VOSM255A System-on-Module

Product Brief

The VOSM255A is a high-integration, ready-to-deploy System-on-Module built on the compact, scalable OSM form factor, engineered to streamline the development of high-performance embedded IoT and industrial applications. It is powered by the STM32MP255A CPU, integrating a powerful dual-core Cortex®-A35 cluster running at up to 1.5 GHz, paired with a Cortex®-M33 core for deterministic real-time tasks, and a Cortex®-M0+ core to enable ultra-low-power peripheral operation. This heterogeneous architecture delivers robust performance for demanding edge-AI and multimedia workloads while maintaining an efficient, low-power profile.

The VOSM255A supports up to 1080p@60fps video CODEC, alongside integrated graphics acceleration for rich HMI applications. It supports dual GbE ports, Wi-Fi, and Bluetooth for high-speed industrial networking. A comprehensive set of I/O is exposed through the standard OSM edge connector, including USB, PCIe, CAN, GPIO, multiple serial interfaces, and multi-channel audio I/O, enabling modular, high-performance industrial and commercial IoT implementations.

With support for Linux Yocto operating system, it offers developers with a streamlined development path, backed by long-term software maintenance and built-in security features. This module is ideally suited for a wide range of demanding edge applications, including industrial HMIs, autonomous edge gateways, medical diagnostic devices, smart factory controllers, and predictive monitoring systems.

Features and benefits

VOSM255A
Heterogeneous multi-core architecture
1.2 TOPS NPU for basic edge AI inference
Integrated 3D GPU & QXGA video output
Rich I/O: USB, UART, SPI, GPIO, PCIe, I2C, CAN
GbE, Wi-Fi, BT support for stable connectivity
Arm TrustZone security technology
Linux Yocto operating system support
OSM size-M compliant (30mm x 45mm)
Extended service life (7+ years)

