Carbon AM62 OSM-MF (PRELIMINARY)

Datasheet

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Introduction

This document describes key hardware aspects of Ezurio's Carbon AM62 OSM-MF system-on-module which is based on the TI AM625 and AM623 Sitara™ processor family. Carbon AM62 OSM-MF is a module that conforms to the SGET Open Standard Module (OSM) version 1.2 standards specification.

Overview

The Carbon AM62 OSM-MF module uses the TI AM625 and AM623 Sitara™ processors which integrate up to a quad-core Arm Cortex-A53 MPU, a 400 MHz Cortex-M4F MCU, a PRU module for high speed real-time I/O capability, and 3D graphics acceleration.

General Description

In addition, the extensive set of peripherals included with Carbon AM62 enables system-level connectivity, such as: LVDS display output, RGB display output, USB 2.0, gigabit ethernet, MMC/SD/SDIO, MIPI-CSI camera interface, UART, SPI, I2C, CAN-FD, PWM, and GPIO. Carbon AM62 supports our Summit Suite Chain of Trust's secure boot, secure image, and secure storage protection using the built-in Hardware Security Module (HSM). In addition, Carbon AM62 employs advanced power management support for portable and power-sensitive applications.

Note: This datasheet is subject to change. Please contact Ezurio for further information.

Application Areas

- Smart Building Control, HVAC
- Energy Meters, Energy Storage, Smart Electrical Panels
- Test and Measurement Equipment
- Industrial Vision and Camera Systems
- Commercial Food and Beverage Equipment
- Medical and Healthcare Devices
- Human-Machine Interfaces (HMI) and Kiosk Systems

Features & Benefits

The Carbon AM62 OSM-MF module is based on the AM62x family from Texas Instruments which offers a variety of interfaces and different memory configurations. The following feature summary list follows Carbon AM62's implementation of the OSM v1.2 standard. If customer does not need to conform to OSM v1.2, most of the interfaces described in TI's AM62x datasheet are available via the processor pinmux configuration in our software releases.

Key features of Carbon AM62 OSM-MF are described in Table 1.

Feature	Description
Graphics, Displays, and Cameras	Up to 2 independent displays, GPU, camera support
OSM-MF v1.2 Compatible	Built in the size optimized 45x30mm OSM Size-MF form factor and pin-compatible with our full range of OSM-MF modules
Robust Software and Board Support Support	Choose from Yocto Linux, Buildroot Linux, Android, Debian, or QNX for Cortex-A53, FreeRTOS for Cortex-M4F and Cortex-R5F
Secure Enclave and Secure Boot	Dedicated on-board security hardware, secure boot Linux, high-performance and flexible secure storage for passwords, certificates, and data storage.
Choose your Sona Wi-Fi and Bluetooth Module	Select from our line of Wi-Fi 6 and Wi-Fi 6E modules that include up to Bluetooth 5.4 and global radio certifications

Personal Support from Design to Manufacture	Our industry-renowned support and field application engineering team is passionate about helping you speed your design to market.

Specification Summary

Processor / SoC

MPUs	Up to Quad 64-bit Arm® Cortex®-A53 microprocessor subsystem at up to 1.4 GHz • Quad-core Cortex-A53 cluster with 512KB L2 shared cache with SECDED ECC • 32KB L1 DCache with SECDED ECC • 32KB L1 ICache with Parity protection
MCUs	Single-core Arm® Cortex®-M4F MCU at up to 400 MHz • 256KB SRAM with SECDED ECC Dual-core Programmable Real-Time Unit Subsystem (PRUSS) at up to 333 MHz • Intended for driving GPIOs for cycle accurate protocols Dedicated Device/Power Manager
GPU	Optional 3D Graphics Processing Unit • 1 pixel per clock or higher • Fillrate greater than 500 Mpixels/sec • >500 MTexels/s, >8 GFLOPs • Supports at least 2 composition layers • Supports up to 2048x1080 @60fps • Supports ARGB32, RGB565 and YUV formats • 2D graphics capable • OpenGL ES 3.1, Vulkan 1.2

Memory

RAM	1GB, 2GB, and 4GB LPDDR4
Storage	Up to 128 GB eMMC (16GB eMMC default)

Wi-Fi

Standards	(Optional): • Sona TI351: Wi-Fi 6 • Sona IF573: Wi-Fi 6E • Sona IF513: Wi-Fi 6E • Sona NX611: Wi-Fi 6
Interface	SDIO
Frequency Range	Wi-Fi 6: 2.4/5 GHz Wi-Fi 6E: 2.4/5/6 GHz

Bluetooth

Standards	(Optional): • Sona TI351: Bluetooth Core 5.4 (LE) • Sona IF573: Bluetooth Core 6.0 (Classic and LE) • Sona IF513: Bluetooth Core 6.0 (Classic and LE) • Sona NX611: Bluetooth Core 5.4 (Classic and LE)

Radio Performance

Interfaces

Peripheral Interfaces	
Ethernet	2x Gigabit Ethernet • RGMII (10/100/1000) • IEEE1588 (Annex D, Annex E, Annex F with 802.1AS PTP) • Clause 45 MDIO PHY management • Packet Classifier based on ALE engine with 512 classifiers • Priority based flow control • Time sensitive networking (TSN) support • Four CPU H/W interrupt Pacing • IP/UDP/TCP checksum offload in hardware

UART	3x 4-wire UART* 2x 2-wire UART The additional RTS and CTS pins beyond OSM-MF v1.2 spec are available on OSM's GPIO pins
USB	2x USB2.0 Ports • Up to 480 Mbps • Port configurable as USB host, USB peripheral, or USB Dual-Role Device (DRD mode) • Integrated USB VBUS detection • Trace over USB supported
GPIO	25x GPIO
PWM	3x PWM
CAN	2x CAN-FD
I2C	4x I2C
SPI	1x QSPI/SPI (Hardware acceleration only in QSPI operations, normal SPI operations enabled as a software bit-bang driver) 2x SPI
SDIO	1x 4-bit MMC/SD/SDIO 3.0 port • Speeds up to UHS-1
	1x I2S

Display	Display subsystem • Dual display support • 1x LVDS (up to 2 channels)*, up to 1920 x 1080 @ 60 fps per Single Link, up to 3840 x 1080 at 60 fps in Dual Link • 1x 18-bit RGB, up to 1920 x 1080 @ 60 fps • Support safety feature such as freeze frame detection and MISR data check LVDS interfaces not to OSM-MF v1.2 spec, but pin-compatible with other Ezurio OSM-MF modules

Camera	1x Camera Serial interface (MIPI-CSI-2): • 4-Lane CSI-RX with DPHY • MIPI® CSI-2 v1.3 Compliant + MIPI D-PHY 1.2 • Support for 1,2,3 or 4 data lane mode up to 1.5Gbps • ECC verification/correction with CRC check + ECC on RAM • Support for up to 16 virtual channels • Ability to write stream data directly to DDR via DMA
Audio	1x I2S (Inter-IC Sound) • Clocks up to 50 MHz

Power

Power Modes	Low power modes supported by Device/Power Manager • Partial IO support for CAN/GPIO/UART wakeup • DeepSleep • MCU Only • Standby • Dynamic frequency scaling for Cortex-A53

Software

Security	Optional Summit Suite Chain of Trust • Secure boot hardware root of trust architecture including secure storage • Secure manufacturing of hardware root of trust and image programming • Secure generation and provisioning of customer specific application secure keys, certificates, and credentials • Secure signing service for generating new signed firmware and certificates Optional Software Vulnerability Monitoring • Email alerts that can be configured to be sent daily, weekly, or monthly on new vulnerabilities in your SBOM • Web-based, easy to digest vulnerability reports with detailed information for every vulnerability in your SBOM • Vulnerability reports are exportable and shareable Optional Software Vulnerability Remediation • Meet with your team on joint remediation or mitigation strategies for vulnerabilities in Ezurio's BSP • Provide updated BSP releases for vulnerabilities in Ezurio's BSP (Planned) Optional Summit Suite FIPS Cryptographic Module • FIPs 140-3 Level 1 validation managed over life of product • Data-in-transit over TLS • Data-at-rest for encrypted filesystems or files • Data-in-transit over Wi-Fi in conjunction with select Ezurio Wi-Fi modules Secure boot supported • Hardware-enforced Root-of-Trust (RoT) • Support to switch RoT via backup key • Support for takeover protection, IP protection, and anti-roll back protection Trusted Execution Environment (TEE) supported • Arm TrustZone® based TEE • Extensive firewall support for isolation • Secure watchdog/timer/IPC • Secure storage support • Replay Protected Memory Block (RPMB) support Cryptographic acceleration supported • Session-aware cryptographic engine with ability to auto-switch key-material based on incoming data stream • AES – 128-/192-/256-Bit key sizes • SHA2 – 224-/256-/384-/512-Bit key sizes • DRBG with true random number generator • PKA (Public Key Accelerator) to Assist in RSA/ECC processing for secure boot Debugging • Secure software controlled debug access

	• Security aware debugging Dedicated Security Controller with user programmable HSM core and dedicated security DMA & IPC subsystem for isolated processing

Lead Free	Lead-free and RoHS Compliant

Warranty

Warranty Terms	One Year Warranty

Functional Descriptions

Power-Up Sequence and Timing

Boot Mode

The Carbon AM62 OSM-MF module can be configured to boot from a different interface by selecting the BOOT_SEL0#, BOOT_SEL1#, and FORCE_RECOVERY# pins. These bits are latched externally during boot-up. The selected boot mode is the mode attempted after reset.

All BOOT_SEL0#, BOOT_SEL1#, and FORCE_RECOVERY# pins signals must be pulled high through a resistor to 1.8V, or pulled low to ground, they must not be left floating.

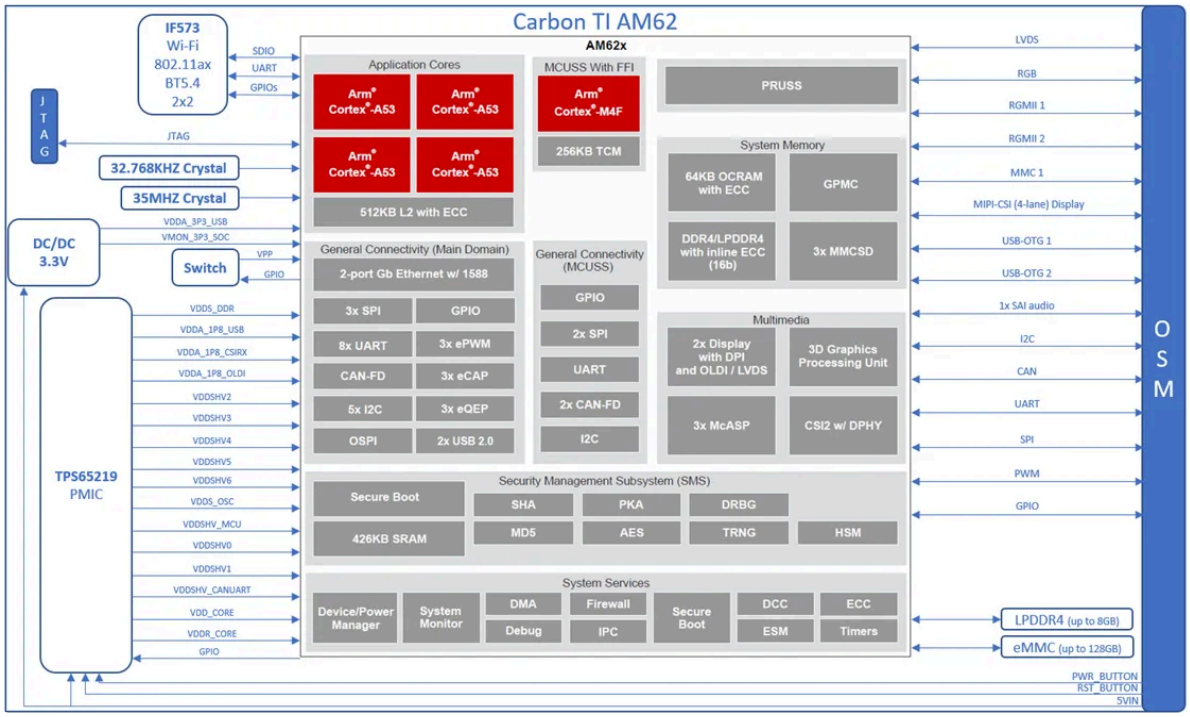
This allows more combinations as shown in the following table.

BOOT_SEL0	BOOT_SEL1#	FORCE_RECOVERY#	BOOT MODE
1	1	1	Onboard eMMC
0	1	1	MMCSD Boot (SD Card Boot or external eMMC Boot using User Data Area)
0	0	0	USB DFU

Hardware Architecture

Block Diagrams

The figure below shows the block diagram of the Carbon AM62 OSM-MF which contains the TI AM62x processor and TI PMIC (TPS65219).



Pin-Out / Package Layout

Tables listed below show the pin multiplexing of the Carbon AM62 OSM-MF SOM.

The table below defines I/O Types used in the pin mux tables.

Table: I/O Types

I/O Type	Description
I	Input to the Module
O	Output from the Module
I/O	Bi-directional Input / Output signal
OD	Open Drain Output
I OD	Input to the module, where an OD output on the carrier is expected
P	Power to the module
PO	Power source from the module
Analog	Analog signal between defined voltage
CMOS	Logic input or output.
USB	USB compatible differential signal. Please refer to the USB Specification for details.
USB SS	USB SuperSpeed signal. Please refer to the USB 3.x specification for details.

