



MobiPad nBOX MK12F-V2-I5U v.8.1 - Powerful, industrial mini PC for production management, with 32GB RAM, 1TB SSD, WiFi 6E, and Windows 11 Pro license



Category:	MiniPC Industry
Manufacturer:	Mobilator
Supported OS:	Windows 11, Windows 10, Linux
Installed OS:	Windows 11 PRO
Chipset:	Intel Alder Lake-U
CPU Support:	12th and 13th generation Intel Core
Installed CPU:	Intel Core i5-1235U
Graphic Card:	Intel Iris Xe Graphics
Memory Support:	DDR4
Installed Memory:	32GB RAM
Storage (HDD) Support:	SSD M.2 - NVMe
Installed Storage (HDD):	1TB SSD M.2 - NVME 2TB (optional)
IP Norm:	None
Temp:	-20°C ~ +55°C
Storage temperature:	-20°C ~ +70°C

Humidity:	5% - 95%
Others:	Color black
LAN:	2x RJ45 2.5Gbe LAN (Intel I225-V/I226-V chip)
Wireless LAN card:	WiFi 6E
3G:	No
4G LTE:	Optional
Bluetooth:	Bluetooth 4.2
Rear Panel (ports):	3x HDMI 2.0b 1x DisplayPort 1.4a 2x LAN 2.5G 2x COM (RS232/RS485) 2x USB 2.0 Phoenix connector DC-IN
Front Panel (ports):	USB-C 3.0 4x USB 3.0 2x USB 2.0 MIC IN Line-out Power + LED
Expansion:	Adapter HDMI cable VESA mount WiFi Antenna
Power:	100-240V AC - 19V DC / 3.7A
Watch Dog Timer:	Yes
CD/DVD Drive:	None
TV Tuner:	No
Dimensions:	186 x 128 x 67 mm
Fanless:	Yes
Weight:	1,63kg

1 108,42 €
net price: 901,15 €

MobiPad **nBOX MK12F-V2-I5U**



SPECIFICATION

CONNECTIVITY AND COMMUNICATION

RESISTANCE AND DURABILITY

APPLICATION

AVAILABLE VERSIONS

Compact industrial computers demonstrate exceptional resistance to operation in harsh and dusty environments, ensuring completely silent operation in any workplace. The durable MobiPad nBOX MK12F-V2-I5U model utilizes a passive heat dissipation system and a metal construction, enabling efficient cooling of the ten-core Intel Core i5-1235U processor without the use of any moving parts.

This innovative device from the Alder Lake-U family is fully designed for continuous operation in 24/7 mode, further enhanced by automatic restart after power outage and Wake-On-Lan support. The powerful Intel Iris Xe graphics card makes the device an excellent foundation for advanced industrial systems and modern office workstations requiring maximum stability.

Small dimensions



The small dimensions of the metal housing, measuring 186x128x67 mm, ensure it takes up minimal space on your workstation.

Lightweight construction



A net weight of 1.63 kg combined with the small dimensions of the housing allows for easy storage in a bag or backpack.

Efficient processor



The use of a modern Intel Core i5-1235U processor guarantees high system responsiveness when performing multiple operations simultaneously.

Wireless Networking



The implementation of modern communication solutions enables stable and fast wireless data transfer.

Quick Start



The use of advanced data storage technologies translates into immediate system readiness and the rapid opening of all software tools.

Passive Cooling



The complete absence of moving mechanical parts in the design translates into completely silent system operation in all operating conditions.

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SPECIFICATION

MobiPad nBOX MK12F-V2-I5U

Processor

Intel Core i5-1235U

MobiPad nBOX MK12F-V2-I5U

Operating system	Windows 11 PRO
RAM DDR4	32GB
Hard Disk SSD M.2	1TB 2TB * (optional)
Communication	WiFi 6E Bluetooth 4.2 4G LTE * (optional)
Connectors - front	1x USB-C 3.0 4x USB 3.0 2x USB 2.0 microphone input (MIC IN) line output (Line out)
Connectors - rear	3x HDMI 2.0b 1x DisplayPort 1.4a 2x LAN 2x USB 2.0 2x COM ** (a choice of 2x RS232 or 2xRS485 or 1xRS232 and 1x RS485)
Dimensions	186x128x67mm
Weight	1.63kg
Graphics card	Intel Iris Xe Graphics
Colors available	Black (Metal Housing)

* Optional equipment available only in the appropriate product versions or upon request.

