uIBX-260-EHL

Ultra Compact Size

Features

» Ultra-Compact Industrial Mini PC Fanless system

» Intel® Celeron® J6412 2.0 GHz (up to 2.6 GHz, quad-core, TDP 10W)

» Onboard LPDDR4x 8G (up to 16GB)

» M.2 for expansion

» Four USB 3.2 Gen2 (10Gb/s) ports

» Two 2.5GbE LAN ports

Specifications

Form factor	
SBC Form Factor	» CPU:
	Intel® Celeron® J6412 2GHz (up to 2.6 GHz, quad-core, TDP 10W)
	» Chipset:
	SoC
	» System Memory:
	LPDDR4x on board 8GB (up to 16G)
	» Power:
	DC Jack: 12 V DC
	Consumption: +12V@3.6A (Intel® Celeron® J6412 with 8GB memory)
I/O Interface	
I/O Ports	» USB:
	4 x USB 3.2 Gen2
	2 x USB 2.0 (optional)(USB expansion is applicable only when 2.5-inch hard disk is not installed)
	» Ethernet:
	2 x RJ-45 2.5 GbE by I225V controller
	» Display:
	1 x HDMI™ 1.4b (up to 4k@ 30Hz)
	» COM Port:
	1 x RS-232/422/485 (DB9)
	1 x RS-232 (optional)
	» TPM:
	Support Intel PTT
	» Wireless/Bluetooth:
	1 x 802.11a/b/g/n/ac (M.2 A Key optional)
	» Watchdog Timer:
	Programmable 1 ~ 255 sec/min
Expansion Slots	
Expansion Slots	» M.2:
	1 x 2230 A-key (PCIe Gen3 x1/ USB2.0)
	1 x 2280 M-key (PCIe Gen3 x2)
System	
Cooling method / System Fan	Fanless
Drive Bays	1 x 2.5” SATA 6Gb/s HDD/SSD bay
Indicator&Buttons	

Buttons	1 x Power button(with LED)
	1 x Reset button
	1 x AT/ATX switch
	1 x Clear CMOS Button
Indicators	1 x Power LED
	1 x HDD LED
Physical Characteristics	
Construction	Extruded aluminum alloy
Color	
Color	Black C
Dimensions	
Dimensions	137 x 102.8 x 65.8
Weight	
Weight	0.97KG /1.74KG
Environment	
Operating Temperature	-10°C ~ 50°C with air flow (M.2)
Humidity	10% ~ 95% non-condensing
Operating Vibration	10-500 Hz, 1.04 Grms, random, 1 hr/axis (SSD)
Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
Safety & EMC	CE / FCC / UKCA compliant
OS Support	
OS Support	Microsoft® Windows® 10/11, Linux

Ordering Information

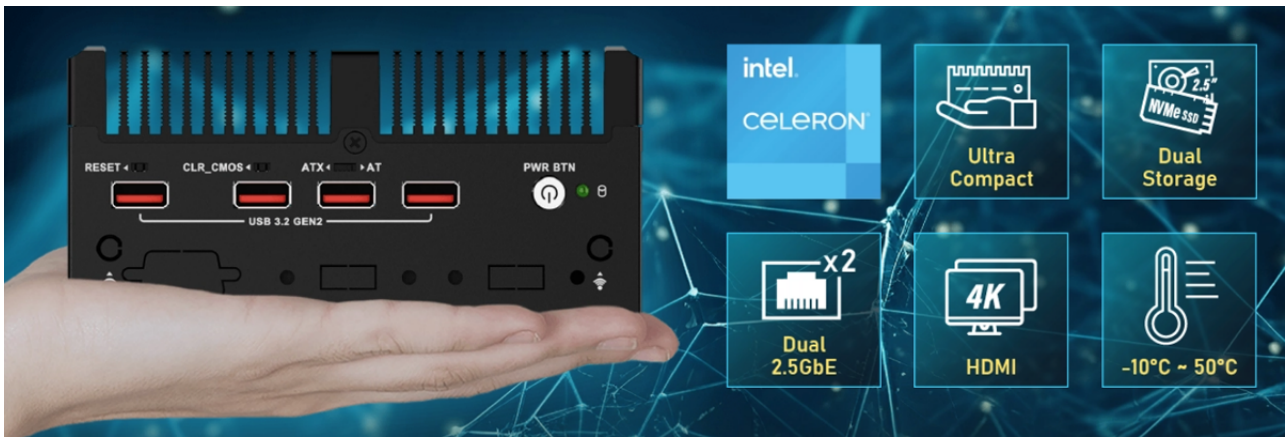
uIBX-260-EHL-W10IoT21-E-R10	OS Image with Windows® 10 Enterprise Entry 64-bit 2021 LTSC for uIBX-260-EHL Series, with DVD-ROM, RoHS
uIBX-260-EHL-JC-R10	Fanless embedded system with Intel® Celeron® J6412 2.0GHz (up to 2.6 GHz, Quad Core, TDP 10W), on board 8GB LPDDR4x memory, 1 x RS-232/422/485, 4 x USB 3.2, 1 x HDMI™, 2 x 2.5GbE Lan, 12V DC, RoHS

