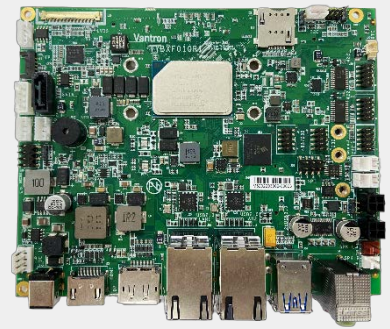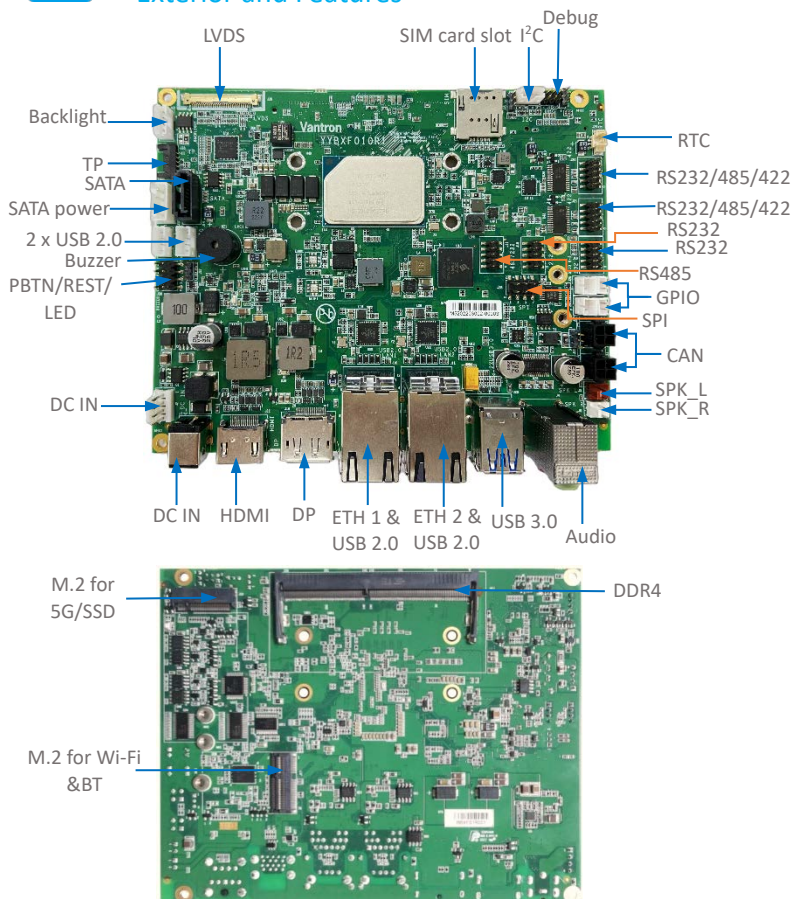# VT-SBC-EKT Single Board Computer

Product Brief Introduction

VT-SBC-EKT Single Board Computer is powered by Intel® Elkhart Lake Atom® x6425E high-performance processor that has four cores capable of delivering high computing power for various embedded applications while keeping the CPU performance at a maximum of 15W power consumption. The board supports two Ethernet ports transmitting at 10/100/1000Mbps. As to internal expansion, the box offers two M.2 slots, one for Wi-Fi and BT and the other optionally expandable for 4G/5G connection to keep the communication uninterrupted.

The board comes with an HDMI interface, a DP interface, and an LVDS/eDP connector to optimize image display. Five serial connectors are available to communicate with external devices to ensure a reliable, error-free data path.

Above all, its strong performance, stable quality, and excellent cost performance are second to none for smart business applications, making it a reliable solution for industrial IoT applications.