** When ordering, a selection of two COM connector variants is available: 2x RS232, 2x RS485, or a mixed set (1x RS232 and 1x RS485).



Detailed device specification is available in the "Technical data".

Efficient Processor

The modern MobiPad nBOX MK12F-V2-I5U is powered by the powerful and energy-efficient Intel Core i5-1235U processor from the Alder Lake-U series, which offers ten cores and twelve threads to efficiently handle multiple processes simultaneously. The hybrid architecture of this processor, with a low power consumption of 15W, enables dynamic resource allocation, which, combined with two DDR4-3200MHz memory slots with a maximum capacity of 64GB, ensures high data throughput.

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Passive Cooling

The advanced design of the MobiPad nBOX MK12F-V2-I5U is based on a passive fanless cooling system that fully utilizes the thermal properties of the durable metal housing. Thermal energy generated by the ten-core unit is transferred directly to the device's external structure, eliminating fans and other moving parts. This technical solution guarantees silent operation and significantly reduces the likelihood of mechanical failures, while also providing a high barrier against dust and dirt.

Dimensions

The compact, all-metal design, measuring 186x128x67mm, makes the versatile MobiPad nBOX MK12F-V2-I5U perfectly suited for both modern office environments and demanding industrial sectors.



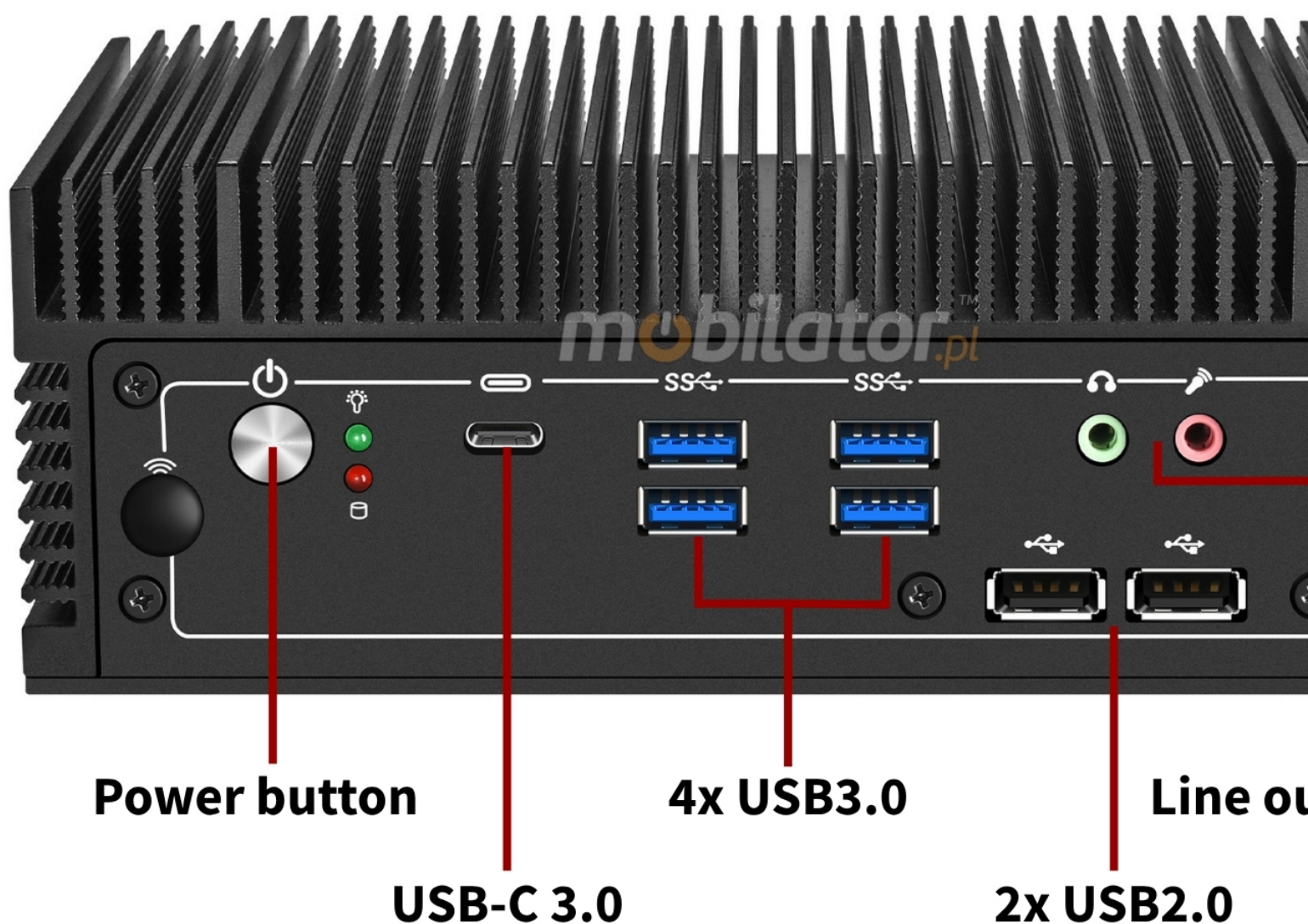
Dimensions	186mm x 128mm x 67mm
Net weight	1630g

