

VT-SBC-SMARC-3568

Computer-on-Module



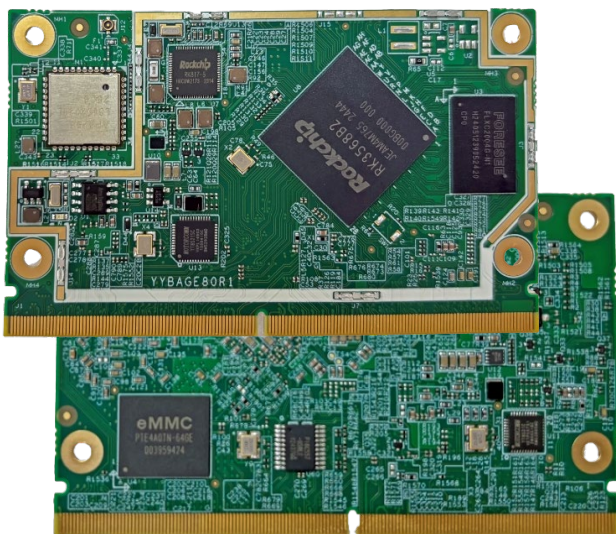
Product Brief

VT-SBC-SMARC-3568 Computer-on-Module (CoM) leverages the Rockchip RK3568 quad-core processor to deliver robust performance in a compact SMARC 2.1 form factor. The module integrates a quad-core ARM Cortex-A55 CPU, a high-performance ARM Mali-G52 GPU, and an NPU with up to 1 TOPS computing performance to handle complex workloads.

It supports 4K H.265/H.264 video decoding and 1080p @60fps H.265/H.264 video encoding, ensuring optimal video output quality. It enables up to three independent displays via HDMI 2.0, eDP, and MIPI DSI/LVDS, ideal for digital signage, interactive kiosks, and medical imaging systems. In addition, VT-SBC-SMARC-3568 supports 8MP single-channel ISP that implements diverse algorithm accelerators, such as HDR, 3A, CGC, 3DNR, 2DNR, Sharpening, and Dehaze, delivering enhanced image processing performance.

For connectivity, the module offers two MDI interfaces, supporting 10/100/1000Mbps Ethernet networking. A Wi-Fi and Bluetooth combo module offers a wireless connectivity option. In addition, various I/O signals are available for flexible expansion. VT-SBC-SMARC-3568 is ideally suitable for applications such as digital multimedia, smart retail, surveillance, edge computing, and industrial HMI.

