

NVIDIA® JETSON™ TX1 SYSTEM-ON-MODULE

FULL-FEATURED MODULE FOR INTELLIGENT DEVICES

JETSON TX1 IS A FULL-FEATURED SUPERCOMPUTER ON A MODULE THE SIZE OF A CREDIT CARD.

This technology breakthrough gives you the performance and power efficiency to create next-generation products targeting GPU computing, computer graphics, and artificial intelligence (AI).

Jetson TX1 provides a variety of standard hardware interfaces that can be exposed using a carrier board, enabling a highly flexible and extensible platform. It's the ideal solution for all your use cases that demand high computational performance in a low-power envelope. The module is supported by NVIDIA's complete development tool chain, including a variety of common APIs. The Jetson SDK, JetPack, includes a Linux BSP and sample filesystem for your device, developer tools, libraries for AI, Compute, Multimedia, and Graphics, supporting documentation, and code samples to help you get started.

For detailed specifications, design guides, and JetPack, go to <http://developer.nvidia.com/embedded-computing>.

KEY FEATURES

Jetson TX1 System-on-Module

- > NVIDIA Maxwell™ GPU with 256 NVIDIA CUDA® cores
- > Quad-core ARM® Cortex®-A57 MPCore processor
- > 4 GB LPDDR4 memory
- > 16 GB eMMC 5.1 flash storage
- > Connectivity with 802.11ac wireless LAN and Bluetooth-enabled devices
- > 10/100/1000BASE-T Ethernet

Power

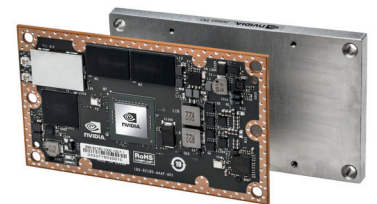
- > Voltage input: 5.5 V-19.6 V DC
- > Maximum module power: 6.5 W-15 W*

Software

- > Linux for Tegra driver package, including Ubuntu-based sample filesystem
- > AI, Compute, Multimedia, and Graphics libraries and APIs

I/O

- > USB 3.0
- > USB 2.0
- > HDMI/eDP/DSI
- > PCI-E x4
- > Gigabit Ethernet
- > Full-Size SD
- > SATA data and power
- > GPIOs, I2C, I2S, SPI**
- > TTL UART with Flow Control
- > Display expansion header**
- > Camera expansion header**



CONTENTS

- > NVIDIA Jetson TX1
- > Attached Thermal Transfer Plate (TTP)

TECHNICAL SPECIFICATIONS Jetson TX1 System-on-Module

GPU	1 TFLOP/s 256-core Maxwell
CPU	64-bit quad-core ARM A57 CPUs
Memory	4 GB LPDDR4 25.6 GB/s
Storage	16 GB eMMC
Networking	10/100/1000Mbit Ethernet
Camera	12 CSI DPHY 1.1 lanes Dual ISP, 1.5 Gb/sec
Display	Dual pipeline HDMI/ eDP/DSI
Video	4K 60 Hz decode 4K 30 Hz encode
USB	USB 3.0 + USB 2.0
PCI-E	Gen 2 1x1 + 1x4 (full x4 slot)
Size	87 mm x 50 mm
Weight (incl. TTP)	88 g

Visit www.nvidia.com/embedded to learn more.

* Power and thermal solution: refer to the OEM Product Design Guide and the Thermal Design Guide

** I/O expansion headers: refer to product documentation for header specification

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