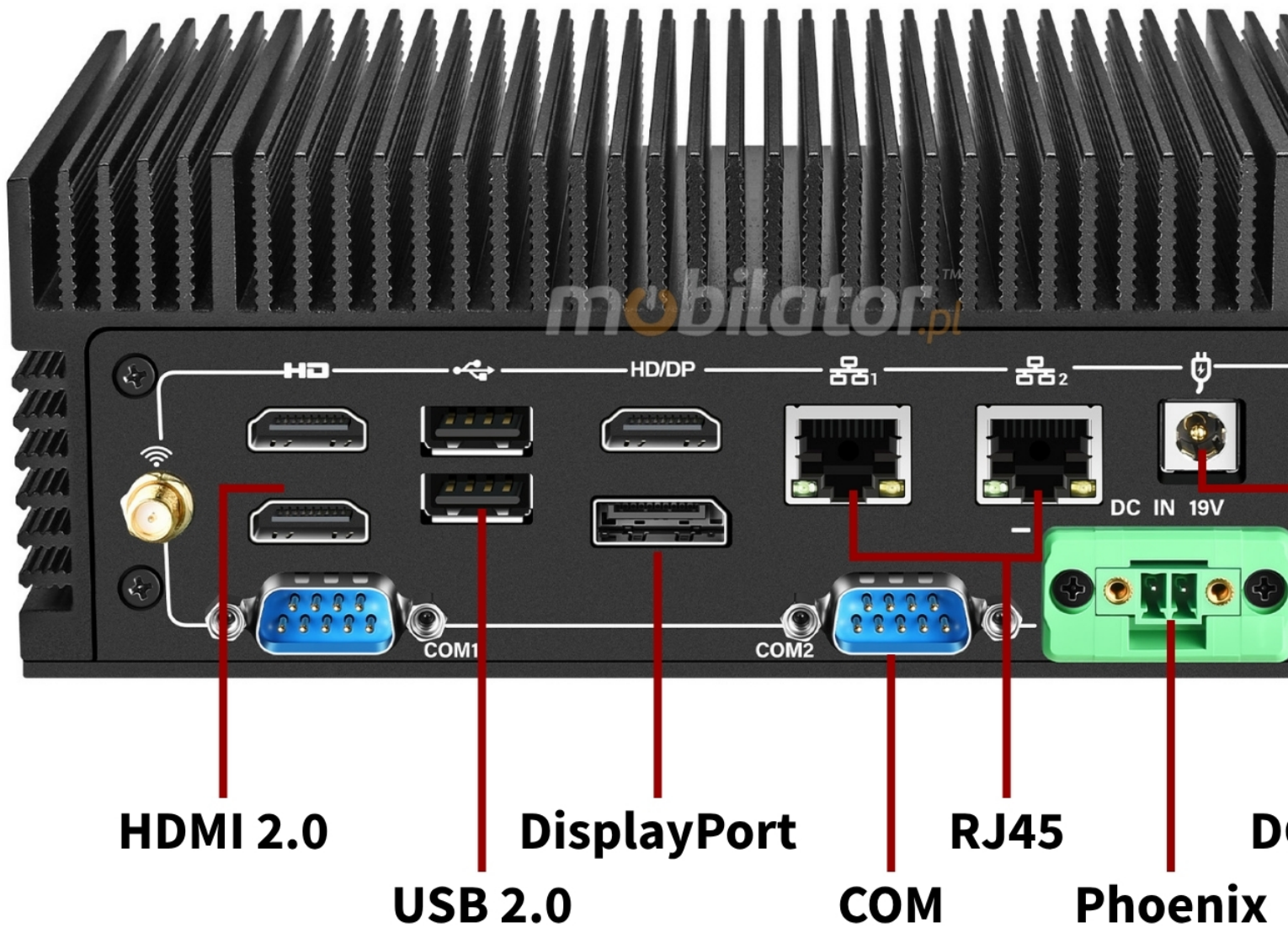
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Connectors and Buttons