Exterior and Features



VT-SBC-SMARC-3568



Rockchip RK3568 quad-core processor



4K video decoding, 1080p @60fps video encoding



MIPI DSI/LVDS/HDMI/eDP/ for video output



Rich I/O signals for flexible expansion



Gigabit Ethernet, Wi-Fi 5, Bluetooth 5.0



Up to 1 TOPS NPU for AI acceleration



Android and Debian systems supported

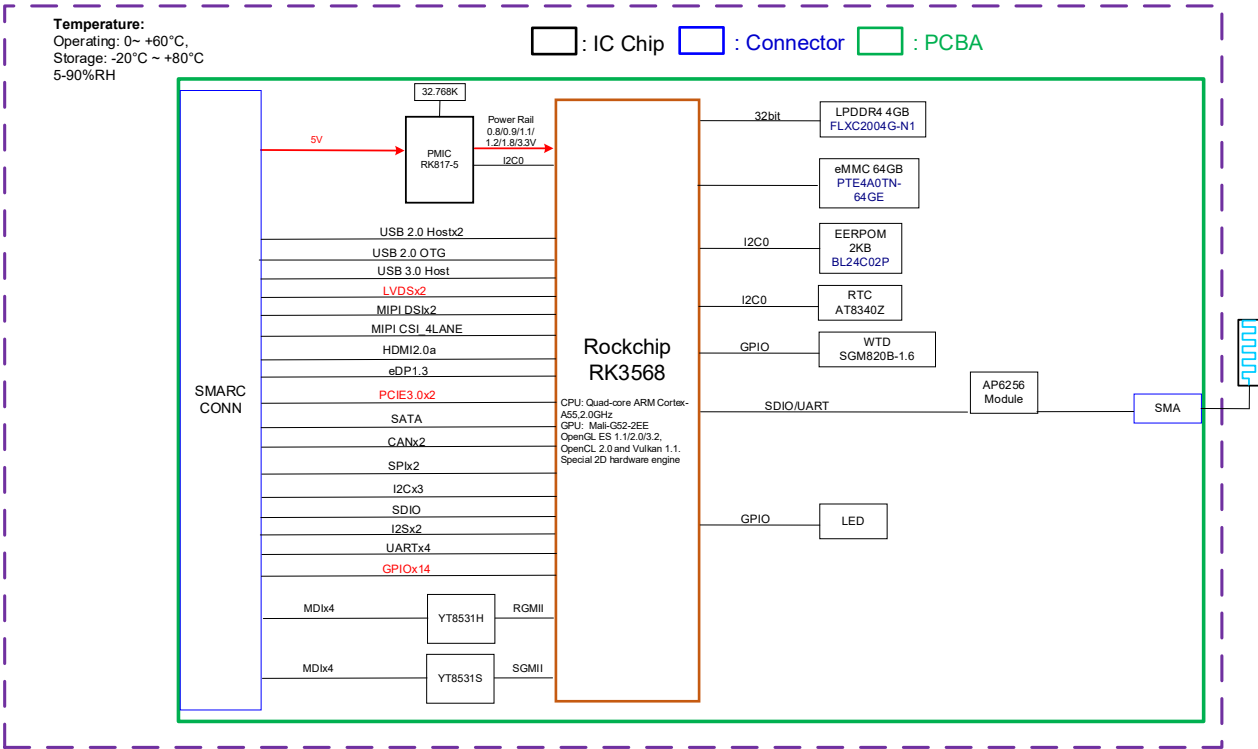


SMARC 2.1 form factor for flexible integration

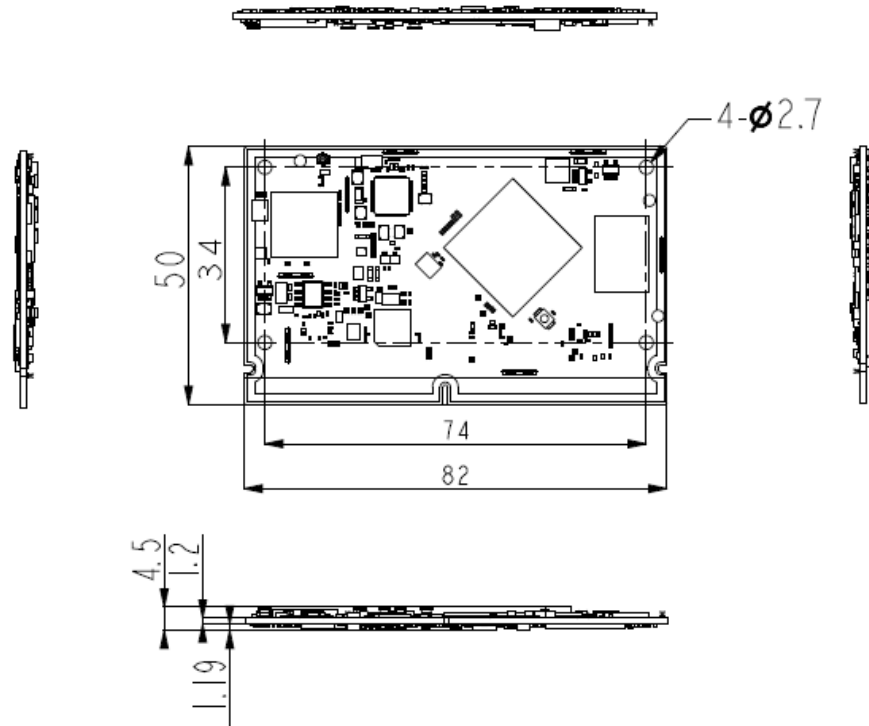
VT-SBC-SMARC-3568 Computer-on-Module Datasheet