MDI	Media Dependent Interface, differential signal.
LVDS D-PHY	MIPI-DSI/CSI differential signal. Please refer to the MIPI D-PHY specification
LVDS M-PHY	MIPI-DSI/CSI differential signal. Please refer to the MIPI M-PHY specification
LVDS PCIE	PCI Express compatible differential signal. Please refer to the PCI Express Specification for details.
LVDS UFS	UFS compatible differential signal. Please refer to the UFS specification by JEDEC.
LVDS DP	DisplayPort compatible differential signal. Please refer to the DisplayPort specification for details.
LVDS LCD	Low Voltage Differential signals for connecting an LCD. Please refer to the LDI/OLDI specification for details.

TI processor has configurable internal Pull-up (PU) and pull-down (PD) resistor whose values are listed below. During a reset condition, the PU and PD state are pre-defined and cannot be changed.

Table: Resistor Characteristics

Parameter	Conditions	Min	Typ	Max	Unit
Pull-up (PU) resistor	VDD=1.65 to 1.95V Temp=0 to 95°C	15	22	30	kΩ
Pull-down (PD) resistor		15	22	30	kΩ
Pull-up (PU) resistor	VDD=3.0 to 3.6V Temp=0 to 95°C	15	22	30	kΩ
Pull-down (PD) resistor		15	22	30	kΩ

Our board support package's default pin muxing is highlighted in red. Pin configuration for the TI AM62x is achieved using a suite of evaluation and configuration tools that assists users from initial evaluation to production software development. In order to know how to mux each pin, one would need to check the SysConfig tool from TI: https://dev.ti.com/sysconfig/#/start

Table: Size-0 Power Supply and Ground

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold= default muxing)	I/O Type	I/O Level	Comments
VCC_2_TEST2	M19				PO	3.3V	
VCC_3_TEST	Y16				PO	0.75V	
VCC_4_TEST	Y20				PO	1.8V	
VCC_IN_5V	Y17				P	5V	

VCC_IN_3V3	Y19	NC	NC		P	3.3V	
V_BAT	AA18, AB18	NC	NC		P		
GND	D18, E15, E21, F16, F20, J16, J20, L18, M16, M20, P18, R16, R20, V16, V20, Y18, AA14, AA17, AA19, AA22, AB15, AB21				P		
RESET_IN#	U17	F20	RESET_REQZ	**RESET_REQZ**	I OD CMOS	1.8V	10K PU on module
RESET_OUT#	Y14	F22	RESETSTATZ	**RESETSTATZ**	O CMOS	1.8V	
CARRIER_PWR_EN	V17	E21	PORZ_OUT	**PORZ_OUT**	O CMOS	1.8V	
CARRIER_STBY#	Y13	NC	NC		O CMOS	1.8V	
VCC_OUT_IO	U18	NC	NC		PO	1.8V/3.3V	
RTC_PWR	W17				P	3V	Low current RTC circuit backup power – 3V nominal. May be sourced from a Carrier based Lithium cell or Super Cap.
BOOT_SEL0#	U19				I OD CMOS	1.8V	See Boot Mode; 10K PU on module
BOOT_SEL1#	R18				I OD CMOS	1.8V	See Boot Mode; 10K PU on module
FORCE_RECOVERY#	T17				I OD CMOS	1.8V	See Boot Mode; 10K PU on module

Table: Size 0 JTAG

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold= default muxing)	I/O Type	I/O Level	Comments
JTAG_TCK(SWCLK)	N17	A10	TCK	**TCK**	I CMOS	1.8V	

JTAG_TMS(SWDIO)	N19	B11	TMS	**TMS**	I CMOS	1.8V	
JTAG_TDI	P27	A11	TDI	**TDI**	I CMOS	1.8V	
JTAG_RTCK	P19	NC	NC		O CMOS	1.8V	
JTAG_TDO(SWO)	R17	D12	TDO	**TDO**	O CMOS	1.8V	
JTAG_nTRST	R19	B10	TRSTN	**TRSTN**	I CMOS	1.8V	
DEBUG_EN	AC18	E12	EMU0	**EMU0**	I CMOS	1.8V	
TEST_GENERIC/TEST_BOUNDARY_SCAN	C18	C11	EMU1	**EMU1**	I/O CMOS	1.8V	

Table: Size 0 UART

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
UART_A_RX	A14	J23	OSPI0_D4	OSPI0_D4 SPI1_CS0 MCASP1_AXR1 **UART6_RXD** GPIO0_7	I CMOS	1.8V	
UART_A_TX	B13	J25	OSPI0_D5	OSPI0_D5 SPI1_CLK MCASP1_AXR0 **UART6_TXD** GPIO0_8	O CMOS	1.8V	

UART_A_RTS	C13	H25	OSPI0_D6	OSPI0_D6 SPI1_D0 MCASP1_ACLKX **UART6_RTSn** GPIO0_9	O CMOS	1.8V	
UART_A_CTS	C14	J22	OSPI0_D7	OSPI0_D7 SPI1_D1 MCASP1_AFSX **UART6_CTSn** GPIO0_10	I CMOS	1.8V	
UART_B_RX/ UART_B_MCS_RX	D14	B5	MCU_UART0_RXD	**MCU_UART0_RXD** MCU_GPIO0_5	I CMOS	1.8V	
UART_B_TX/ UART_B_MCS_TX	D13	A5	MCU_UART0_TXD	**MCU_UART0_TXD** MCU_GPIO0_6	O CMOS	1.8V	
UART_B_RTS/ UART_B_MCU_RTS	D15	B6	MCU_UART0_RTSN	**MCU_UART0_RTSN** MCU_TIMER_IO1 MCU_SPI1_D1 MCU_GPIO0_8	O CMOS	1.8V	

UART_B_CTS/ UART_B_MCU_CTS	D16	A6	MCU_UART0_CTSN	**MCU_UART0_CTSN** MCU_TIMER_IO0 MCU_SPI1_D0 MCU_GPIO0_7	I CMOS	1.8V	
UART_C_RX/ UART_C_ALT_RX	A22	B4	WKUP_UART0_RXD	**WKUP_UART0_RXD** MCU_SPI0_CS2 MCU_GPIO0_9	I CMOS	1.8V	
UART_C_TX/ UART_C_ALT_TX	B23	C5	WKUP_UART0_TXD	**WKUP_UART0_TXD** MCU_SPI1_CS2 MCU_GPIO0_10	O CMOS	1.8V	
UART_D_RX	C22	T22	GPMC0_AD12	GPMC0_AD12 VOUT0_DATA20 **UART4_RXD** MCASP2_AFSX PR0_PRU0_GPO0 PR0_PRU0_GPI0 TRC_DATA22 GPIO0_27 BOOTMODE12	I CMOS	1.8V	A Dual-Supply Bus Transceiver is between SoC contact and SOM contact (SN74AVCH4T245RSVR)

UART_D_TX	C23	T24	GPMC0_AD13	GPMC0_AD13 VOUT0_DATA21 **UART4_TXD** MCASP2_ACLKX PR0_PRU0_GPO1 PR0_PRU0_GPI1 TRC_DATA21 GPIO0_28 BOOTMODE13	O CMOS	1.8V	A Dual-Supply Bus Transceiver is between SoC contact and SOM contact (SN74AVCH4T245RSVR)

Table: Size 0 UART Console

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (red = default muxing)	I/O Type	I/O Level	Comments
UART_CON_RX	D22	D14	UART0_RXD	**UART0_RXD** ECAP1_IN_APWM_OUT SPI2_D0 EHRPWM2_A GPIO1_20	I CMOS	1.8V	

UART_CON_TX	D23	E14	UART0_TXD	**UART0_TXD** ECAP2_IN_APWM_OUT SPI2_D1 EHRPWM2_B GPIO1_21	O CMOS	1.8V	

Table: Size 0 Ethernet

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold= default muxing)	I/O Type	I/O Level	Comments
ETH_A_(R)(G)MII_CRS	E16	NC	NC		I CMOS	1.8V/3.3V	
ETH_A_(R)(G)MII_COL	F15	NC	NC		I CMOS	1.8V/3.3V	
ETH_A_(S)(R)(G)MII_TXD0	H15	AE20	RGMII1_TD0	**RGMII1_TD0** RMII1_TXD0 GPIO0_75	O CMOS	1.8V	
ETH_A_(S)(R)(G)MII_TXD1	G15	AD20	RGMII1_TD1	**RGMII1_TD1** RMII1_TXD1 GPIO0_76	O CMOS	1.8V	
ETH_A_(S)(R)(G)MII_TXD2	H16	AE18	RGMII1_TD2	**RGMII1_TD2** PR0_UART0_RXD GPIO0_77	O CMOS	1.8V	

ETH_A_(S)(R)(G)MII_TXD3	G16	AD18	RGMII1_TD3	**RGMII1_TD3** PR0_UART0_TXD GPIO0_78	O CMOS	1.8V	
ETH_A_(R)(G)MII_TX_EN(_ER)	K16	AD19	RGMII1_TX_CTL	**RGMII1_TX_CTL** RMII1_TX_EN GPIO0_73	O CMOS	1.8V	
ETH_A_(R)(G)MII_TX_CLK	J15	AE19	RGMII1_TXC	**RGMII1_TXC** RMII1_CRS_DV GPIO0_74	I/O CMOS	1.8V	
ETH_A_(S)(R)(G)MII_RXD0	K15	AB17	RGMII1_RD0	**RGMII1_RD0** RMII1_RXD0 GPIO0_81	I CMOS	1.8V	
TH_A_(S)(R)(G)MII_RXD1	L15	AC17	RGMII1_RD1	**RGMII1_RD1** RMII1_RXD1 GPIO0_82	I CMOS	1.8V	
ETH_A_(R)(G)MII_RXD2	N15	AB16	RGMII1_RD2	RGMII1_RD2 PR0_UART0_RTSn GPIO0_83	I CMOS	1.8V	
ETH_A_(R)(G)MII_RXD3	P15	AA15	RGMII1_RD3	RGMII1_RD3 GPIO0_84	I CMOS	1.8V	
ETH_A_(R)(G)MII_RX_ER	L16	NC	NC		I CMOS	1.8V/3.3V	

ETH_A_(R)(G)MII_RX_DV(_ER)	M15	AE17	RGMII1_RX_CTL	**RGMII1_RX_CTL** RMII1_RX_ER GPIO0_79	I CMOS	1.8V	
ETH_A_(R)(G)MII_RX_CLK	R15	AD17	RGMII1_RXC	**RGMII1_RXC** RMII1_REF_CLK PR0_UART0_CTSn GPIO0_80	I/O CMOS	1.8V	
ETH_A_SDP	N16	NC	NC		O CMOS	1.8V/3.3V	
ETH_MDIO/ ETH_A_MDIO	T15	AB22	MDIO0_MDIO	**MDIO0_MDIO** GPIO0_85	I/O CMOS	1.8V	
ETH_MDC/ ETH_A_MDC	T16	AD24	MDIO0_MDC	**MDIO0_MDC** GPIO0_86	O CMOS	1.8V/	
ETH_IOPWR	M17				PO	1.8V	

Table: Size 0 GPIO

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold= default muxing)	I/O Type	I/O Level	Comments

GPIO_A_0/ SDIO_B_RST	D17	H21	OSPI0_CSN2	OSPI0_CSN2 SPI1_CS1 OSPI0_RESET_ OUT1 MCASP1_AFSR MCASP1_AXR2 UART5_RXD **GPIO0_13**	I/O CMOS	1.8V	
GPIO_A_1/ ETH_A_RST	E17	J24	OSPI0_DQS	OSPI0_DQS UART5_CTSn **GPIO0_2**	I/O CMOS	1.8V	
GPIO_A_2/ ETH_A_INTR	F17	G25	OSPI0_LBCLKO	OSPI0_LBCLKO UART5_RTSn **GPIO0_1**	I/O CMOS	1.8V	
GPIO_A_3/ USB_A_PD_RS T	G17	E5	MCU_MCAN1_T X	MCU_MCAN1_T X MCU_TIMER_IO 2 MCU_SPI1_CS1 MCU_EXT_REF CLK0 **MCU_GPIO0_1 5**	I/O CMOS	1.8V	
GPIO_A_4/ USB_C_PD_RS T	H17	A8	MCU_I2C0_SCL	MCU_I2C0_SCL **MCU_GPIO0_1 7**	I/O CMOS	1.8V	

GPIO_A_5/ I2S_AB_RST	J17	D10	MCU_I2C0_SDA	MCU_I2C0_SDA **MCU_GPIO0_18**	I/O CMOS	1.8V	
GPIO_A_6/ SPI_A_CS1#	K17	G21	OSPI0_CSN1	**OSPI0_CSN1** GPIO0_12	I/O CMOS	1.8V	
GPIO_A_7/ SPI_B_CS1#	L17	C13	SPI0_CS1	**SPI0_CS1** CP_GEMAC_CPTS0_TS_COMP EHRPWM0_B ECAP0_IN_APWM_OUT GPIO1_16 EHRPWM_TZn_IN5	I/O CMOS	1.8V	
GPIO_B_0/ UART_C_ALT_RTS	D19	A4	WKUP_UART0_RTSN	**WKUP_UART0_RTSN** WKUP_TIMER_IO1 MCU_SPI1_CLK MCU_GPIO0_12	I/O CMOS	1.8V	
GPIO_B_1/ UART_C_ALT_CTS	E19	C6	WKUP_UART0_CTSN	**WKUP_UART0_CTSN** WKUP_TIMER_IO0 MCU_SPI1_CS0 MCU_GPIO0_11	I/O CMOS	1.8V	

