- 32GB eMMC
- 4kp60 H.264/H.265 encoder & decoder
- Dual ISPs (Image Signal Processors)
- 1.4 gigapixel/sec MIPI CSI camera ingest for higher Frame per Second
- Ports and Peripherals includes HDMI 2.0, Ethernet, Bluetooth, USB 3.0, WIFI, SATA, SD CARD, UART, SPI, I2C, GPIO etc

Research Area

- Machine Vision
- Robotics
- Deep Learning Model Inference
- Machine Learning
- Medical Imaging
- Gaming
- Virtual Reality
- NLP And Many More....

Skill sets :



Image Processing



Image Rendering



Parallel Computing



NVIDIA.
VISIONWORKS™

Hardware Accelerated
Graphics



Hardware Accelerated
Image Rendering

Tools:



USB Hard Disk

Preconfigured Host image with Linux Operating System, necessary software tools, IDE, Compilers, other utilities and reference examples with source code and documentation



SSD Hard Disk (Optional)

120GB Expandable Memory with Lab work and Deep Learning Examples

Accessories:



USB HUB, Mouse, Keyboard, USB Camera and HDMI Screen (Optional)

* Images shown are for reference only

Supported Camera Interface*:

Camera	Output format	Max. Resolution	Frame rate
USB camera	color/mono	1920x1200	163
Ethernet camera	color/mono	2048x1536	35
CSI-MIPI camera	YUV420	1948x1096	30
		1948x1096	60
		1948x1096	120
Stereo camera	Raw (RGB)	1 MP (1280 x 800)	100
Thermal Camera MIPI interface	Raw	80x60	8.6

*Optional cameras can be interfaced for research work.

Recommended Departments for Advance Image/Video Processing Lab:

The lab is useful to (but not restricted to) Professors, Research Scholars and other students from various University departments & Engineering streams.

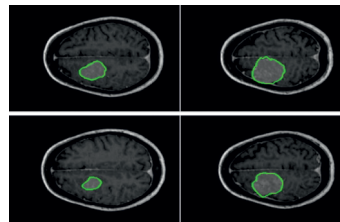
University Departments: Engineering Streams:

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Biotechnology • Mathematics • Physics • Botany • Chemistry • Microbiology | <ul style="list-style-type: none"> • Computer Science, • Electrical and Electronics, • Mechanical, • Chemical, • Metallurgy, • Aeronautical |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Training & Workshop Programs on Advance Image/Video Processing are available. For more details, mail us on info@edutechlearning.com or visit www.edutechlearning.com

This lab can be clubbed with the Deep Learning Setup for research based on Speech/NLP, Image/Video (Segmentation, regression, detection etc using data sets)

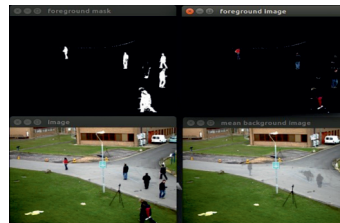
Application:



Biomedical Application



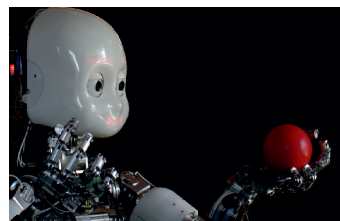
Autonomous Driving



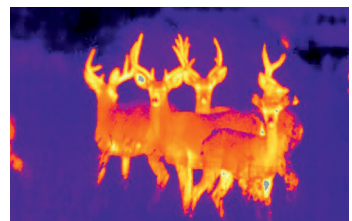
Surveillance and Motion Detection



2D/3D graphics development



Robotics



Thermal Vision

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