Packing List

1 x Mounting Screw	1 x Mounting Bracket
1 x Adapter	1 x Power Cord

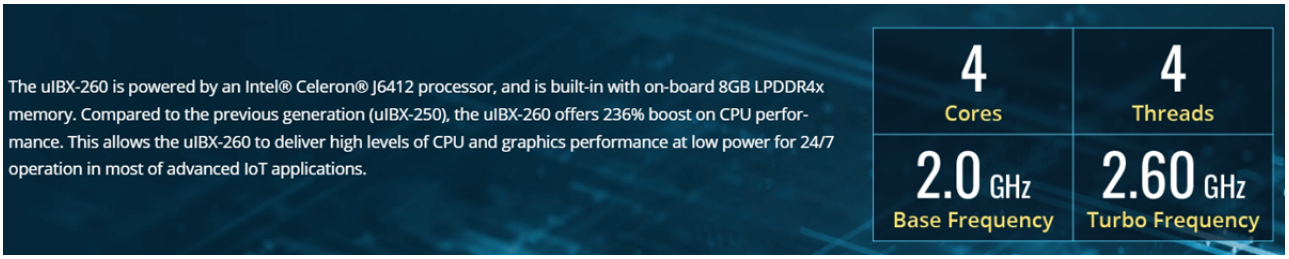
Options

EMB-WIFI-KIT02I3-R10	2T2R M.2 wifi module kit for embedded system, IEEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2;Intel;AX210.NGWG Module, 2 x RF cable , 2 x Antenna; RoHs
32205-008000-100-RS	FLAT CABLE;RS-232/422/485;2;250mm;28AWG;(A)D-SUB 9P MALE,BLUE;(B)MOLEX 51021-0900 P=1.25;Wins Precision;C24230217-0;RoHS
32001-008600-200-RS	ROUND CABLE;USB CABLE;3;210mm;28AWG;(A)USB A TYPE 4PIN FEMALE *2;(B)DU PONT 2*4P P=2.0 FEMALE;ONE PCS PKG W/ LABEL;WITH 4PCS SCREWS,32000-070301-RS SUBSTITUTE;Wins Precision;RoHS



