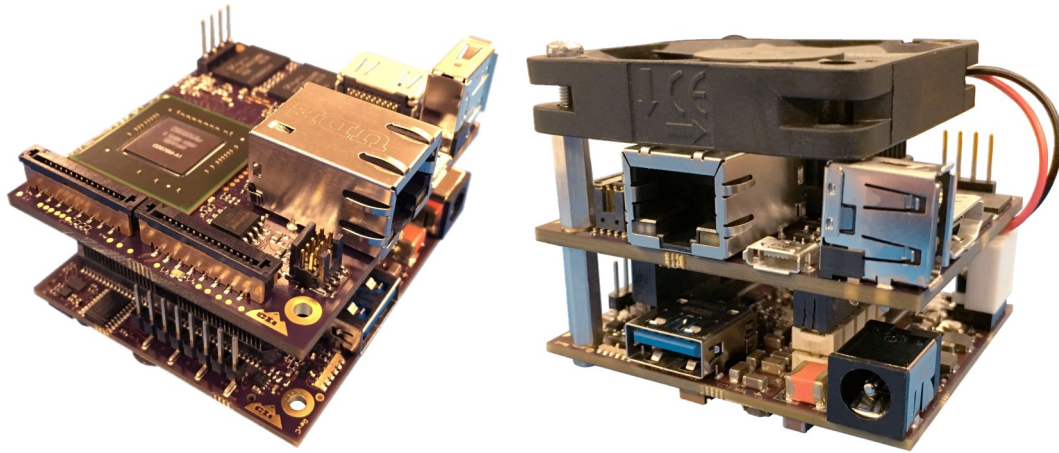


TK1-SOM and Supporting Power Supply Unit (PSU)



SYSTEM-ON-MODULE

PRODUCT DESCRIPTION

At only 2" x 2.3" and just 2.89-3.52 ounces (without/with fan), the TK1-SOM is designed to give you the freedom to use the NVIDIA Tegra K1 SoC for any application you want. From deeply embedded applications like rear obstacle collision avoidance systems, Advanced Driver Assist Systems (ADAS), medical devices, traffic monitoring, and security systems to less rugged applications like facial recognition stations, UAV and quadcopters, the TK1-SOM has the computing power to handle demanding applications.

The TK1-SOM is rich in I/O. Dual CSI-2, USB 2.0, USB 3.0, Ethernet, and GPIO are all available to integrate with your favorite sensor. We even have pre-integrated options for EO, active IR, passive IR, 24 GHz radar, 60 GHz radar, 77 GHz radar, 4G LTE, WiFi, Bluetooth®, CANBus, MIL-STD 1553 and many other sensors.

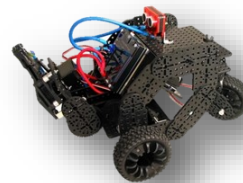
The TK1-SOM can run a wide range of analytics. From shopping to traffic to video analytics, the Tegra K1 runs standard CUDA and Linux to allow you to use your favorite software packages. IoT, M2M, deep learning, smart city and smart traffic ready today!

FEATURES

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>NVIDIA Tegra K1</p> <ul style="list-style-type: none"> • 192 CUDA cores • NVIDIA Kepler • H.264 • HDMI • 1 USB 2.0 • USB 3.0 • 10/100/1000 ethernet • X4 PCIe gen2 • Dual CSI-2 ports • Onboard IMU | <p>Software</p> <ul style="list-style-type: none"> • Linux OS • NVIDIA CUDA • OpenCV • OpenCX • Caffe • Theano • Torch • cuDNN, cuBLAS, etc • C/C++ • Python & PyCUDA |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

APPLICATION

- Internet of Things (IoT)
- Machine to Machine (M2M)
- Smart city
- Traffic monitoring
- Advanced Driver Assistance Systems (ADAS)
- Sensor fusion
- Constant False Alarm Rate (CFAR)
- SAR processing
- OpenCV & OpenVX
- Home security
- Tattoo recognition
- Face detection
- Perimeter detection
- Gunshot detection
- Situational Awareness 360 (SA360)



Not quite what you need? Need a custom version? CEI offers custom NVIDIA Jetson solutions.

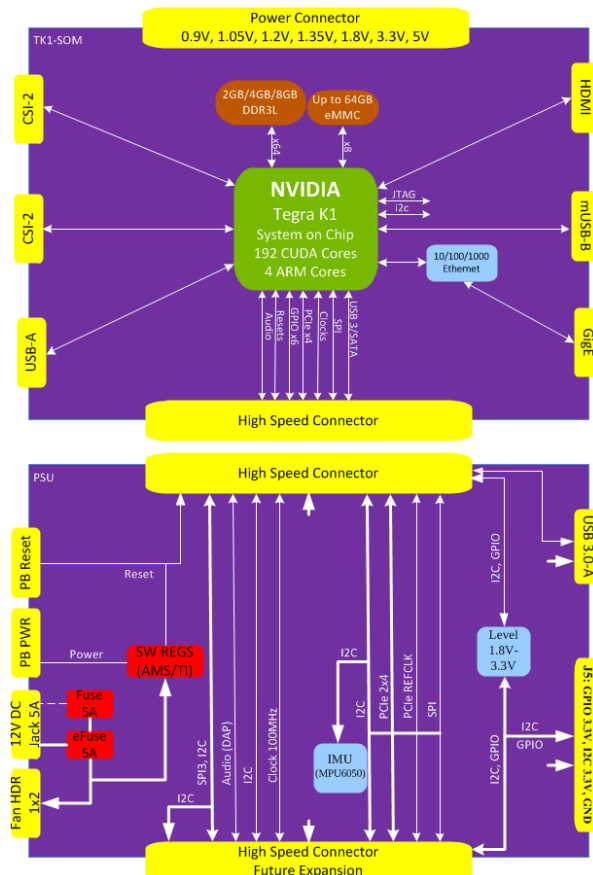
SPECIFICATIONS

Environmentals	Warranty	I/O Modules Coming Soon	
<ul style="list-style-type: none"> 10 year life cycle support Operating 0° C to 50°C 	<ul style="list-style-type: none"> Standard 30 days Extended options available 	<ul style="list-style-type: none"> Infineon BGT24 radar Infineon BGT60 comms Infineon BGT61 radar Infineon BGT70 radar Analog Devices A/D module with Altera Cyclone V 	<ul style="list-style-type: none"> Analog Devices D/A module with Altera Cyclone V 5 MP camera module Passive IR module Active IR module Microphone array module Wi-Fi module—B/G/N Verizon 4G LTE module CANBus module MIL-STD 1553 module Others on demand

CONFIGURATIONS

Model Number	Configuration
TK1-SOM	2" x 2.3" module includes Tegra K1 and Linux support package
TK1-SOM-PSU	2" x 2.3" module for use with TK1-SOM, standard 110V wall power
TK1-SOM-Case	3" x 3" x 3" cube for housing TK1-SOM with TK1-SOM-PSU
Memory	eMMC Flash
2 GB	16 GB
4 GB	16 GB
8 GB	32 GB, configurable up to 64 GB by request

TK1-SOM CARD BLOCK DIAGRAM



Deep Learning, Smart City, Smart Traffic, IoT and M2M Ready Now!

www.TK1SOM.com