GPIO_B_2/ UART_D_RTS	F19	V25	GPMC0_WAIT1	GPMC0_WAIT1 VOUT0_EXTPCLKIN GPMC0_A21 UART6_RXD **GPIO0_38** EQEP2_I	I/O CMOS	1.8V	A voltage[DK1] [FN2] level shifter is between SoC contact and SOM contact (TXS0108ENMER)
GPIO_B_3/ UART_D_CTS	G19	N20	GPMC0_BE1N	GPMC0_BE1N MCASP2_AXR12 PR0_PRU0_GPO13 PR0_PRU0_GPI13 TRC_DATA11 **GPIO0_36**	I/O CMOS	1.8V	A voltage level shifter is between SoC contact and SOM contact (TXS0108ENMER)
GPIO_B_4/ I2C_C_SCL/ I2C_DISPLAY_CLK	H19	B9	WKUP_I2C0_SCL	**WKUP_I2C0_SCL** MCU_GPIO0_19	I/O CMOS	1.8V	
GPIO_B_5/ I2C_C_SDA/ I2C_DISPLAY_DAT	J19	A9	WKUP_I2C0_SDA	**WKUP_I2C0_SDA** MCU_GPIO0_20	I/O CMOS	1.8V	

GPIO_B_6/ LVDS_D_VDD_EN	K19	U24	GPMC0_AD15	GPMC0_AD15 VOUT0_DATA23 UART5_TXD MCASP2_ACLKR PR0_PRU0_GPO3 PR0_PRU0_GPI3 TRC_DATA19 **GPIO0_30** UART2_RTSn BOOTMODE15	I/O CMOS	1.8V	
GPIO_B_7/ LVDS_D_BL_EN	L19	L24	GPMC0_OEN_REN	GPMC0_OEN_REN MCASP1_AXR1 PR0_PRU0_GPO10 PR0_PRU0_GPO10 TRC_DATA8 **GPIO0_33**	I/O CMOS	1.8V	A MOSFET is between SoC contact and SOM contact (SSM3K35CTC); 10K PU on module

Table: Size 0 SDIO

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments

SDIO_A_CMD	E20	A21	MMC1_CMD	**MMC1_CMD** TIMER_IO5 UART3_TXD GPIO1_47	I/O CMOS	1.8V or 3.3V	
SDIO_A_CLK	F21	B22	MMC1_CLK	**MMC1_CLK** TIMER_IO4 UART3_RXD GPIO1_46	O CMOS	1.8V or 3.3V	
SDIO_A_D0	G20	A22	MMC1_DAT0	**MMC1_DAT0** CP_GEMAC_CPTS0_HW2TSPUSH TIMER_IO3 UART2_CTSn ECAP2_IN_APWM_OUT GPIO1_45	I/O CMOS	1.8V or 3.3V	
SDIO_A_D1	G21	B21	MMC1_DAT1	**MMC1_DAT1** CP_GEMAC_CPTS0_HW1TSPUSH TIMER_IO2 UART2_RTSn ECAP1_IN_APWM_OUT GPIO1_44	I/O CMOS	1.8V or 3.3V	

SDIO_A_D2	H20	C21	MMC1_DAT2	**MMC1_DAT2** CP_GEMAC_CPTS0_TS_SYNC TIMER_IO1 UART2_TXD GPIO1_43	I/O CMOS	1.8V or 3.3V	
SDIO_A_D3	H21	D22	MMC1_DAT3	**MMC1_DAT3** CP_GEMAC_CPTS0_TS_COMP TIMER_IO0 UART2_RXD GPIO1_42	I/O CMOS	1.8V or 3.3V	
SDIO_A_CD#	J21	D17	MMC1_SDCD	**MMC1_SDCD** UART6_RXD TIMER_IO6 UART3_RTSn GPIO1_48	I OD CMOS	1.8V or 3.3V	10K PU on module
SDIO_A_WP	D20	C17	MMC1_SDWP	**MMC1_SDWP** UART6_TXD TIMER_IO7 UART3_CTSn GPIO1_49	I OD CMOS	1.8V or 3.3V	10K PU on module

SDIO_A_PWR_EN	D21	T25	GPMC0_AD10	GPMC0_AD10 VOUT0_DATA18 UART3_RXD MCASP2_AXR2 PR0_PRU1_GPO2 PR0_PRU1_GPI2 **GPIO0_25** OBSCLK0 BOOTMODE10	O CMOS	1.8V or 3.3V	A Dual-Supply Bus Transceiver is between SoC contact and SOM contact (SN74AVCH4T245RSVR)
SDIO_A_IOPWR	C20				PO	1.8V or 3.3V	
SDIO_B_CLK	K20	NC	NC		O CMOS	1.8V or 3.3V	
SDIO_B_CMD	K21	NC	NC		I/O CMOS	1.8V or 3.3V	
SDIO_B_D0	L20	NC	NC		I/O CMOS	1.8V or 3.3V	
SDIO_B_D1	L21	NC	NC		I/O CMOS	1.8V or 3.3V	
SDIO_B_D2	M21	NC	NC		I/O CMOS	1.8V or 3.3V	
SDIO_B_D3	N20	NC	NC		I/O CMOS	1.8V or 3.3V	
SDIO_B_D4	N21	NC	NC		I/O CMOS	1.8V or 3.3V	
SDIO_B_D5	P20	NC	NC		I/O CMOS	1.8V or 3.3V	
SDIO_B_D6	P21	NC	NC		I/O CMOS	1.8V or 3.3V	
SDIO_B_D7	R21	NC	NC		I/O CMOS	1.8V or 3.3V	
SDIO_B_CD#	T21	NC	NC		I OD CMOS	1.8V or 3.3V	
SDIO_B_WP	U20	NC	NC		I OD CMOS	1.8V or 3.3V	
SDIO_B_PWR_EN	U21	NC	NC		O CMOS	1.8V or 3.3V	
SDIO_B_IOPWR	T20	NC	NC		PO	1.8V or 3.3V	

Table: Size 0 PWM

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
PWM_0/ DSI_A_E_BL_PWM/ LVDS_A_BL_PWM	E18	C13	SPI0_CS1	SPI0_CS1 CP_GEMAC_CPTS0_TS_COMP **EHRPWM0_B** ECAP0_IN_APWM_OUT GPIO1_16 EHRPWM_TZn_IN5	O CMOS	1.8V	
PWM_1/ RGB_BL_PWM	F18	B18	MCASP0_AXR1	MCASP0_AXR1 SPI2_CS2 ECAP1_IN_APWM_OUT PR0_UART0_RXD **EHRPWM1_A** GPIO1_9 EQEP0_S	O CMOS	1.8V	

PWM_2/ LVDS_D_BL_PWM	G18	E18	MCASP0_AXR0	MCASP0_AXR0 PR0_ECAP0_IN_APWM_OUT AUDIO_EXT_REFCLK0 PR0_UART0_TXD **EHRPWM1_B** GPIO1_10 EQEP0_I	O CMOS	1.8V	
PWM_3/ LVDS_E_BL_PWM	H18	NC	NC		O CMOS	1.8V	
PWM_4/ CAM_B_MCK	J18	NC	NC		O CMOS	1.8V	
PWM_5/ CAM_C_MCK	K18	NC	NC		O CMOS	1.8V	

Table: Size 0 Analog Signals

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
ADC_0	M18	NC	NC		O CMOS	0V – 1.8V	
ADC_1	N18	NC	NC		O CMOS	0V – 1.8V	

Table: Size 0 SPI

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments

SPI_A_SDI_(IO1)	U15	G24	OSPI0_D1	**OSPI0_D1** GPIO0_4	IO CMOS	1.8V	Hardware acceleration only in QSPI operations, normal SPI operations enabled as a software bit-bang driver
SPI_A_SDO_(IO0)	V15	E25	OSPI0_D0	**OSPI0_D0** GPIO0_3	IO CMOS	1.8V	Hardware acceleration only in QSPI operations, normal SPI operations enabled as a software bit-bang driver
SPI_A_/WP_(IO2)	W16	F25	OSPI0_D2	**OSPI0_D2** GPIO0_5	IO CMOS	1.8V	Hardware acceleration only in QSPI operations, normal SPI operations enabled as a software bit-bang driver
SPI_A_/HOLD_(IO3)	W15	F24	OSPI0_D3	O**S**PI0_D3 GPIO0_6	IO CMOS	1.8V	Hardware acceleration only in QSPI operations, normal SPI operations enabled as a software bit-bang driver
SPI_A_CS0#	Y15	F23	OSPI0_CSN0	**OSPI0_CSN0** GPIO0_11	O CMOS	1.8V	Hardware acceleration only in QSPI operations, normal SPI operations enabled as a software bit-bang driver
SPI_A_CS1#/ GPIO_A_6	K14	G21	OSPI0_CSN1	**OSPI0_CSN1** GPIO0_12	O CMOS	1.8V	Hardware acceleration only in QSPI operations, normal SPI operations enabled as a software bit-bang driver

SPI_A_SCK	U16	H24	OSPI0_CLK	**OSPI0_CLK** GPIO0_0	O CMOS	1.8V	Hardware acceleration only in QSPI operations, normal SPI operations enabled as a software bit-bang driver
SPI_B_SDI/ SPI_B_MCU_SDI	Y22	B13	SPI0_D0	**SPI0_D0** CP_GEMAC_CPTS0_HW1TSPUSH EHRPWM1_B GPIO1_18	I CMOS	1.8V	
SPI_B_SDO/ SPI_B_MCU_SDO	Y23	B14	SPI0_D1	**SPI0_D1** CP_GEMAC_CPTS0_HW2TSPUSH EHRPWM_TZn_IN0 GPIO1_19	O CMOS	1.8V	
SPI_B_CS0#/ SPI_B_MCU_CS0#	AA23	A13	SPI0_CS0	**SPI0_CS0** EHRPWM0_A PR0_ECAP0_SYNC_IN GPIO1_15	O CMOS	1.8V	

SPI_B_CS1#/ GPIO_A_7	L17	C13	SPI0_CS1	**SPI0_CS1** CP_GEMAC_CPTS0_TS_COMP EHRPWM0_B ECAP0_IN_APWM_OUT GPIO1_16 EHRPWM_TZn_IN5	O CMOS	1.8V	
SPI_B_SCK/ SPI_B_MCU_SCK	Y21	A14	SPI0_CLK	**SPI0_CLK** CP_GEMAC_CPTS0_TS_SYNC EHRPWM1_A GPIO1_17	O CMOS	1.8V	

Table: Size 0 I2S

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
I2S_A_DATA_IN	V21	L23	GPMC0_ADVN_ALE	GPMC0_ADVN_ALE **MCASP1_AXR2** PR0_PRU0_GPO9 PR0_PRU0_GPI9 TRC_DATA7 GPIO0_32	I/O CMOS	1.8V	A MOSFET is between SoC contact and SOM contact (SSM3K35CTC); 10K PU on module

I2S_A_DATA_OUT	W21	L25	GPMC0_WEN	GPMC0_WEN **MCASP1_AXR0** PR0_PRU0_GPO11 PR0_PRU0_GPI11 TRC_DATA9 GPIO0_34	I/O CMOS	1.8V	A MOSFET is between SoC contact and SOM contact (SSM3K35CTC); 10K PU on module
I2S_B_DATA_IN	V19	NC	NC		I/O CMOS	1.8V	
I2S_B_DATA_OUT	W19	NC	NC		I/O CMOS	1.8V	
I2S_MCLK/ I2S_AB_MCLK	V18	D20	MCASP0_AFSX	MCASP0_AFSX SPI2_CS3 **AUDIO_EXT_REFCLK1** GPIO1_12 EQEP1_B	I/O CMOS	1.8V	
I2S_A_LRCLK	W18	U23	GPMC0_WAIT0	GPMC0_WAIT0 **MCASP1_AFSX** PR0_PRU0_GPO14 PR0_PRU0_GPI14 TRC_DATA12 GPIO0_37	I/O CMOS	1.8V	A voltage level shifter is between SoC contact and SOM contact (TXS0108ENMER)

I2S_A_BITCLK	W20	M24	GPMC0_BE0N_CLE	GPMC0_BE0N_CLE **MCASP1_ACLKX** PR0_PRU0_GPO12 PR0_PRU0_GPI12 TRC_DATA10 GPIO0_35	I/O CMOS	1.8V	A MOSFET is between SoC contact and SOM contact (SSM3K35CTC); 10K PU on module

Table: Size 0 CAN

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
CAN_A_TX	AC17	C15	MCAN0_TX	**MCAN0_TX** UART5_RXD TIMER_IO2 SYNC2_OUT UART1_DTRn EQEP2_I PR0_UART0_RXD GPIO1_24 MCASP2_AXR0 EHRPWM_TZn_IN3	O CMOS	1.8V	

CAN_A_RX	AB17	E15	MCAN0_RX	**MCAN0_RX** UART5_TXD TIMER_IO3 SYNC3_OUT UART1_RIn EQEP2_S PR0_UART0_TXD GPIO1_25 MCASP2_AXR1 EHRPWM_TZn_IN4	I CMOS	1.8V	
CAN_B_TX/ CAN_B_MCU_TX	AC19	D6	MCU_MCAN0_TX	**MCU_MCAN0_TX** WKUP_TIMER_IO0 MCU_SPI0_CS3 MCU_GPIO0_13	O CMOS	1.8V	
CAN_B_RX/ CAN_B_MCU_RX	AB19	B3	MCU_MCAN0_RX	**MCU_MCAN0_RX** MCU_TIMER_IO0 MCU_SPI1_CS3 MCU_GPIO0_14	I CMOS	1.8V	

