VT-SBCQ7-CB Carrier Board

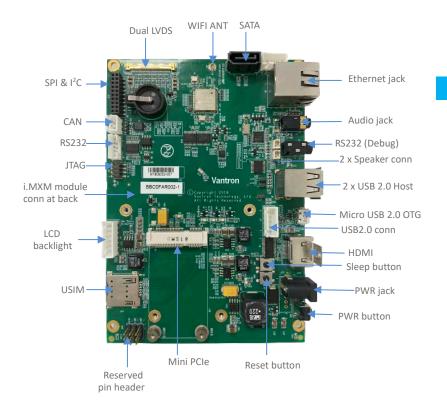


Product Brief Introduction

VT-SBCQ7-CB is a small carrier board designed to allow integration with industrial modules that feature standard Q-seven form factor to customize a single board computer for specific use. The carrier board provides on-board connectors to enable access to SATA, SPI, I2C, CAN, LVDS etc. and implements flexible expansion features for different application scenarios of industry 4.0 including industrial control, digital kiosks, intelligent medical systems, and digital media.

VT-SBCQ7-CB features high flexibility and high performance, and can work under extreme environments with extended temperatures ranging from -20°C to +70°C, making it a reliable industrial IoT solution.

Exterior and Features



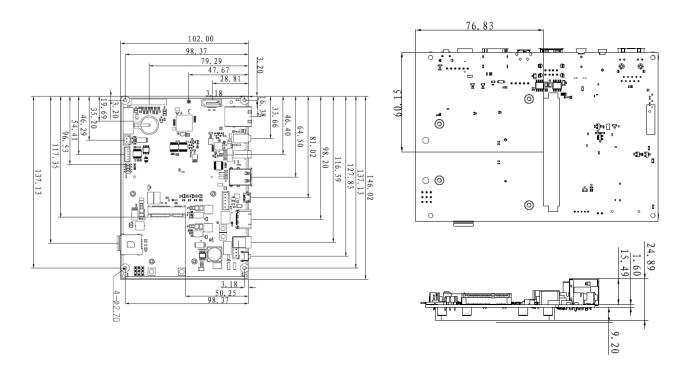
VT-SBCQ7-CB Carrier Board Easy to integrate Multiple displays Rich interfaces, flexible expansion Extended temperature range supported

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VT-SBCQ7-CB Carrier Board Datasheet