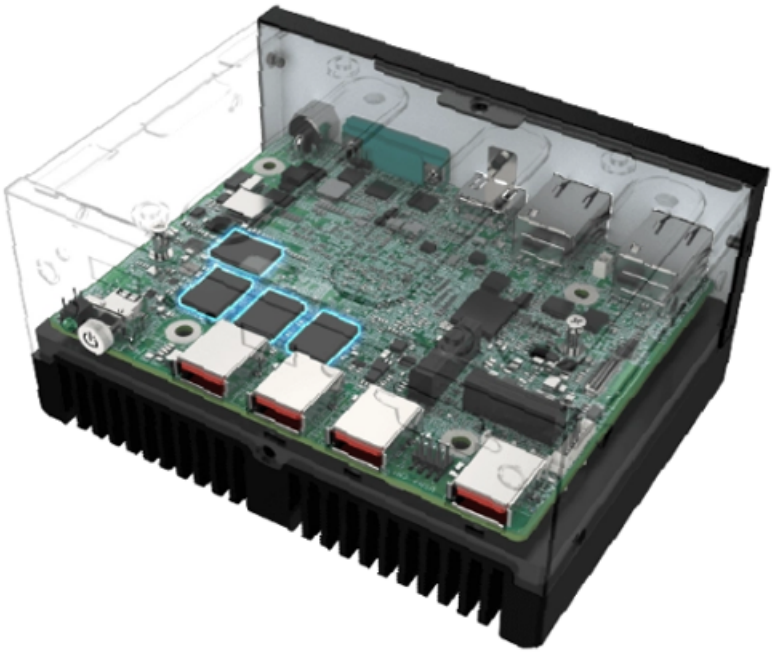
The uIBX-260 is a compact, powerful box PC designed to support your industrial IoT applications that require installation into confined spaces. It is fanless, and features an Intel® Celeron® J6412 processor with onboard LPDDR4x memory that delivers exceptional, reliable performance at low power. Flexible storage options are available, including M.2 NVMe or 2.5" SATA HDD, to suit your needs on data processing. Moreover, the uIBX-260 not only has Wi-Fi capability for seamless control of IoT devices, but also equips dual 2.5GbE ports for faster network communication, making it ideal for use in factory automation, warehouse management, transportation, and other edge computing applications.

Intel® Celeron® J6412 Quad-core Processor, up to 2.60GHz



Reliable Onboard 8GB Dual-channel LPDDR4x Memory

The uIBX-260's memory is upgraded to LPDDR4x, which not only brings faster memory speeds at 4267MT/s, but also reduces the power consumption of the memory system by 60% from 1.5V to 0.6V. The dual-channel memory is soldered on board, enabling the box PC to deliver much more stable, solid operation compared to the socket-type memory for critical usage such as transportation, AGV and other mobile scenarios.

