

MIDI-ELTON Jetson AGX Xavier System



NVIDIA Jetson AGX Xavier high performance AI-at-the-edge computing platform



FEATURES

Baseline features:

- ♦ Complete system with AGX Xavier and Linux OS installed
- ♦ AGX Xavier 32GB module with 512-core Volta GPU and 32 TeraOPS performance
- ♦ 2 gigabit Ethernet ports
- ♦ 1 HDMI 2.0a/b port
- ♦ 2 USB 3.0 ports with type A connectors
- ♦ 2 USB 2.0 ports with type A connectors; 1 port can serve as OTG
- ♦ 4 serial ports with RS-232/422/485
- ♦ 2 CAN 2.0B ports
- ♦ Audio line in/out, mic in
- ♦ 6 12-bit A/D + 2 12-bit D/A channels
- ♦ 12 GPIO with 3.3V logic levels
- ♦ 9-20VDC and 7-34VDC input options
- ♦ Operating temperature -25 to +70°C
- ♦ Dimensions: 183mm W x 180mm D x 86mm H / 7.2" x 7.1" D x 3.4" H

Expansion options:

- ♦ Camera module connector for 12 lanes CSI
- ♦ 1 Mini PCIe socket with PCIe and USB support
- ♦ 1 M.2 2242 PCIe x4 socket
- ♦ PCI/104-Express expansion capability (PCIe/104 and PCI-104)
- ♦ Nimbeline SkyWire modem socket

MIDI-ELTON is a compact Nvidia Jetson AI computing platform ready to deploy. It includes the Jetson AGX Xavier 32 TeraOPS AI computing module installed on our **ELTON** carrier board with a Linux OS installed and preconfigured to support all the I/O on Elton.

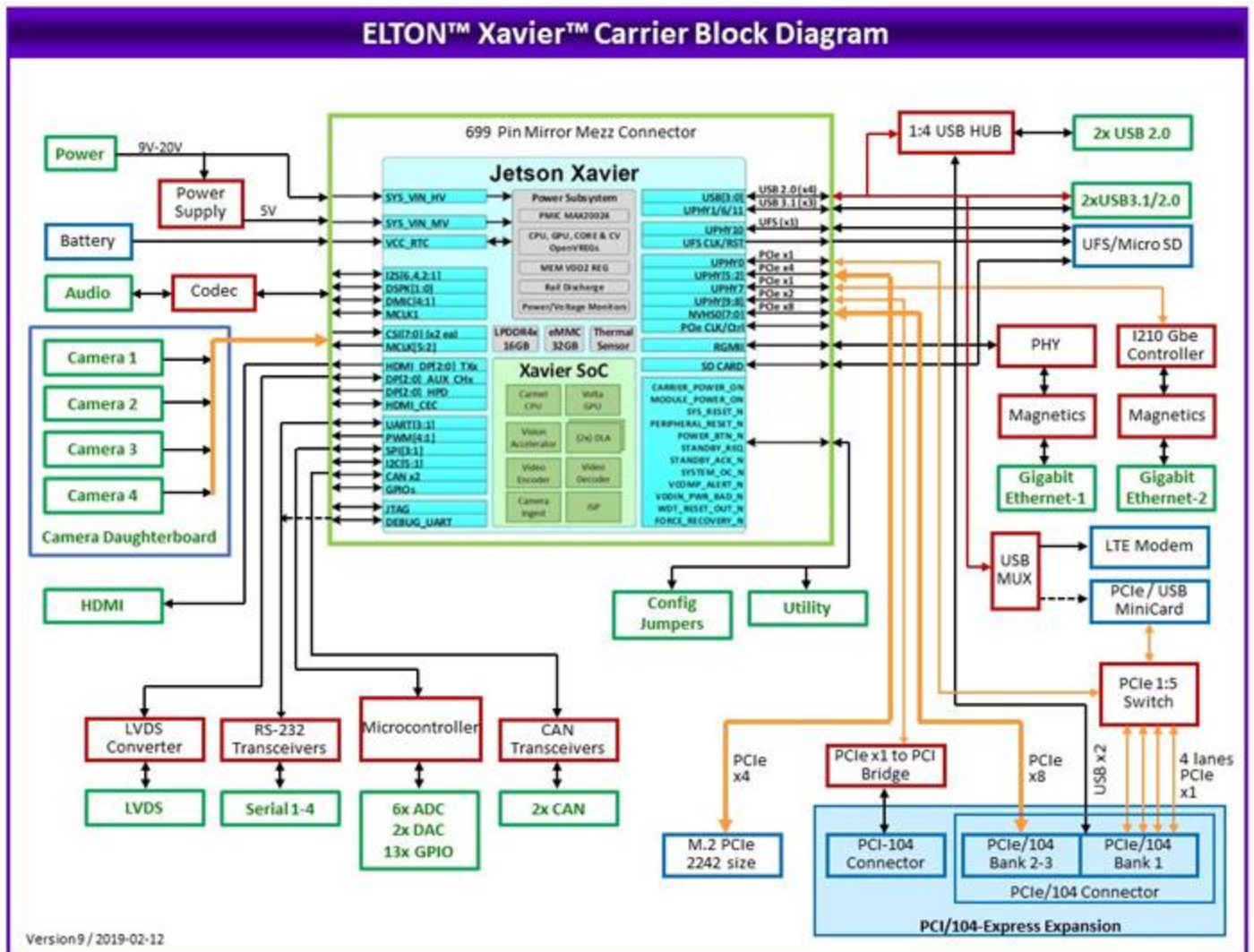
Click [here](#) to learn more about Nvidia Jetson AGX Xavier.