Specifications			
System	CPU	Rockchip RK3568, Quad-core ARM Cortex-A55 MPCore processor, up to 2.0 GHz	
	GPU	Arm Mali G52-2EE GPU, OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, and Vulkan 1.0/1.1 supported	
	NPU	1 TOPS, int8/int16/FP16/BF16 supported	
	Memory	4GB LPDDR4	
	Storage	64GB eMMC 5.1	
Media	Video processing	4K H.265/H.264 video decoder, 1080p @60fps H.265/H.264 video encoder	
	Camera ISP	8MP for single-channel camera (HDR, 3A, CGC, 3DNR, 2DNR, Sharpening, Dehaze...)	
Power	Input	5V DC	
	Consumption	Max.: 6W (full load)	
Software	Operating system	Android, Debian	
	Device management	BlueSphere MDM (Optional for Android version)	
Mechanical	Dimensions	82mm x 50mm x 4.5mm (SMARC 2.1 form factor)	
Environmental Condition	Temperature	Operating: 0°C ~ +60°C	Optional: -20°C ~ +70°C
		Storage: -20°C ~ +80°C	Optional: -55°C ~ +85°C
	Humidity	5%~95% RH (Non-condensing)	
I/O			
Display (Support up to 3 independent displays)	2 x Single MIPI DSI, up to 1920 x 1080@60Hz / 1 x Dual MIPI DSI, up to 2048 x 1536@60Hz / 2 x Single LVDS, up to 1280 x 800@60Hz / 1 x Dual LVDS, up to 1920 x 1080@60Hz		
	1 x HDMI 2.0a, up to 1080p@120Hz and 4096 x 2304@60Hz		
	1 x eDP 1.3, up to 2560 x 1600@60Hz		
Camera	1 x 4-Lane MIPI CSI		
Audio	2 x I ² S		
Ethernet	2 x MDI, 10/100/1000Mbps		
Wi-Fi and Bluetooth	Wi-Fi IEEE 802.11 a/b/g/n/ac + Bluetooth 5.0		
USB	1 x USB 2.0 OTG		
	1 x USB 3.0 host	2 x USB 2.0 host	
UART	3 x Communication UART (1.8V)	1 x Debug UART (1.8V)	
CAN	2 x CAN		
GPIO	14 x GPIO (Max.)		
SPI	2 x SPI		
I ² C	3 x I ² C		
PCIe	1 x PCIe 3.0 x2		
SDIO	1 x 4-Bit SDIO 3.0		
SATA	1 x SATA		
Watchdog Timer	Supported		
RTC	Supported		

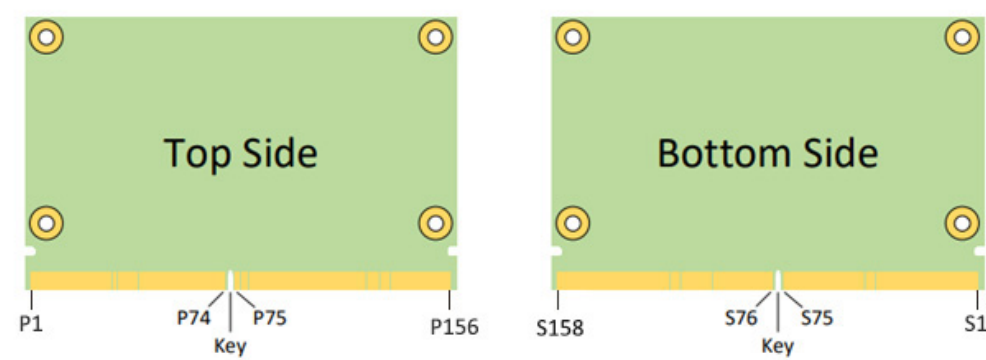
Block Diagram



Product Outlines



Edge Connector Pinout



Primary (Top) Side	Function 1*	Function 2	Level	Description
P1	SMB_ALERT	LED_CTRL	1.8V	SMBus alert
P2	GND	-	-	Ground
P3	MIPI_CSI1_RX_CLKOP	-	-	MIPI CSI 1 receive clock +
P4	MIPI_CSI1_RX_CLKON	-	-	MIPI CSI 1 receive clock -
P5	NC	-	-	No connection
P6	NC	-	-	No connection
P7	MIPI_CSI1_RX_D0P	-	-	MIPI CSI 1 receive data 0 +
P8	MIPI_CSI1_RX_D0N	-	-	MIPI CSI 1 receive data 0 -
P9	GND	-	-	Ground
P10	MIPI_CSI1_RX_D1P	-	-	MIPI CSI 1 receive data 1 +
P11	MIPI_CSI1_RX_D1N	-	-	MIPI CSI 1 receive data 1 -
P12	GND	-	-	Ground
P13	MIPI_CSI1_RX_D2P	-	-	MIPI CSI 1 receive data 2 +
P14	MIPI_CSI1_RX_D2N	-	-	MIPI CSI 1 receive data 2 -
P15	GND	-	-	Ground
P16	MIPI_CSI1_RX_D3P	-	-	MIPI CSI 1 receive data 3 +
P17	MIPI_CSI1_RX_D3N	-	-	MIPI CSI 1 receive data 3 -
P18	GND	-	-	Ground
P19	GBE0_MDI3-	-	-	Differential pair signals routed through the external transformer. Carrier series termination: use a magnetic module for GBE transceivers. Carrier parallel termination: use the center tap on the secondary side for GBE implementations.
P20	GBE0_MDI3+	-	-	
P21	GBE0_LINK_100	-	3.3V	GBE 0 100Mbps link indicator
P22	GBE0_LINK_1000	-	3.3V	GBE 0 1000Mbps link indicator

* Function 1 is set as the default. For specific pins, there are multiple functions available.