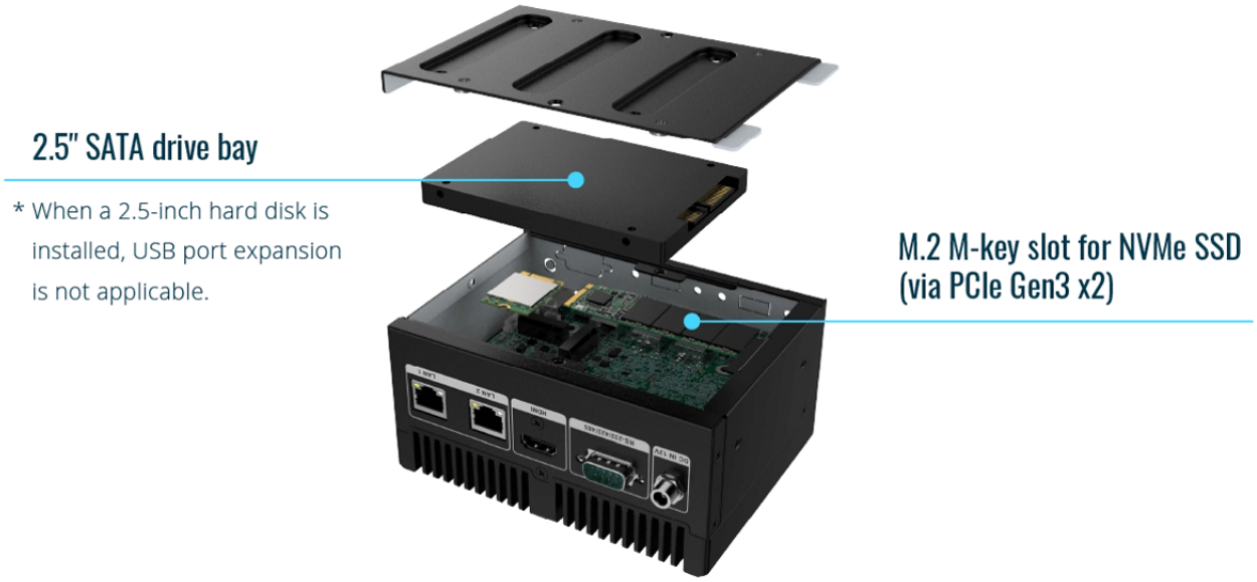


Ultra-compact Size Easily Fits into Any Industrial Setting

With a mounting space of just 137 x 102.8 x 65.8 mm, the uIBX-260 is perfect for industrial applications that require installation into confined spaces, for example as an IoT gateway in a control cabinet for data acquisition, pre-processing or even data aggregation. It is also ideal for wall mounting and is VESA 75 compliant, which allows the compact system to be mounted onto any VESA mount devices.

Dual Storage Design - M.2 NVMe SSD & 2.5-inch HDD/SSD

The uIBX-260 can accommodate both M.2 NVMe SSD and 2.5-inch SATA SSD, providing flexible options for users with different data storage requirements. By leveraging the PCIe Gen3 x2 bus, the NVMe SSD features high-level performance and speed. It can provide real-time data processing or analysis, and greatly optimize computing at the edge.

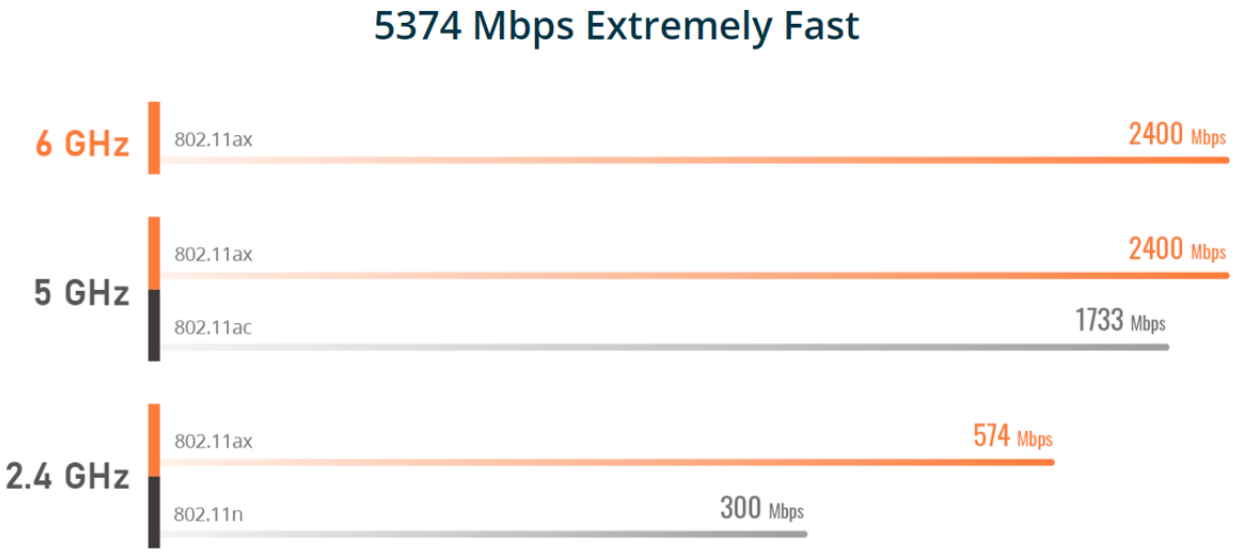


Wi-Fi 6E Capability Enables Seamless Control of IoT Devices

The compact box PC equips one M.2 A-key slot for installation of an optional module to provide Intel Wi-Fi 6E and Bluetooth 5.2 technology. This wireless network capability offers an easy-to-deploy and cost-effective foundation that requires no separate gateways or specialized skills to deliver IoT applications. Two external antennas can also be added to improve the coverage, performance and reliability of a Wi-Fi network by reducing latency, packet loss, and interference.

