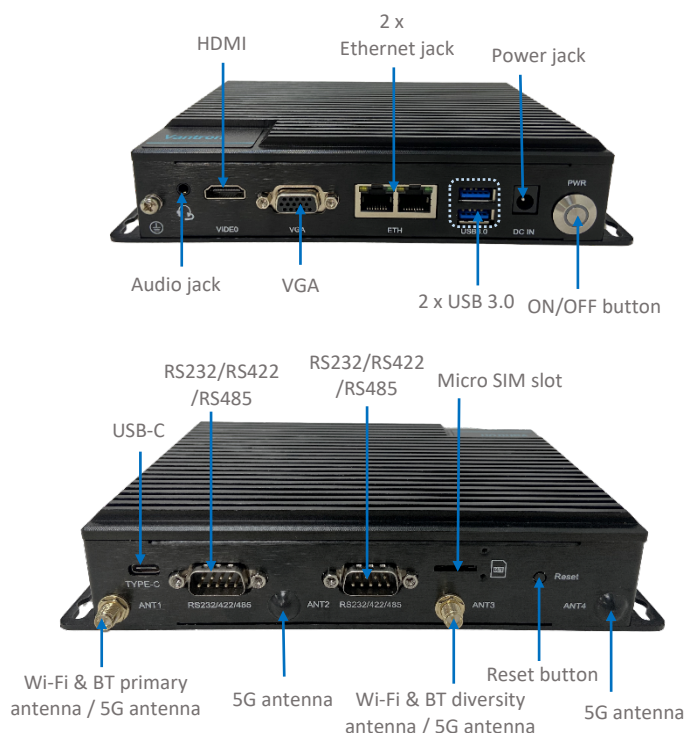# IBOX6425E Embedded Industrial Computer

━━ Product Brief

Vantron IBOX6425E Embedded Industrial Computer is powered by the high-performing Intel® Atom® Elkhart Lake processor that has four cores capable of delivering high computing power for various embedded applications while keeping the CPU power consumption low at just 12W. The device supports two Ethernet ports transmitting at 10/100/1000Mbps. It also boasts two M.2 B-Key slots, one for SSD expansion and the other for connection of either a Wi-Fi 802.11 a/b/g/n/ac and BT 5.0 module or a 5G module to ensure reliable wireless communication.

The device comes with an HDMI interface and a VGA interface for optimized image display. In addition, there are two serial ports to enable seamless communication with external devices, ensuring a reliable, error-free data path.

IBOX6425E offers rich peripheral interfaces, allowing businesses to connect a wide range of peripherals for extended applications. This includes devices such as barcode scanners, cameras, barcode printers and keyboard plates, making customers rest assured of a reliable and consistent user experience.

━━ Exterior and Features

IBOX6425E
Intel® Elkhart Lake high-performance processor
HDMI/VGA for 4K/FHD video output
Rich industrial I/O for flexible user expansion
Gigabit Ethernet, Wi-Fi, BT, optional 5G connectivity
Industrial-grade wide temperature design
Ability to withstand harsh environments
Industrial longevity