The multi-functional MobiPad nBOX MK12F-V2-I5U is equipped with a comprehensive set of front-panel connectors, allowing for efficient peripheral connection in challenging work environments. The robust metal front panel

incorporates a power button, system error LED, and SSD activity indicator, ensuring constant visibility. The available I/O interface offers a modern USB-C 3.0 port, four USB 3.0 ports, and two USB 2.0 ports, enabling lightning-fast data transfer and simultaneous connection with numerous external accessories. The front panel also features dedicated audio connectors, including a MIC IN and a line out, making it easy to customize the hardware configuration for specific operational tasks. This port arrangement in this passive Alder Lake-U series unit promotes ergonomics and allows for efficient connection management in modern industrial and office environments.





HDMI 2.0

USB 2.0

DisplayPort

COM

RJ45

Phoenix

The advanced design of the MobiPad nBOX MK12F-V2-I5U offers an extensive rear panel equipped with a DC IN socket and a professional Phoenix terminal, ensuring power stability in industrial environments. Network communication is provided by two RJ45 2.5GbE LAN ports based on powerful Intel chips, while display transmission is handled by three HDMI 2.0b ports and one DisplayPort 1.4a port supporting 4K resolution at 60Hz. The back I/O section also includes two additional USB 2.0 ports, which, combined with the ten-core Intel Core i5-1235U processor, creates a powerful platform for data management. A key element enhancing the functionality of this fanless unit are two serial COM ports.

Thanks to internal jumpers, these ports can operate in 2x RS232, 2x RS485, or 1x RS232 and 1x RS485 standards, allowing for seamless integration with a variety of measurement equipment and industrial controllers. This modular interface design makes the device a precise response to the specific needs of advanced automation systems and critical infrastructure.

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CONNECTIVITY AND COMMUNICATION

WiFi 6E wireless network

The modern MobiPad nBOX MK12F-V2-I5U offers stable and efficient wireless connectivity thanks to a dedicated M.2 2230 E Key connector, which provides full support for the Wi-Fi ac and ax communication standards. This advanced industrial platform guarantees smooth data transfer even in the demanding and heavily loaded network environments found in modern offices and manufacturing plants.

Wired LAN

The powerful MobiPad nBOX MK12F-V2-I5U is equipped with two RJ45 2.5Gbe LAN ports based on advanced Intel I225-V or I226-V controllers, guaranteeing significantly higher throughput compared to traditional gigabit solutions. This network configuration enables the rapid exchange of large volumes of data and

minimizes latency in critical control systems. The use of a dual wired interface enables physical separation of the local network from the external network or the configuration of redundant connections, which significantly increases operational reliability.