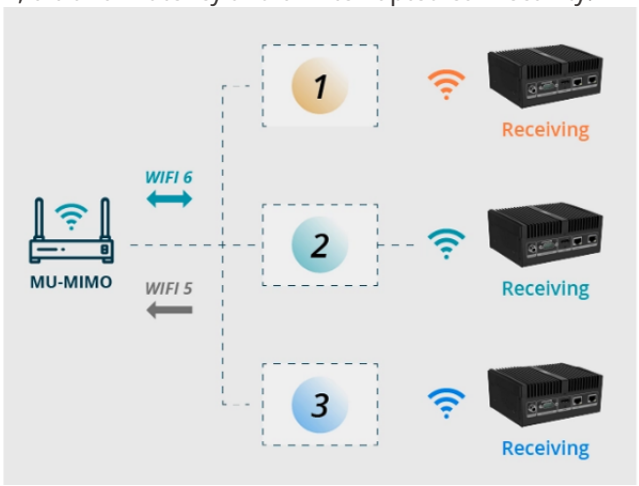
Maximize speed, latency, and reliability of WiFi-6E

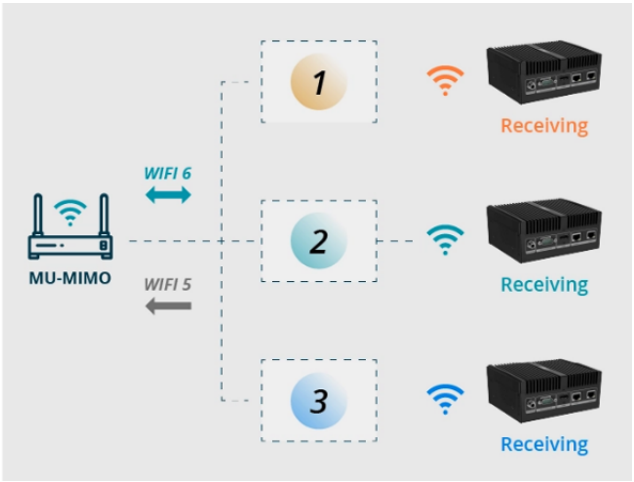
With the popularity of IoT device connectivity, the number of devices connected wirelessly by Wi-Fi is increasing dramatically, which will lead to over congestion in the 2.4GHz and 5GHz bands, making it difficult for Wi-Fi to reach its full potential. The uIBX-260 has capability to support the latest Wi-Fi 6E (802.11ax) technology with a new 6GHz channel. Older devices with low network requirements can connect to the 2.4GHz and 5GHz bands, while devices with high network requirements can connect to the new 6GHz band for network experience improvement.



MU-MIMO

The optional Intel® AX210 wireless module can make the uIBX-260 carry with advanced OFDMA & MU-MIMO wireless technology to greatly provide connection efficiency and network capacity. MU-MIMO effectively improves signal gain when multiple users are sending and receiving at the same time. It delivers double throughput, from 80 MHz to 160 MHz, ultra-low latency and uninterrupted connectivity.





Bluetooth 5.2

The Bluetooth 5.2 includes Isochronous Channel (ISOC) feature which lays the foundation for the implementation of next generation of Bluetooth Audio – Low Energy Audio. In addition, LE Power Control (LEPC) offered by Bluetooth 5.2 allows the transmitter to adjust its transmission power by itself or can be requested to change its transmission power by a peer device.

One-click device pairing & easier file sharing

Up to 20% less audio power consumption vs. standard Bluetooth

2x faster speeds' vs. Bluetooth" 4.2

Connect multiple devices at a time

Dual 2.5GbE Enhance Transfer Speed

2.5GbE can provide higher bandwidth and lower latency than the traditional 1 Gigabit Ethernet, which can improve the performance and reliability of applications that involve large data transfers or real-time communications. Since it uses the same cabling as the Gigabit Ethernet, the cost and complexity of upgrading the network infrastructure can be significantly reduced.