Application Scenarios

Smart Cities

Industrial HMI

Speech Capture

Smart Metering

Industrial Automation

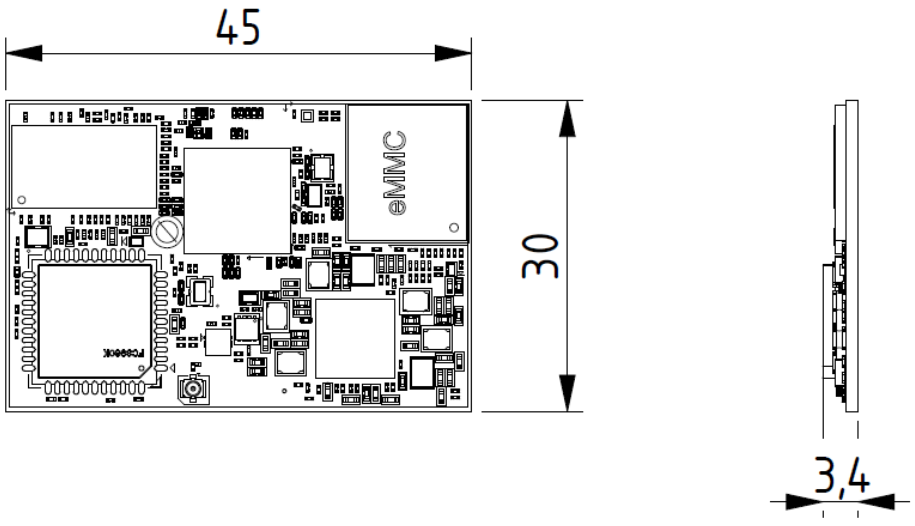
Smart Healthcare

VOSM255A System-on-Module Datasheet

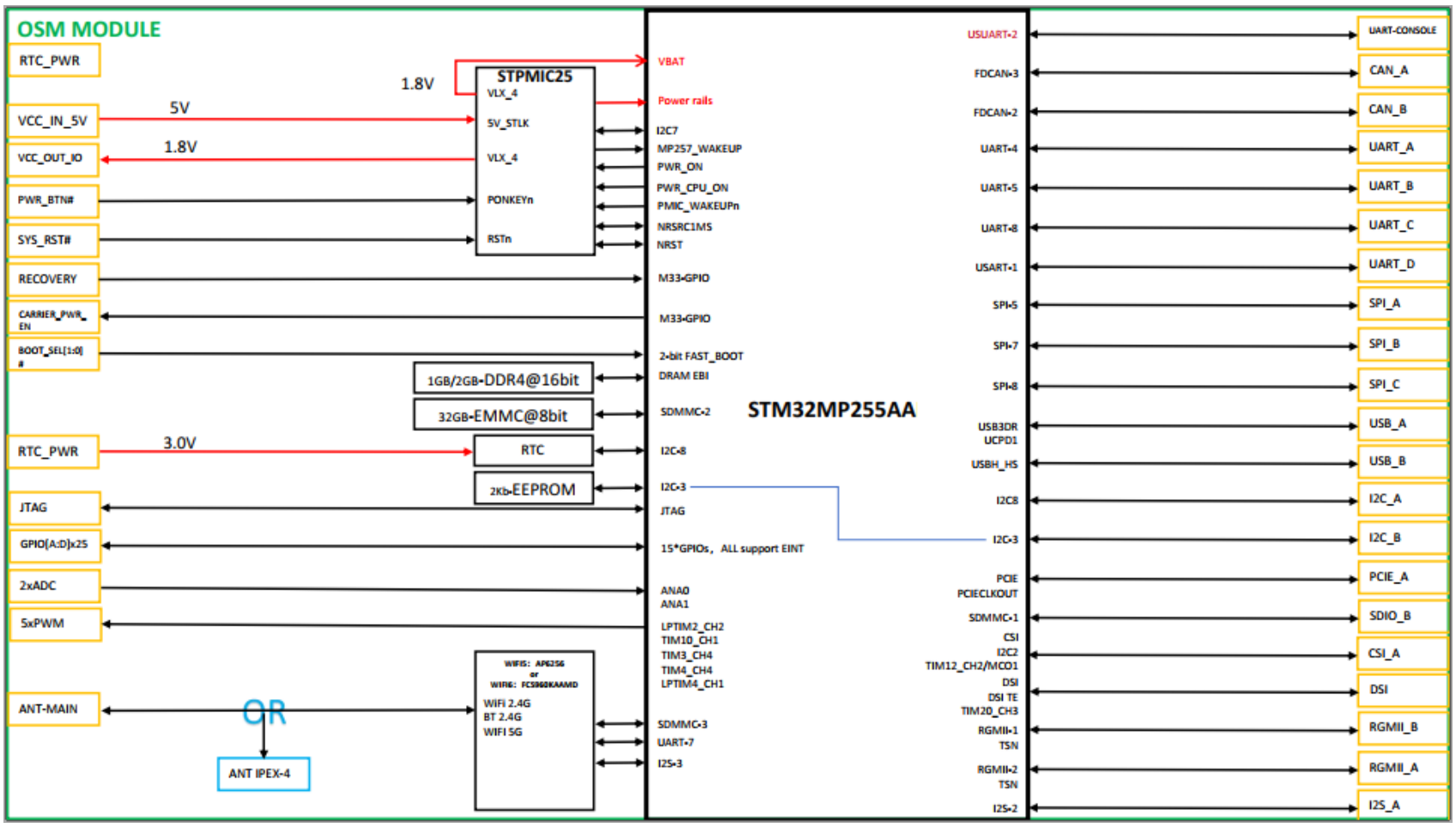
Specifications			
System	CPU	STMicroelectronics STM32MP255A dual-core Arm Cortex-A35 processor, 1.5GHz	
	MCU	1 x Arm Cortex-M33 RISC core with FPU/MPU, 400MHz	
		1 x Arm Cortex-M0+ RISC core in SmartRun domain, 200MHz	
	GPU	VeriSilicon GC8000UL, 800 MHz, Support OpenGL ES 3.1, Vulkan 1.3, OpenCL 3.0, OpenVX 1.3	
	NPU	VeriSilicon GC8000UL, 800 MHz, up to 1.2 TOPS, Support TensorFlowLite, ONNX, Linux NN	
	Memory	1GB DDR4	
	Storage	32GB eMMC 5.1	
Communication	Ethernet	GbE MAC (TSN)	
	Wi-Fi & BT	Wi-Fi IEEE 802.11 a/b/g/n/ac/ax + Bluetooth 5.4	
Media	Video processing	1080P@60fps H.264/VP8 video CODEC	
	Image signal processing	ISP embedded inside DCMIPP (all MIPI CSI-2 v1.3: RGB565, 888, YUV422, RawBayer)	
Power	Input	5V/1A DC input	
Software	Operating system	Linux Yocto	
Mechanical	Dimensions	30mm x 45mm (OSM Size-M)	Packaging: LGA
Miscellaneous	RTC	Integrated RTC	
Environmental Condition	Temperature	Operating: -20℃ ~ +70℃	Storage: -40℃ ~ +80℃
	Humidity	5%~95% RH (Non-condensing)	