Table: Size 0 USB

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments

USB_A_D_N	AB13	AE11	USB0_DM	USB0_DM	I/O USB	USB	
USB_A_D_P	AC14	AD11	USB0_DP	**USB0_DP**	I/O USB	USB	
USB_A_ID	AB14	A18	EXT_REFCLK1	EXT_REFCLK1 SYNC1_OUT SPI2_CS3 SYSCLKOUT0 TIMER_IO4 CLKOUT0 CP_GEMAC_CPTS0_RFT_CLK **GPIO1_30** ECAP0_IN_APWM_OUT	I OD CMOS	1.8V	
USB_A_OC#	AC15	NC	NC		I OD CMOS	1.8V	
USB_A_VBUS	AB16	AC11	USB0_VBUS	**USB0_VBUS**	I USB VBUS 5V	USB VBUS 5V	
USB_A_EN	AC16	C20	USB0_DRVVBUS	USB0_DRVVBUS **GPIO1_50**	O CMOS	1.8V	
USB_B_D_N	AB23	AD10	USB1_DM	**USB1_DM**	I/O USB	USB	
USB_B_D_P	AC22	AE9	USB1_DP	**USB1_DP**	I/O USB	USB	

USB_B_ID	AB22	N24	GPMC0_AD2	GPMC0_AD2 PR0_PRU1_GPO10 PR0_PRU1_GPI10 MCASP2_AXR6 PR0_PRU0_GPO2 PR0_PRU0_GPI2 TRC_DATA0 **GPIO0_17** BOOTMODE02	I CMOS	1.8V	A Dual-Supply Bus Transceiver is between SoC contact and SOM contact (SN74AVCH4T245RSVR)
USB_B_OC#	AC21	NC	NC		I OD CMOS	1.8V	
USB_B_VBUS	AB20	AB10	USB1_VBUS	**USB1_VBUS**	I USB VBUS 5V	USB VBUS 5V	
USB_B_EN	AC20	F18	USB1_DRVVBUS	USB1_DRVVBUS **GPIO1_51**	O CMOS	1.8V	USB1_DRVVBUS

Table: Size 0 I2C

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments

I2C_A_SCL	AA15	B17	I2C1_SCL	**I2C1_SCL** UART1_RXD TIMER_IO0 SPI2_CS1 EHRPWM0_SYNCI GPIO1_28 EHRPWM2_A MMC2_SDCD	I/O OD CMOS	1.8V	2.2K PU on module
I2C_A_SDA	AA16	A17	I2C1_SDA	**I2C1_SDA** UART1_TXD TIMER_IO1 SPI2_CLK EHRPWM0_SYNCO GPIO1_29 EHRPWM2_B MMC2_SDWP	I/O OD CMOS	1.8V	2.2K PU on module

I2C_B_SCL/ I2C_B_MCU_SCL	AA20	K22	GPMC0_CSn2	GPMC0_CSn2 **I2C2_SCL** MCASP1_AXR4 UART4_RXD PR0_PRU0_GPO19 PR0_PRU0_GPI19 TRC_DATA17 GPIO0_43 MCASP1_AFSR	I/O OD CMOS	1.8V	A voltage level shifter is between SoC contact and SOM contact (TXS0108ENMER); 2.2K PU on module
I2C_B_SDA/ I2C_B_MCU_SDA	AA21	K24	GPMC0_CSn3	GPMC0_CSn3 **I2C2_SDA** GPMC0_A20 UART4_TXD MCASP1_AXR5 TRC_DATA18 GPIO0_44 MCASP1_ACLKR	I/O OD CMOS	1.8V	A voltage level shifter is between SoC contact and SOM contact (TXS0108ENMER); 2.2K PU on module

Table: Size 0 Communication Area - Fieldbus Mode

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
COM_AREA_01	A15	NC	NC		I MDI		
COM_AREA_02	A16	NC	NC		O OD CMOS	3.3V	
COM_AREA_03	A17	NC	NC		O MDI		

COM_AREA_04	A18	NC	NC		O CMOS	3.3V	
COM_AREA_05	A19	NC	NC		I MDI		
COM_AREA_06	A20	NC	NC		O OD CMOS	3.3V	
COM_AREA_07	A21	NC	NC		O MDI		
COM_AREA_08	B15	NC	NC		I MDI		
COM_AREA_09	B16	NC	NC		O OD CMOS	3.3V	
COM_AREA_10	B17	NC	NC		O MDI		
COM_AREA_11	B18	NC	NC		O CMOS	3.3V	
COM_AREA_12	B19	NC	NC		I MDI		
COM_AREA_13	B20	NC	NC		O OD CMOS	3.3V	
COM_AREA_14	B21	NC	NC		O MDI		
COM_AREA_15	C15	NC	NC		Analog	0 to 3.3V	
COM_AREA_16	C17	NC	NC		Analog	0 to 3.3V	
COM_AREA_17	C19	NC	NC		Analog	0 to 3.3V	
COM_AREA_18	C21	NC	NC		Analog	0 to 3.3V	

Table: Size 0 Reserved Contacts

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
RESERVED	AA13	NC	NC				

Table: Size 0 Vendor-Defined Contacts

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
Vendor Defined/GPIO_V0_0 / CAM_B_PWR	B22	NC	NC				

Vendor Defined/GPIO_V0_1 / CAM_B_RST#	C16	NC	NC				
Vendor Defined/GPIO_V0_2 / CAM_D_MCK	P16	NC	NC				

Table: Size S Power + Ground

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
VCC_5_TEST	Y3		VDD_1V1		PO	1.1V	
VCC_6_TEST	C5		VDDA_0V85		PO	0.85V	
VCC_IN_5V	Y8, Y9, Y10, Y11		VSYS_5V		P	5V	
GND	A4, A7, A10, B2, B5, B8, B9, C11, D1, D5, D8, E2, H2, H4, L2, L4, P2, P4, R1, U2, U4, V1, W3, Y2, AA1, AA4, AA7, AA8, AA10, AA11, AB3, AB6, AB9, AC4, AC7, AC10		GND		P	3.3V	
PWR_BTN#	AA9		EN/PB/VSENSE		I OD CMOS	1.8 to 5V	

Table: Size S Ethernet

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
ETH_B_(R)(G)MII_CRS	D2	NC	NC		I CMOS	1.8V/3.3V	
ETH_B_(R)(G)MII_COL	E1	NC	NC		I CMOS	1.8V/3.3V	

ETH_B_(S)(R)(G)MII_TXD0	G1	Y18	RGMII2_TD0	**RGMII2_TD0** RMII2_TXD0 MCASP2_AXR6 PR0_PRU1_GPO2 PR0_PRU1_GPI2 GPIO0_89	O CMOS	1.8V/3.3V	
ETH_B_(S)(R)(G)MII_TXD1	F1	AA18	RGMII2_TD1	**RGMII2_TD1** RMII2_TXD1 MCASP2_ACLKR PR0_PRU1_GPO3 PR0_PRU1_GPI3 MCASP2_AXR8 GPIO0_90	O CMOS	1.8V/3.3V	
ETH_B_(S)(R)(G)MII_TXD2	G2	AD21	RGMII2_TD2	**RGMII2_TD2** MCASP2_AFSX PR0_PRU1_GPO4 PR0_PRU1_GPI4 PR0_ECAP0_IN_APWM_OUT GPIO0_91 EQEP2_I	O CMOS	1.8V/3.3V	

ETH_B_(S)(R)(G)MII_TXD3	F2	AC20	RGMII2_TD3	**RGMII2_TD3** MCASP2_ACLKX PR0_PRU1_GPO16 PR0_PRU1_GPI16 PR0_ECAP0_SYNC_OUT PR0_UART0_CTSn GPIO1_0 EQEP2_S	O CMOS	1.8V/3.3V	
ETH_B_(R)(G)MII_TX_EN(_ER)	J2	AA19	RGMII2_TX_CTL	**RGMII2_TX_CTL** RMII2_TX_EN MCASP2_AXR4 PR0_PRU1_GPO0 PR0_PRU1_GPI0 GPIO0_87	O CMOS	1.8V/3.3V	
ETH_B_(R)(G)MII_TX_CLK	H1	AE21	RGMII2_TXC	**RGMII2_TXC** RMII2_CRS_DV MCASP2_AXR5 PR0_PRU1_GPO1 PR0_PRU1_GPI1 GPIO0_88	I/O CMOS	1.8V/3.3V	

ETH_B_(S)(R)(G)MII_RXD0	J1	AE23	RGMII2_RD0	**RGMII2_RD0** RMII2_RXD0 MCASP2_AXR2 PR0_PRU0_GPO2 PR0_PRU0_GPI2 PR0_UART0_RTSn GPIO1_3	I CMOS	1.8V/3.3V	
ETH_B_(S)(R)(G)MII_RXD1	K1	AB20	RGMII2_RD1	**RGMII2_RD1** RMII2_RXD1 MCASP2_AFSR PR0_PRU0_GPO3 PR0_PRU0_GPI3 MCASP2_AXR7 GPIO1_4	I CMOS	1.8V/3.3V	
ETH_B_(R)(G)MII_RXD2	M1	AC21	RGMII2_RD2	**RGMII2_RD2** MCASP2_AXR0 PR0_PRU0_GPO4 PR0_PRU0_GPI4 PR0_UART0_RXD GPIO1_5 EQEP2_A	I CMOS	1.8V/3.3V	

ETH_B_(R)(G)MII_RXD3	N1	AE22	RGMII2_RD3	**RGMII2_RD3** AUDIO_EXT_REFCLK0 PR0_PRU0_GPO16 PR0_PRU0_GPI16 PR0_UART0_TXD GPIO1_6 EQEP2_B	I CMOS	1.8V/3.3V	
ETH_B_(R)(G)MII_RX_ER	K2	NC	NC		I CMOS	1.8V/3.3V	
ETH_B_(R)(G)MII_RX_DV(_ER)	L1	AD22	RGMII2_RX_CTL	**RGMII2_RX_CTL** RMII2_RX_ER MCASP2_AXR3 PR0_PRU0_GPO0 PR0_PRU0_GPI0 GPIO1_1	I CMOS	1.8V/3.3V	

ETH_B_(R)(G)MII_RX_CLK	P1	AD23	RGMII2_RXC	**RGMII2_RXC** RMII2_REF_CLK MCASP2_AXR1 PR0_PRU0_GPO1 PR0_PRU0_GPI1 PR0_ECAP0_SYNC_IN GPIO1_2	I/O CMOS	1.8V/3.3V	
ETH_B_SDP	M2	NC	NC		O CMOS	1.8V/3.3V	
ETH_B_MDIO	C7	AB22	MDIO0_MDIO	**MDIO0_MDIO** GPIO0_85	I/O CMOS	1.8V/3.3V	
ETH_B_MDC	C6	AD24	MDIO0_MDC	**MDIO0_MDC** GPIO0_86	O CMOS	1.8V/3.3V	

Table: Size S GPIO

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments

GPIO_C_0/ ETH_B_RST	D3	K25	GPMC0_WPN	GPMC0_WPN AUDIO_EXT_REFCLK1 GPMC0_A22 UART6_TXD PR0_PRU0_GPO15 PR0_PRU0_GPI15 TRC_DATA13 **GPIO0_39**	I/O CMOS	1.8V	A voltage level shifter is between SoC contact and SOM contact (TXS0108ENMER)
GPIO_C_1/ ETH_B_INTR	D4	M21	GPMC0_CSN0	GPMC0_CSN0 MCASP2_AXR14 PR0_PRU0_GPO17 PR0_PRU0_GPI17 TRC_DATA15 **GPIO0_41**	I/O CMOS	1.8V	A voltage level shifter is between SoC contact and SOM contact (TXS0108ENMER)
GPIO_C_2/CAM_B_PWR/RGB_VDD_EN/LVDS_E_VDD_EN	E3	E24	OSPI0_CSN3	OSPI0_CSN3 OSPI0_RESET_OUT0 OSPI0_ECC_FAIL MCASP1_ACLKR MCASP1_AXR3 UART5_TXD **GPIO0_14**	I/O CMOS	1.8V	

GPIO_C_3/CAM_B_RST#/RGB_BL_EN/LVDS_E_BL_EN	E4	A23	MMC2_SDCD	MMC2_SDCD MCASP1_ACLKX UART4_RXD **GPIO0_71**	I/O CMOS	1.8V	
DISP_VDD_EN/ GPIO_C_4 / DSI_A_VDD_EN /LVDS_A_VDD_EN	F3	NC	NC		I/O CMOS	1.8V	
DISP_BL_EN/GPIO_C_5 / DSI_A_BL_EN/LVDS_A_BL_EN	F4	NC	NC		I/O CMOS	1.8V	
GPIO_C_6/ CAM_A_PWR	G3	B23	MMC2_SDWP	MMC2_SDWP MCASP1_AFSX UART4_TXD **GPIO0_72**	I/O CMOS	1.8V	
GPIO_C_7/ CAM_A_RST#	G4	U25	GPMC0_AD14	GPMC0_AD14 VOUT0_DATA22 UART5_RXD MCASP2_AFSR PR0_PRU0_GPO2 PR0_PRU0_GPI2 TRC_DATA20 **GPIO0_29** UART2_CTSn BOOTMODE14	I/O CMOS	1.8V	A MOSFET is between SoC contact and SOM contact (SSM3K35CTC); 10K PU on module

