

PJAI-100-ON

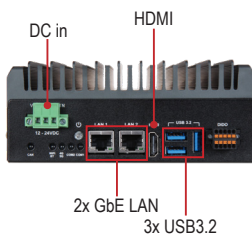
Fanless Compact System with NVIDIA® Jetson Orin Nano™ for Edge AI Applications



Designed with NVIDIA® Jetson Orin Nano™ SOM, Portwell's rugged and compact PJAI-100-ON supports a wide industrial temperature range from -20°C to 60°C, while its fan-less design ensures silent operation, reliability and low maintenance rate. In addition, it integrates M.2 Type E and M.2 Type B for wireless connectivity, and the support of dual Gigabit Ethernet LAN ports suitable for Edge AI applications and more.

FEATURES

- Fanless System with NVIDIA® Jetson Orin Nano™ SOM (up to 40 TOPS)
- 4GB/8GB 64-bit LPDDR5 (By SOM)
- 1x M.2 2280 M-Key NVMe (PCIe x4)
- Supports 1x M.2 2230 E-Key, 1x M.2 3042/3052 B-Key and 2x Nano SIM slots
- Supports 2x RJ45 GbE and 3x USB 3.2 Type A ports
- 2x DB9 COM ports and 1x DB9 CANbus



System

SOM	NVIDIA® Jetson Orin Nano™
CPU	- 4GB: 6-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU - 8GB: 6-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU
Memory	- 4GB: 4GB LPDDR5 - 8GB: 8GB LPDDR5
Storage	1x M.2 2280 M-Key (PCIe x4)
Expansion	- 1x M.2 2280 M-Key (PCIe x4) - 1x M.2 3042/3052 B-Key - 1x M.2 2230 E-Key - 2x Nano SIM slots

External I/O

Ethernet	2x RJ45 GbE ports
USB	- 3x USB 3.2 Gen1 Type-A - 1x USB 2.0 Micro-USB for debug - 1x USB 2.0 Type C for OS flash
DIO	4ch DIDO
Serial Port	- 2x DB9 COM port for RS-232/422/485 - 1x DB9 CANbus
Display	HDMI (Max. resolution 3840x2160 @ 60Hz)

Power Supply

Power Input	DC-IN 12V ~ 24V with 3-pin terminal block
-------------	---

Environmental

Operating Temp	- 20°C to 60°C (-4°F ~ 140°F)
Storage Temp	- 40°C to 85°C (-40°F ~ 176°F)
Humidity	5 ~ 95% @ 40°C, non-condensing
Vibration	5G 10~500 Hz for IPC (1G 10~500 Hz with Wall mount/ DIN-Rail)
Shock	50G/11ms for IPC (15G/11ms with Wall mount/ DIN-Rail)

Mechanical

Dimension	152 x 112 x 62 mm (5.9" x 4.4" x 2.5")
Weight	1.4kg (3.08lbs)
Mounting	Wall mount / DIN-Rail (Optional)

Operation System

BSP	Jetpack 5.1.3 or above
-----	------------------------

Certification

Certification	CE / FCC class A
---------------	------------------





PJAI-100-ON



ORDERING INFORMATION

Part Number	NVIDIA Module	NVIDIA Module Memory	NVIDIA Module eMMC	NVMe
PJAI-100-ON4G	Orin Nano	4G	N/A	240GB~1920GB for option
PJAI-100-ON8G	Orin Nano	8G	N/A	240GB~1920GB for option

PACKING LIST

Part Number	Description	Quantity
PJAI-100-ON	PJAI-100 Fanless system	1
Accessory box	Wall-mount kit, DIO connector, 3-pin terminal block, Foot pads	1

OPTIONAL

Item	Description
NVMe	240GB NVMe SSD
	480GB NVMe SSD
	960GB NVMe SSD
	1920GB NVMe SSD
Adaptor	65W 12V AC/DC power adaptor
DIN-Rail	DIN-Rail kit
Wi-Fi	Wi-Fi module (Customer should install separately)
4G/5G	4G/5G module (Customer should install separately)



Portwell, Inc. Headquarters
 No. 242, Bo'Ai St., Shu-Lin Dist,
 New Taipei City 238, Taiwan
 Tel: +886-2-7731-8888
 Fax: +886-2-7731-9888
 E-mail: info@portwell.com.tw
www.portwell.com.tw

American Portwell
 (Fremont, CA)
 Tel: +1-510-403-3399
 E-mail: info@portwell.com
www.portwell.com

Portwell UK Ltd.
 Tel: +44(0)1235-750-760
 E-mail: info@portwell.eu
www.portwell.eu

Portwell Japan, Inc.
 (Tokyo)
 Tel: +81-3-6902-9225
 E-mail: info@portwell.co.jp
www.portwell.co.jp

Portwell Japan, Inc.
 (Osaka)
 Tel: +81-6-4807-7721
 E-mail: info@portwell.co.jp
www.portwell.co.jp

European Portwell
 Tel: +31-252-620790
 E-mail: info@portwell.eu
www.portwell.eu

KIOSK Embedded Systems GmbH
 Tel: +49-8152-3962-500
 E-mail: info@portwell.eu
www.portwell.de

Shanghai Portwell
 Tel: +86-21-5771-2505
 E-mail: info@portwell.com.cn
www.portwell.com.cn

Portwell Korea, Inc.
 Tel: +82-31-450-3043
 E-mail: info@portwell.co.kr
www.portwell.co.kr

Portwell India Technology Private Limited
 Tel: +91-80-4168-4255
 E-mail: enquiry@portwell.in
www.portwell.in