I/O		
Display	1 x 4-Lane MIPI DSI D-PHY (up to 2.5 Gbit/s each), up to 2048 × 1536@60fps	
Camera	1 x 2-Lane MIPI CSI-2 v1.3	
Audio	1 x I^2S (support 1 x SDI, 1 x SDO), dedicated MLCK/SCK/WS for speaker & headphone & mic	
Ethernet	2 x RGMII, 10/100/1000Mbps, TSN supported	
USB	1 x USB 2.0, 480Mbps, HOST only for general use	
PCIe	1 x 1-Lane PCIe 2.0 (Gbps, RC or EP dual-mode supported)	
SDIO	1 x 4-bit SDIO, for on-board Wi-Fi on the OSM module	
	1 x 4-bit SDIO, for Micro SD card	
ADC	2 x 12-bit ADC	
SPI	3 x SPI (1-bit MISO, 1-bit MOSI), up to 40MHz	
CAN	2 x CAN FD, up to 5Mbps	
UART/USART	2 x UART for RS232 (UART4, UART5)	2 x UART for RS485 (USART1, UART8)
	1 x USART for debugging (USART2)	
JTAG	Supported	
I^2C	2 x I^2C, including one for touch panel	
GPIO	15 x GPIO, all support E-INT	
PWM	1 x PWM for MIPI display	1x PWM for fan
	4 x PWM for general use	
Key Signal	1 x Power key	1 x Reset key
	1 x 2-bit boot switch	

Product Outlines



Block Diagram



Electrical Characteristics

Absolute Maximum Ratings

Voltage beyond absolute maximum ratings may cause permanent damage to the module. Operation of the module outside of recommended conditions may result in reduced lifetime and/or reliability problems even if the absolute maximum ratings are not exceeded.