Table: Size S MIPI DSI

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
DSI_DATA0_N/LVDS_A_LANE0_N / DSI_A_DATA0_N/LVDS_A_LANE0_N	AB11	NC	NC		O LVDS D-PHY		
DSI_DATA0_P/LVDS_A_LANE0_P / DSI_A_DATA0_P/LVDS_A_LANE0_P	AB10	NC	NC		O LVDS D-PHY		
DSI_DATA1_N/LVDS_A_LANE1_N / DSI_A_DATA1_N/LVDS_A_LANE1_N	AC9	NC	NC		O LVDS D-PHY		
DSI_DATA1_P/LVDS_A_LANE1_P / DSI_A_DATA1_P/LVDS_A_LANE1_P	AC8	NC	NC		O LVDS D-PHY		
DSI_DATA2_N/LVDS_A_LANE2_N / DSI_A_DATA2_N/LVDS_A_LANE2_N	AC6	NC	NC		O LVDS D-PHY		
DSI_DATA2_P/LVDS_A_LANE2_P / DSI_A_DATA2_P/LVDS_A_LANE2_P	AC5	NC	NC		O LVDS D-PHY		
DSI_DATA3_N/LVDS_A_LANE3_N / DSI_A_DATA3_N/LVDS_A_LANE3_N	AB5	NC	NC		O LVDS D-PHY		

DSI_DATA3_P/LVDS_A_LANE3_P / DSI_A_DATA3_P/LVDS_A_LANE3_P	AB4	NC	NC		O LVDS D-PHY		
DSI_CLOCK_N/LVDS_A_CLK_N / DSI_A_CLOCK_N/LVDS_A_CLK_N	AB8	NC	NC		O LVDS D-PHY		
DSI_CLOCK_P/LVDS_A_CLK_P / DSI_A_CLOCK_P/LVDS_A_CLK_P	AB7	NC	NC		O LVDS D-PHY		
DSI_TE / DSI_A_TE	AA3	NC	NC		I CMOS	1.8V	
DISP_VDD_EN/GPIO_C_4 / DSI_A_VDD_EN/LVDS_A_VDD_EN	F3	NC	NC		O CMOS	1.8V	
DISP_BL_EN/GPIO_C_5 / DSI_A_BL_EN/LVDS_A_BL_EN	F4	NC	NC		O CMOS	1.8V	
PWM_0/ DSI_A_E_BL_PWM/ LVDS_A_BL_PWM	E18	C13	SPI0_CS1	SPI0_CS1 CP_GEMAC_CPTS0_TS_COMP **EHRPWM0_B** ECAP0_IN_APWM_OUT GPIO1_16 EHRPWM_TZn_IN5	O CMOS	1.8V	

Table: Size S MIPI CSI

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
CSI_A_DATA0_N	C1	AB14	CSI0_RXN0	**CSI0_RXN0**	I LVDS D-PHY/ I LVDS M-PHY		
CSI_A_DATA0_P	B1	AC15	CSI0_RXP0	**CSI0_RXP0**	I LVDS D-PHY/ I LVDS M-PHY		
CSI_A_DATA1_N	A2	AD14	CSI0_RXN1	**CSI0_RXN1**	I LVDS D-PHY/ I LVDS M-PHY		
CSI_A_DATA1_P	A3	AE14	CSI0_RXP1	**CSI0_RXP1**	I LVDS D-PHY/ I LVDS M-PHY		
CSI_A_DATA2_N	A5	AD13	CSI0_RXN2	**CSI0_RXN2**	I LVDS D-PHY/ I LVDS M-PHY		
CSI_A_DATA2_P	A6	AE13	CSI0_RXP2	**CSI0_RXP2**	I LVDS D-PHY/ I LVDS M-PHY		
CSI_A_DATA3_N	B6	AB12	CSI0_RXN3	**CSI0_RXN3**	I LVDS D-PHY/ I LVDS M-PHY		
CSI_A_DATA3_P	B7	AC13	CSI0_RXP3	**CSI0_RXP3**	I LVDS D-PHY/ I LVDS M-PHY		
CSI_A_CLOCK_N	B3	AD15	CSI0_RXCLKN	**CSI0_RXCLKN**	I LVDS D-PHY		
CSI_A_CLOCK_P	B4	AE15	CSI0_RXCLKP	**CSI0_RXCLKP**	I LVDS D-PHY		
CAM_MCK/ CAM_A_MCK	C2	B20	MCASP0_ACLKX	MCASP0_ACLKX SPI2_CS1 **ECAP2_IN_APWM_OUT** GPIO1_11 EQEP1_A	O CMOS	1.8V	

CAM_A_SDA / CSI_A_TX_N	C3	B15	UART0_RTSN	UART0_RTSN SPI0_CS3 **I2C3_SDA** UART2_TXD TIMER_IO7 AUDIO_EXT_REFCLK1 PR0_ECAP0_IN_APWM_OUT GPIO1_23 MCASP2_ACLKX MMC2_SDWP	I/O OD CMOS / O LVDS M-PHY	1.8V	2.2K PU on module
CAM_A_SCL / CSI_A_TX_P	C4	A15	UART0_CTSN	UART0_CTSN SPI0_CS2 **I2C3_SCL** UART2_RXD TIMER_IO6 AUDIO_EXT_REFCLK0 PR0_ECAP0_SYNC_OUT GPIO1_22 MCASP2_AFSX MMC2_SDCD	I/O OD CMOS / O LVDS M-PHY	1.8V	2.2K PU on module

GPIO_C_6/ CAM_A_PWR	G3	B23	MMC2_SDWP	MMC2_SDWP MCASP1_AFSX UART4_TXD **GPIO0_72**	I/O CMOS	1.8V	
GPIO_C_7/ CAM_A_RST#	G4	U25	GPMC0_AD14	GPMC0_AD14 VOUT0_DATA22 UART5_RXD MCASP2_AFSR PR0_PRU0_GPO2 PR0_PRU0_GPI2 TRC_DATA20 **GPIO0_29** UART2_CTSn BOOTMODE14	I/O CMOS	1.8V	A MOSFET is between SoC contact and SOM contact (SSM3K35CTC); 10K PU on module

Table: Size S Parallel RGB Display

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments

RGB_R0	Y7	AB25	VOUT0_DATA12	**VOUT0_DATA12** GPMC0_A12 PR0_PRU1_GPO11 PR0_PRU1_GPI11 UART5_RTSn PR0_PRU0_GPO2 PR0_PRU0_GPI2 GPIO0_57	O CMOS	3.3V	
RGB_R1	AA6	AA24	VOUT0_DATA13	**VOUT0_DATA13** GPMC0_A13 PR0_PRU1_GPO12 PR0_PRU1_GPI12 UART5_CTSn PR0_PRU0_GPO3 PR0_PRU0_GPI3 GPIO0_58	O CMOS	3.3V	

RGB_R2	Y6	Y22	VOUT0_DATA14	**VOUT0_DATA14** GPMC0_A14 PR0_PRU1_GPO13 PR0_PRU1_GPI13 UART4_RTSn PR0_PRU0_GPO4 PR0_PRU0_GPI4 GPIO0_59	O CMOS	3.3V	
RGB_R3	AA5	AA21	VOUT0_DATA15	**VOUT0_DATA15** GPMC0_A15 PR0_PRU1_GPO14 PR0_PRU1_GPI14 UART4_CTSn PR0_PRU0_GPO5 PR0_PRU0_GPI5 GPIO0_60	O CMOS	3.3V	

RGB_R4	Y5	R24	GPMC0_AD8	GPMC0_AD8 **VOUT0_DATA16** UART2_RXD MCASP2_AXR0 PR0_PRU1_GPO0 PR0_PRU1_GPI0 GPIO0_23 BOOTMODE08	O CMOS	3.3V	A Dual-Supply Bus Transceiver is between SoC contact and SOM contact (SN74AVCH4T245RSVR)
RGB_R5	Y4	R25	GPMC0_AD9	GPMC0_AD9 **VOUT0_DATA17** UART2_TXD MCASP2_AXR1 PR0_PRU1_GPO1 PR0_PRU1_GPI1 GPIO0_24 BOOTMODE09	O CMOS	3.3V	A Dual-Supply Bus Transceiver is between SoC contact and SOM contact (SN74AVCH4T245RSVR)

RGB_G0	W4	Y23	VOUT0_DATA6	**VOUT0_DATA6** GPMC0_A6 PR0_PRU1_GPO6 PR0_PRU1_GPI6 UART5_RXD PR0_PRU0_GPO14 PR0_PRU0_GPI14 GPIO0_51	O CMOS	3.3V	
RGB_G1	V3	AA25	VOUT0_DATA7	**VOUT0_DATA7** GPMC0_A7 PR0_PRU1_GPO7 PR0_PRU1_GPI7 UART5_TXD PR0_PRU0_GPO15 PR0_PRU0_GPI15 GPIO0_52	O CMOS	3.3V	

RGB_G2	V4	V21	VOUT0_DATA8	**VOUT0_DATA8** GPMC0_A8 PR0_PRU1_GPO16 PR0_PRU1_GPI16 UART6_RXD PR0_PRU0_GPO17 PR0_PRU0_GPI17 GPIO0_53	O CMOS	3.3V	
RGB_G3	U3	W21	VOUT0_DATA9	**VOUT0_DATA9** GPMC0_A9 PR0_PRU1_GPO8 PR0_PRU1_GPI8 UART6_TXD PR0_PRU0_GPO16 PR0_PRU0_GPI16 GPIO0_54	O CMOS	3.3V	

RGB_G4	T3	V20	VOUT0_DATA10	**VOUT0_DATA10** GPMC0_A10 PR0_PRU1_GPO9 PR0_PRU1_GPI9 UART6_RTSn PR0_PRU0_GPO0 PR0_PRU0_GPI0 GPIO0_55	O CMOS	3.3V	
RGB_G5	T4	AA23	VOUT0_DATA11	**VOUT0_DATA11** GPMC0_A11 PR0_PRU1_GPO10 PR0_PRU1_GPI10 UART6_CTSn PR0_PRU0_GPO1 PR0_PRU0_GPI1 GPIO0_56	O CMOS	3.3V	

RGB_B0	R4	U22	VOUT0_DATA0	**VOUT0_DATA12** GPMC0_A12 PR0_PRU1_GPO11 PR0_PRU1_GPI11 UART5_RTSn PR0_PRU0_GPO2 PR0_PRU0_GPI2 GPIO0_57	O CMOS	3.3V	
RGB_B1	R3	V24	VOUT0_DATA1	**VOUT0_DATA1** GPMC0_A1 PR0_PRU1_GPO1 PR0_PRU1_GPI1 UART2_TXD PR0_PRU0_GPO9 PR0_PRU0_GPI9 GPIO0_46	O CMOS	3.3V	

RGB_B2	P3	W25	VOUT0_DATA2	**VOUT0_DATA2** GPMC0_A2 PR0_PRU1_GPO2 PR0_PRU1_GPI2 UART3_RXD PR0_PRU0_GPO10 PR0_PRU0_GPI10 GPIO0_47	O CMOS	3.3V	
RGB_B3	N3	W24	VOUT0_DATA3	**VOUT0_DATA3** GPMC0_A3 PR0_PRU1_GPO3 PR0_PRU1_GPI3 UART3_TXD PR0_PRU0_GPO11 PR0_PRU0_GPI11 GPIO0_48	O CMOS	3.3V	

RGB_B4	N4	Y25	VOUT0_DATA4	**VOUT0_DATA4** GPMC0_A4 PR0_PRU1_GPO4 PR0_PRU1_GPI4 UART4_RXD PR0_PRU0_GPO12 PR0_PRU0_GPI12 GPIO0_49	O CMOS	3.3V	
RGB_B5	M3	Y23	VOUT0_DATA5	**VOUT0_DATA5** GPMC0_A5 PR0_PRU1_GPO5 PR0_PRU1_GPI5 UART4_TXD PR0_PRU0_GPO13 PR0_PRU0_GPI13 GPIO0_50	O CMOS	3.3V	

RGB_(PIXEL)CLK	M4	AC24	VOUT0_PCLK	**VOUT0_PCLK** GPMC0_A19 PR0_PRU1_GPO19 PR0_PRU1_GPI19 UART2_CTSn PR0_PRU0_GPO19 PR0_PRU0_GPI19 GPIO0_64 PR0_ECAP0_IN_APWM_OUT	O CMOS	3.3V	
RGB_VSYNC	L3	AC25	VOUT0_VSYNC	**VOUT0_VSYNC** GPMC0_A18 PR0_PRU1_GPO18 PR0_PRU1_GPI18 UART2_RTSn PR0_PRU0_GPO18 PR0_PRU0_GPI18 GPIO0_63	O CMOS	3.3V	

RGB_HSYNC	K3	AB24	VOUT0_HSYNC	**VOUT0_HSYNC** GPMC0_A16 PR0_PRU1_GPO15 PR0_PRU1_GPI15 UART3_RTSn PR0_PRU0_GPO6 PR0_PRU0_GPI6 GPIO0_61	O CMOS	3.3V	
RGB_DISP	K4	R21	GPMC0_AD11	GPMC0_AD11 VOUT0_DATA19 UART3_TXD MCASP2_AXR3 PR0_PRU1_GPO3 PR0_PRU1_GPI3 TRC_DATA23 **GPIO0_26** BOOTMODE11	O CMOS	3.3V	A Dual-Supply Bus Transceiver is between SoC contact and SOM contact (SN74AVCH4T245RSVR)

RGB_DE	J4	Y20	VOUT0_DE	**VOUT0_DE** GPMC0_A17 PR0_PRU1_GPO17 PR0_PRU1_GPI17 UART3_CTSn PR0_PRU0_GPO7 PR0_PRU0_GPI7 GPIO0_62	O CMOS	3.3V	
RGB_RESET#	J3	P24	GPMC0_AD4	GPMC0_AD4 PR0_PRU1_GPO12 PR0_PRU1_GPI12 MCASP2_AXR8 PR0_PRU0_GPO4 PR0_PRU0_GPI4 TRC_DATA2 **GPIO0_19** BOOTMODE04	O CMOS	3.3V	A Dual-Supply Bus Transceiver is between SoC contact and SOM contact (SN74AVCH4T245RSVR)

