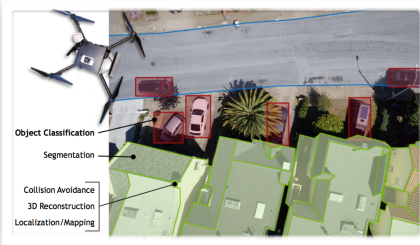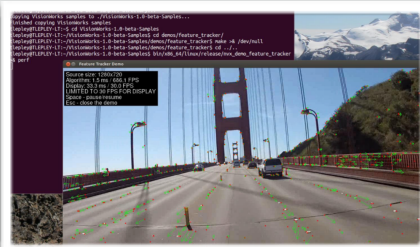# news

Object classification
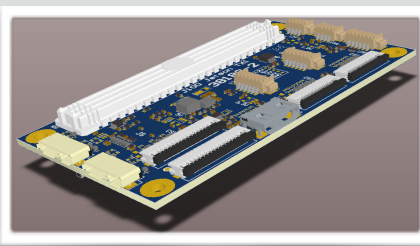

Feature Tracking

Automotive integration

J100 rev 2 (38188-2)

The J100 has been redesigned for bug fixes and feature upgrades:

- micro USB 3 connectors
- 2 SPI to CAN converters
- LM75 I2C temperature sensor

J100 carrier board for the Jetson TX1
quad core ARM + H.264/H.265 encoder + CUDA graphics

The J100 is identical in size to the TX1 compute module. It fits right underneath and forms a very compact subsystem. The main application is the integration in a UAV, where space and weight are critical. For this reason the J100 provides compact headers for the various interface.

Rev 2 will have 2 micro USB 3 connectors for the USB 3 ports.

| Jetson TX1 with J100 carrier	
CPU module	NVIDIA Jetson TX1
CPU	Tegra X1 ARM Cortex-A57
GPU	256 core Maxwell graphics
software	CUDA & Visionworks
memory	4 GB DDR4 & 16GB eMMC
display	mini HDMI
CAN	2 (SPI to CAN)
CSI-2	2 two lane & 2 four lane
USB	1 USB2 & 2 USB3
network	1000B-T, BT & 802.11ac
storage	micro SD, SATA, 4xPCIe
power	12 V typical (7 to 17 V)
size	87 x 50 mm (26 grams)
price	€199 net
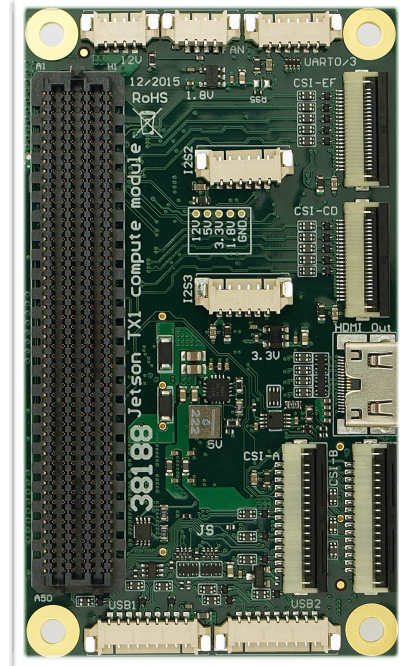
J100 carrier board for the TX1
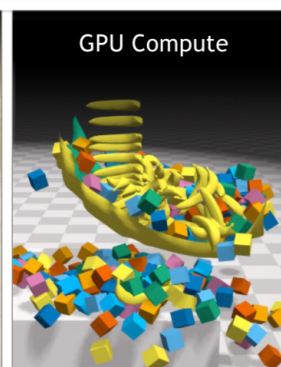original size

INDIEGOGO

The J100 is mounted below the TX1. The total height is 16 mm without the components on the bottom side of the J100.

An optional heatsink may be mounted on top if the CPU and the GPU of the TX1 are heavily loaded.

