

PE1100N

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

Features

- Intelligent Edge AI System with NVIDIA Jetson™ Orin™ NX, Orin™ Nano
- Fanless design and diverse I/O in a compact size
- Ready to connect Wi-Fi, BT & LTE by optional modules
- Wide range of power input and operating temperature
- Support ASUS Expansion Module (AEM)



Specifications

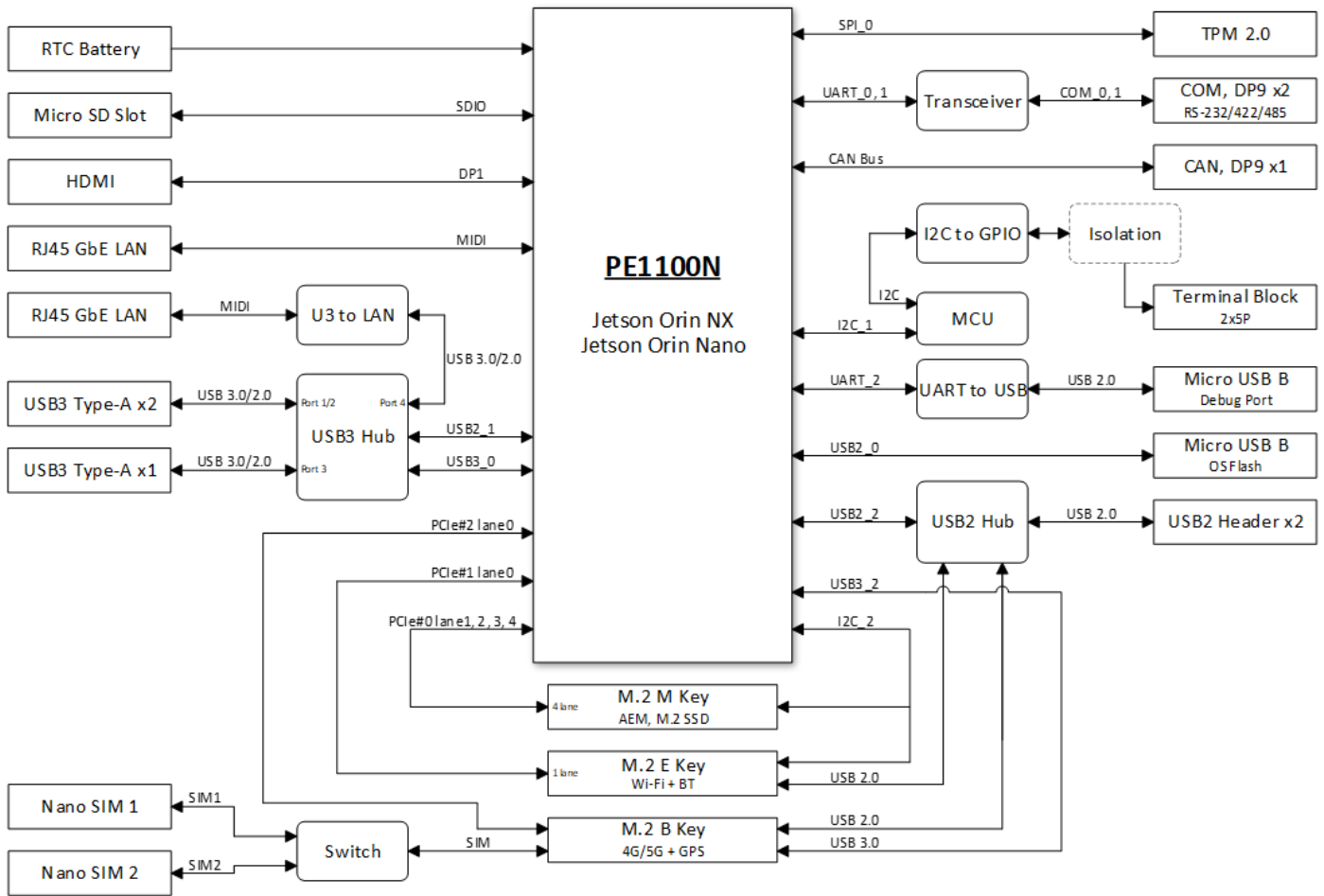
| | | | | | | |
|---------------------------|-------------------------------|---|--|----------------------------------|----------------------|-----------------------------|
| Processor System | SOM | Jetson Orin Nano 4G | Jetson Orin Nano 8G | Jetson Orin NX 8G | Jetson Orin NX 16G | |
| | CPU | 6 x Arm® Cortex®-A78AE v8.2 | | | | 8 x Arm® Cortex®-A78AE v8.2 |
| | GPU | 512-core NVIDIA Ampere GPU with 16 Tensor Cores | 1024-core NVIDIA Ampere GPU with 32 Tensor Cores | | | |
| | Memory | 4 GB 64-bit LPDDR5 | 8 GB 128-bit LPDDR5 | 8 GB 128-bit LPDDR5 | 16 GB 128-bit LPDDR5 | |
| 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 1 x CAN bus, DB9 | | | | |
| | DIO | 4 x DI, 4 x DO (2x5 Terminal Block, w/ isolation) | | | | |
| | Display | 1 x HDMI 1.4a, 3840 x 2160 @30Hz | | 1 x HDMI 2.0b, 3840 x 2160 @60Hz | | |
| | Debug Port | 1 x Debug console via Micro-USB | | | | |
| Wireless Interface | Wi-Fi | Optional | | | | |
| | Bluetooth | Optional | | | | |
| | Cellular | Optional | | | | |
| | GPS | Optional | | | | |
| Expansion | M.2 M key | 1 x 2242/2260/2280, for M.2 SSD (PCIe, OS disk, size option) | | | | |
| | M.2 E key | 1 x 2230, for Wi-Fi/BT (PCIe, USB 2.0, I2C and PCM) | | | | |
| | M.2 B key | 1 x 3042/3052, for 4G/5G (PCIe, USB 2.0/3.0) | | | | |
| Slot | SIM | 2 x nano-SIM slots | | | | |
| 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 72 mm | | | | |
| | Weight | 1.4 KG | | | | |
| Environment | Operating Temp. | -20 ~ up to 60°C | | | | |
| | 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 ¹ | Ubuntu Desktop | | | | |