-10°C~50°C Fanless System

A fanless system, like uIBX-260, is more energy-efficient, reliable and durable than a system with a fan. It is also more resistant to dust, dirt, and moisture, as it has no openings or vents. With optimized heatsink that has a large surface area and a finned structure to dissipate heat quickly, uIBX-260 can perform stably and prevent overheating, throttling, or damage to the components. Therefore, uIBX-260 is suitable for harsh environments and applications that require high performance, low noise, and high reliability.

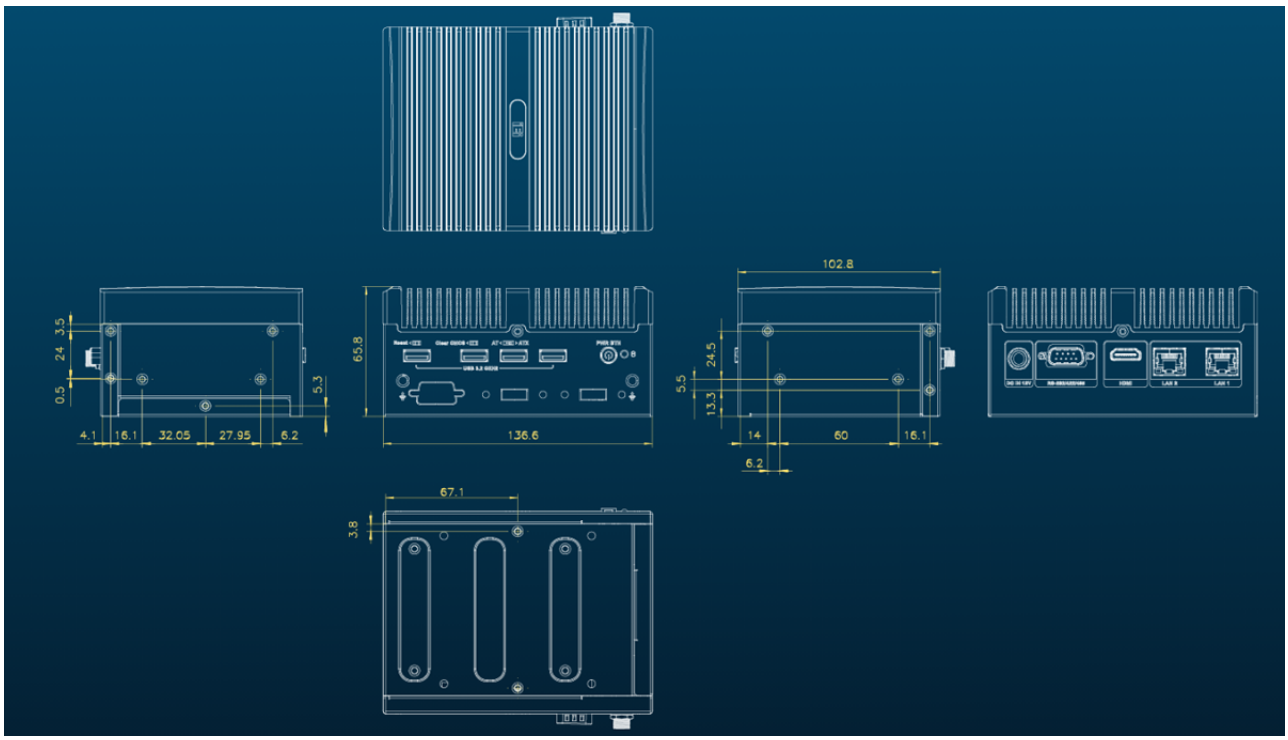
MIL-STD-810H Compliance Withstands Extreme Shocks and Vibrations

The uIBX-260 is a rugged and reliable box PC offering superior shock and vibration protection that can withstand harsh and mobile environments and conditions.

» Operating Shock: Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
» Operation Vibration: 10-500 Hz, 1.04 Grms, random, 1 hr/axis (SSD)

Small Size, Rich Interfaces

Dimensions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