Jetson X1

SYSTEM-ON-MODULE

PRODUCT DESCRIPTION

The Jetson X1 is the latest of CEI's exciting, embedded NVIDIA products! Designed to bring the power of the new Tegra X1 Maxwell Architecture to the embedded market, the Jetson X1 features a plethora of I/O to integrate into your system, including MIPI CSI-2, USB, Ethernet, PCIe, WiFi, Bluetooth, UART, SPI, I2C, I2S, and GPIO. The Jetson X1 is perfect for video analytics, featuring a mind-blowing 1 TFLOPs (FP16), and can process 4K video at up to 60 FPS using hard H.265 and H.264 encoding and decoding. The X1 features a quad core A57 in a big.LITTLE architecture for power optimized use. Using NVIDIA's well developed software ecosystem, developers can create complex computer vision applications with ease using cuDNN and the Deep Learning GPU Training System (DIGITS), as well as other libraries from CUDA 7.5. The X1 can also be used in other demanding compute applications to include security, medical, and robotics.

FEATURES

Components

- 256 CUDA Cores
- 8 CPU cores, 64-bit (4x Cortex A57)
- NVIDIA Maxwell Architecture
- 4 GB LPDDR4-3200
- 16 GB eMMC 5.1
- 802.11ac 2x2 MIMO WiFi and Bluetooth
- 1 TFLOPs (FP16)
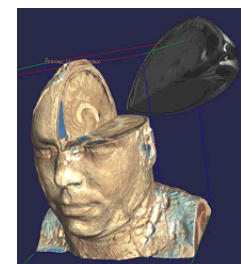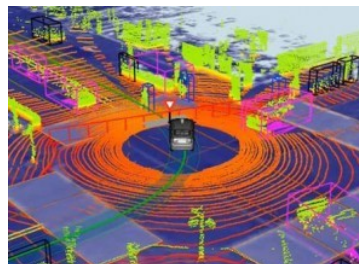- Onboard IMU
- Auto power up

I/O

- 6x CSI (12 lanes, 6 cameras)
- HDMI 2.0
- MicroSD and SATA 2.0
- USB 3.0, USB 2.0
- 1 GbE
- x1 and x4 PCIe Gen 2
- 2x UART, 2x SPI, 3x I2C, 3x I2S, GPIOs

Software

- Ubuntu Linux (Linux4Tegra)
- NVIDIA CUDA 7.5
- OpenCV
- OpenCX
- Caffe
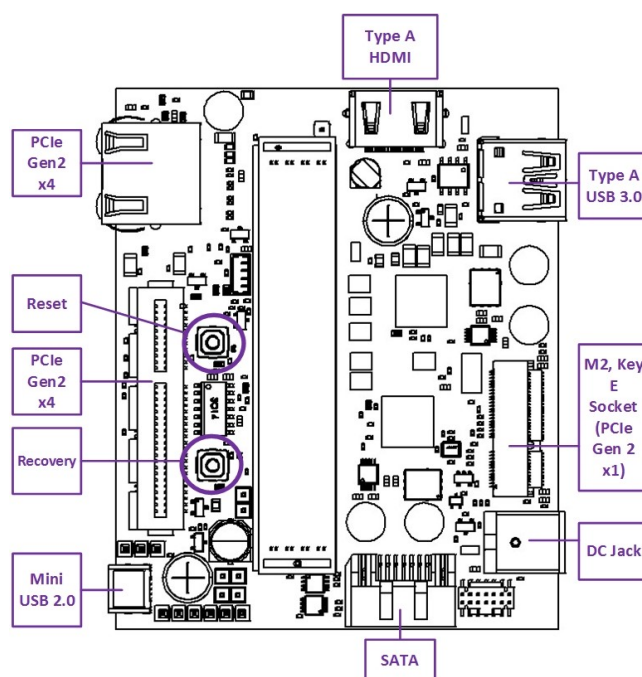- Theano
- Torch
- cuDNN, cuBLAS, etc
- C/C++
- Python & PyCUDA

Not quite what you need? Need a custom version? CEI offers custom NVIDIA Jetson solutions. Contact us to learn more.
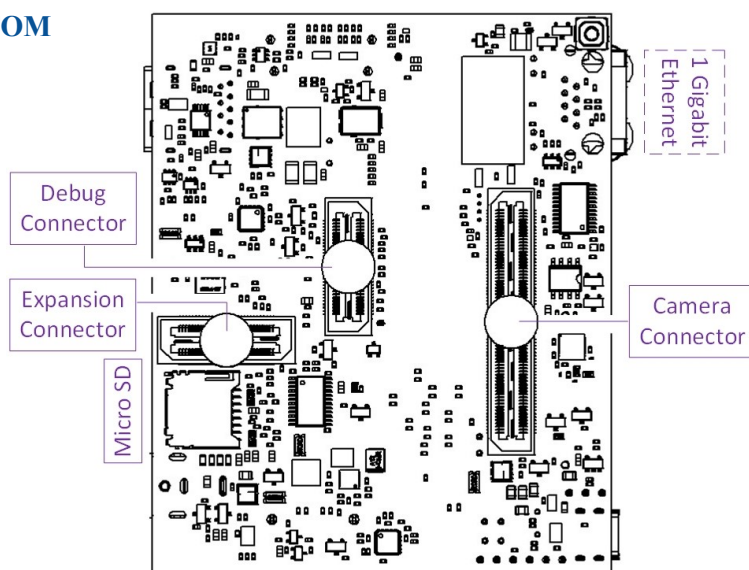
SPECIFICATIONS

Dimensions/Weight	Power	Environmentals	Warranty
• Length: 8.89 cm / 3.5 in • Width: 7.62 cm / 3 in • Height: 5.08 cm / 2 in • 680.389 g / 1.5 lbs	• External 19V AC adapter	• 10 year life cycle support • Automotive grade • Operating -20° C to 55℃ • Storage : -40° C to 75° C • 10G shock • Custom temperature testing available	• Standard 30 days • Extended options available

TOP

Type A HDMI

PCIe Gen2 x4

Type A USB 3.0

Reset

PCIe Gen2 x4

Recovery

M2, Key E Socket (PCIe Gen 2 x1)

DC Jack

Mini USB 2.0

SATA

BOTTOM

1 Gigabit Ethernet

Debug Connector

Expansion Connector

Micro SD

Camera Connector

nVIDIA TEGRA X1