

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)

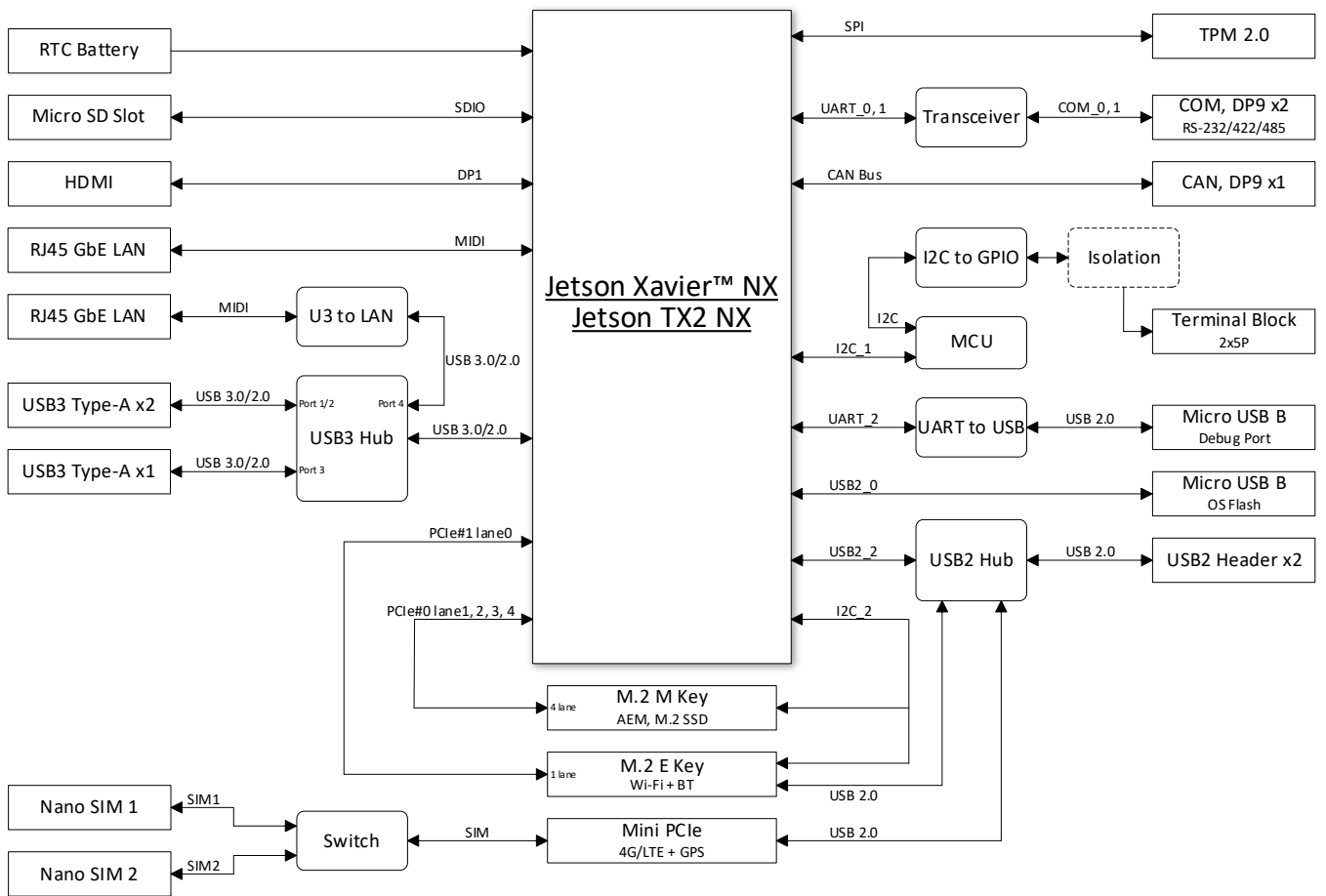


Specifications

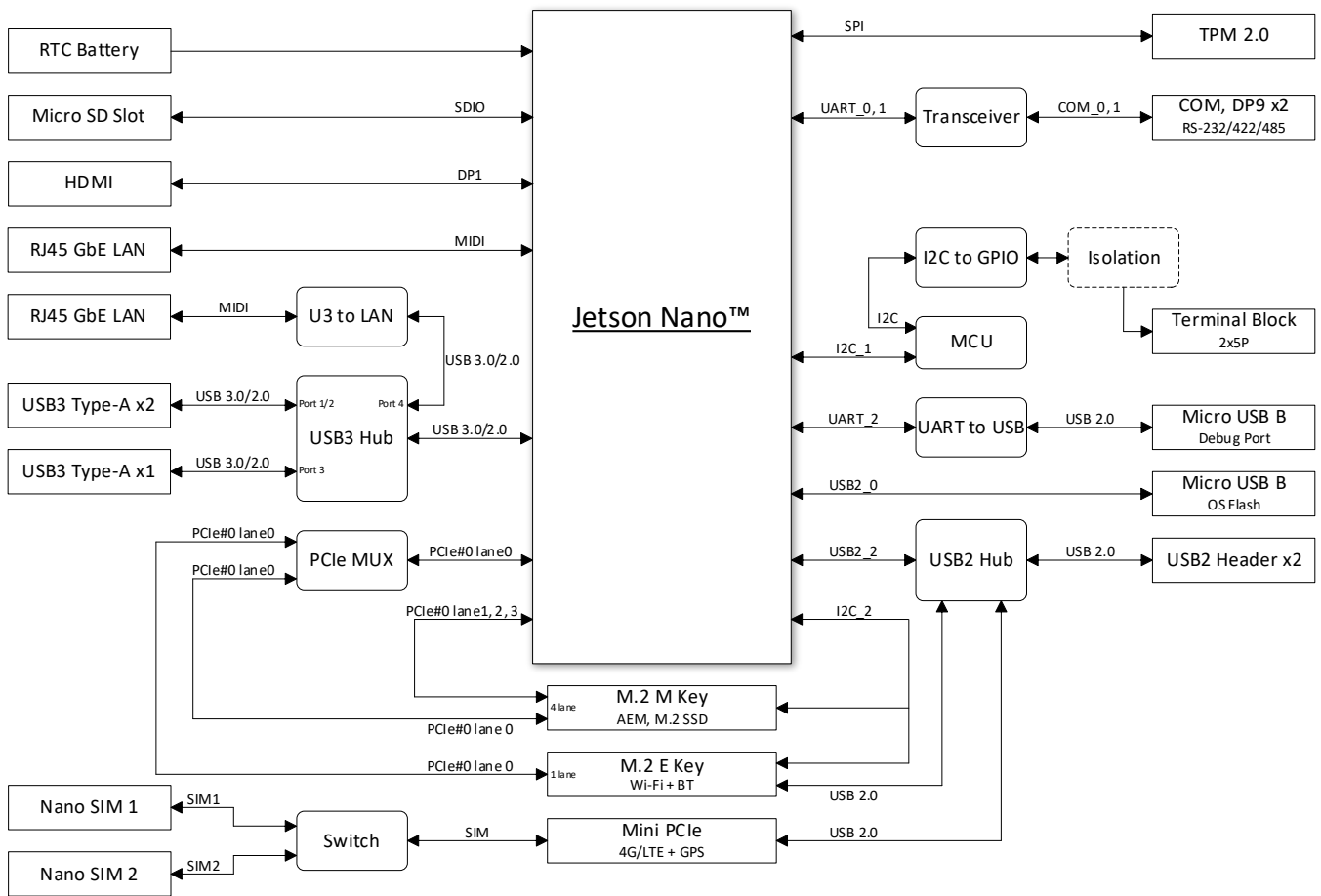
Processor System	SOM	NVIDIA Jetson Nano™	NVIDIA Jetson TX2 NX	NVIDIA Jetson Xavier™ NX
	CPU	4 x Arm® Cortex®-A57	2 x NVIDIA Denver 2 64-Bit 4 x Arm® Cortex®-A57	6 x NVIDIA Carmel Arm®v8.2 64-bit
	GPU	128-core NVIDIA Maxwell™	256-core NVIDIA Pascal™ GPU	384-core NVIDIA Volta™ with 48 Tensor Cores
	Memory	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	2 x RS-232/422/485, DB9	2 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 WLAN module (M.2 E Key), 802.11 a/b/g/n/ac, 2.4G/5GHz, -40 ~ 85°C O.T.		
	Bluetooth	Integrated with WLAN module, BT 5.0+		
	Cellular	Optional LTE module (Mini PCIe), -40 ~ 80°C O.T.		
	GPS	Integrated with cellular module		
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 power button)		
Mechanical	Mounting	Wall-mount (support assembly with DIN rail clips)		
	Dimensions	Board: 3.5", 146 x 105 mm System: 152 x 114 x 62 mm		
	Weight	1.4 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		
Others	Watch Dog Timer	Yes. HW WDT		
	Operating System	Ubuntu Desktop		

