



Rudi-NX Embedded System

Connect Tech's Rudi-NX Embedded System utilizes the new Jetson Xavier NX™, the World's Smallest AI Supercomputer. Delivering up to 21 TOPS of performance in 15W. With 384 CUDA Cores, 48 Tensor Cores, and 2 NVDLA engines, it can run multiple modern neural networks in parallel and process high-resolution data from multiple sensors simultaneously.

The Rudi-NX enables multiple vision inputs including up to 4x GMSL (MIPI CSI-2) Camera inputs, 4x USB 3.0 ports and 2x Gigabit Ethernet ports. Additional connectivity via CAN, UARTs, RS-485, I2C, SPI, and GPIO.



Specifications

NVIDIA Jetson Module Compatibility	Rudi-NX is pre-integrated with the NVIDIA® Jetson Xavier NX™
AI Performance	21 TOPS (INT8)
GPU	384-core NVIDIA Volta™ GPU with 48 Tensor Cores
CPU	6-core NVIDIA Carmel ARM® v8.2 64-bit CPU 6MB L2 + 4MB L3
Memory	8 GB 128-bit LPDDR4x @1600MHz, 51.2GB/s
Video Decode	2x 4K @ 30(HEVC) 6x 1080p @ 60 (HEVC) 14x 1080p @ 30 (HEVC)
Video Encode	2x 4K @ 60 (HEVC) 4x 4K @ 30 (HEVC) 12x 1080p @ 60 (HEVC) 32x 1080p @ 30 (HEVC) 16x 1080p @ 30 (H.264)
DL Accelerator	2x NVDLA Engines
Networking	2x 10/100/1000 BASE-T Ethernet
Display Output	1 x HDMI 2.0
USB	4 x USB 3.0 Ports (Type-A) 1 x USB OTG (Micro-AB)
GMSL Camera Inputs	4x GMSL1/2 Camera Inputs (MIPI CSI-2 Access to Jetson)
Storage	16 GB internal eMMC 5.1 1x NVMe Expansion (M.2 M-key (PCIe x4, 2280))** 1 x Full Sized SD Card Slot
Wireless / Misc Expansion	1x M.2 B-Key (USB 3.0 + USB 2.0, 3042) 1x M.2 E-key (PCIe x1 + USB, 2230) 1x M.2 M-key (PCIe x4, 2280) **
MISC / IO Connector	1x UART, 1x RS-485, 2x I2C, 2x SPI, 4x GPIO, 2x PWM, 3x +5V Output, 3x +3.3V Output
CAN	1 x CAN 2.0b Port
Input Power	+9 to 36V DC Input
Operating Temperature	-20°C to +80°C
Dimensions	135mm x 50mm x 105mm (Width x Height x Depth)
Warranty and Support	1 Year Warranty and Free Support

**M.2 M-Key can be used for Storage or for Video Capture Cards

FEATURES

- ✓ *Extremely small footprint
135mm x 50mm x 105mm*
- ✓ *GMSL, USB 3.0, USB 2.0,
CAN 2.0b, USB OTG, RS-485,
I2C, GPIO, SPI, PWM*
- ✓ *1x NVMe (PCIe x4, 2280)
1x SD card slot*
- ✓ *Operating Temperature Range
-20°C to +80°C*

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