RGB_CS#	H3	N25	GPMC0_AD3	GPMC0_AD3 PR0_PRU1_GPO11 PR0_PRU1_GPI11 MCASP2_AXR7 PR0_PRU0_GPO3 PR0_PRU0_GPI3 TRC_DATA1 **GPIO0_18** BOOTMODE03	O CMOS	3.3V	A Dual-Supply Bus Transceiver is between SoC contact and SOM contact (SN74AVCH4T245RSVR)
GPIO_C_2/CAM_B_PWR/RGB_VDD_EN/LVDS_E_VDD_EN	E3	E24	OSPI0_CSN3	OSPI0_CSN3 OSPI0_RESET_OUT0 OSPI0_ECC_FAIL MCASP1_ACLKR MCASP1_AXR3 UART5_TXD **GPIO0_14**	I/O CMOS	1.8V	
GPIO_C_3/CAM_B_RST#/RGB_BL_EN/LVDS_E_BL_EN	E4	A23	MMC2_SDCD	MMC2_SDCD MCASP1_ACLKX UART4_RXD **GPIO0_71**	I/O CMOS	1.8V	

PWM_1/ RGB_BL_PWM	F18	B18	MCASP0_AXR1	MCASP0_AXR1 SPI2_CS2 ECAP1_IN_APWM_OUT PR0_UART0_RXD **EHRPWM1_A** GPIO1_9 EQEP0_S	O CMOS	1.8V	PWM_1/ RGB_BL_PWM

Table: Size S USB

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
USB_C_D_N	D11	NC	NC		I/O USB	USB	
USB_C_D_P	D10	NC	NC		I/O USB	USB	
USB_C_ID	D9	NC	NC		I OD CMOS	1.8V	
USB_C_OC#	C8	NC	NC		I OD CMOS	1.8V	
USB_C_VBUS	C9	NC	NC		I USB VBUS 5V	USB VBS 5V	
USB_C_EN	C10	NC	NC		O CMOS	1.8V	
USB_C_SSTX_N	A9	NC	NC		O USB SS	USB SS	
USB_C_SSTX_P	A8	NC	NC		O USB SS	USB SS	
USB_C_SSRX_N	B11	NC	NC		I USB SS	USB SS	
USB_C_SSRX_P	B10	NC	NC		I USB SS	USB SS	

Table: Size S PCIe

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold= default muxing)	I/O Type	I/O Level	Comments
PCIe_A_HSI0_P	AB1	NC	NC		I LVDS PCIE		
PCIe_A_HSI0_N	AB2	NC	NC		I LVDS PCIE		
PCIe_A_HSO0_P	AC2	NC	NC		O LVDS PCIE		
PCIe_A_HSO0_N	AC3	NC	NC		O LVDS PCIE		
PCIe_CLKREQ#	W2	NC	NC		I OD CMOS	1.8V	
PCIe_A_PERST#	V2	NC	NC		O CMOS	1.8V	
PCIe_REFCLK_P	W1	NC	NC		O LVDS PCIE		
PCIe_REFCLK_N	Y1	NC	NC		O LVDS PCIE		
PCIe_WAKE#	T2	NC	NC		I OD CMOS	1.8V	
PCIe_SMDAT	U1	NC	NC		I/O OD CMOS	1.8V	
PCIe_SMCLK	T1	NC	NC		O OD CMOS	1.8V	
PCIe_SM_ALERT#	R2	NC	NC		I OD CMOS	1.8V	

Table: Size S Reserved Contacts

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
RESERVED/UART_F_WKUP_RTS	N2	NC	NC				
RESERVED/LVDS_E_I2C_CLK	AA2	NC	NC				

Table: Size S Vendor Defined Contacts

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
VENDOR DEFINED/UART_F_WKUP_RX	D6	NC	NC				
VENDOR DEFINED/UART_F_WKUP_TX	D7	NC	NC				

Table: Size M Power + Ground

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
VCC_7_TEST	AA33		VDD_2V5		PO	2.5V	
VCC_8_TEST	B29		VDDA_1V8		PO	1.8V	
VCC_IN_5V	Y25, Y26, Y27, Y28		VSYS_5V		P	5V	
GND	A26, A29, A32, B27, B28, B30, B33, C25, C32, C35, D28, D34, F33, F35, G34, H32, J33, J35, K34, M35, N34, T34, W34, AA25, AA26, AA27, AA28, AA32, AB28, AB31, AB34, AC27, AC30, AC33, K32, M32, R32				P		

Table 34: Size M Ethernet

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments

ETH_C_(R)(G)MII_CRS/CSI_C_DATA0_P	AC34	NC	NC		I CMOS	1.8V/2.5V/3.3V	
ETH_C_(R)(G)MII_COL/CSI_C_DATA0_N	AB35	NC	NC		I CMOS	1.8V/2.5V/3.3V	
ETH_C_(S)(R)(G)MII_TXD0/CSI_C_DATA1_P	Y35	NC	NC		O CMOS	1.8V/2.5V/3.3V	
ETH_C_(S)(R)(G)MII_TXD1/CSI_C_DATA1_N	AA35	NC	NC		O CMOS	1.8V/2.5V/3.3V	
ETH_C_(S)(R)(G)MII_TXD2/CSI_C_DATA2_P	Y34	NC	NC		O CMOS	1.8V/2.5V/3.3V	
ETH_C_(S)(R)(G)MII_TXD3/CSI_C_DATA2_N	AA34	NC	NC		O CMOS	1.8V/2.5V/3.3V	
ETH_C_(R)(G)MII_TX_EN(_ER)/CSI_C_DATA3_P	V34	NC	NC		O CMOS	1.8V/2.5V/3.3V	
ETH_C_(R)(G)MII_TX_CLK	N35	NC	NC		I/O CMOS	1.8V/2.5V/3.3V	
ETH_C_(S)(R)(G)MII_RXD0/CSI_C_CLOCK_P	V35	NC	NC		I CMOS	1.8V/2.5V/3.3V	
ETH_C_(S)(R)(G)MII_RXD1/CSI_C_CLOCK_	U35	NC	NC		I CMOS	1.8V/2.5V/3.3V	
ETH_C_(R)(G)MII_RXD2	R35	NC	NC		I CMOS	1.8V/2.5V/3.3V	
ETH_C_(R)(G)MII_RXD3	P35	NC	NC		I CMOS	1.8V/2.5V/3.3V	
ETH_C_(R)(G)MII_RX_ER	U34	NC	NC		I CMOS	1.8V/2.5V/3.3V	
ETH_C_(R)(G)MII_RX_DV(_ER)	T35	NC	NC		I CMOS	1.8V/2.5V/3.3V	

ETH_C_(R)(G)MII_RX_CLK/CSI_C_DATA3_N	W35	NC	NC		I/O CMOS	1.8V/2.5V/3.3V	
ETH_C_SDP	R34	NC	NC		O CMOS	1.8V/2.5V/3.3V	
ETH_CDE_MDIO	P33	NC	NC		I/O CMOS	1.8V/2.5V/3.3V	
ETH_CDE_MDC	N33	NC	NC		O CMOS	1.8V/2.5V/3.3V	

Table: Size M GPIO

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
GPIO_D_0/LVDS_D_VDD_EN	U32	NC	NC		I/O CMOS	1.8V	
GPIO_D_1 /LVDS_D_BL_EN	U33	NC	NC		I/O CMOS	1.8V	
GPIO_D_2/I2C_E_SCL/I2C_CAM_C_SCL	V32	NC	NC		I/O CMOS	1.8V	
GPIO_D_3/I2C_E_SDA/I2C_CAM_C_SDA	V33	NC	NC		I/O CMOS	1.8V	
GPIO_D_4/I2C_F_SCL/I2C_CAM_D_SCL	W32	NC	NC		I/O CMOS	1.8V	
GPIO_D_5/I2C_F_SDA/I2C_CAM_D_SDA	W33	NC	NC		I/O CMOS	1.8V	
GPIO_D_6/LVDS_E_VDD_EN	Y32	NC	NC		I/O CMOS	1.8V	

SPI_C_CS1#/ GPIO_D_7	Y33	M22	GPMC0_DIR	GPMC0_DIR PR0_ECAP0_IN _APWM_OUT MCASP2_AXR13 PR0_PRU0_GP O16 PR0_PRU0_GPI 16 TRC_DATA14 **GPIO0_40** EQEP2_S	I/O CMOS	1.8V	A MOSFET is between SoC contact and SOM contact (SSM3K35CTC); 10K PU on module

Table: Size M SPI

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
SPI_C_SDI	C29	D9	MCU_SPI0_D0	**MCU_SPI0_D0** MCU_GPIO0_3	I CMOS	1.8V	
SPI_C_SDO	D30	C9	MCU_SPI0_D1	**MCU_SPI0_D1** MCU_GPIO0_4	O CMOS	1.8V	
SPI_C_CS0#	C30	E8	MCU_SPI0_CS 0	**MCU_SPI0_CS 0** WKUP_TIMER_I O1 MCU_GPIO0_0	O CMOS	1.8V	

SPI_C_CS1#/ GPIO_D_7	Y33	M22	GPMC0_DIR	GPMC0_DIR PR0_ECAP0_IN _APWM_OUT MCASP2_AXR13 PR0_PRU0_GP O16 PR0_PRU0_GPI 16 TRC_DATA14 **GPIO0_40** EQEP2_S	O CMOS	1.8V	A MOSFET is between SoC contact and SOM contact (SSM3K35CTC); 10K PU on module
SPI_C_SCK	D29	A7	MCU_SPI0_CLK	**MCU_SPI0_CL K** MCU_GPIO0_2	O CMOS	1.8V	

Table: Size M UFS

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
UFS_TX0_N/ CSI_D_DATA0_ N	AC29	NC	NC		O LVDS UFS		
UFS_TX0_P/ CSI_D_DATA0_ P	AC28	NC	NC		O LVDS UFS		
UFS_RX0_N/ CSI_D_DATA1_ N	AC32	NC	NC		I LVDS UFS		
UFS_RX0_P/ CSI_D_DATA1_ P	AC31	NC	NC		I LVDS UFS		
UFS_TX1_N/ CSI_D_DATA2_ N	AB30	NC	NC		O LVDS UFS		

UFS_TX1_P/ CSI_D_DATA2_ P	AB29	NC	NC		O LVDS UFS		
UFS_RX1_N/ CSI_D_DATA3_ N	AB33	NC	NC		I LVDS UFS		
UFS_RX1_P/ CSI_D_DATA3_ P	AB32	NC	NC		I LVDS UFS		
UFS_RESET#/ /CSI_D_CLOCK _N	AB27	NC	NC		O CMOS	1.8V/ 1.2V	
UFS_CLK/ CSI_D_CLOCK_ P	AC26	NC	NC		O CMOS	1.8V/ 1.2V	

Table: Size M USB

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
USB_D_D_N	D26	NC	NC		I/O USB	USB	
USB_D_D_P	D25	NC	NC		I/O USB	USB	
USB_D_ID	D27	NC	NC		I OD CMOS	1.8V	
USB_D_OC#	C28	NC	NC		I OD CMOS	1.8V	
USB_D_VBUS	C27	NC	NC		I USB VBUS 5V	USB VBUS 5V	
USB_D_EN	C26	NC	NC		O CMOS	1.8V	
USB_D_SSTX_ N	A28	NC	NC		O USB SS	USB SS	
USB_D_SSTX_P	A27	NC	NC		O USB SS	USB SS	
USB_D_SSRX_ N	B26	NC	NC		I USB SS	USB SS	
USB_D_SSRX_ P	B25	NC	NC		I USB SS	USB SS	

Table: Size M PCIe

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
PCIe_B_HSI0_P	L34	NC	NC		I LVDS PCIE		
PCIe_B_HSI0_N	M34	NC	NC		I LVDS PCIE		
PCIe_B_HSO0_P	K35	NC	NC		O LVDS PCIE		
PCIe_B_HSO0_N	L35	NC	NC		O LVDS PCIE		
PCIe_B_PERST#	L33	NC	NC		O CMOS	1.8V	