Exterior and Features



| VT-SBC-EKT |
| --- |
| Intel® Elkhart Lake Atom® x6425E processor |
| Mass storage |
| SDK available for custom development |
| HDMI/DP/LVDS/eDP for display |
| Wi-Fi/BT/4G/5G/ETH for communication |
| TPM 2.0 supported |
| USB 2.0 & USB 3.0 |

VT-SBC-EKT Single Board Computer Datasheet

VT-SBC-EKT			
System	CPU	Intel® Elkhart Lake Atom® x6425E processor, Quad-core, 3.0GHz (Max.)	
	Memory	DDR4 SO-DIMM socket, 3200MT/s, up to 16 GB	
	Storage	64GB on-board eMMC (optional) 1 x SATA Gen 3 slot (6Gb/s, up to 2TB)	M.2 (2242) B-Key SSD supported (up to 256GB)
Communication	Ethernet	2 x RJ45, 10/100/1000 Base-T, LAN7430	
	Wi-Fi & BT	Optional (expansion by an M.2 E-Key slot)	
	4G/5G	Optional (expansion by an M.2 B-Key slot)	
Media	Display	1 x HDMI 2.0b, 4096 x 2160 @60Hz	1 x DP 1.4, 7680 x 4320 @60Hz
		1 x Dual LVDS/eDP connector, up to 3840 x 2160 @30Hz	
	Audio	1 x Headphone jack 1 x 3.5mm Microphone jack	2 x 2W/8R Speaker connector
I/Os	Serial	2 x RS232/RS422/RS485 connector 2 x RS232 connector	1 x RS485 connector
	USB	2 x USB 2.0 Host (Type-A) 2 x USB 3.0 Host (Type-A)	2 x USB 2.0 connector
	RTC	Supported	
	Watchdog	Supported	
	SIM card slot	1 x Micro SIM card slot	
Expansion	M.2	1 x M.2 B-Key, for SSD (2242) or 4G/5G (3052)	1 x M.2 E-Key, for Wi-Fi & BT (2230)
	GPIO	4 x GPIO	
	CAN	2 x CAN	
	SPI	1 x SPI	
System control	Button	1 x Power button	
Security	TPM	TPM 2.0 supported	
Power	Input	12-36V DC	1 x Power connector, 1 x Power jack
	Consumption	15W+	
Software	Operating system	Linux, Windows 10	
	OTA tool	BlueSphere OTA	
	SDK	SDK available	
Mechanical	Dimensions	153.5mm x 123 mm	
	Cooling mode	Aluminum alloy heat sink (fanless)	
Environment Condition	Temperature	Operating: -20°C ~ +60°C	Storage: -40°C ~ +85°C
	Humidity	5%-95%RH (Non-condensing)	
	Certifications	UL, FCC, IC, CE, RoHS, PTCRB	