Primary (Top) Side	Function 1	Function 2	Level	Description
P23	GBE0_MDI2-	-	-	GBE 0 media dependent interface 2-
P24	GBE0_MDI2+	-	-	GBE 0 media dependent interface 2+
P25	GBE0_LINK_ACT	-	3.3V	GBE 0 link/activity indicator (Driven low for link (10/100/1000 Mbps), blinking for activity)
P26	GBE0_MDI1-	-	-	GBE 0 media dependent interface 1-
P27	GBE0_MDI1+	-	-	GBE 0 media dependent interface 1+
P28	GBE0_CTREF	-	0 -3.3V	Center-tap reference voltage for carrier board Ethernet magnetics (if required by the GBE PHY module)
P29	GBE0_MDI0-	-	-	GBE 0 media dependent interface 0-
P30	GBE0_MDI0+	-	-	GBE 0 media dependent interface 0+
P31	GMAC1_INTN	SPI0_CS1	1.8V	GMAC 1 interrupt
P32	GND	-	-	Ground
P33	SDIO_WP	-	1.8V	SDIO write protect
P34	SDMMC0_CMD	-	1.8V	SDMMC 0 command/response
P35	SDMMC0_DET	-	3.3V	SDMMC 0 card detection
P36	SDMMC0_CLK	-	1.8V	SDMMC 0 clock
P37	SDMMC0_PWR_EN	-	3.3V	SDMMC 0 power enable
P38	GND	-	-	Ground
P39	SDMMC0_D0	-	1.8V	SDMMC 0 data 0
P40	SDMMC0_D1	-	1.8V	SDMMC 0 data 1
P41	SDMMC0_D2	-	1.8V	SDMMC 0 data 2
P42	SDMMC0_D3	-	1.8V	SDMMC 0 data 3
P43	SPI0_CS0_M1	-	1.8V	SPI 0 chip select
P44	SPI0_CLK_M1	-	1.8V	SPI 0 clock
P45	SPI0_MISO_M1	-	1.8V	SPI 0 master in slave out
P46	SPI0_MOSI_M1	-	1.8V	SPI 0 master out slave in
P47	GND	-	-	Ground
P48	SATA0_TXP	-	-	SATA 0 transmit +
P49	SATA0_TXN	-	-	SATA 0 transmit -
P50	GND	-	-	Ground
P51	SATA0_RXP	-	-	SATA 0 receive +
P52	SATA0_RXN	-	-	SATA 0 receive -
P53	GND	-	-	Ground
P54	SPI1_CS0_M1	-	1.8V	SPI 1 master chip select 0
P55	FSPI_CS0	-	1.8V	SPI 1 master chip select 1

Primary (Top) Side	Function 1	Function 2	Level	Description
P56	SPI1_CLK_M1	-	1.8V	SPI 1 clock
P57	SPI1_MISO_M1	-	1.8V	SPI 1 master in slave out
P58	SPI1_MOSI_M1	-	1.8V	SPI 1 master out slave in
P59	GND	-	-	Ground
P60	USB3_OTG0_DP	-	-	USB port 0 (download port) OTG data +
P61	USB3_OTG0_DM	-	-	USB port 0 (download port) OTG data -
P62	NC	-	-	No connection
P63	USB3_OTG0_VBUSDET	-	5.0V	USB port 0 power detection
P64	USB3_OTG0_ID	-	1.8V	USB port 0 OTG identification
P65	USB2_HOST2_DP	-	-	USB port 2 data +
P66	USB2_HOST2_DM	-	-	USB port 2 data -
P67	NC	-	-	No connection
P68	GND	-	-	Ground
P69	USB3_HOST1_DP	-	-	USB port 1 data +
P70	USB3_HOST1_DM	-	-	USB port 1 data -
P71	NC	-	-	No connection
P72	NC	-	-	No connection
P73	SARADC_VIN3	-	1.8V	ADC
P74	NC	-	-	No connection
KEY				
P75	PCIE30x2_PERSTN		3.3V	PCIe port A reset output
P76	NC	-	-	No connection
P77	NC	-	-	No connection
P78	PCIE30x2_CLKREQN	-	3.3V	PCIe port A clock request
P79	GND	-	-	Ground
P80	NC	-	-	No connection
P81	NC	-	-	No connection
P82	GND	-	-	Ground
P83	PCIE30_REFCLKP_A	-	-	PCIe port A reference clock +
P84	PCIE30_REFCLKN_A	-	-	PCIe port A reference clock -
P85	GND	-	-	Ground
P86	PCIE30_RX0P_A	-	-	PCIe port A receiver +
P87	PCIE30_RX0N_A	-	-	PCIe port A receiver -
P88	GND	-	-	Ground
P89	PCIE30_TX0P_A	-	-	PCIe port A transmitter +
P90	PCIE30_TX0N_A	-	-	PCIe port A transmitter -
P91	GND	-	-	Ground
P92	HDMI_TX2+	-	-	HDMI transmit data 2 +
P93	HDMI_TX2-	-	-	HDMI transmit data 2 -