Table: Size M eDP

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
eDP_A_LANE0_P/ LVDS_D_LANE0_P	A30	Y6	OLDI0_A0P	OLDI0_A0P	O LVDS DP		
eDP_A_LANE0_N/ LVDS_D_LANE0_N	A31	AA5	OLDI0_A0N	OLDI0_A0N	O LVDS DP		
eDP_A_LANE1_P/ LVDS_D_LANE1_P	B31	AB4	OLDI0_A1P	OLDI0_A1P	O LVDS DP		
eDP_A_LANE1_N/ LVDS_D_LANE1_N	B32	AD3	OLDI0_A1N	OLDI0_A1N	O LVDS DP		
eDP_A_LANE2_P/ LVDS_D_LANE2_P	A33	AA8	OLDI0_A2P	OLDI0_A2P	O LVDS DP		

eDP_A_LANE2_N/ LVDS_D_LANE2_N	A34	Y8	OLDI0_A2N	OLDI0_A2N	O LVDS DP		
eDP_A_LANE3_P/ LVDS_D_LANE3_P	B34	AA7	OLDI0_A3P	OLDI0_A3P	O LVDS DP		
eDP_A_LANE3_N/ LVDS_D_LANE3_N	B35	AB6	OLDI0_A3N	OLDI0_A3N	O LVDS DP		
eDP_A_AUX_P/ LVDS_D_CLK_P	C33	AE3	OLDI0_CLK0P	OLDI0_CLK0P	I/O LVDS DP		
eDP_A_AUX_N/ LVDS_D_CLK_N	C34	AD4	OLDI0_CLK0N	OLDI0_CLK0N	I/O LVDS DP		
eDP_A_AUX_SEL	D32	NC	NC		I CMOS	1.8V	
eDP_A_BL_HPD	D33	NC	NC		I CMOS	1.8V	
eDP_A_BL_EN	D31	NC	NC		O CMOS	1.8V	
eDP_A_BL_PWM	C31	NC	NC		O CMOS	1.8V	
eDP_B_LANE0_P/ LVDS_E_LANE0_P	D35	AC5	OLDI0_A4P	OLDI0_A4P	O LVDS DP		
eDP_B_LANE0_N/ LVDS_E_LANE0_N	E35	AC6	OLDI0_A4N	OLDI0_A4N	O LVDS DP		
eDP_B_LANE1_P/ LVDS_E_LANE1_P	E34	AD6	OLDI0_A5P	OLDI0_A5P	O LVDS DP		
eDP_B_LANE1_N/ LVDS_E_LANE1_N	F34	AE5	OLDI0_A5N	OLDI0_A5N	O LVDS DP		
eDP_B_LANE2_P/ LVDS_E_LANE2_P	G35	AD7	OLDI0_A6P	OLDI0_A6P	O LVDS DP		

eDP_B_LANE2_N/ LVDS_E_LANE2_N	H35	AE6	OLDI0_A6N	OLDI0_A6N	O LVDS DP		
eDP_B_LANE3_P/ LVDS_E_LANE3_P	H34	AE7	OLDI0_A7P	OLDI0_A7P	O LVDS DP		
eDP_B_LANE3_N/ LVDS_E_LANE3_N	J34	AD8	OLDI0_A7N	OLDI0_A7N	O LVDS DP		
eDP_B_AUX_P/ P/LVDS_E_CLK_P	G33	AD5	OLDI0_CLK1P	OLDI0_CLK1P	I/O LVDS DP		
eDP_B_AUX_N/ LVDS_E_CLK_N	H33	AE4	OLDI0_CLK1N	OLDI0_CLK1N	I/O LVDS DP		
eDP_B_AUX_SEL	F32	NC	NC		I CMOS	1.8V	
eDP_B_BL_HPD	G32	NC	NC		I CMOS	1.8V	
eDP_B_BL_EN	E32	NC	NC		O CMOS	1.8V	
eDP_B_BL_PWM	E33	NC	NC		O CMOS	1.8V	

Table: Size M MIPI CSI

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
CSI_B_DATA0_N	L32	NC	NC		I LVDS D-PHY/ I LVDS M-PHY		
CSI_B_DATA0_P	M33	NC	NC		I LVDS D-PHY/ I LVDS M-PHY		
CSI_B_DATA1_N	N32	NC	NC		I LVDS D-PHY/ I LVDS M-PHY		
CSI_B_DATA1_P	P32	NC	NC		I LVDS D-PHY/ I LVDS M-PHY		
CSI_B_DATA2_N	P34	NC	NC		I LVDS D-PHY/ I LVDS M-PHY		

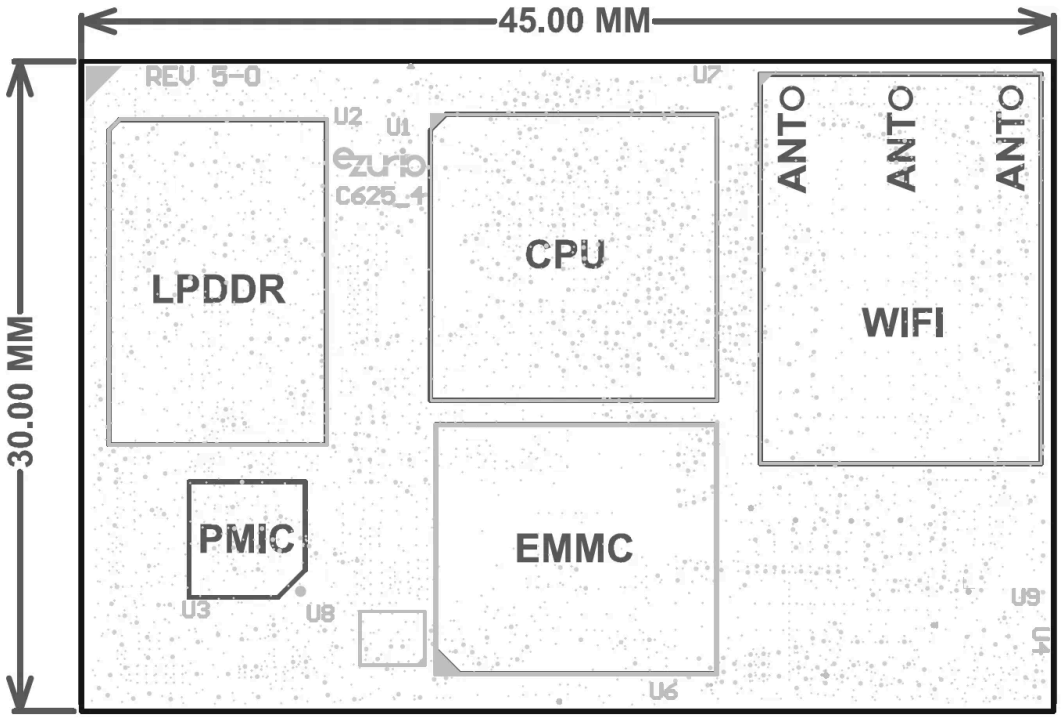
CSI_B_DATA2_P	R33	NC	NC		I LVDS D-PHY/ I LVDS M-PHY		
CSI_B_DATA3_N	T32	NC	NC		I LVDS D-PHY/ I LVDS M-PHY		
CSI_B_DATA3_P	T33	NC	NC		I LVDS D-PHY/ I LVDS M-PHY		
CSI_B_CLOCK_N	J32	NC	NC		I LVDS D-PHY		
CSI_B_CLOCK_P	K33	NC	NC		I LVDS D-PHY		
CAM_B_SDA / CSI_B _TX_N	AB26	NC	NC		O CMOS	1.8V	
CAM_B_SCL / CSI_B_TX_P	AB25	NC	NC		I/O OD CMOS / O LVDS M-PHY	1.8V	
GPIO_C_2/CAM_B_PWR/RGB_VDD_EN/LVDS_E_VDD_EN	E3	E24	OSPI0_CSN3	OSPI0_CSN3 OSPI0_RESET_OUT0 OSPI0_ECC_FAIL MCASP1_ACLKR MCASP1_AXR3 UART5_TXD **GPIO0_14**	I/O CMOS	1.8V	
GPIO_C_3/CAM_B_RST#/RGB_BL_EN/LVDS_E_BL_EN	E4	A23	MMC2_SDCD	MMC2_SDCD MCASP1_ACLKX UART4_RXD **GPIO0_71**	I/O CMOS	1.8V	

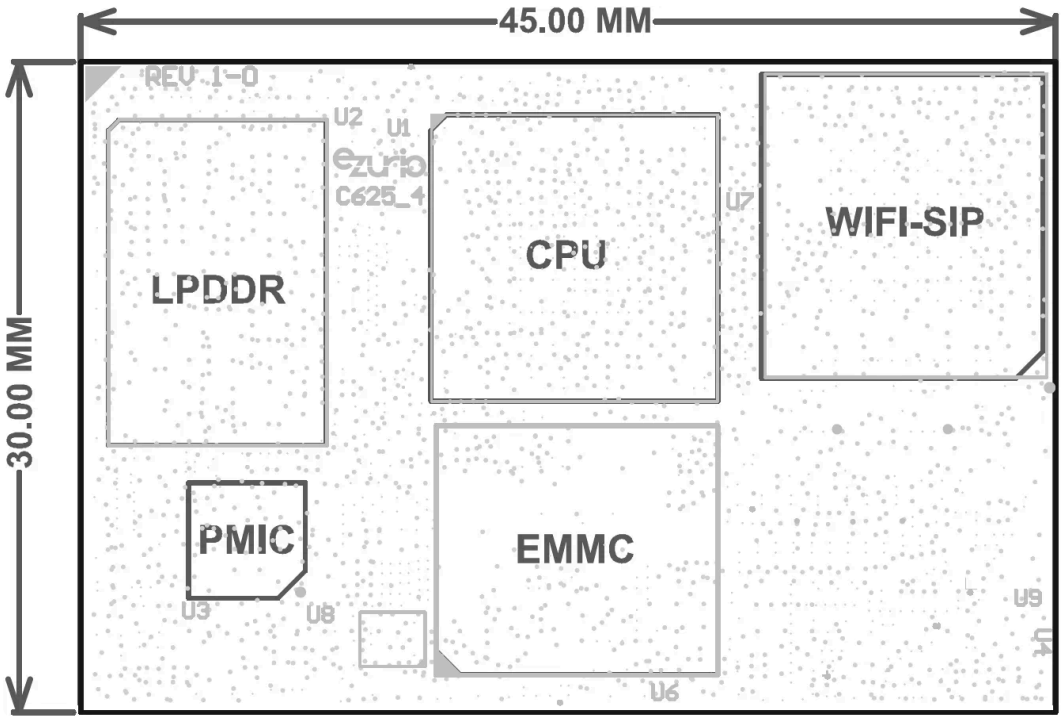
Table: Size M Vendor Defined Contacts

SOM Contact Name	SOM Contact Acronym	Contact Number on SoC	Contact Name on SoC	SoC PIN Multiplexing (bold = default muxing)	I/O Type	I/O Level	Comments
GPIO_VM_0/CAM_D_PWR	Y29	NC	NC		I/O CMOS	1.8V	
GPIO_VM_1/CAM_D_RST#	Y30	NC	NC		I/O CMOS	1.8V	
GPIO_VM_2/UART_E_RX	Y31	NC	NC		I/O CMOS	1.8V	
GPIO_VM_3/UART_E_TX	AA29	NC	NC		I/O CMOS	1.8V	
GPIO_VM_4/UART_E_RTS	AA30	NC	NC		I/O CMOS	1.8V	
GPIO_VM_5/UART_E_CTS	AA31	NC	NC		I/O CMOS	1.8V	

Mechanical Drawings

Module dimensions of the Carbon AM62 OSM-MF SOM with onboard M.2 1216 footprint Wi-Fi-BT module are 30mm x 45mm. Detail drawings are shown below.





Electrical Characteristics

Absolute Maximum Ratings

The following table summarizes the absolute maximum ratings for the Carbon AM62 OSM-MF SOM product series. Absolute maximum ratings are those values beyond which damage to the device can occur. Functional operation under these conditions, or at any other condition beyond those indicated in the operational sections of this document, is not recommended.

> **Note:** Maximum rating for signals follows the supply domain of the signals.

Table: Absolute Maximum Ratings

Symbol (Domain)	Parameter	Min.	Max	Unit
VSYS_5V	Input voltage for the SOM	-0.5	+6.0	V
I/O Input/output voltage range	Any I/O pin referred to VDD_1V8; VDDA_1V8; WI-FI_1V8; NVCC_SNVS_1V8	-0.3	+2.1	V
I/O Input/output voltage range	Any I/O pin referred to VDD_3V3; VSD_3V3; NVCC_SD2	-0.3	+3.6	V
$T_{STORAGE}$	Storage Temperature Range	-40	+125	°C

ESD	Electrostatic discharge tolerance	-2000	+2000	V

Recommended Operating Conditions

Table: Recommended Operating Conditions

Symbol (Domain)	Parameter	Min	Typ	Max	Unit
VSYS_5V	Input voltage for the SOM	3.3	5.0	5.5	V
I/O Input/output voltage range	Any I/O pin referred to VDD_1V8; VDDA_1V8; WI-FI_1V8; NVCC_SNVS_1V8	1.71	1.8	1.89	V
I/O Input/output voltage range	Any I/O pin referred to VDD_3V3; VSD_3V3; NVCC_SD2	3.0	3.3	3.6	V
T-ambient	Operating Ambient temperature	-40	25	85	°C

The operating ambient temperature ratings are highly dependent on the design-case, such as the enclosure design, system design, processor activity, GPU/VPU activity, and peripherals used.
Running over 70° C ambient temperature typically requires the implementation of thermal management strategies such as passive (heatsink/spreader). Please contact Ezurio if you need information and guidance for thermal management.

DC Electrical Characteristics / Current Consumption

Several power saving modes are available and are listed below.

Note: These figures are estimates and subject to change.