Midi-Elton features multiple expansion sockets for additional I/O and storage capacity to meet a wide range of application needs. Dual SMA antenna cutouts support the installation of WiFi and cellular

modem modules for network connectivity. The enclosure is DIN rail mountable or can be used in a table-top scenario.

A 12VDC universal AC adapter with US plug is included with the system.

◆ Elton Block Diagram



◆ I/O Expansion

MIDI-Elton includes several options for I/O and memory expansion:

- The PCI/104-Express socket supports PCIe/104 x1 and x8 I/O modules along with PCI-104 I/O modules.
- The M.2 2242 socket may be used for additional flash storage using Diamond's flashdisks up to 512GB in capacity, or for I/O modules in M.2 2242 format.
- The PCIe minicard socket accepts any full-size PCIe- or USB-based minicard. Check to be sure that drivers compatible with Nvidia Linux are available.
- A micro-SD card socket is also available for adding flash storage.
- A **NimbeLink Skywire** socket supports the installation of the entire line of Skywire miniature embedded modems, featuring global compatibility.

Note that all Jetson modules include built-in flash memory. Check the Jetson datasheets for specifics. This built-in flash contains Diamond's customized Linux based on Nvidia Jetpack for the installed Jetson module.

Note that all Jetson modules include built-in flash memory. Check the Jetson datasheets for specifics. This built-in flash contains Diamond's customized Linux based on Nvidia L4T Linux OS as well as customer application software.

◆ Customization

Midi-Elton can be customized to fit your application needs. Typical customizations include:

- Change of case size / shape to accommodate additional I/O or electronics
- Installation of additional flash or I/O modules
- Branding with your color and logo
- Change in I/O connector assortment based on your I/O needs
- Conformal coating of internal electronics
- Customization of the Linux OS or loading of your custom software

Please contact Diamond Systems Sales for further information.

◆ Input Power Options

The base model utilizes the built-in power supply of the Elton baseboard to support an input voltage range of 9-20VDC. Diamond's **JMM-5012** PC/104 DC/DC power supply can be installed to increase the range to 7-34VDC and also provide ample power for other internal electronics.

◆ System Configuration

Use the following format to specify the system configuration for quoting and ordering:

MIDI-ELTxx-Lyy-zz

xx = Elton baseboard model:

- 01 = ELT-BB01 with PCIe/104 connector
- 02 = ELT-BB02 with PCIe/104 and PCI-104 connectors (PCI/104-Express)
- 03 = ELT-BB03 without PCIe and PCI connectors

yy = Xavier module and flash configuration:

- 00 = Xavier with 512 core GPU + 32GB RAM + 32GB flash, no external flash
- 01 = Xavier with 512 core GPU + 32GB RAM + 32GB flash, 64GB flashdisk installed
- 80 = Xavier with 384 core GPU + 8GB RAM + 16GB flash, no external flash
- 81 = Xavier with 384 core GPU + 8GB RAM + 16GB flash, 64GB M.2 flashdisk installed

zz = Input power option:

- 00 = no DC/DC power supply, 9-20VDC input range
- 5012 = JMM-5012 DC/DC power supply, 7-34VDC input range

◆ Models and Accessories

MIDI-ELTON Jetson AGX Xavier System

available models:

MIDI-ELTXX-YY-ZZ Midi Elton system, please specify complete part number in quote comments

Please login or signup for an online quote request.

www.diamondsystems.com | Sunnyvale, California USA | +1-650-810-2500 | sales@diamondsystems.com