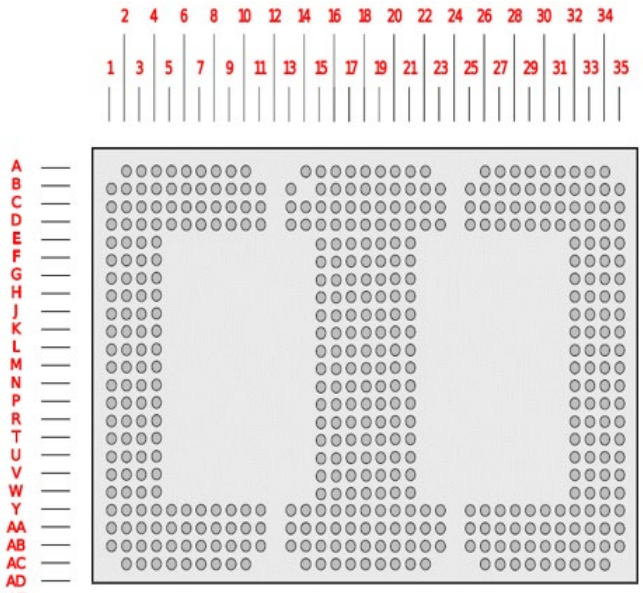
Parameter		Min.	Max.	Unit
Voltage of the SOM Module	VCC_IN_5V	-0.3	5.5	V
Voltage of the RTC	SOM V_BAT	-0.3	3.6	V
Voltage of the Carrier	VCC_IO_OUT	-0.3	1.85	V
Voltage of DDR4 DRAM	VPP_{DDR}	-0.4	3	V
	VDD_{DDR}	-0.4	1.5	V
	VTT_{DDR}	-	-	V
Voltage of CPU core	V_{DDCORE}	-0.3	0.99	V
Voltage of GPU	V_{DDGPU}	-0.3	0.99	V
Voltage of CPU VDD I/O	V_{DDIO}	-0.3	2	V
Voltage of CPU USB	$V_{DD33USB}$	-0.3	3.7	V
	$V_{DDA18USB}$	-0.3	1.98	V
Voltage of CPU ADC	$V_{DDA18ADC}$	-0.3	1.98	V
Voltage of CPU COMBO_PHY	$V_{DDPCIECLK}$	-0.3	0.99	V
	$V_{DDCOMBOPHY}$	-0.3	0.99	V
	$V_{DDCOMBOPHYTX}$	-0.3	0.99	V
	$V_{DDA18COMBOPHY}$	-0.3	0.99	V
Voltage of CPU UCPD PHY	$V_{DD33UCPD}$	-0.3	3.7	V
Voltage of CPU DSI	V_{DDDSI}	-0.3	0.99	V
	$V_{DDA18DSI}$	-0.3	1.98	V
Voltage of CPU CSI	V_{DDCSI}	-0.3	0.99	V
	$V_{DDA18CSI}$	-0.3	0.99	V
Voltage of CPU PLL	$V_{DDA18PLL1}$	-0.3	1.98	V
	$V_{DDA18PLL2}$	-0.3	1.98	V
	$V_{DDA18PLL3}$	-0.3	1.98	V
Voltage of Wi-Fi & BT 3V3		3	3.6	V
Voltage of RTC VBAT		-0.3	3.6	V
Voltage of OTG_VBUS		-	-	V
Voltage of eMMC VDD	V_{DDEMMC}	0.9	40	V
Voltage of SDCARD		-	-	V
Voltage of SDCARD IO		-	-	V
Operating temperature (Junction)		-20	70	℃

Recommended Operating Conditions

You are recommended to operate the module in the following conditions to achieve optimized performance of the module.

Parameter		Min.	Typ.	Max.	Unit
Voltage of the SOM Module	VCC_IN_5V	2.8	5	5.5	V
Voltage of the RTC	SOM V_BAT	2.2	3	3.6	V
Voltage of the Carrier	VCC_IO_OUT	1.7	1.8	1.85	V
Voltage of DDR4 DRAM	VPP_{DDR}	2.375	2.5	2.75	V
	VDD_{DDR}	1.14	1.2	1.26	V
	VTT_{DDR}	0.9	0.6	4	V
Voltage of CPU core	V_{DDCORE}	0.79	0.82	0.842	V
Voltage of GPU	V_{DDGPU}	0.86	0.8	0.961	V
Voltage of CPU VDD I/O	V_{DDIO}	1.71	1.8	1.89	V
Voltage of CPU USB	$V_{DD33USB}$	3.07	3.3	3.6	V
	$V_{DDA18USB}$	1.75	1.8	1.89	V
Voltage of CPU ADC	$V_{DDA18ADC}$	1.62	1.8	1.89	V
Voltage of CPU COMBO_PHY	$V_{DDPCIECLK}$	0.79	0.82	0.842	V
	$V_{DDCOMBOPHY}$	0.79	0.82	0.842	V
	$V_{DDCOMBOPHYTX}$	0.79	0.82	0.842	V
	$V_{DDA18COMBOPHY}$	0.79	0.82	0.842	V
Voltage of CPU UCPD PHY	$V_{DD33UCPD}$	3.07	3.3	3.6	V
Voltage of CPU DSI	V_{DDDSI}	0.79	0.82	0.842	V
	$V_{DDA18DSI}$	1.71	1.8	1.89	V
Voltage of CPU CSI	V_{DDCSI}	0.79	0.82	0.842	V
	$V_{DDA18CSI}$	1.71	1.8	1.89	V
Voltage of CPU PLL	$V_{DDA18PLL1}$	1.71	1.8	1.89	V
	$V_{DDA18PLL2}$	1.71	1.8	1.89	V
	$V_{DDA18PLL3}$	1.71	1.8	1.89	V
Voltage of Wi-Fi & BT 3V3		3	3.3	3.6	V
Voltage of RTC VBAT		2.2	3	3.6	V
Voltage of OTG_VBUS		-	5	-	V
Voltage of eMMC VDD	V_{DDEMMC}	-	1.8	-	V
Voltage of SDCARD		-	3.3	-	V
Voltage of SDCARD IO		-	1.8	-	V
Operating temperature (Junction)		-20	-	70	℃

