

NTDRW100

AI DIN Rail Box PC with NVIDIA® Jetson Orin™ Nano



CE

FCC

KEY FEATURES

- NVIDIA® Jetson Orin™ Nano (up to 67 TOPS)
- 3 x 1 Giga LAN, 1 x 1 Giga LAN with PSE (up to 30 watts of power)
- 4 x USB 3.2 Gen 2x1, 1 x USB2.0, 3 x COM, 1 x CAN
- Isolated DIO (8-in/8-out)
- Wide Range 9V to 36V DC Power Input with Isolation
- Wide Operating Temperature range from -20°C to +60°C
- DIN-Rail type Edge Computing

INTRODUCTION

Winmate NTDRW100 is an AI DIN Rail Box PC with NVIDIA® Jetson Orin™ Nano engineered for machine vision, edge AI inference, and industrial automation. It combines NVIDIA® Jetson Orin™ Nano (up to 67 TOPS), 3 x 1 Giga LAN, 1 x 1 Giga LAN with PSE (up to 30 watts of power), and 4 x USB 3.2 Gen 2x1, 1 x USB2.0, 3 x COM, 1 x CAN to support reliable operation in harsh industrial environments. With Isolated DIO (8-in/8-out), the NTDRW100 helps OEMs, system integrators, and project teams deploy durable, configurable solutions for demanding field, factory, and mission-critical applications.

SPECIFICATIONS

System Specification

Processor	NVIDIA® Jetson Orin™ Nano	Memory	8GB LPDDR5 @ 2133 MHz on SOM
Storage	1 x M.2 2280 M-Key NVMe SSD 256GB (Default) 512GB (Optional) 1TB (Optional) 2TB (Optional)	Ethernet controller	1 x 10/100/1000 Mbps (via Orin™ Nano, with PSE, up to 30 watts of power) 3 x 10/100/1000 Mbps
Security	TPM 2.0	Operating System	Linux (Support NVIDIA Jetpack 6.2) (Optional)
WLAN	Support (Optional)	BT	Support (Optional)
WWAN	Support (Optional)	Expansion Port	1 x M.2 2230 E-key Slot (for WiFi+BT) 1 x M.2 3042/3052 B-key Slot (for 4G/5G)

Mechanical

Dimension	130 x 68 x 150 mm	Weight	2.5 kg
Mounting	Din-Rail mount (Default) Mini Din-Rail Mount (Optional) Wall Mount (Optional)	Enclosure	Aluminum and Metal Housing
Cooling System	Fanless Design		

Environment

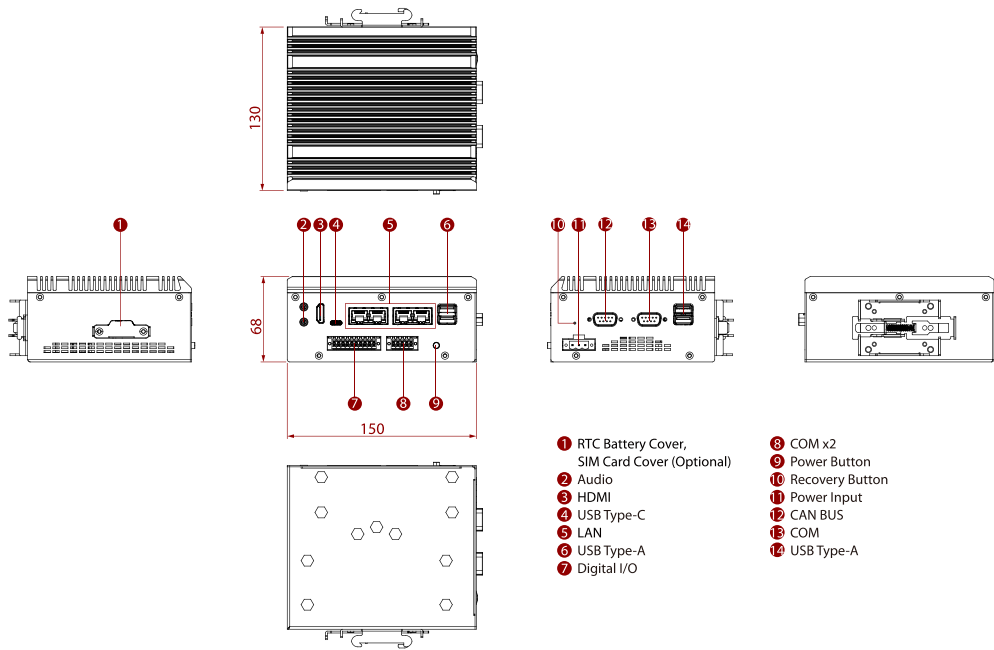
Operating Humidity	10% to 90% RH, Non-Condensing	Operating Temperature	-20°C to 60°C
Storage Temperature	-40°C to 70°C	Shock	MIL-STD-810H Method 516.8 Procedure I (Optional)
Vibration	MIL-STD-810H Method 514.8 Procedure I		