Primary (Top) Side	Function 1	Function 2	Level	Description
P94	GND	-	-	Ground
P95	HDMI_TX1+	-	-	HDMI transmit data 1 +
P96	HDMI_TX1-	-	-	HDMI transmit data 1 -
P97	GND	-	-	Ground
P98	HDMI_TX0+	-	-	HDMI transmit data 0 +
P99	HDMI_TX0-	-	-	HDMI transmit data 0 -
P100	GND	-	-	Ground
P101	HDMI_TXC+	-	-	HDMI transmit data 3 +
P102	HDMI_TXC-	-	-	HDMI transmit data 3 -
P103	GND	-	-	Ground
P104	HDMI_TX_HPDIN	-	2.4~5.3V	HDMI hot plug detection input
P105	HDMI_TX_SCL	-	1.8V	I2C_CLK line dedicated to HDMI
P106	HDMI_TX_SDA	-	1.8V	I2C_DAT line dedicated to HDMI
P107	HDMITX_CEC_M0	-	1.8V	HDMI transmitter (CEC)
P108	GPIO1_A0	CAM0_PWR	1.8V	GPIO
P109	CAM1_PWR	GPIO1_A4	1.8V	Camera power enable, active low
P110	GPIO0_B0	CAM0_RST	1.8V	GPIO
P111	CAM1_RST	GPIO1_B2	1.8V	Camera reset, active low
P112	HDA_RST	GPIO0_C3	1.8V	HDA reset
P113	PWM6_OUT	GPIO0_C5	1.8V	PWM output
P114	TACHIN	GPIO3_C5	1.8V	Tachometer input
P115	GPIO2_D7	-	1.8V	GPIO
P116	GPIO3_A0	-	1.8V	GPIO
P117	GPIO1_A6	-	1.8V	GPIO
P118	GPIO3_A7	-	1.8V	GPIO
P119	GPIO3_B0	-	1.8V	GPIO
P120	GND	-	-	Ground
P121	I2C5_SCL_PM	-	1.8V	I ² C 5 clock
P122	I2C5_SDA_M0	-	1.8V	I ² C 5 data
P123	NC	-	-	No connection
P124	NC	-	-	No connection
P125	NC	-	-	No connection
P126	RESET_OUT	-	1.8V	Reset output
P127	RESETn	-	3.3V	Reset, low active
P128	POWER_BIN	-	3.3V	PMIC_PWRON
P129	UART0_TX	-	1.8V	UART 0 transmit data
P130	UART0_RX	-	1.8V	UART 0 receive data
P131	UART0_RTSN_M0	-	1.8V	UART 0 request to send
P132	UART0_CTSN_M0	-	1.8V	UART 0 clear to send
P133	GND	-	-	Ground

Primary (Top) Side	Function 1	Function 2	Level	Description
P134	UART2_TX_M0_DEBUG	-	1.8V	Debug UART 2 transmit data
P135	UART2_RX_M0_DEBUG	-	1.8V	Debug UART 2 receive data
P136	UART8_TX_M0	-	1.8V	UART 8 transmit data
P137	UART8_RX_M0	-	1.8V	UART 8 receive data
P138	UART8_RTSN_M0	-	1.8V	UART 8 request to send
P139	UART8_CTSN_M0	-	1.8V	UART 8 clear to send
P140	UART3_TX_M1	-	1.8V	UART 3 transmit data
P141	UART3_RX_M1	-	1.8V	UART 3 receive data
P142	GND	-	1.8V	Ground
P143	CAN2_TX_M0	-	1.8V	CAN 2 transmit data
P144	CAN2_RX_M0	-	1.8V	CAN 2 receive data
P145	CAN1_TX_M1	-	1.8V	CAN 1 transmit data
P146	CAN1_RX_M1	-	1.8V	CAN 1 receive data
P147	VDD_IN	-	5.0V	5V power input
P148	VDD_IN	-	5.0V	5V power input
P149	VDD_IN	-	5.0V	5V power input
P150	VDD_IN	-	5.0V	5V power input
P151	VDD_IN	-	5.0V	5V power input
P152	VDD_IN	-	5.0V	5V power input
P153	VDD_IN	-	5.0V	5V power input
P154	VDD_IN	-	5.0V	5V power input
P155	VDD_IN	-	5.0V	5V power input
P156	VDD_IN	-	5.0V	5V power input