Pinout



(View from top, through the module)

In the tables below:

* **Pin** refers to the pin number defined by OSM as shown in above figure.
* **Signal** refers to the pin name used by Vantron.
* **CPU Pad Name** refers to the corresponding designations of the STM32MP255A CPU.
* Certain signals are derived from auxiliary ICs and the corresponding IC names are provided accordingly.
* Unless otherwise explicitly stated, all I/O signals use a **1.8V level**.

Pin*	Signal*	CPU Pad Name*	Description
U19	BOOT_0	T2	BOOT config[0] BOOT config[1:0]=11=eMMC
R18	BOOT_1	P3	BOOT config[1] BOOT config[1:0]=11=eMMC
V17	CARRIER_PWR_EN	M3	Carrier power control 1=ON; 0=OFF (PD 1M)
AA9	PWR_BTN#	1 PONKEYn (STPMIC25BPQR)	POWER KEY 0=active; 1=inactive (PU 10K)
W17	RTC_PWR	R6	RTC power input (**3V** voltage)
U17	SYS_RST#	CPU: N2 / STPMIC25BPQR: 31	RESET KEY 0=active; 1=inactive (PU 10K)
T17, AB18, AA18	NC		No connection
M19, Y16, Y20, Y3, C5, AA33	NC		No connection
B29, Y17, Y19	NC		No connection
Y8, Y9, Y10, Y11	NC		No connection
Y25, Y26, Y27, Y28	VCC_IN_5V		**5V** power input for the module
U18	VCC_OUT_IO	19 VDDIO (STPMIC25BPQR)	1.8V IO power source output < 100mA
D18, E15, E21, F16, F20, J16	GND		Ground
J20, L18, M16, M20, P18, R16	GND		Ground

(To be continued…)

Pin	Signal	CPU Pad Name	Description
R20, V16, V20, Y18, AA14, AA17, AA19	GND		Ground
AA22, AB15, AB21, A4, A7, A10, B2, B5	GND		Ground
B8, B9, C11, D1, D5	GND		Ground
D8, E2, H2, H4, L2, L4, P2, P4, R1, U2, U4	GND		Ground
V1, W3, Y2, AA1, AA4, AA7, AA8	GND		Ground
AA10, AA11, AB3, AB6, AB9, AC4, AC7	GND		Ground
AC10, A26, A29, A32, B27, B28, B30	GND		Ground
B33, C25, C32, C35	GND		Ground
D28, D34, F33, F35, G34, H32, J33	GND		Ground
J35, K34, M35, N34, T34, W34	GND		Ground
AA25, AA26	GND		Ground
AA27, AA28, AA32, AB28	GND		Ground
AB31, AB34, AC27, AC30, AC33,	GND		Ground
T18, T19, Y13, Y14, N2, AA13, AA2, J32	NC		No connection
K32, K33, L32, M32, M33, N32, P32, P34	NC		No connection
R32, R33, T32, T33, AB25, AB26	NC		No connection
C2	CAM_MCK	PI6	Camera master clock
G3	TIM12_CH2	PF8	Camera power enable
G4	GPIO/PH3	PH3	Camera reset
B3	CSI_CKN	C2	MIPI CSI differential clock -
B4	CSI_CKP	C1	MIPI CSI differential clock +
C1	CSI_D0N	E1	MIPI CSI differential data 0 -
B1	CSI_D0P	E2	MIPI CSI differential data 0 +
A2	CSI_D1N	D2	MIPI CSI differential data 1 -
A3	CSI_D1P	D1	MIPI CSI differential data 1 +
A5, A6, B6 , B7	NC		No connection
C4	I2C2_SCL	PF2	I2C serial clock (PU 2.2k)
C3	I2C2_SDA	PF0	I2C serial data (PU 2.2k)
F4	DSI_BL_EN	PI7	Backlight enable for MIPI DSI display (PD 1M)
E18	MIPI DSI PWM	PB4	PWM dimming for MIPI DSI display
F3	DSI_LCD_EN	PG14	VDD logic enable for MIPI DSI display