On the left are the mini HDMI and the CS-2 connectors.
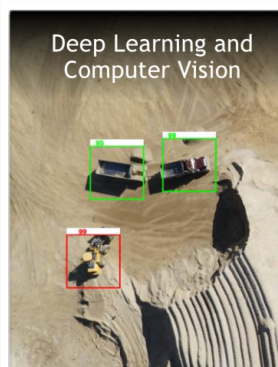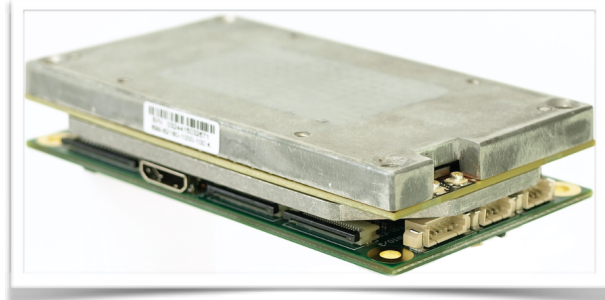
Applications

- GPU computations
- deep learning
- computer vision
- HD video encoding (H.264/H265)
- 3D video (Stereolabs ZED camera)
- UAV flight control
- object and feature tracking
- object classification

Custom carrier board

Auvidea offers design services to design a custom carrier board for the TX1 for you.

> **What product would you like to do?**
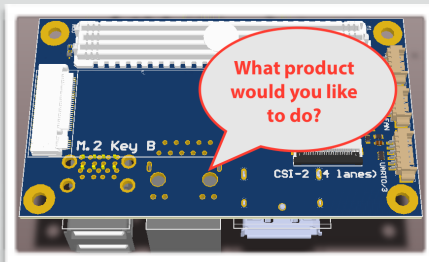
- CAN interface
- mini Displayport, Displayport, eDP
- mSATA and M.2 (type B and type M)
- 10/100/1000B-T Ethernet, BT, and Wifi
- CSI-2 and LVDS
- analog video, HDMI and SDI in
- SPI, I2C, and UART
- RS232, and RS485
- STM32 micro controllers
- openWRT based router (5 port Ethernet switch)
- 5 to 40V power in (DC to DC)

Schematics and layout

Auvidea uses Altium Designer for schematic capture, layout and 3D modeling. With its integrated design methodology Auvidea can quickly and effectively design new products or make modifications or customizations to existing products.
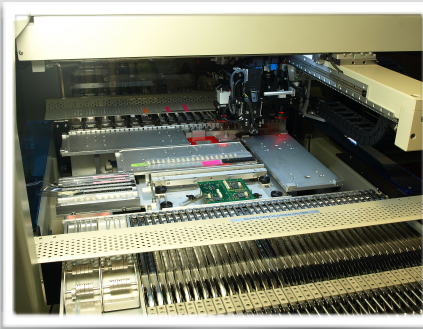
Fast prototyping

Auvidea offers a fast prototyping service with its in house SMT manufacturing equipment.
Please contact us, so we can discuss your project in detail and send you a quotation.

Jetson Pi
A "Raspberry Pi" on steroids - similar form factor but mind blowing performance

Look at the Jetson Pi being the integration of a much faster Raspberry Pi and a NVIDIA GeForce graphics card.

Now you can run your CUDA or Visionworks applications on a very compact system.

- RJ45 for 1000B-T Ethernet
- dual USB 3 type A
- mini Displayport
- M.2 key M slot for ultra fast 2280 SSDs
- size: 50 x 107 mm
- buy it on: _Indiegogo campain_

INDIEGOGO

J200 - dual TX1
A PX2 for all

The J200 integrates 2 complete TX1 subsystems on a single carrier board. 3 interconnect options for the TX1s to communicate with each other:

- low speed: CAN (1 Mbit/s)
- high speed: Gigabit Ethernet
- super speed: 4x PCIe (future option)

2 Jetson TX1 with J200 carrier	
CPU module	2 NVIDIA Jetson TX1
CPU	Tegra X1 ARM Cortex-A57
GPU	256 core Maxwell graphics
software	CUDA & Visionworks
memory	4 GB DDR4 & 16GB eMMC
display	1 Displayport each
CAN	2 (SPI to CAN) each
CSI-2	2 slots for B100 HDMI to CSI-2
USB	1 USB2 & 2 USB3 each
network	1000B-T, BT & 802.11ac
storage	micro SD, M.2 key B and M.2 key M
power	12 V typical (7 to 17 V)
size	317 x 77 mm
price	€999 net (38195 + 38196)

2 operating modes

Standalone
The J200 may be operated standalone with the addition of the 38186 network interface module. It features 2 RJ45 connectors for Gigabit Ethernet.

OpenGear
The J200 card is plugged into the Ross openGear 19" 2RU chassis. It should be possible to install up to 10 J200 with 20 TX1 into a single chassis.

An optional network module bridges the 1000B-T of the TX1 to the 1000B-X of the openGear mid plane. So the 20 TX1 will be interconnected by the 20 port Gigabit Ethernet switch which is integrated in the openGear chassis.

www.rossvideo.com