Secondary (Bottom) Side	Function 1	Function 2	Level	Description
S1	I2C2_SCL_CAM1	-	1.8V	I ² C clock for serial camera data support link or differential data lane
S2	I2C2_SDA_CAM1	-	1.8V	I ² C data for serial camera data support link or differential data lane
S3	GND	-	-	Ground
S4	I2S3_MCLK	-	1.8V	I ² S 3 master clock
S5	GPIO3_B5_d	I2C3_SCL_CAM0	1.8V	GPIO
S6	CAM_CIF_CLKOUT	-	1.8V	Master clock output
S7	GPIO3_B6_d	I2C3_SDA_CAM0	1.8V	GPIO
S8	NC	-	-	No connection
S9	NC	-	-	No connection
S10	GND	-	-	Ground
S11	NC	-	-	No connection

Secondary (Bottom) Side	Function 1	Function 2	Level	Description
S12	NC	-	-	No connection
S13	GND	-	-	Ground
S14	NC	-	-	No connection
S15	NC	-	-	No connection
S16	GND	-	-	Ground
S17	GBE1_MDI0+	-	-	Differential pair signals routed through the external transformer. Carrier series termination: use a magnetic module for GBE transceivers. Carrier parallel termination: use the center tap on the secondary side for GBE implementations.
S18	GBE1_MDI0-	-	-	
S19	GBE1_LINK_100	-	-	GBE 1 100Mbps link indicator
S20	GBE1_MDI1+	-	-	GBE 1 media dependent interface 1+
S21	GBE1_MDI1-	-	-	GBE 1 media dependent interface 1-
S22	GBE1_LINK_1000	-	-	GBE 1 1000Mbps link indicator
S23	GBE1_MDI2+	-	-	GBE 1 media dependent interface 2+
S24	GBE1_MDI2-	-	-	GBE 1 media dependent interface 2-
S25	GND	-	-	Ground
S26	GBE1_MDI3+	-	-	PHY 1 media dependent interface 3+
S27	GBE1_MDI3-	-	-	PHY 1 media dependent interface 3-
S28	GBE1_CTREF	-	-	Center-tap reference voltage for carrier board Ethernet magnetics (if required by the GBE PHY module)
S29	NC	-	-	No connection
S30	NC	-	-	No connection
S31	GBE1_LINK_ACT	-	-	GBE 1 activity indicator
S32	NC	-	-	No connection
S33	NC	-	-	No connection
S34	GND	-	-	Ground
S35	USB2_HOST3_DP	-	-	USB port 3 data +
S36	USB2_HOST3_DM	-	-	USB port 3 data -
S37	NC	-	-	No connection
S38	I2S1_MCLK_M0	-	1.8V	I ² S 1 master clock
S39	I2S1_LRCK_TX_M0	-	1.8V	I ² S 1 left/right clock
S40	I2S1_SDO0_M0	-	1.8V	I ² S 1 serial data output 0
S41	I2S1_SDI0_M0	-	1.8V	I ² S 1 serial data input 0
S42	I2S1_SCLK_TX_M0	-	1.8V	I ² S 1 serial clock
S43	FSPI_D1	GPIO1_D2	1.8V	FSPI data 1
S44	FSPI_D0	GPIO1_D1	1.8V	FSPI data 0
S45	NC	-	-	No connection