MIPI CSI x 2 lanes (MPI CSI voltage)

Pin	Signal	CPU Pad Name	Description
AB8	DSI_CKN	A4	MIPI DSI clock -
AB7	DSI_CKP	B4	MIPI DSI clock +
AB11	DSI_D0N	A5	MIPI DSI differential data 0 -
AB10	DSI_D0P	B5	MIPI DSI differential data 0 +
AC9	DSI_D1N	A6	MIPI DSI differential data 1 -
AC8	DSI_D1P	B6	MIPI DSI differential data 1 +
AC6	DSI_D2N	B3	MIPI DSI differential data 2 -
AC5	DSI_D2P	A3	MIPI DSI differential data 2 +
AB5	DSI_D3N	B2	MIPI DSI differential data 3 -
AB4	DSI_D3P	A2	MIPI DSI differential data 3 +

MIPI DSI x 4 lanes (MPI DSI voltage)

Pin	Signal	CPU Pad Name	Description
AA3	DSI_TE	PI10	Tearing effect (TE) of MIPI DSI display
M18	ANA0	R5	ADC input (8-bit, recommend to use as NTC input)
N18	ANA1	P5	ADC input (8-bit, recommend to use as NTC input)
AC18	NC		No connection
R19	NJTRST	V2	JTAG test reset, active low
P19	NC		No connection
N17	JTMS_SWCLK	W4	JTAG test clock
P17	JTDI	W3	JTAG test data in
R17	JTDO_TRACESWO	V1	JTAG test data out
N19	JTMS_SWDIO	W2	JTAG test mode select
C18, B22, C16, P16	NC		No connection
D6, D7, Y29, Y30, Y31	NC		No connection
AA29, AA30, AA31	NC		No connection
F18	TIM4_CH4	PF4	Pulse width modulation 1
G18	TIM3_CH4	PF3	Pulse width modulation 2
H18	TIM10_CH1	PB9	Pulse width modulation 3
J18	LPTIM1_CH1	PI4	Pulse width modulation 4
K18	LPTIM2_CH1	PH2	Pulse width modulation 5
AB17	FDCAN2_RX	PA5	CAN A receive data
AC17	FDCAN2_TX	PI9	CAN A transmit data
AB19	FDCAN3_RX	PF14	CAN B receive data
AC19	FDCAN3_TX	PF13	CAN B transmit data
C14	UART4_CTS	PD8	UART 4 clear to send
C13	UART4_RTS	PD9	UART 4 request to send
A14	UART4_RX	PD10	UART 4 receive data
B13	UART4_TX	PD11	UART 4 transmit data

(To be continued…)

Pin	Signal	CPU Pad Name	Description
D16	UART5_CTS	PI5	UART 5 clear to send
D15	UART5_RTS/UART5_DE	PG8	UART 5 request to send
D14	UART5_RX	PG10	UART 5 receive data
D13	UART5_TX	PG9	UART 5 transmit data
A22	UART8_RX	PF11	UART 8 receive data
B23	UART8_TX	PF10	UART 8 transmit data
D22	USART2_RX	PA8	Debug USART receive data
D23	USART2_TX	PA4	Debug USART transmit data
C22	USART1_RX	PA2	USART 1 receive data
C23	USART1_TX	PA3	USART 1 transmit data
V21	I2S2_SDI	PB6	I2S 2 data input
W21	I2S2_SDO	PB2	I2S 2 data output
V19, W19	NC		No connection
W20	I2S2_CK	PB0	I2S serial clock
W18	I2S_WS	PB3	I2S word select
V18	I2S_MCK	PB5	I2S master clock
AB2	PCIE_RX1N	V16	PCIe 1 receive data 0 –
AB1	PCIE_RX1P	U16	PCIe 1 receive data 0 +
AC3	PCIE_TX1N	V15	PCIe 1 transmit data 0 -
AC2	PCIE_TX1P	U15	PCIe 1 transmit data 0 +
V2	PCIE_PERST	PA6	PCIe 1 reset, active low
M34, L34	NC		No connection
L35, K35, L33	NC		No connection
W2	PCIE_CLKREQN	PA7	PCIe 1 clock request, active low
Y1	PCIE_CLKOUTN	V14	PCIe 1 reference clock -
W1	PCIE_CLKOUTP	U14	PCIe 1 reference clock +
R2, T1, U1	NC		No connection
T2	PCIE1_PEWAKE	PA1	PCIe 1 wakeup, active low
AA15	I2C_A_SCL	PZ1	I2C A serial clock (PU 2.2k)
AA16	I2C_A_SDA	PZ0	I2C A serial data (PU 2.2k)
AA20	I2C_B_SCL	PG1	I2C B serial clock (PU 2.2k)
AA21	I2C_B_SDA	PG2	I2C B serial data (PU 2.2k)
AB13	USB3DR_DM	V12	USB_A data - **(5V)**
AC14	USB3DR_DP	W12	USB_A data + **(5V)**
AC16	USB3DR_VBUSEN	PH5	USB 3.0 VBUS enable control
AB14	UPCD1_CC1	W13	USB Type-C CC configuration channels
AC15	UPCD1_CC2	W14	
AB16	OTG_VBUS_5V		USB OTG power supply **(5V)**
AB23	USB1_HS_DM	V11	USB 2.0 High-speed differential data -
AC22	USB1_HS_DP	W11	USB 2.0 High-speed differential data +