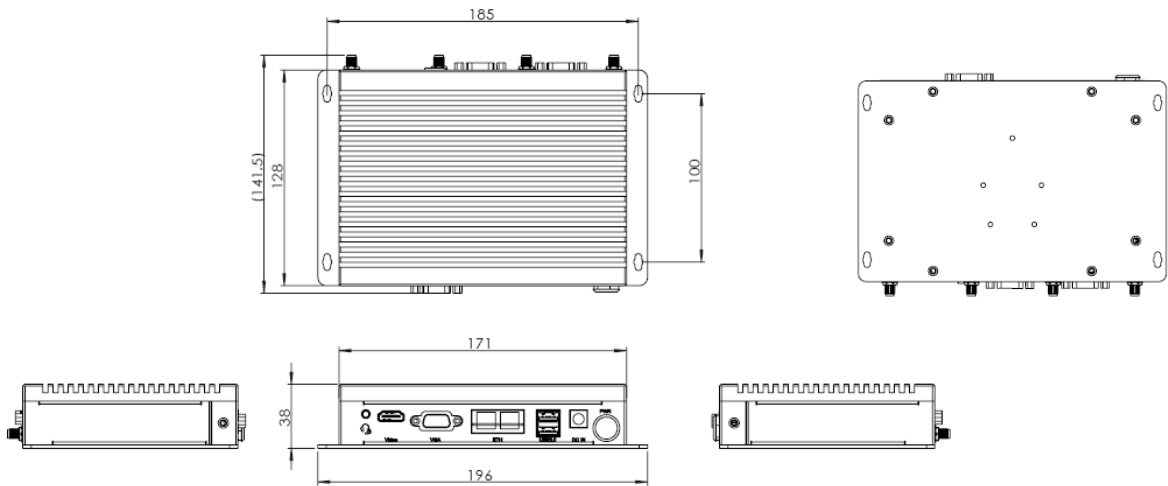## IBOX6425E Embedded Industrial Computer Datasheet
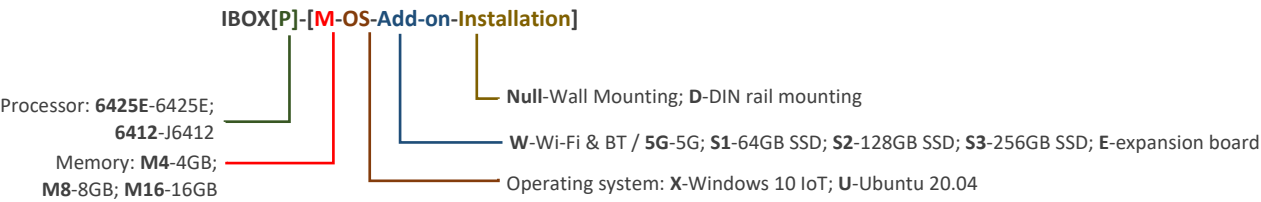
IBOX6425E			
System	CPU	Intel® Atom® x6425E processor, 4C4T, 2.0GHz (base), 3.0GHz (turbo), 12W TDP Optional: Intel® Celeron® J6412 processor, 4C4T, 2.0GHz (base), 2.6GHz (turbo), 10W TDP	
	GPU	Intel® HD Graphics 500	
	Memory	4GB DDR4 (Up to 16GB)	
	Storage	32GB eMMC 1 x SATA slot	1 x M.2 B-Key (2242/2280), for SSD
Communication	Ethernet	2 x RJ45, 10/100/1000Mbps	
	Wireless	1 x M.2 B-Key (3042/3052) for Wi-Fi 802.11 a/b/g/n/ac + BT 5.0 (Optional alternate: 5G cellular connectivity)	
Media	Display	1 x Standard HDMI 2.0b (4096 x 2160 @60Hz) 1 x VGA (1920 x 1080 @60Hz)	
	Audio	1 x 3.5mm combo audio jack (CTIA)	
I/O	Serial port	2 x RS232/RS485/RS422	
	USB	2 x USB 3.0 Type-A	1 x USB 3.0 Type-C
	Micro SIM slot	1 x Micro SIM slot	
	RTC	Supported	
	Watchdog	Supported	
	TPM	1 x TPM 2.0	
Expansion	M.2 slot	1 x M.2 B-Key (2242/2280) for SSD or VPU	
		1 x M.2 B-Key (3042/3052) for Wi-Fi & BT (default) or 5G	
	I/O expansion board (Optional)	2 x USB 2.0 Type-A 2 x RS232/RS485	1 x CAN 8 x GPIO
System Control	Button	1 x ON/OFF button	1 x Reset button
	LED	1 x ON/OFF LED indicator	
Software	OS	Windows 10 (IoT), Ubuntu 20.04	
Power	Input	1 x Power jack (12V/5A or 24V/3A)	
Mechanical	Dimensions	171mm x 128mm x 38mm (Enclosure only) 196mm x 128mm x 38mm (With bracket)	
	Installation	Wall mounting	Optional: DIN rail mounting
	Weight	750g	
	Shock test	IEC 60068-2-27	
	Water and dust resistance	IP40	
	Cooling mode	Fanless	
Environmental Condition	Temperature	Operating: -20℃~+70℃ (**6425E**); 0 ~ +70℃ (**J6412**) Storage: -40℃~+85℃	
	Humidity	Operating: 10%~90% RH	Storage: 5%~95% RH
	Certification	EMC 3 Class B, SRRC, RoHs ESD: ±4KV (contact) and ±8KV (air)	

Product Outlines

Ordering Information

Nomenclature

IBOX[**P**]-[**M**-**OS**-**Add-on**-**Installation**]

Processor: **6425E**-6425E;
6412-J6412

Memory: **M4**-4GB;
M8-8GB; **M16**-16GB

Operating system: **X**-Windows 10 IoT; **U**-Ubuntu 20.04

W-Wi-Fi & BT / **5G**-5G; **S1**-64GB SSD; **S2**-128GB SSD; **S3**-256GB SSD; **E**-expansion board

Null-Wall Mounting; **D**-DIN rail mounting

Example Ordering No.	Processor	Memory	Operating System	Add-on	Installation
IBOX6425E-M4XW	Intel® Atom® x6425E	4GB	Windows 10 IoT	Wi-Fi & BT	Wall mounting
IBOX6425E-M8US2ED		8GB	Ubuntu 20.04	128GB SSD, expansion board	DIN rail mounting
IBOX6412-M4XWS3D	Intel® Celeron® J6412	4GB	Windows 10 IoT	Wi-Fi & BT, 256GB SSD	DIN rail mounting
IBOX6412-M16U5E		16GB	Ubuntu 20.04	5G cellular, expansion board	Wall mounting

Packing list	
IBOX6425E Embedded industrial computer	1
Wi-Fi & Bluetooth/5G antenna	2/4

Optional accessories	
12V DC Adapter	1
Power cable	1
Expansion board	1
DIN rail	1