Secondary (Bottom) Side	Function 1	Function 2	Level	Description
S46	NC	-	-	No connection
S47	GND	-	-	Ground
S48	I2C1_SCL_GP	-	1.8V	I ² C general purpose clock
S49	I2C1_SDA_GP	-	1.8V	I ² C general purpose data
S50	I2S3_LRCK	-	1.8V	I ² S 3 left/right clock
S51	I2S3_SDOOUT	-	1.8V	I ² S 3 serial data output
S52	I2S3_SDIN	-	1.8V	I ² S 3 serial data input
S53	I2S3_CK	-	1.8V	I ² S 3 serial clock
S54	SATA0_ACT#	-	3.3V	SATA activity indicator
S55	NC	-	-	No connection
S56	FSPI_D2	GPIO1_C7	1.8V	FSPI data 2
S57	FSPI_D3	GPIO1_D4	1.8V	FSPI data 3
S58	GPIO3_D1_d	-	1.8V	GPIO
S59	NC	-	-	No connection
S60	NC	-	-	No connection
S61	GND	-	-	Ground
S62	NC	-	-	No connection
S63	NC	-	-	No connection
S64	GND	-	-	Ground
S65	NC	-	-	No connection
S66	NC	-	-	No connection
S67	GND	-	-	Ground
S68	NC	-	-	No connection
S69	NC	-	-	No connection
S70	GND	-	-	Ground
S71	USB3_HOST1_SSTXP	-	-	USB 3.0 Host 1 super speed transmit +
S72	USB3_HOST1_SSTXN	-	-	USB 3.0 Host 1 super speed transmit -
S73	GND	-	-	Ground
S74	USB3_HOST1_SSRXP	-	-	USB 3.0 Host 1 super speed receive +
S75	USB3_HOST1_SSRXN	-	-	USB 3.0 Host 1 super speed receive -
KEY				
S76	NC	-	-	No connection
S77	NC	-	-	No connection
S78	NC	-	-	No connection
S79	NC	-	-	No connection
S80	GND	-	-	Ground
S81	NC	-	-	No connection
S82	NC	-	-	No connection
S83	GND	-	-	Ground

Secondary (Bottom) Side	Function 1	Function 2	Level	Description
S84	PCIE30_REFCLKP_B	-	-	PCIe port B reference clock +
S85	PCIE30_REFCLKN_B	-	-	PCIe port B reference clock -
S86	GND	-	-	Ground
S87	PCIE30_RX1P_B	-	-	PCIe port B receiver +
S88	PCIE30_RX1N_B	-	-	PCIe port B receiver -
S89	GND	-	-	Ground
S90	PCIE30_TX1P_B	-	-	PCIe port B transmitter +
S91	PCIE30_TX1N_B	-	-	PCIe port B transmitter -
S92	GND	-	-	Ground
S93	EDP_TX0P	-	-	eDP transmitter 0 +
S94	EDP_TX0N	-	-	eDP transmitter 0 -
S95	DPO_AUX_SEL	-	1.8V	DisplayPort (DP) auxiliary channel
S96	EDP_TX1P	-	-	eDP transmitter 1 +
S97	EDP_TX1N	-	-	eDP transmitter 1 -
S98	EDP_HPDIN_M1	-	-	eDP hot plug detection
S99	EDP_TX2P	-	-	eDP transmitter 2 +
S100	EDP_TX2N	-	-	eDP transmitter 2 -
S101	GND	-	-	Ground
S102	EDP_TX3P	-	-	eDP transmitter 3 +
S103	EDP_TX3N	-	-	eDP transmitter 3 -
S104	NC	-	-	No connection
S105	EDPAUXP	-	-	eDP auxiliary channel +
S106	EDPAUXN	-	-	eDP auxiliary channel -
S107	LCD1_BKLT_EN	-	1.8V	LCD 1 backlight enable
S108	MIPI_DSI_TX1_CLKP	-	-	MIPI DSI transmitter clock +
S109	MIPI_DSI_TX1_CLKN	-	-	MIPI DSI transmitter clock -
S110	GND	-	-	Ground
S111	MIPI_DSI_TX1_D0P	LVDS_TX1_D0P	-	MIPI DSI 1 transmitter data 0 +
S112	MIPI_DSI_TX1_D0N	LVDS_TX1_D0N	-	MIPI DSI 1 transmitter data 0 -
S113	DSI1_TE	-	1.8V	MIPI DSI tearing effect
S114	MIPI_DSI_TX1_D1P	LVDS_TX1_D1P	-	MIPI DSI 1 transmitter data 1 +
S115	MIPI_DSI_TX1_D1N	LVDS_TX1_D1N	-	MIPI DSI 1 transmitter data 1 -
S116	LCD1_VDD_EN	-	1.8V	LVDS1 VDD enable
S117	MIPI_DSI_TX1_D2P	LVDS_TX1_D2P	-	MIPI DSI 1 transmitter data 2 +
S118	MIPI_DSI_TX1_D2N	LVDS_TX1_D2N	-	MIPI DSI 1 transmitter data 2 -
S119	GND	-	-	Ground
S120	MIPI_DSI_TX1_D3P	LVDS_TX1_D3P	-	MIPI DSI 1 transmitter data 3 +
S121	MIPI_DSI_TX1_D3N	LVDS_TX1_D3N	-	MIPI DSI 1 transmitter data 3 -