PCIe 1 (PCIe voltage)

(USB voltage)

Pin	Signal	CPU Pad Name	Description
AC20	USB_B_EN	PH4	USB_B enable
AB22, AC21, AB20, J21	NC		No connection
F21, E20, G20, H20, H21, C20	NC		No connection
D21, D20	NC		No connection
T21	SDIO_CD#	PF12	SDIO card detect, active low
K20	SDMMC1_CK	PE3	SDMMC 1 clock
K21	SDMMC1_CMD	PE2	SDMMC 1 command
L20	SDMMC1_D0	PE4	SDMMC 1 data bit 0
L21	SDMMC1_D1	PE5	SDMMC 1 data bit 1
M21	SDMMC1_D2	PE0	SDMMC 1 data bit 2
N20	SDMMC1_D3	PE1	SDMMC 1 data bit 3
N21, P20, P21	NC		No connection
R21, U20	NC		No connection
T20	VDDIO_SDCARD	2 VDDIO_SDCARD (STPMIC25BPQR)	I/O voltage for SDMMC1 (**3.3V**)
U21	VDD_SDCARD	4 VDD_SDCARD (STPMIC25BPQR)	Power supply for external SD card (**3.3V**) (PU 1k)
D17	TP_INT	PZ3	Touch panel interrupt
E17	TYPEC_CC_INT	PD4	USB Type-C configuration channel interrupt
F17	SPIA_INT	PD5	SPI_A interrupt
G17	SPIB_INT_A	PD6	SPI_B interrupt
H17	SPIC_INT_A	PD7	SPI_C interrupt
J17	AMP_CRL	PI0	Audio amplifier control
D19	GPIO2	PH6	GPIO
E19	EEPROM_WP	PI2	EEPROM write protect
F19	HP_DET	PZ9	Headphone detection
G19	SPI0_RST	PB15	SPI 0 reset
H19	GPIO3	PG5	GPIO
J19	GPIO	PI3	GPIO
K19, L19	NC		No connection
D3	GPIO	PF15	GPIO
D4	CAM1_PWN#	PI8	PWM control for camera 1 (active low)
E3	ETH2_PHY_INTN	PF5	Ethernet PHY 2 interrupt (active low)
E4	ETH1_PHY_INTN	PA12	Ethernet PHY 1 interrupt (active low)

(To be continued…)