Product Outlines
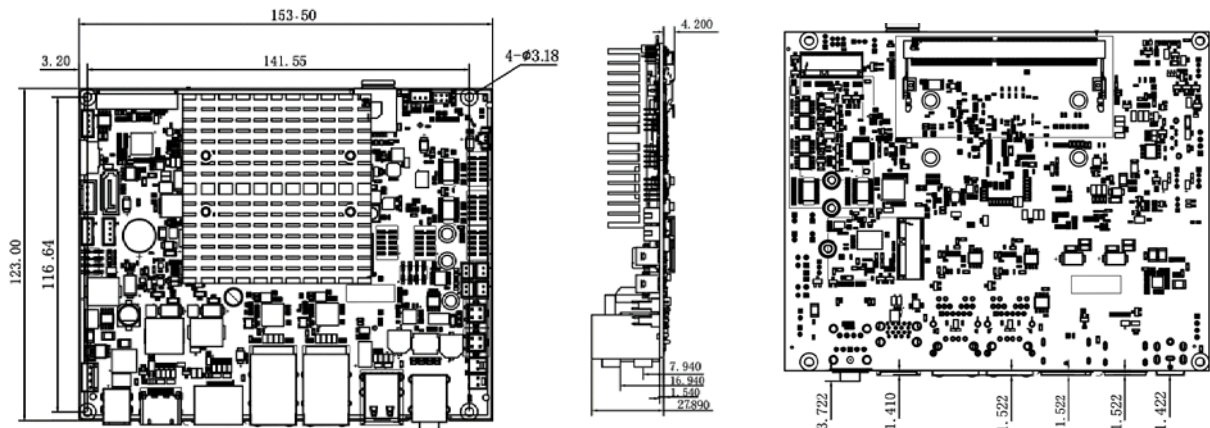
Block Diagram
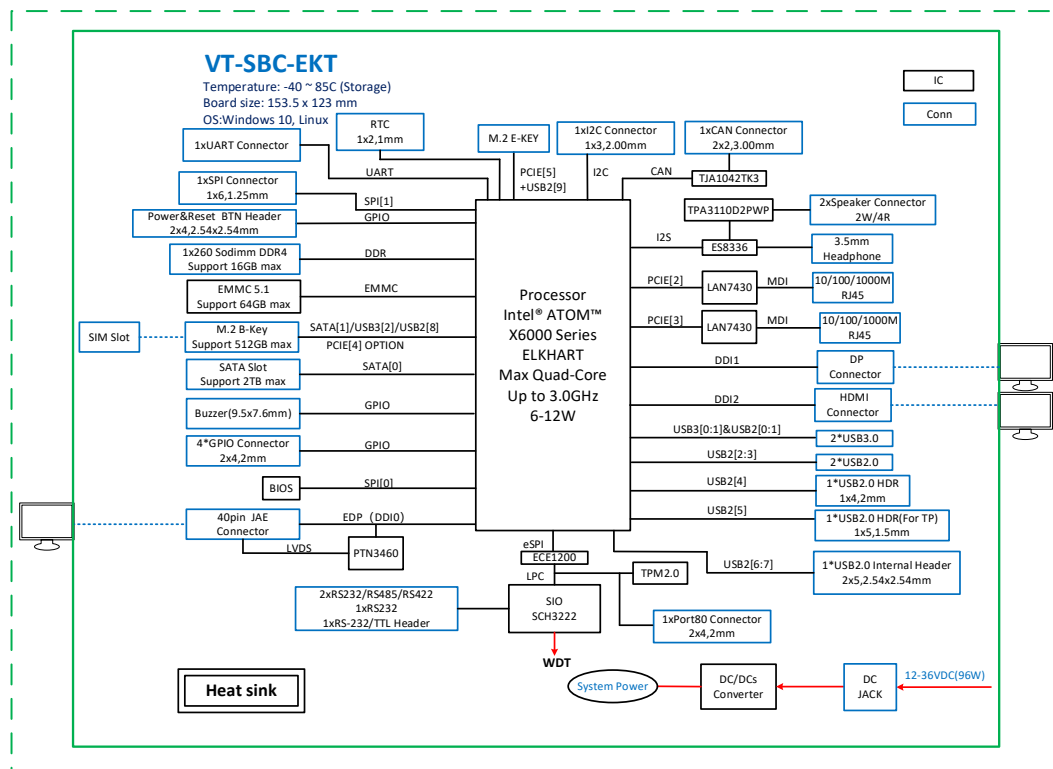
Company Profile

Since 2002 established by two Silicon Valley entrepreneurs, Vantron Technology has been a pioneer in connected IoT devices and IoT platform solutions. Today, Vantron serves countless customers all over the world, some of them are Fortune 500 companies. Products lines cover edge intelligent hardware, IoT communication devices, industrial displays and BlueSphere cloud device management platform.

Vantron has 20 years of experience in R&D of embedded edge intelligent hardware like SOM board and motherboard, and provided users with various embedded solutions with ARM and X86 architecture. From Linux to Windows, from embedded to desktop level, from gateway to server. At the same time, we provide our users with system clipping, driver transplantation and other services.

Vantron IoT communication devices support multi-protocol connection of industrial equipment, edge computing of local data. Abundant wired and wireless connectivity make remote operations and maintenance possible. From electricity and transportation to smart retail, medical and warehousing, Vantron IoT communication device can be deployed anywhere in any business section. Vantron believes its IoT solution to help many companies finish their digital transformation, efficiency of manufacturing and productivities have been improved significantly.

Vantron industrial display systems, ARM and X86 series, are equipped with Rockchip, NXP, MediaTek, Intel and other high-performance processors. It supports various operating systems such as Windows, Linux, and Android. Diverse wireless communications keep your device online all the time. Multiple installation methods make it suitable for a variety of application scenarios. Features like waterproof, dustproof, shatter resistant guarantee the best performance in any environment.

Vantron BlueSphere device management platform, a software product, is playing a big role in Vantron overall IoT solution. Today, Vantron puts more focus on offering complete cost effective, leading-edge yet reliable solutions to help customers carry out their visions.