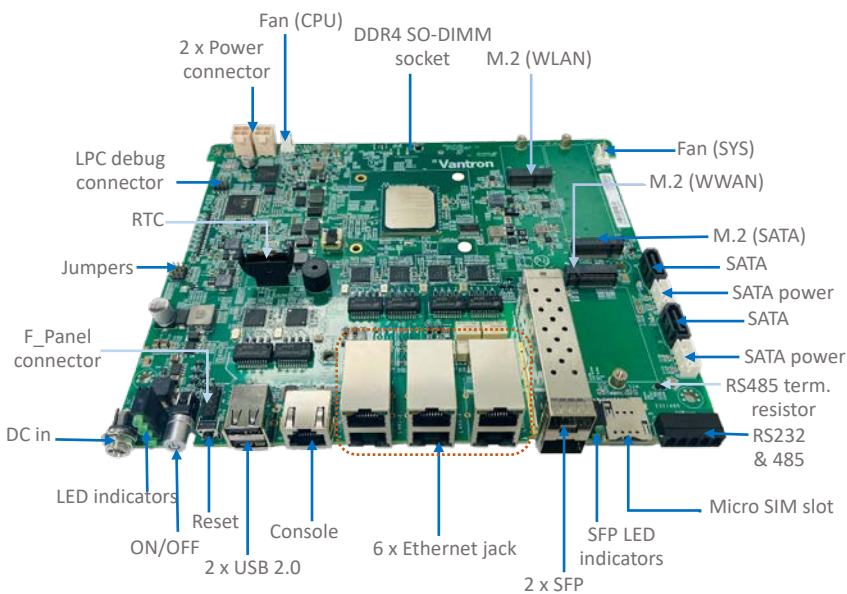# VT-SBC-C3558R Single Board Computer

Product Brief

VT-SBC-C3558R single board computer is powered by Intel Atom® C3558R Quad-core processor that extends low-power Intel® architecture into new segments and accelerates IoT innovation across a wide range of environments and use cases.

The Board offers 6 Ethernet jacks, including 2 that are bypassed by default to create a crossed connection loop-back between the jacks to keep data transfer uninterrupted in case of system failure. Customers also have an expansion option to implement two gigabyte SFP connectors in stacked configuration for high-speed signal conversion and data transmission. The Board implements an M.2 B-Key slot for 4G/5G cellular communication.

The integrated technologies and pre-validated solutions of VT-SBC-C3558R enable industrial, energy, aerospace, robotics, public sector, and other customers with demanding edge IoT workloads to easily extract value from data, reduce time to market, and innovate new connected technologies faster.

Exterior and Features

Fan (CPU)
2 x Power connector
DDR4 SO-DIMM socket
M.2 (WLAN)
LPC debug connector
RTC
Jumpers
F_Panel connector
DC in
LED indicators
ON/OFF
Reset
2 x USB 2.0
Console
6 x Ethernet jack
2 x SFP
SFP LED indicators
Micro SIM slot
Fan (SYS)
M.2 (WWAN)
M.2 (SATA)
SATA
SATA power
SATA
SATA power
RS485 term. resistor
RS232 & 485

VT-SBC-C3558R

|	
	Intel Atom® C3558R Quad-core processor
	SATA/M.2 SSD for storage expansion
	Rich interface, flexible expansion
	6 x RJ45 & 2 x SFP
	Bypassed network to guarantee data transfer
	Wi-Fi/BT/4G/5G/ETH for communication
	Wide input voltage

VT-SBC-C3558R Single Board Computer Datasheet

VT-SBC-C3558R			
System	CPU	Intel Atom® C3558R Quad-core processor, 2.4GHz (17W TDP)	
	Memory	1 x DDR4 SO-DIMM socket (up to 32GB)	
	Storage	32GB eMMC V5.0 2 x SATA 3.0 connector 1 X M.2 B-Key for SSD card	
Communication	Ethernet	6 x RJ45, 10/100/1000Mbps Bypass: 1 pair (Optional: 2 pairs)	
	SFP	2 x 10Gb SFP connector with activity indicators (Optional)	
	Cellular	Optional	
	Wi-Fi & BT	Optional	
I/Os	Serial port	1 x RS232	1 x RS485
	USB	2 x USB 2.0 Type-A	
	Console	1 x RJ45 Console	
	SIM slot	1 x Micro SIM slot	
	Security	FTPM 2.0 (Default) or DTPM 2.0	
	Jumper	1 x Clear RTC jumper 1 x Clear CMOS jumper	1 x Flash security override jumper
	RTC	Supported	
	WDT	Supported	
Expansion	Bus	1 x M.2 E-Key (2242) for Wi-Fi/BT module 1 x M.2 B-Key (3052) for 4G/5G module 1 x M.2 B-Key (2280) for SATA SSD	
System Control	Button	1 x Reset button	1 x Power button
	LED indicator	1 x Power indicator 1 x System indicator	1 x HA indicator 1 x Bypass indicator
Power	Input	12V~36V DC	1 x Power jack (wide input voltage) 2 x Internal power connector (12V)
	Consumption	40W+	
Software	Operating system	Yocto	
Mechanical	Dimensions	220mm x 178mm	
	Cooling mode	2 x Fan connector (12V DC)	
Environment Condition	Temperature	Operating: 0°C~+50°C	Storage: -20°C~+70°C
	Humidity	Operating and storage: RH 10%-85% (Non-condensing)	
	Certification	RoHS	

