

## Diamond Introduces Family of Embedded Computing Solutions for NVIDIA® Jetson™ Computer Modules

**Sunnyvale, California — February 26, 2019** — Diamond Systems, a leading global provider for rugged, I/O-rich embedded computing solutions, has introduced a family of solutions for delivering AI-at-the-edge high performance computing solutions based on NVIDIA Jetson TX2, TX2i and AGX Xavier™ modules. The family includes four carrier boards as well as a finished system housed in an ultra-compact enclosure. These solutions target a range of industrial and military applications, with a focus on harsh environments such as vehicles and other outdoor applications.

Diamond’s carriers bring out the unique characteristics of the Jetson family of computer modules while enhancing them with additional I/O and features. Ziggy™ and Jethro™ carriers are designed to work with the Jetson TX2 and TX2i system-on-modules (SoM), while Stevie™ and Elton™ provide a platform for implementing solutions with the AGX Xavier high-end module. In keeping with Diamond’s “Rugged I/O” and “2-in-1” philosophies, all products feature data acquisition capability, maximum feature density, and wide temperature operation combined with shock and vibration resistance.



**Ziggy Carrier Board with TX2 module**



**Elton AGX Xavier Carrier Board  
With PCIe/104 Expansion**

Particularly noteworthy among the Diamond family is the full-fledged **PCI/104-Express expansion socket** present on the Elton carrier. Unique in the NVIDIA ecosystem, Elton bridges the emerging world of AI/ML technology with the long-life, highly successful, rugged industrial embedded computing ecosystem of PC/104. Elton provides support for PCI-104, PCIe/104 type 2 (x8 lane), and PCIe/104 OneBank expansion modules (4 x1 lanes), enabling rapid creation of truly rugged, custom-configured, high performance,

PCIe-based solutions using off-the-shelf I/O modules from a large number of manufacturers worldwide.

The Diamond product family features a compact and cost-effective yet full-featured **data acquisition circuit** with analog input, analog output, and digital I/O to interface to the "real world" of analog and digital sensors and controls. A programming library provides support for rapid development of custom applications, while a ready-to-run application with graphical user interface provides convenient real-time control of the data acquisition I/O as well as data logging.

**Ziggy** is the carrier for Jetson TX2/TX2i targeting size- and cost-sensitive applications as well as “maker” projects. At 50x87mm, it matches the size of the Jetson modules and provides commercial style connectors for I/O. The compact **ZiggyBox** computer system houses the Ziggy carrier and Jetson module in an ultra-compact enclosure with DIN rail mounting capability. Its compact size lets it fit into crowded equipment racks and cabinets for local AI at the edge / machine learning applications. ZiggyBox sets a new benchmark in combined computing performance, size, cost, and I/O.



**ZiggyBox System**



**Jethro TX2 Carrier Board**

**Jethro**, at 76x107mm, is a slightly larger TX2/TX2i carrier that offers far greater I/O and expansion capability, as well as a rugged connector scheme. Jethro includes a PCIe MiniCard socket, an M.2 SATA flash socket, and a LTE modem socket designed to work with Nimbelinek SkyWire cellular modems. Jethro utilizes pin headers that can accommodate both low-cost traditional connector technology or more rugged latching connectors where resistance to vibration and shock are required.

**Stevie** is a unique “translator” board that enables the Ziggy and Jethro TX2 carriers to be used with the higher performance AGX Xavier module. The same size as Xavier (87x100mm), Stevie adds an M.2 PCIe NVMe flash socket, 2 CAN ports, and an additional USB 3.0 port, as well as a socket for connecting high performance cameras, thus rounding out the TX2 carriers to provide a complete platform for taking advantage of Xavier’s superior performance and features.

The crowning member of Diamond’s NVidia family is **Elton**, the full-featured, rugged carrier board for NVidia’s Xavier SoM. Elton utilizes a 50% thicker PCB, latching connectors, and the rugged PCI/104-Express expansion bus to create a rugged platform ideal for the most demanding compute-intensive harsh-environment applications. Elton’s larger size of 102x152mm allows it to include all the I/O and expansion of Diamond’s other carriers: data acquisition, M.2 and PCIe MiniCard sockets, and LTE modem socket.

### Product Family Roundup

Product	Size	NVidia Module	Notable Features
Ziggy	50 x 87mm	TX2 and TX2i	Compact, low-cost, data acquisition
Jethro	76 x 107mm	TX2 and TX2i	Expandable, data acquisition
Stevie	100 x 87mm	Jetson AGX Xavier	High performance, feature-rich
Elton	102 x 152mm	Jetson AGX Xavier	Highest performance, PCI/104-Express expansion, data acquisition
ZiggyBox	63 x 67 x 96mm	TX2 and TX2i	Compact, I/O-rich, ideal for industrial control

### Media Resources

Ziggy: <http://www.diamondsystems.com/products/ziggy>  
Jethro: <http://www.diamondsystems.com/products/jethro>  
Elton: <http://www.diamondsystems.com/products/elton>  
ZiggyBox: <http://www.diamondsystems.com/products/ziggybox>  
Stevie: <http://www.diamondsystems.com/products/stevie>

### Availability

For more information, please contact the Diamond’s sales team: [sales@diamondsystems.com](mailto:sales@diamondsystems.com).

### About Diamond Systems

Celebrating its 30<sup>th</sup> year, Diamond Systems Corporation is an innovator of compact, rugged, board and system-level real world embedded computing solutions to companies in a broad range of markets worldwide.

In addition to complete system-level solutions, Diamond’s extensive product line of compact, highly integrated solutions include Nvidia Jetson and Xavier carrier boards; single-board computers (SBCs); an extensive line of expansion modules for analog and digital I/O, wired and wireless communications, GPS, solid-state disk, and power supply functions. In support of performance-critical embedded application requirements, these products are engineered to operate reliably over wide operating temperature ranges, such as –40°C to +85°C, and at high levels of shock and vibration. Additionally, the company offers a comprehensive hardware, software, and system integration and customization services. For further information, please visit [www.diamondsystems.com](http://www.diamondsystems.com).

**Diamond Systems will have the NVIDIA Jetson platform carrier solutions on display at the Embedded World Show (February 26-28) on display in Hall 2, Booth 2-350. The company will offer daily presentations and giveaways featuring its Jetson products.**

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