

Fanless Box Computer with Intel® Core™ i3/i5/i7 Processor, 4 x LAN, 6 x COM

Overview

The NBC-2414 fanless industrial computer is engineered with a cableless design, providing exceptional resistance to vibrations and electromagnetic interference. Its modular architecture, which includes a CPU board that seamlessly plugs into an I/O board, not only minimizes the time and cost associated with product upgrades but also facilitates effortless customization to address unique customer application requirements. Furthermore, the NBC-2414 is equipped with a comprehensive array of I/O interfaces and expansion capabilities, such as COM ports, GbE LAN, GPIO, WiFi, and 4G connectivity, ensuring robust and flexible performance for a wide range of industrial applications.

Features

- Intel® Core™ i3/i5/i7 processor
- 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI
- 2 x CAN2.0c(optional), 16 x Opto-isolated DIO (optional)
- 9 to 36VDC power input



Operating Temp.



Power Input



Fanless

I/O Interfaces



Specifications

System				
CPU	Intel® Core™ i3-8145U	Intel® Core™ i3-10110U	Intel® Core™ i3-1115G4/	Intel® Core™ i3-1215U/
CPU TDP	/i5-8265U	/i5-10210U/i7-10510U	i5-1145G7/i7-1185G7	i5-1235U/i7-1255U
Memory	1 x DDR4 2666 MHz SO-DIMM up to 32GB		1 x DDR4 3200 MHz SO-DIMM up to 32GB	
Storage	1 x mSATA		1 x M.2 2280 NVME	
BIOS	AMI UEFI			
Watchdog Timer	Software Programmable supports 256 levels system reset			
I/O Ports				
USB	2 x USB 2.0, 2 x USB 3.0			
Serial	6 x RS-232 (1 x RS-232/422/485)		6 x RS-232 (1 x RS-232/422/485, 1 x RS-232/485)	
Ethernet	4 x RJ45 GbE Intel® I226-V			
Display	1 x VGA, 1 x HDMI			
SIM Card Slot	1 x SIM card slot (optional)			
DIO	16 x Opto-isolated DIO (optional)			
CAN bus	2 x CAN 2.0B (optional)			
Antenna	3 x SMA antenna holes			
Expansion Slot				
Mini PCIe	1 x Full length mini PCIe		N/A	
M.2	N/A		1 x M.2 2230 E-Key/1 x M.2 2280 NVME	
RF Communication				
Wi-Fi	Mini PCIe		M.2 2230 E-Key	
Cellular	Mini PCIe			
Bluetooth	Mini PCIe		M.2 2230 E-Key	
GNSS	Mini PCIe			
Audio				
Audio	Mic in, line out			
Power				
Button	Yes			
Remote Power On/Off	4-Pin Remote SW&Power LED			
DC Input	9-36VDC			
Power Mode	AT/ATX			
Operating System				
Windows	Windows 10/11			
Linux	Ubuntu			
Mechanical				
Dimensions (W x D x H)	200 x 154 x 56 mm (7.87 x 6.06 x 2.21 inches)			
Weight (N.W.)	2 kg (4.41 lbs)			
Mounting	Wall mount			
Material	Aluminum alloy			
Environment				
Operating Temperature	-10 to 60°C (14 to 140°F)			
Storage Temperature	-20 to 60°C (-4 to 140°F)			
Relative Humidity	10% to 95% @ 40°C (104°F), non-condensing			
Certification				
EMC	CE, FCC Class A			

Technical drawing of the ECU showing front, side, and rear views with dimensions and connector details.

Front View Dimensions:

- Overall width: 232mm
- Width excluding side rails: 218mm
- Width of main body: 200mm
- Overall height: 154mm
- Height of top rail: 86mm
- Height of bottom rail: 34mm

Side View Labels:

- R4
- R7

Rear View Connector Details:

Top Row Connectors:

- SW
- USB
- CAN
- COM1
- COM2
- COM3
- COM4
- COM5
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Part No.	Description
A.02.001.000058	110-240VAC Input, 12VDC/5A Output, 60W, Phoenix 2P Terminal Block Connector (5.0)
C.02.009.000094	110-240VAC Input, 12VDC/7A Output, 84W, Phoenix 2P Terminal Block Connector (5.0)

Part No.	Description
NBC-2414-8145U	Core™ i3-8145U NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-8265U	Core™ i5-8265U NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-10110U	Core™ i3-10110U NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-10210U	Core™ i5-10210U NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-10510U	Core™ i7-10510U NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-1115G4	Core™ i3-1115G4 NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-1145G7	Core™ i5-1145G7 NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-1185G7	Core™ i7-1185G7 NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-1215U	Core™ i3-1215U NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-1235U	Core™ i5-1235U NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC
NBC-2414-1255U	Core™ i7-1255U NBC with 6 x COM, 4 x LAN, 4 x USB, 1 x VGA, 1 x HDMI, 9 to 36VDC