Secondary (Bottom) Side	Function 1	Function 2	Level	Description
S122	LCD1_BKLT_PWM	-	1.8V	LCD 1 backlight PWM control
S123	GPIO4_D2	-	1.8V	GPIO
S124	GND	-	-	Ground
S125	MIPI_DSI_TX0_D0P	LVDS_TX0_D0P	-	MIPI DSI 0 transmit data 0 +
S126	MIPI_DSI_TX0_D0N	LVDS_TX0_D0N	-	MIPI DSI 0 transmit data 0 -
S127	LCD0_BKLT_EN	-	1.8V	LCD 0 backlight enable
S128	MIPI_DSI_TX0_D1P	LVDS_TX0_D1P	-	MIPI DSI 0 transmit data 1 +
S129	MIPI_DSI_TX0_D1N	LVDS_TX0_D1N	-	MIPI DSI 0 transmit data 1 -
S130	GND	-	-	Ground
S131	MIPI_DSI_TX0_D2P	LVDS_TX0_D2P	-	MIPI DSI 0 transmit data 2 +
S132	MIPI_DSI_TX0_D2N	LVDS_TX0_D2N	-	MIPI DSI 0 transmit data 2 -
S133	LCD0_VDD_EN	-	1.8V	LVDS0 VDD enable
S134	MIPI_DSI_TX0_CLKP	LVDS_TX0_CLKP	-	MIPI DSI 0 transmit clock +
S135	MIPI_DSI_TX0_CLKN	LVDS_TX0_CLKN	-	MIPI DSI 0 transmit clock -
S136	GND	-	-	Ground
S137	MIPI_DSI_TX0_D3P	LVDS_TX0_D3P	-	MIPI DSI 0 transmit data 3 +
S138	MIPI_DSI_TX0_D3N	LVDS_TX0_D3N	-	MIPI DSI 0 transmit data 3 -
S139	I2C4_SCL_LCD	I2C4_SCL_M0	1.8V	I ² C clock to read LCD display EDID EEPROMs (DDC clock line used for flat panel detection and control)
S140	I2C4_SDA_LCD	I2C4_SDA_M0	1.8V	I ² C data to read LCD Display EDID EEPROMs (DDC data line used for flat panel detection and control)
S141	LCD0_BKLT_PWM	-	1.8V	LCD 0 backlight PWM control
S142	GPIO3_C4	-	1.8V	GPIO
S143	GND	-	-	Ground
S144	FSPI_CLK	GPIO1_D0	1.8V	FSPI clock
S145	NC	-	-	No connection
S146	PCIE30x2_WAKEN	-	3.3V	PCIe 3.0 wake up
S147	VCC_RTC	-	2.0V-3.25V	RTC battery power supply
S148	LID_3V3	-	3.3V	Lid open/close indication to Module. Low indicates lid closure (which system may use to initiate a sleep state). Carrier to float the line in in-active state. Active low, level sensitive. Should be de-bounced on the Module.

Secondary (Bottom) Side	Function 1	Function 2	Level	Description
S149	SLEEP	-	-	Sleep indicator from the carrier board. May be sourced from user Sleep button or Carrier logic. Carrier to float the line in in-active state. Active low, level sensitive. Should be de-bounced on the Module.
S150	NC	-	-	No connection
S151	NC	-	-	No connection
S152	NC	-	-	No connection
S153	CARRIER_STBY	-	-	The module shall drive this signal low when the system is in a standby power state.
S154	CARRIER_PWR_ON	-	1.8V	Carrier board circuits (apart from power management and power path circuits) should not be powered up until the module asserts the CARRIER_PWR_ON signal.
S155	SARADC_VINO_KEY/RECOVERY	-	-	SARADC_VIN1_KEY/RECOVERY
S156	NC	-	-	No connection
S157	NC	-	-	No connection
S158	GND	-	-	Ground

Ordering Information

Ordering No.	Operating System	Memory	Storage	Form factor
VT-SBC-SMARC-3568-A	Android 11	4GB	64GB	SMARC 2.1
VT-SBC-SMARC-3568-D	Debian 11	4GB	64GB	SMARC 2.1

Packing List	
VT-SBC-SMARC-3568 computer-on-module	1

Since its establishment in 2002 by two Silicon Valley entrepreneurs, Vantron Technology has been at the forefront of the connected IoT devices and IoT platform solutions. Today, Vantron boasts a global customer base that includes many Fortune Global 500 companies. Its product lines cover edge intelligent hardware, IoT communication devices, industrial displays and BlueSphere cloud platforms.

With over 20 years of experience in R&D of intelligent edge hardware, Vantron has provided users with diverse embedded solutions featuring ARM and X86 architectures. Its offerings range from Linux, Android to Windows, from embedded to desktop level, and from gateways to servers. In addition, it provides users with system trimming, driver transplantation and more to cater to the unique needs of its users.