Product Outlines
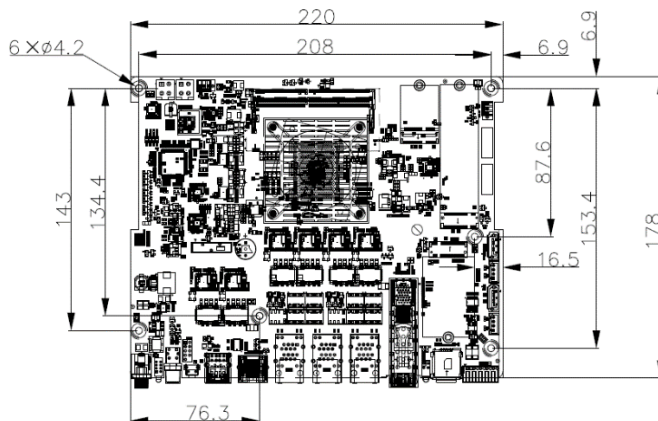
Block Diagram
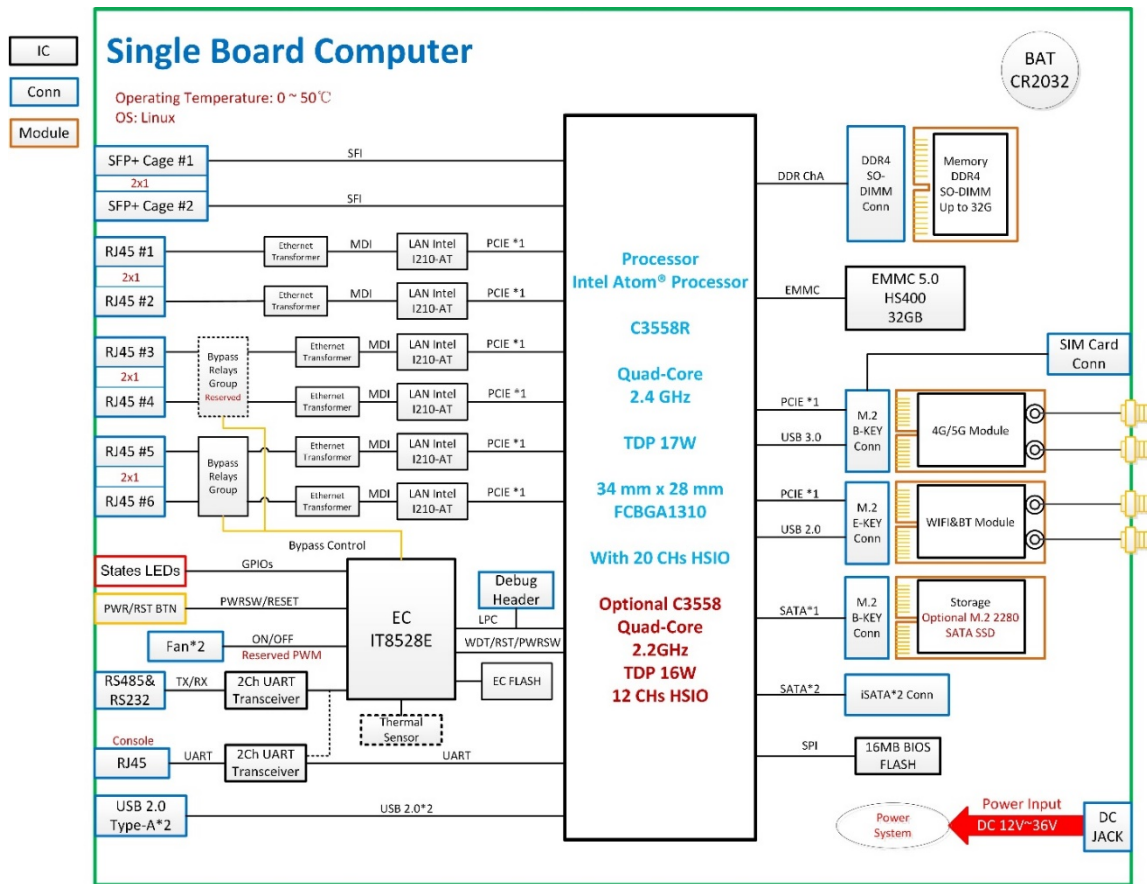
Company Profile

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.