PRESS RELEASE

3 carrier boards for the NVIDIA® Jetson™ TX1

super-mini-computer performance for
embedded and deep learning applications

March 3, 2016: Auvidea announces a family of 3 carrier boards for the new NVIDIA Jetson TX1 compute module.

The first carrier board is the J120. It turns the Jetson TX1 compute module into a Super-Mini-Computer. It is basically the integration of a compact computer with a „GeForce“ like graphics card. It offers very high computational (quad core Tegra™ X1 ARM Cortex-A57 with up to 1.9GHz) and graphical processing (256 core Maxwell™ engine) performance in a tiny form factor (only 50 x 111 mm).

This brings applications like deep learning, 3D computer vision with stereo cameras, HD H.264/H.265 video encoding/decoding, object and feature tracking and UAV flight control into a tiny factor, so it can be easily integrated in many applications.

Jurgen Stelbrink, managing director and founder of Auvidea, commented: „NVIDIA created the TX1 which brings desktop performance to embedded applications. This allows Auvidea to develop a family of carrier boards to ease the integration in UAV, automotive, medical and industrial applications. In addition Auvidea offers design services to customize these carrier boards.“

The J120 has all high speed connectors on one side, to ease the integration into an enclosure. There is an RJ45 connector for Gigabit Ethernet (1000B-T), two USB 3.0 type A connectors for high speed peripherals like stereo cameras and a mini HDMI output. For mass storage the TX1 module contains 16 GByte eMMC (bootable). The J120 adds a micro SD card slot, a M.2 type M (2280) slot for extremely high performance SSDs with a read/write performance up to 2500 MByte/s and an integrated 9 axis sensor (IMU).

The second product is the J100. It is exactly the same size as the Jetson TX1 (50 x 87 mm) and fits right underneath the TX1 to form a very compact processing unit. As the target application are UAVs and embedded applications all interfaces are brought out on compact connectors like pin headers, mini HDMI and micro USB 3 connectors.

The third product covers the other end of the spectrum. It is the J200, which integrates two TX1 modules on a single board. It can be operated standalone or it may to plugged into the openGear 19“ 2RU frame by Ross (www.rossvideo.com). Up to ten J200 (with up to 20 TX1s) may be installed in a single 2RU rack mount case, to turn this into a real super computing platform.

3 levels of networking are supported. An integrated CAN bus allows the TX1s to communicate with each other and other CAN devices with 1 Mbit/s. By connecting the TX1s to a Gigabit switch high speed communication up to 1 Gbit/s is enabled. A future option might be to interconnect the two TX1s via the 4 lane PCIe bus for extreme communications bandwidth (more than 10 Gbit/s).

All three carrier boards will start shipping in April/May 2016. The J100 and J120 are priced at €219 net each and the J200 is priced at €999 net. Early adopters may pre order the J120 on Indiegogo (http://igg.me/at/cJ7dDQkO6lw/x/13380589).

Supporting Information

Auvidea GmbH is located in Denklingen/Germany (80 km from Munich). The company designs, manufactures and markets products for embedded systems such as HD video capture and encoding, and CAN centric peripherals and sensors.

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