Pin	Signal	CPU Pad Name	Description
Y15	SPI5_NSS	PG7	SPI_5 chip select, active low
U16	SPI5_SCK	PG6	SPI_5 serial clock
U15	SPI5_MISO	PG4	SPI_5 serial data in
V15	SPI5_MOSI	PG3	SPI_5 serial data out
AA23	SPI7_NSS	PI1	SPI_7 chip select, active low
Y21	SPI7_SCK	PG13	SPI_7 serial clock
Y22	SPI7_MISO	PG12	SPI_7 serial data in
Y23	SPI7_MOSI	PG11	SPI_7 serial data out
C30	SPI8_NSS	PZ6	SPI_8 chip select, active low
D29	SPI8_SCK	PZ5	SPI_8 serial clock
C29	SPI8_MISO	PZ8	SPI_8 serial data in
D30	SPI8_MOSI	PZ7	SPI_8 serial data out
R15	ETH2_RGMII_RX_CLK	PF6	Ethernet 2 RGMII receive clock
M15	ETH2_RGMII_RX_CTL	PC3	Ethernet 2 RGMII receive control
N15	ETH2_RGMII_RXD2	PF9	Ethernet 2 RGMII receive data 2
P15	ETH2_RGMII_RXD3	PC11	Ethernet 2 RGMII receive data 3
J15	ETH2_RGMII_GTX_CLK	PF7	Ethernet 2 RGMII gigabit transmit clock
K16	ETH2_RGMII_TX_CTL	PC4	Ethernet 2 RGMII transmit control
K15	ETH2_RGMII_RXD0	PG0	Ethernet 2 RGMII receive data 0
L15	ETH2_RGMII_RXD1	PC12	Ethernet 2 RGMII receive data 1
H15	ETH2_RGMII_TXD0	PC7	Ethernet 2 RGMII transmit data 0
G15	ETH2_RGMII_TXD1	PC8	Ethernet 2 RGMII transmit data 1
H16	ETH2_RGMII_TXD2	PC9	Ethernet 2 RGMII transmit data 2
G16	ETH2_RGMII_TXD3	PC10	Ethernet 2 RGMII transmit data 3
P1	ETH1_RGMII_RX_CLK	PA14	Ethernet 1 RGMII receive clock
L1	ETH1_RGMII_RX_CTL	PA11	Ethernet 1 RGMII receive control
M1	ETH1_RGMII_RXD2	PH12	Ethernet 1 RGMII receive data 2
N1	ETH1_RGMII_RXD3	PH13	Ethernet 1 RGMII receive data 3
H1	ETH1_RGMII_GTX_CLK	PC0	Ethernet 1 RGMII gigabit transmit clock
J2	ETH1_RGMII_TX_CTL	PA13	Ethernet 1 RGMII transmit control
J1	ETH1_RGMII_RXD0	PF1	Ethernet 1 RGMII receive data 0
K1	ETH1_RGMII_RXD1	PC2	Ethernet 1 RGMII receive data 1
G1	ETH1_RGMII_TXD0	PA15	Ethernet 1 RGMII transmit data 0
F1	ETH1_RGMII_TXD1	PC1	Ethernet 1 RGMII transmit data 1
G2	ETH1_RGMII_TXD2	PH10	Ethernet 1 RGMII transmit data 2
F2	ETH1_RGMII_TXD3	PH11	Ethernet 1 RGMII transmit data 3
C6	ETH1_MDC	PA9	Ethernet 1 management data clock
C7	ETH1_MDIO	PA10	Ethernet 1 management data input/output
T16	ETH2_MDC	PC6	Ethernet 2 management data clock
T15	ETH2_MDIO	PC5	Ethernet 2 management data input/output
A17	GND		Ground
A16	Wi-Fi_ANT		Wi-Fi antenna

* Apart from those specified here, any pins not included in these sheets are not connected.

Ordering Information

Ordering No.	Memory	Storage	Connectivity	Description
VOSM255A	1GB DDR4	32GB eMMC	GbE, Wi-Fi, Bluetooth	MIPI DSI, MIPI CSI, SPI, PCIe, CAN, UART, USB, I^2C, GPIO
VT-SBC-VOSM255A-EVB	1GB DDR4	32GB eMMC	GbE, Wi-Fi, Bluetooth	VOSM255A + Carrier board, MIPI DSI/HDMI, UART, CAN, MIPI CSI, USB, GPIO

Packing List	
VOSM255A system-on-module	1

Company Profile

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 embedded edge intelligent hardware, Vantron has provided users with diverse embedded solutions featuring ARM and X86 architectures. Its offerings range from Linux to Windows, from embedded to desktop level, and from gateway to server. In addition, it provides users with system trimming, driver transplantation and more to cater to the unique needs of its users.