Communication Ethernet 1 x R145, 10/100/1000Mbps Wi-Fi & Biluetooth Wi-Fi 802.11 a/b/g/n/ac + Biluetooth 4.2 Media 1 x Dual LVDS, up to 165Mpix/s, with backlight control 1 x HDMI 1.4 Audio 1 x 3.5mm audio jack Speaker 2 x Speaker connector Speaker 2 x Sepaker connector (one for debugging) USB 2 x USB 2.0 Host connector 2 x USB 2.0 Host connector 2 x USB 2.0 Host 1 x USB 2.0 OTG 3 x USB 2.0 Host USIM 1 x USIM card slot Debug 1 x JTAG RTC Supported 1 x PC 1 x PC 1 x PR 1 x CAN System Control Button 1 x Power button 1 x Power button 1 x Reset button 1 x Seleep button 1 x Power button Power Input 1 x Power jack (12V) Environment Cooling mode Fanless Environment Cooling mode Fanless Environment Cooling mode Coperatings - 20°C*+70°C (Optional: -40°C*-485°C) Condition Humidity			VT-SBCQ7-CB Carrier Board
Media Display	Communication	Ethernet	1 x RJ45, 10/100/1000Mbps
Display		Wi-Fi & Bluetooth	Wi-Fi 802.11 a/b/g/n/ac + Bluetooth 4.2
1 x HDM1 1.4	Media	Display	1 x Dual LVDS, up to 165Mpix/s, with backlight control
Audio			1 x HDMI 1.4
Serial 2 x RS232 connector (one for debugging) 1 x USB2.0 Host connector 2 x USB 2.0 Host 2 x USB 2.0 Host 1 x USB 2.0 OTG 2 x USB 2.0 OTG 2 x USB 2.0 OTG 3 torage 1 x SATA 2 USIM 1 x USIM card slot 3 torage 1 x JTAG 4 torage 1 x JTAG 5 torage 1 x JTAG 5 torage 1 x JTAG 6 torage 1 x Mini PCIe 1 x I²C 1 x SPI 1 x CAN 1 x Power button 1 x Reset button 1 x Reset button 1 x Reset button 1 x Sleep button 1 x Sleep button 1 x Sleep button 1 x Power jack (12V) 5 torage 5		Audio	1 x 3.5mm audio jack
1 x USB2.0 Host connector		Speaker	2 x Speaker connector
1/Os 1/Os Storage 1 x USB 2.0 OTG Storage 1 x SATA USIM 1 x USIM card slot Debug 1 x JTAG RTC Supported 1 x Mini PCle 1 x PC 1 x SPI 1 x CAN System Control Button 1 x Reset button 1 x Reset button 1 x Reset button 1 x Sleep button Dimensions 1 4 x Power jack (12V) Dimensions Cooling mode Fanless Operating: -20°C~+70°C (Optional: -40°C~+85°C) Humidity Operating and storage: 10-85%RH (Non-condensing)	I/Os	Serial	2 x RS232 connector (one for debugging)
1/Os Storage 1 x USB 2.0 OTG Storage 1 x SATA USIM Debug 1 x JTAG RTC Supported 1 x Mini PCIe 1 x SPI 1 x CAN System Control Button 1 x Power button 1 x Reset button 1 x Reset button 1 x Sleep button 1 x Power jack (12V) Mechanical Cooling mode Fanless Operating: -20°C*+70°C (Optional: -40°C*+85°C) Humidity Operating and storage: 10-85%RH (Non-condensing)		USB	1 x USB2.0 Host connector
Storage			2 x USB 2.0 Host
Storage 1 x SATA USIM 1 x USIM card slot Debug 1 x JTAG RTC Supported 1 x Mini PCle 1 x I^2C 1 x SPI 1 x CAN System Control Button 1 x Reset button 1 x Reset button 1 x Reset button 1 x Power jack (12V) Mechanical Cooling mode Fanless Penvironment Condition Humidity Operating and storage: 10-85%RH (Non-condensing)			1 x USB 2.0 OTG
Debug 1 x JTAG RTC Supported 1 x Mini PCIe 1 x SPI 1 x SPI 1 x CAN System Control Button 1 x Power button 1 x Reset button 1 x Sleep button Power Input 1 x Power jack (12V) Mechanical Dimensions 146 x 100mm Cooling mode Fanless Operating: -20°C~+70°C (Optional: -40°C~+85°C) Condition Humidity Operating and storage: 10-85%RH (Non-condensing)		Storage	1 x SATA
Expansion Bus 1 x Mini PCle		USIM	1 x USIM card slot
ExpansionBus $1 \times Mini PCle$ $1 \times I^2C$ $1 \times SPI$ $1 \times CAN$ System ControlButton $1 \times Power button$ $1 \times Reset button$ $1 \times Sleep button$ PowerInput $1 \times Power jack (12V)$ MechanicalDimensions Cooling mode $146 \times 100 \text{mm}$ FanlessEnvironment ConditionTemperatureOperating: $-20^{\circ}C^{\sim}+70^{\circ}C$ (Optional: $-40^{\circ}C^{\sim}+85^{\circ}C$)ConditionHumidityOperating and storage: $10-85\%RH$ (Non-condensing)		Debug	1 x JTAG
ExpansionBus $1 \times 1^2 C$ $1 \times SPI$ $1 \times CAN$ System ControlButton $1 \times Power button$ $1 \times Reset button$ $1 \times Sleep button$ PowerInput $1 \times Power jack (12V)$ MechanicalDimensions $146 \times 100 mm$ Cooling modeFanlessEnvironmentTemperatureOperating: $-20^{\circ}C^{\sim}+70^{\circ}C$ (Optional: $-40^{\circ}C^{\sim}+85^{\circ}C$)ConditionHumidityOperating and storage: $10-85\%RH$ (Non-condensing)		RTC	Supported
Expansion Bus 1 x SPI 1 x CAN	Expansion	Bus	1 x Mini PCle
1 x SPI 1 x CAN 1 x Power button 1 x Reset button 1 x Reset button 1 x Sleep button 1 x Power jack (12V)			1 x I ² C
System Control Button 1 x Power button 1 x Reset button 1 x Sleep button Power Input 1 x Power jack (12V) Dimensions 146 x 100mm Cooling mode Fanless Operating: -20°C~+70°C (Optional: -40°C~+85°C) Condition Humidity Operating and storage: 10-85%RH (Non-condensing)			1 x SPI
System Control Button 1 x Reset button 1 x Sleep button Power Input 1 x Power jack (12V) Mechanical Dimensions 146 x 100mm Cooling mode Fanless Temperature Operating: -20°C~+70°C (Optional: -40°C~+85°C) Condition Humidity Operating and storage: 10-85%RH (Non-condensing)			1 x CAN
Power Input 1 x Power jack (12V) Mechanical Dimensions 146 x 100mm Cooling mode Fanless Temperature (Optional: -40°C~+85°C) Condition Humidity Operating and storage: 10-85%RH (Non-condensing)	System Control	Button	1 x Power button
Power Input 1 x Power jack (12V) Mechanical Dimensions 146 x 100mm Cooling mode Fanless Operating: -20°C~+70°C Condition Humidity Operating and storage: 10-85%RH (Non-condensing)			1 x Reset button
Dimensions 146 x 100mm Cooling mode Fanless Environment Operating: -20°C~+70°C Condition Humidity Operating and storage: 10-85%RH (Non-condensing)			1 x Sleep button
Mechanical Cooling mode Fanless Operating: -20°C~+70°C (Optional: -40°C~+85°C) Condition Humidity Operating and storage: 10-85%RH (Non-condensing)	Power	Input	1 x Power jack (12V)
Cooling mode Fanless Operating: -20°C~+70°C (Optional: -40°C~+85°C) Condition Humidity Operating and storage: 10-85%RH (Non-condensing)	Mechanical	Dimensions	146 x 100mm
Temperature (Optional: -40°C~+85°C) Condition Humidity Operating and storage: 10-85%RH (Non-condensing)		Cooling mode	Fanless
Environment(Optional: -40°C~+85°C)ConditionHumidityOperating and storage: 10-85%RH (Non-condensing)		Temperature	Operating: -20°C~+70°C
			(Optional: -40°C~+85°C)
Certificate RoHS		Humidity	Operating and storage: 10-85%RH (Non-condensing)
		Certificate	RoHS

Product Outlines



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.

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