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Preliminary

Block Diagram



Ordering Information

| PN | SoM | DRAM | Wi-Fi/BT* (M.2 E-Key) | SSD* (M.2 M-Key) | 4G/5G* (M.2 B-Key) | O.P. Temperature | PSU* | OS* |
|-------------|------------------|-------|--------------------------|---------------------|-----------------------|---------------------|--------|--------|
| 90AE0191-M* | Jetson Orin NX | 16 GB | option | option | option | -20~60 | option | option |
| 90AE0191-M* | Jetson Orin NX | 8 GB | option | option | option | -20~60 | option | option |
| 90AE0191-M* | Jetson Orin Nano | 8 GB | option | option | option | -20~60 | option | option |
| 90AE0191-M* | Jetson Orin Nano | 4 GB | option | option | option | -20~60 | option | option |

* 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 |
|-------------------------|---|
| Wi-Fi/BT Module | |
| 0C011-00214100 | EMWICON WMX6219, RTL8822CE, Wi-Fi 5 802.11ac + BT 5.0 (2*2), M.2 2230 |
| 4G Module | |
| TBD | |
| 5G Module | |
| TBD | |
| Wi-Fi/BT ANTENNA | |
| 14008-04490000 | |
| 4G ANTENNA | |
| TBD | |
| 5G ANTENNA | |
| TBD | |
| SSD | |
| 03B03-00236400 | SSD P3X4 128GB M2 2280 NVME |
| 03B03-00422100 | SSD P3X4 256GB M2 2280 NVME |
| 03B03-00378200 | SSD P3X4 512GB M2 2280 NVME |

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

Optional Accessories: (purchased separately)

| Item# | Description |
|-------------------|--|
| ADAPTER | |
| 0A001-01050900 | 65W Power adapter, input 100 - 240Vac, output 12Vdc / 5.41A, C14, 0 to 40°C O.P. temperature |
| 0A001-00891600 | 65W Power adapter, input 100 - 240Vac, output 19Vdc / 3.42A, C6, 0 to 35°C O.P. temperature |
| POWER CORD | |
| 14009-00021400 | C14 Power cord with United States (US) plug, 180cm |
| 14009-00021000 | C14 Power cord with Europe (EU) plug, 180cm |
| 14009-00021100 | C14 Power cord with China (CN) plug, 180cm |
| 14009-00020600 | C14 Power cord with Japan (JP) plug, 180cm |
| 14009-00020800 | C14 Power cord with Australia (AU) plug, 180cm |
| 14009-00020900 | C14 Power cord with United Kingdom (UK) plug, 180cm |
| 14009-00021000 | C14 Power cord with Korea (KR) plug, 180cm |
| 14009-00020700 | C14 Power cord with Swiss (CH) plug, 180cm |
| 14009-00021200 | C14 Power cord with Taiwan (TW) plug, 180cm |
| 14G1100083A0 | C6 Power cord with United States (US) plug, 150cm |
| 14G110060341 | C6 Power cord with Europe (EU) plug, 80cm |
| 14G110008300 | C6 Power cord with China (CN) plug, 80cm |
| 14G110008330 | C6 Power cord with Japan (JP) plug, 80cm |
| 14G110060365 | C6 Power cord with Australia (AU) plug, 80cm |
| 14G110008350 | C6 Power cord with United Kingdom (UK) plug, 80cm |
| 14G110008310 | C6 Power cord with Korea (KR) plug, 80cm |
| 14G1100083E0 | C6 Power cord with Swiss (CH) plug, 80cm |
| 14G11006032B | C6 Power cord with Taiwan (TW) plug, 80cm |

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



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