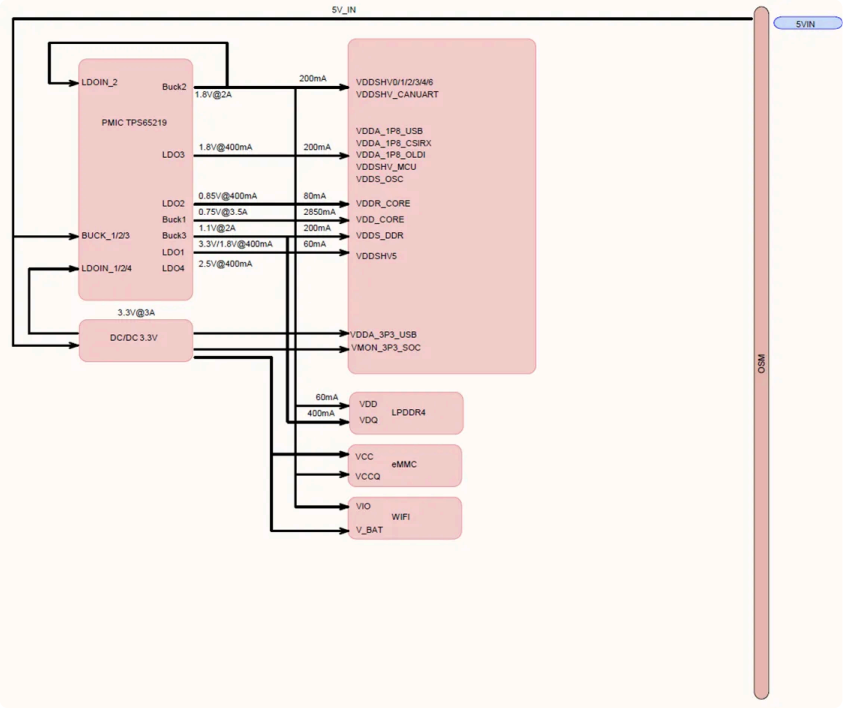
Table: Typical Current Consumption

Mode	Description	Current (Avg)
Idle mode	CPU is on, Stay on Wi-Fi connection only.	172mA
RAM Suspend mode	CPU is sleeping, memory and wireless connection are off.	61mA
Stress Test	Wi-Fi + Ethernet 1 & 2 + CPU	334mA
Stress Test	Wi-Fi + Ethernet 1 & 2 + iPerf.	354mA

Power Management & Consumption

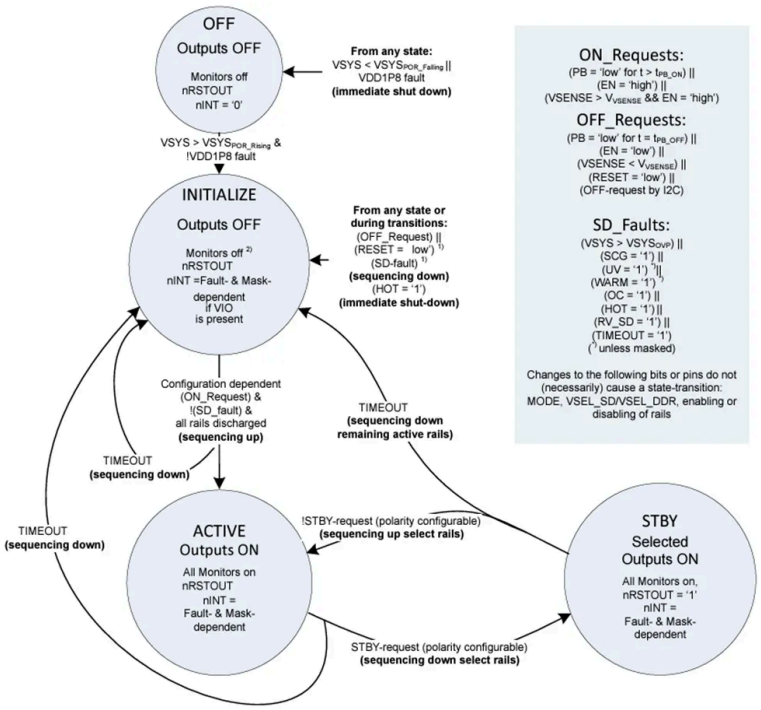
DC Power Tree

The Carbon AM62 OSM-MF requires a primary 5V power supply (VSYS) input. This supply is the main power domain to the on-module TI TPS65219 power management IC (PMIC), which generates all required supply voltages for the module components.



Power Modes

The TI TPS65219 has four power states: OFF, INITIALIZE, ACTIVE and STBY. Below the figure shows the state transition diagram showing the conditions to enter and exit each state.



- **OFF mode:**
  In OFF state, the PMIC is insufficiently supplied. Neither internal logic nor external rails are available. If VSYS exceeds VSYS_POR voltage and the internal 1.8V-rail (VDD1P8) is in regulation, the device enters the INITIALIZE state.
- **INITIALIZE Mode:**
  In INITIALIZE state, the device is completely shut down with the exception of a few circuits to monitor the EN/PB/VSENSE input. Whenever entering the INITIALIZE state, the PMIC reads the memory and loads the registers to their EEPROM-default values. The I2C communication interface is turned off.
- **ACTIVE Mode:**
  The ACTIVE state is the normal mode of operation when the system is up and running. All enabled buck converters and LDOs are operational and can be controlled through the I2C interface. After a wake-up event, the PMIC discharges potential residual voltages on the outputs, regardless of the discharge-configuration.
- **STBY Mode:**
  STBY state is a low-power mode of operation intended to support system standby. The mode can be entered by the MODE/STBY pin, if configured as 'STBY' or by an I2C-command to STBY_I2C_CTRL in MFP_CTRL register. Typically, the majority of power rails are turned off with the exception of rails required by the SoC during this state. Which rails power down in STBY state can be configured in STBY_1_CONFIG and STBY_2_CONFIG register.

Environmental and Reliability

Environmental Requirements

Required Storage Conditions

- **Prior to Opening the Dry Packing**
  The following are required storage conditions prior to opening the dry packing:
  - Normal temperature: 5~40°C
  - Normal humidity: 80% (Relative humidity) or less
  - Storage period: One year or less

Ordering Information

Part	Description
Evaluation Kits	
EZOMI-625-0216-00199-2-K2	Carbon AM62 OSM-MF Evaluation Kit: 7 in Display / Eval Board / HDMI Adapter / SOM with Adapter / AM62 / 2GB RAM / 16GB eMMC / TI351 Wi-Fi-BT / Accessories
EZOMI-625-0216-00199-2-KC	Carbon AM62 OSM-MF Evaluation Kit: 7 in Display / 8.3MP Camera / Eval Board / HDMI Adapter / SOM on Adapter / AM62 / 2GB RAM / 16GB eMMC / TI351 Wi-Fi-BT / Accessories
EZCBC-000-0000-00000-2-K2	OSM Evaluation Kit: Eval Board / HDMI Adapters / Eval Board / Antennas / Accessories / **SOM sold separately**
Boards for Evaluation Kits	
EZOMI-625-0216-00199-2-IK	Carbon AM62 OSM-MF SOM with Adapter: AM62 / 2GB RAM / 16GB eMMC / TI351 Wi-Fi-BT / For Use with OSM Evaluation Kit
EZOMI-625-0216-00117-2-IK	Carbon AM62 OSM-MF SOM with Adapter: AM62 / 2GB RAM / 16GB eMMC / IF573 Wi-Fi-BT / For Use with OSM Evaluation Kit
EZOMI-625-0216-00134-2-IK	Carbon AM62 OSM-MF SOM with Adapter: AM62 / 2GB RAM / 16GB eMMC / 60 Series Wi-Fi-BT / For Use with OSM Evaluation Kit
Distribution-stocked super set variants for evaluation and prototyping	
EZOMI-625-0216-00199-2C	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona TI351 1MHF4L / -40 to +85°C / Cut Tape
EZOMI-625-0216-00117-2C	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona IF573 3MHF4L / -40 to +85°C /Cut Tape
OSM Boards (AM623)	
Without wireless	
EZOMC-623-0116-00000-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Without Wireless / 0 to +70°C / Tape and Reel

EZOMI-623-0116-00000-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Without Wireless / -40 to +85°C / Tape and Reel
EZOMC-623-0216-00000-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Without Wireless / 0 to +70°C / Tape and Reel
EZOMI-623-0216-00000-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Without Wireless / -40 to +85°C / Tape and Reel
EZOMC-623-0416-00000-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Without Wireless / 0 to +70°C / Tape and Reel
EZOMI-623-0416-00000-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Without Wireless / -40 to +85°C / Tape and Reel
With Sona TI351	
EZOMC-623-0116-00199-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Sona TI351 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0116-00199-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Sona TI351 1MHF4L / -40 to +85°C / Tape and Reel
EZOMC-623-0216-00199-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Sona TI351 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0216-00199-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Sona TI351 1MHF4L / -40 to +85°C / Tape and Reel
EZOMC-623-0416-00199-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Sona TI351 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0416-00199-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Sona TI351 1MHF4L / -40 to +85°C / Tape and Reel
With Sona IF513	
EZOMC-623-0116-00184-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Sona IF513 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0116-00184-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Sona IF513 1MHF4L / -40 to +85°C / Tape and Reel
EZOMC-623-0216-00184-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Sona IF513 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0216-00184-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Sona IF513 1MHF4L / -40 to +85°C / Tape and Reel
EZOMC-623-0416-00184-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Sona IF513 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0416-00184-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Sona IF513 1MHF4L / -40 to +85°C / Tape and Reel
With Sona IF573	
EZOMC-623-0116-00117-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Sona IF573 3MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0116-00117-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Sona IF573 3MHF4L / -40 to +85°C / Tape and Reel
EZOMC-623-0216-00117-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Sona IF573 3MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0216-00117-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Sona IF573 3MHF4L / -40 to +85°C / Tape and Reel
EZOMC-623-0416-00117-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Sona IF573 3MHF4L / 0 to +70°C / Tape and Reel

EZOMI-623-0416-00117-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Sona IF573 3MHF4L / -40 to +85°C / Tape and Reel
With Sona NX611	
EZOMC-623-0116-00158-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Sona NX611 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0116-00158-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / Sona NX611 1MHF4L / -40 to +85°C / Tape and Reel
EZOMC-623-0216-00158-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Sona NX611 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0216-00158-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / Sona NX611 1MHF4L / -40 to +85°C / Tape and Reel
EZOMC-623-0416-00158-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Sona NX611 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-623-0416-00158-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / Sona NX611 1MHF4L / -40 to +85°C / Tape and Reel
With 60 Series	
EZOMC-623-0116-00134-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / 60 Series 2MHF1 / 0 to +70°C / Tape and Reel
EZOMI-623-0116-00134-2	Carbon AM62 OSM-MF: AM623 / 2 A53 / 1GB / 16GB eMMC / 60 Series 2MHF1 / -40 to +85°C / Tape and Reel
EZOMC-623-0216-00134-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / 60 Series 2MHF1 / 0 to +70°C / Tape and Reel
EZOMI-623-0216-00134-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 2GB / 16GB eMMC / 60 Series 2MHF1 / -40 to +85°C / Tape and Reel
EZOMC-623-0416-00134-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / 60 Series 2MHF1 / 0 to +70°C / Tape and Reel
EZOMI-623-0416-00134-2	Carbon AM62 OSM-MF: AM623 / 4 A53 / 4GB / 16GB eMMC / 60 Series 2MHF1 / -40 to +85°C / Tape and Reel
OSM Boards (AM625)	
Without wireless	
EZOMC-625-0216-00000-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Without Wireless / 0 to +70°C / Tape and Reel
EZOMI-625-0216-00000-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Without Wireless / -40 to +85°C / Tape and Reel
EZOMC-625-0416-00000-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Without Wireless / 0 to +70°C / Tape and Reel
EZOMI-625-0416-00000-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Without Wireless / -40 to +85°C / Tape and Reel
With Sona TI351	
EZOMC-625-0216-00199-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona TI351 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-625-0216-00199-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona TI351 1MHF4L / -40 to +85°C / Tape and Reel
EZOMI-625-0216-00199-2C	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona TI351 1MHF4L / -40 to +85°C / Cut Tape
EZOMC-625-0416-00199-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Sona TI351 1MHF4L / 0 to +70°C / Tape and Reel

EZOMI-625-0416-00199-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Sona TI351 1MHF4L / -40 to +85°C / Tape and Reel
With Sona IF513	
EZOMC-625-0216-00184-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona IF513 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-625-0216-00184-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona IF513 1MHF4L / -40 to +85°C / Tape and Reel
EZOMC-625-0416-00184-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Sona IF513 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-625-0416-00184-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Sona IF513 1MHF4L / -40 to +85°C / Tape and Reel
With Sona IF573	
EZOMC-625-0216-00117-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona IF573 3MHF4L / 0 to +70°C / Tape and Reel
EZOMI-625-0216-00117-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona IF573 3MHF4L / -40 to +85°C / Tape and Reel
EZOMI-625-0216-00117-2C	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona IF573 3MHF4L / -40 to +85°C /Cut Tape
EZOMC-625-0416-00117-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Sona IF573 3MHF4L / 0 to +70°C / Tape and Reel
EZOMI-625-0416-00117-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Sona IF573 3MHF4L / -40 to +85°C / Tape and Reel
With Sona NX611	
EZOMC-625-0216-00158-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona NX611 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-625-0216-00158-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / Sona NX611 1MHF4L / -40 to +85°C / Tape and Reel
EZOMC-625-0416-00158-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Sona NX611 1MHF4L / 0 to +70°C / Tape and Reel
EZOMI-625-0416-00158-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / Sona NX611 1MHF4L / -40 to +85°C / Tape and Reel
With 60 Series	
EZOMC-625-0216-00134-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / 60 Series 2MHF1 / 0 to +70°C / Tape and Reel
EZOMI-625-0216-00134-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / 60 Series 2MHF1 / -40 to +85°C / Tape and Reel
EZOMI-625-0216-00134-2C	Carbon AM62 OSM-MF: AM625 / 4 A53 / 2GB / 16GB eMMC / 60 Series 2MHF1 / -40 to +85°C / Cut Tape
EZOMC-625-0416-00134-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / 60 Series 2MHF1 / 0 to +70°C / Tape and Reel
EZOMI-625-0416-00134-2	Carbon AM62 OSM-MF: AM625 / 4 A53 / 4GB / 16GB eMMC / 60 Series 2MHF1 / -40 to +85°C / Tape and Reel

Additional Information

Please contact your local sales representative or our support team for further assistance:

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