Certification

Certification	CE, FCC
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IO Ports			
Power Input	1 x Isolated 9~36V DC with 3-Pin Terminal Block	USB Port	3 x USB3.2 Gen2x1 (10Gbps, TypeA) 1 x USB2.0 (TypeA) 1 x USB3.2 Gen2x1 (TypeC for OTG)
Serial Port	2 x Isolated RS232/422/485 (1 x 10 Pin terminal block, select thru jumper) (Default RS232) 1 x Isolated RS232/422/485 (1 x DB9, select thru BIOS) (Default RS232)	SIM Card Slot	1 x nano SIM Card slot (Optional)
Video	1 x HDMI 2.0b , Max resolution up to 3840x2160@30Hz (Optional)	Audio	Mic in Line out
Expansion Port	1 x M.2 2230 Ekey Slot (for WiFi+BT) 1 x M.2 3042/3052 Bkey Slot (for 4G/5G)	LAN	1 x 10/100/1000 Mbps (via Orin™ Nano, with PSE, up to 30 watts of power) 3 x 10/100/1000 Mbps
Indicator	1 x LED Indicator for power	DIDO	1 x Isolated 8in/8out DIO with 20Pin Terminal block : 8 x Digital input channels with 2500 VDC isolation protection -Wet contact: Logic 0: 2 ~ 30 VDC/ Logic 1: 0 ~ 1 VDC -Dry contact: Logic 0: Shorted to GND/ Logic 1: Open 8 x Digital output channels -Output voltage: 5 ~ 30 VDC -Output capability sink: 500 mA ax./channel
CANBUS	1 x CAN FD (DB9 connector)		
Control			
Button	1 x Power Button with LED Indicator 1 x Recovery Button		
Accessory			
Accessory	1 x Terminal Block 20-pin connector for DIO 1 x Terminal Block 3-pin connector for Power 1 x Terminal Block 10-pin connector for COM 1 x Open Wire Cable 1 x Terminal Block 3-pin to 2.5Ø Female Adapter Cable 1 x Din Rail Mount kits	Optional Accessory	1 x 100~240V AC to DC Adapter(12V, 120W) 1 x Power Cord 1 x Mini Din Rail Mount kits 1 x Wall Mount kits
Power			
Power Rating	9V to 36V DC	POE	PoE (PSE): follows IEEE 802.3at (30W)

DIMENSIONS UNIT:MM



- 1 RTC Battery Cover, SIM Card Cover (Optional)

2 Audio

3 HDMI

4 USB Type-C

5 LAN

6 USB Type-A

7 Digital I/O
- 8 COM x2

9 Power Button

10 Recovery Button

11 Power Input

12 CAN BUS

13 COM

14 USB Type-A

NOTE

1. This is a simplified drawing and some components are not marked in detail.
 2. Please contact our sales representative if you need further product information.
 3. All specifications are subject to change without prior notice.
 4. The product shown in this datasheet is a standard model. For diagrams that contain customized or optional I/O, please contact the Winmate Sales Team for more information.
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