* For Jetson Nano™, the M key slot shares same PCIe with E key slot. Default occupied with WLAN module on E key slot.

Block Diagram



Block Diagram



Ordering Information

PN	SoM	DRAM	EMMC	Wi-Fi/BT* (M.2 E-Key)	SSD* (M.2 M-Key)	4G/LTE* (mPCIe)	O.P. Temperature	PSU	OS*
90AE00K1-M00040	Jetson Nano	4 GB	16 GB	WiFi 5 + BT 5.0 QCA6174A-5	N/A	N/A	-20~60	N/A	V
90AE00K1-M00030	Jetson Xavier NX	8 GB	16 GB	WiFi 5 + BT 5.0 QCA6174A-5	N/A	N/A	-20~60	N/A	V

* Optional and part number might vary for different regulations and package. Please consult the local sales representative for the exact 90PN.

Packing List

Description	Qty
Adapter cable DC to terminal block 3 pin	1
Wall mount bracket set	1
DIO terminal block	1
Dust cover set	1

Optional Accessories: (purchased separately)

Item#	Description
ADAPTER	
0A001-01050900	65W Power adapter, input voltage 100 to 240Vac, output voltage 12Vdc with 5.417A load, 0 to 40°C O.P. temperature
POWER CORD	
14009-00021400	Power cord with United States (US) plug, 180cm
14009-00021000	Power cord with Europe (EU) plug, 180cm
14009-00021100	Power cord with China (CN) plug, 180cm
14009-00020600	Power cord with Japan (JP) plug, 180cm
14009-00020800	Power cord with Australia (AU) plug, 180cm
14009-00020900	Power cord with United Kingdom (UK) plug, 180cm
14009-00021000	Power cord with Korea (KR) plug, 180cm
14009-00020700	Power cord with Swiss (CH) plug, 180cm
14009-00021200	Power cord with Taiwan (TW) plug, 180cm
WI-FI/BT ANTENNA	
14008-02990100	Omni-directional rubber duck Wi-Fi antenna, 2.4/5GHz, 2dBi
4G LTE ANTENNA	
14008-03440000	Omni-directional rubber duck GPRS/EDGE/UMTS/HSPA/LTE antenna, 704 to 960MHz & 1710 to 2690MHz, 3.5 dBi
GPS ANTENNA	
14008-04370000	Active type adhesive GPS antenna with extension cable, 1582MHz, 26dBi, extension cable length 3m
WI-FI/BT Module	
0C011-00214000	EMWICON JWW6051, QCA6174A-5, Wi-Fi 5 802.11ac + BT 5.0 (2*2), M.2 2230
LTE Module	
0C031-00091400	Quectel EG25-G, LTE Cat 4, mini-PCIe module
SSD	
03B03-00235300	SSD P3X4 128GB M2 2280 NVME
03B03-00229600	SSD P3X4 256GB M2 2280 NVME
03B03-00375400	SSD P3X4 512GB M2 2280 NVME

* The part number might vary due to part number revision.