

IAN32

Intel® N100 x86 Embedded Motherboard



KEY FEATURES

- 3.5" Form Factor (146mm x 102mm), x86 Embedded motherboard
- Intel® Processor N100
- 1 x SO-DIMM, DDR5 4800 MHz (Max. 16GB)
- Integrated Dual 2.5 Gigabit Ethernet
- 1 x USB 3.2 Type-C (USB 3.2 + DisplayPort)
- 1 x M.2 Key M Slot for M.2 2280 NVMe SSD. Optional 1 x 2.5" SATA III Storage
- 12 V Single Voltage Power Input

INTRODUCTION

Winmate x86 Embedded Board Series combines compact design with powerful performance, featuring multiple advanced processor options. Designed with industrial-grade components, advanced and versatile customization capabilities, this Embedded Board ensures reliable operation in harsh environments with a wide power input range of 9-36V and extended temperature tolerance (-40 to +85°C). Ideal for space-constrained industrial applications, they deliver seamless integration and optimized performance.

SPECIFICATIONS

System Specification

Processor	Intel® Processor N100 6M Cache, up to 3.40 GHz	Memory	8GB 16GB (Optional)
Storage	1 x M.2 2280 M-Key NVMe SSD 128GB 256GB (Optional) 512GB (Optional) 1TB (Optional) 2TB (Optional) 4TB (Optional) 1 x SATA III for 2.5" SSD/HDD up to 2TB(Only available when NVMe SSD is not present) (Optional)	Ethernet controller	2 x Intel® 2.5 Gigabit Ethernet Controller
Security	TPM 2.0	Operating System	Windows 11 IoT Enterprise (64 bit) (Optional) Windows 11 Pro 64 bit (Optional) Linux Ubuntu 22.04(Do not support Wake on Touch) (Optional)
WLAN	(Optional)	BT	(Optional)

IO Ports

Power Input	1 x 12V DC, 2.5φ DC jack	USB Port	2 x USB3.2 Gen2x1 (Type-A) 1 x USB 3.2 Gen 2x1 Type C connector,support DP Alt. mode
Serial Port	1 x RS232/422/485 (Default RS232)	Video	1 x HDMI 2.0b, Max resolution up to 4096x2160@60Hz (Optional)
Expansion Port	1 x M.2 2230 E-Key Slot (for Wi-Fi module) 1 x M.2 2230 E-Key Slot (for AI Acceleration Card, Only available when NVMe SSD is not present)	LAN	2 x 2.5 Giga LAN RJ45 Connector

Internal IO Ports

Power input	1 x 2pin(1x2) for 12V DC in	Power output	1 x 2pin(1x2) blue wafer for 3.3V DC out 1 x 2pin(1x2) red wafer for 5V DC out 1 x 2pin(1x2) yellow wafer for 12V DC out
USB	2 x 8pin(2x4) for 4 x USB 2.0	Serial port	3 x 10pin(2x5) for RS232
Display	1 x 40pin DF13 connector for LVDS (Default) 1 x 30pin DF13 connector for eDP 1.4a, Max resolution up to 4096x2304@60Hz(1 lane) (Optional)	Backlight	1 x 7pin(1x7) for panel backlight
SATA	1 x SATA III (Only available when NVME SSD is not present) 1 x 8pin(2x4) for SATA power	DIDO	1 x 14pin(2x7) for Digital input/output
VR	1 x 3pin(1x3) for Digital panel backlight brightness control 1 x 3pin(1x3) VR/Software brightness switch jumper 1 x 3pin(1x3) PWM/DC brightness switch jumper 1 x 3pin(1x3) 3.3V/5V PWM Level switch jumper	Fan	1 x 3pin(1x3) for CPU Fan
OSD	1 x 10pin(2x5) for OSD control	Speaker	2 x 2pin(1x2) for Speaker
Backup battery	1 x 2pin(1x2) for RTC battery	Audio	1 x 12pin(2x6) for Line in/Line out/ Mic in

Certification

Certification	CE, FCC
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Mechanical

Dimension	146 x 102 mm
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Environment

Operating Humidity	10% to 95% RH, Non-Condensing	Operating Temperature	0°C to 60°C
Storage Temperature	-40°C to 70°C		

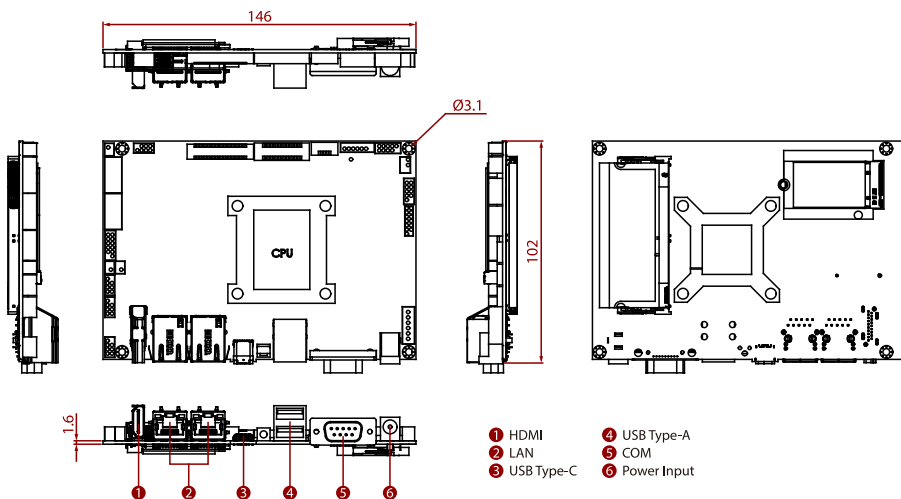
Accessory

Accessory	1 x Installation Guide	Optional Accessory	1 x SATA cable (94H007Z070K0) (Optional) 1 x SATA Power cable (94HE08Z150E0) (Optional) 1 x COM cable (94G309E100E1) (Optional) 1 x 2-Port USB 2.0 Type A cable (94E808E080K0) (Optional) 1 x 12V 84W Adapter (922D084W12V1) (Optional) 1 x Power cord (Varies by country) (Optional) 1 x CPU Heatspreader (98K000A000N2) (Optional) 1 x Membrane (98K000A000N1) (Optional) 2 x Speaker (61262000007) (Optional)
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Power

Power Rating	12V DC in
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DIMENSIONS UNIT:MM



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.