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RESISTANCE AND DURABILITY

Mechanical Damage

The use of passive fanless heat dissipation combined with a fast M.2 NVMe PCIe Gen4x4 SSD makes the rugged MobiPad nBOX MK12F-V2-I5U highly resistant to vibration and mechanical damage. The absence of any moving components inside the enclosure ensures operational stability even in environments subject to intense shock.



A key advantage of the MobiPad nBOX MK12F-V2-I5U is its metal construction, which acts as a passive heat exchanger. The specialized housing is designed to effectively dissipate thermal energy without the need for fans.

Extreme Temperatures

The durable MobiPad nBOX MK12F-V2-I5U is fully equipped for continuous operation in demanding thermal environments, as evidenced by its wide operating temperature range of -20°C to 55°C . The passive heat dissipation system allows for efficient cooling of the Intel Core i5-1235U processor without the use of any mechanical components.

Operating Temperature	-20°C to 55°C
Temperature Storage	-20°C to 70°C
Humidity	5% to 95%

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APPLICATIONS

Retail and Services

The functional MobiPad nBOX MK12F-V2-I5U is an effective tool in the trade and logistics sectors, where its compact design facilitates efficient invoicing and sales documentation. The use of a passive Fanless cooling system and a durable metal casing ensures silent operation at customer service points, resulting in increased comfort and noise-free work. Thanks to the VESA mount supporting 70x70 and 100x100 mm spacing, the 1.63 kg computer can be mounted directly on the back of a monitor, under a counter, or inside a delivery vehicle, allowing for optimal use of available space. This technological solution makes the device ideal for space-constrained environments while offering a rich set of interfaces.



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Warehouse and Logistics

The innovative MobiPad nBOX MK12F-V2-I5U relies on a ten-core Intel Core i5-1235U processor from the Alder Lake-U series, providing seamless support for multiple inventory management processes in parallel. Its robust metal casing and fanless cooling system enable long-term, trouble-free operation in dusty environments without the risk of mechanical failure.



Transportation and Automotive

The professional MobiPad nBOX MK12F-V2-I5U offers extensive functionality in the transportation industry thanks to its dedicated DC IN input and Phoenix connector, which facilitates stable integration with power systems in various vehicles. This passively cooled device is widely used in cars, trains, and public transport, where it supports advanced passenger information systems and real-time diagnostics of technical parameters.



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 More photos in full resolution available in the "Gallery".

AVAILABLE VERSIONS

The flexible MobiPad nBOX MK12F-V2-I5U offers extensive hardware adaptability, allowing for precise adjustment of this passive unit's parameters to specific project requirements. If specific parameters are required, custom specifications can be developed beyond the standard specifications, allowing for the creation of a unique technological solution that fully meets current needs.

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[v.2](#)

[v.2.1](#)

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[v.5](#)

[v.6](#)

Windows 11 PRO	—	—		—	—		—	—
WiFi 6E	—	—			—		—	—
4G	—	—	—	—			—	—
8GB RAM	—						—	—
16GB RAM	—	—	—	—	—			
32GB RAM	—	—	—	—	—		—	—
256GB SSD M.2 - NVMe	—			—	—		—	—
512GB SSD M.2 - NVMe	—	—	—				—	
512GB + 2TB SSD M.2 - NVMe	—	—	—	—	—		—	—
256GB + 1TB SSD M.2 - NVMe	—	—	—	—	—			—

1TB SSD M.2 - NVMe	—	—	—	—	—	—	—
2TB SSD M.2 - NVMe	—	—	—	—	—	—	—
	v.6.1	v.7	v.8	v.8.1	v.9	v.10	
Windows 11 PRO		—	—		—		
WiFi 6E							
4G	—	—	—	—	—	—	
8GB RAM	—	—	—	—	—	—	
16GB RAM			—	—	—	—	
32GB RAM	—	—					
256GB SSD M.2 - NVMe	—	—	—	—	—	—	
512GB SSD M.2 - NVMe		—	—	—	—	—	

512GB + 2TB SSD M.2 - NVMe	—	—	—	—	—		
256GB + 1TB SSD M.2 - NVMe	—	—	—	—	—		—
1TB SSD M.2 - NVMe	—				—		—
2TB SSD M.2 - NVMe	—	—	—	—			—