

PE1000N

Arm System, NVIDIA Jetson, LPDDR4, eMMC, USB3, Dual LAN, HDMI, M.2 E, M.2 M, mini PCIe, AEM, Dual SIM, 12-24V

Features

- Intelligent Edge AI System with NVIDIA Jetson™ Nano™, TX2 NX and Xavier™ NX
- Fanless design and diverse I/O in a compact size
- Built in Wi-Fi BT module, LTE ready to connect
- Wide range of power input and operating temperature
- Support ASUS Expansion Module (AEM)

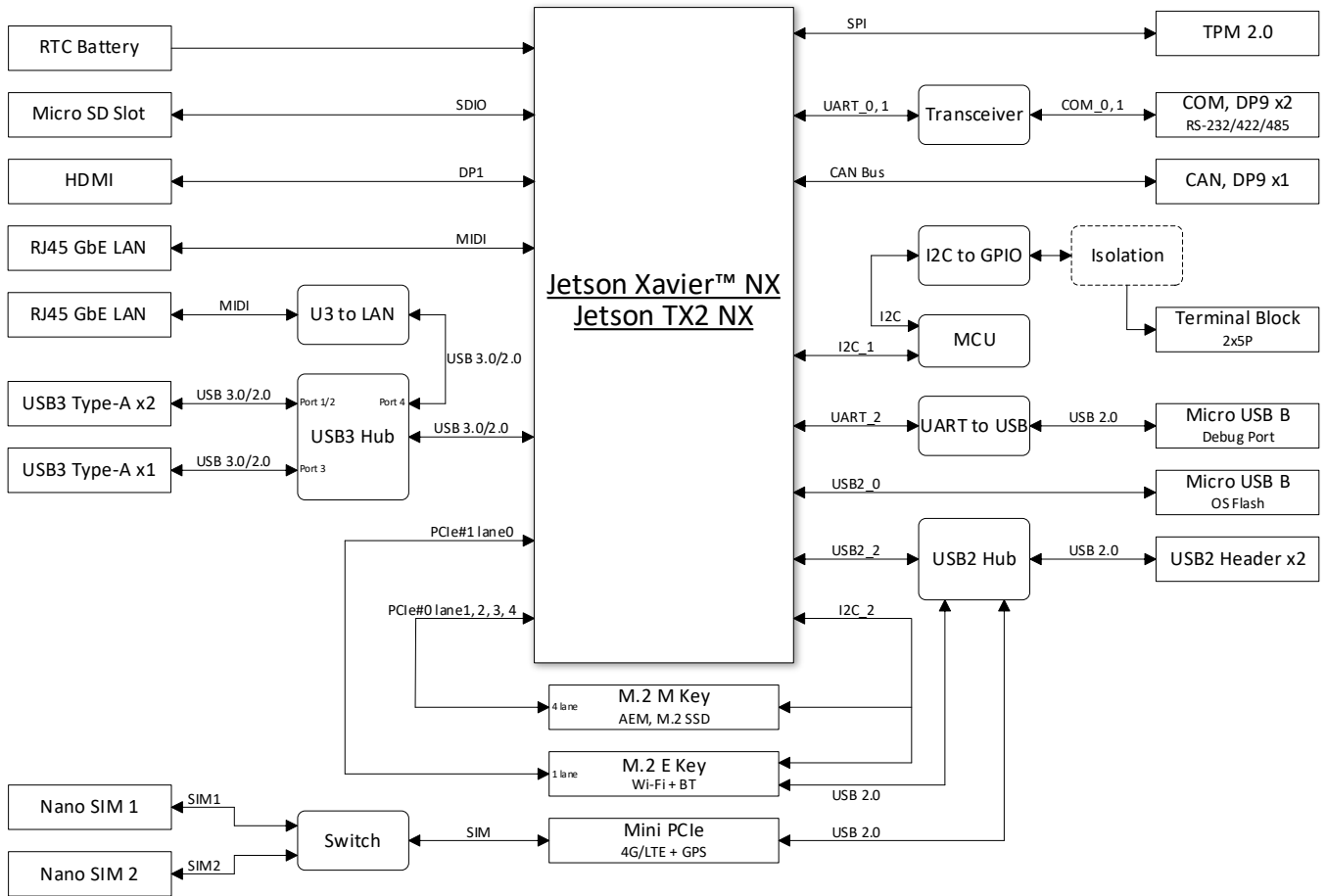


Specifications

Processor System	SoM	NVIDIA Jetson Nano™	NVIDIA Jetson TX2 NX	NVIDIA Jetson Xavier™ NX
	CPU	4 x Arm® Cortex®-A57	2 x NVIDIA Denver 2 64-Bit 4 x Arm® Cortex®-A57	6 x NVIDIA Carmel Arm®v8.2 64-bit
	GPU	128-core NVIDIA Maxwell™	256-core NVIDIA Pascal™ GPU	384-core NVIDIA Volta™ with 48 Tensor Cores
	Memory	4 GB 64-bit LPDDR4	4 GB 128-bit LPDDR4	8 GB 128-bit LPDDR4x
	eMMC	16 GB	16 GB	16 GB
Wired Interface	Ethernet	2 x 10/100/1000 Mbps, RJ45		
	USB (or Header)	3 x USB 3.2 Gen1, Type-A 1 x USB 2.0, Micro-USB for OS Flash 2 x USB 2.0, Pin Header (Internal)		
	COM	1 x RS-232/422/485, DB9 1 x RS-232/422/485, DB9	1 x RS-232/422/485, DB9 1 x RS-232/422/485, DB9 1 x CAN bus, DB9	
	DIO	4 x DI, 4 x DO (2x5 Terminal Block, w/ isolation)		
	Display	1 x HDMI 2.0b, 3840 x 2160 @60Hz		
	Debug Port	1 x Debug console via Micro-USB		
Wireless Interface	Wi-Fi	Built-in (M.2 E Key) 802.11 a/b/g/n/ac, support 2.4G/5GHz, -20 ~ 60°C O.T.		
	Bluetooth	Integrated with Wi-Fi, BT 4.0+		
	Cellular	Optional LTE module, compatible with ASUS built LTE module, -20 ~ 60°C O.T.		
	GPS	Integrated with cellular		
Expansion	M.2 M key*	1 x 2242/2260/2280, for AEM, M.2 SSD (PCIe, I2C and SMBus)		
	M.2 E key*	1 x 2230, for Wi-Fi/BT (PCIe, USB 2.0, I2C and PCM)		
	Mini PCIe	1 x Full-Length socket, for 4G/LTE (USB 2.0)		
Slot	SIM	2 x nano-SIM slots		
	Micro SD	1 x Micro SD slot		
Power	Power Input	12 to 24 VDC, 3-pin terminal block (1-pin for remote button)		
Mechanical	Mounting	Wall-mount / DIN rail		
	Dimensions	Board: 3.5" System: 152 x 114 x 62 mm		
	Weight	1.5 KG		
Environment	Operating Temp.	-20 ~ 60°C w/ all modules operating		
	Storage Temp.	-40 ~ 85°C		
	Relative Humidity	10 ~ 95% (non-condensing)		
Security	TPM	on-board TPM v2.0		
	Watch Dog Timer	Yes. HW WDT		
Others	Operating System	Ubuntu		

* For Jetson Nano™, the M key slot shares same PCIe with E key slot. Default occupied with Wi-Fi module.

Block Diagram



Preliminary

Block Diagram

