



STM32MP257 OSM SOM Datasheet

Cargt, Inc

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Revision History

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NOTE: This datasheet only refers to the **V1** version of the SOM PCB

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-01	Initial Production Release

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2 Introduction

2.1 Product Overview

The Cargt designed STM32MP257 SOM provides the Open Standards Module (OSM-L) layout in a Land Grid Array (LGA) format. The System-on-Module (SOM) contains the STM32MP257 microprocessor from STMicroelectronics, along with DDR RAM, eMMC Flash Memory, Discrete Wireless IC, EEPROM, PMIC, RTC. Consult the block diagram for a list of the peripheral functions that are provided to the connectors on this SOM module.

Note: Cargt also provides an Evaluation Kit that contains both a soldered SOM and the peripherals that are accessible to the SOM.

2.2 Glossary

Term	Definition
DDR RAM	Double Data Rate Random Access Memory
EEPROM	Electrically Erasable Programmable Read-Only Memory
eMMC	Embedded multi-Media Card
IC	Integrated Circuit
OSM	Open Standards Module
PMIC	Power Management Integrated Circuit
RTC	Real Time Clock
SOM	System-on-Module

2.3 Scope

This datasheet describes Cargt specific functions and connections for the product and what peripherals are provided by the microprocessor to the SOM connections. This document shows the memory interfaces and the Boot Mode configurations.

It provides the Pin Mapping Table showing the cross-reference between the OSM-L Pin Functions and the STM32MP257 pins. This will allow the user to generate the device trees and setup code.

This document is supplemental to any documentation that STMicroelectronics provides, specifically their Datasheet and Reference manuals.

2.4 Reference Documents

3 Function Specifications

3.1 STM32MP257 Processor Highlights

The **STMicroelectronics STM32MP257** is a high-performance applications processor designed for secure, connected industrial systems and advanced edge-computing use cases. It provides a robust platform for long-lifecycle products such as industrial HMI, automation, machine vision, EV charging, and edge-AI applications.

It integrates **dual Arm® Cortex®-A35** processors operating up to **1.5 GHz** for application processing, together with an **Arm® Cortex®-M33** core running up to **400 MHz** for real-time control, safety functions, and low-latency system tasks.

Optional **integrated AI acceleration** and a high-performance **3D GPU** support compute-intensive workloads, while dedicated hardware video encoding and decoding enable advanced multimedia and vision-based applications.

The STM32MP257 supports a broad range of display and camera interfaces, including **MIPI-DSI, LVDS, HDMI®, and MIPI-CSI-2**, along with external memory interfaces for **DDR3L, DDR4, and LPDDR4** for scalable system performance.

A rich set of industrial connectivity options—including **multiple Ethernet ports with TSN support, FD-CAN, USB 3.0/2.0, PCIe®, and extensive serial peripherals**—ensures flexible system integration. Built-in security features such as **secure boot, TrustZone® architecture, cryptographic accelerators, and tamper detection** provide strong hardware-based protection for device identity and lifecycle management.

3.2 SOM External Interfaces

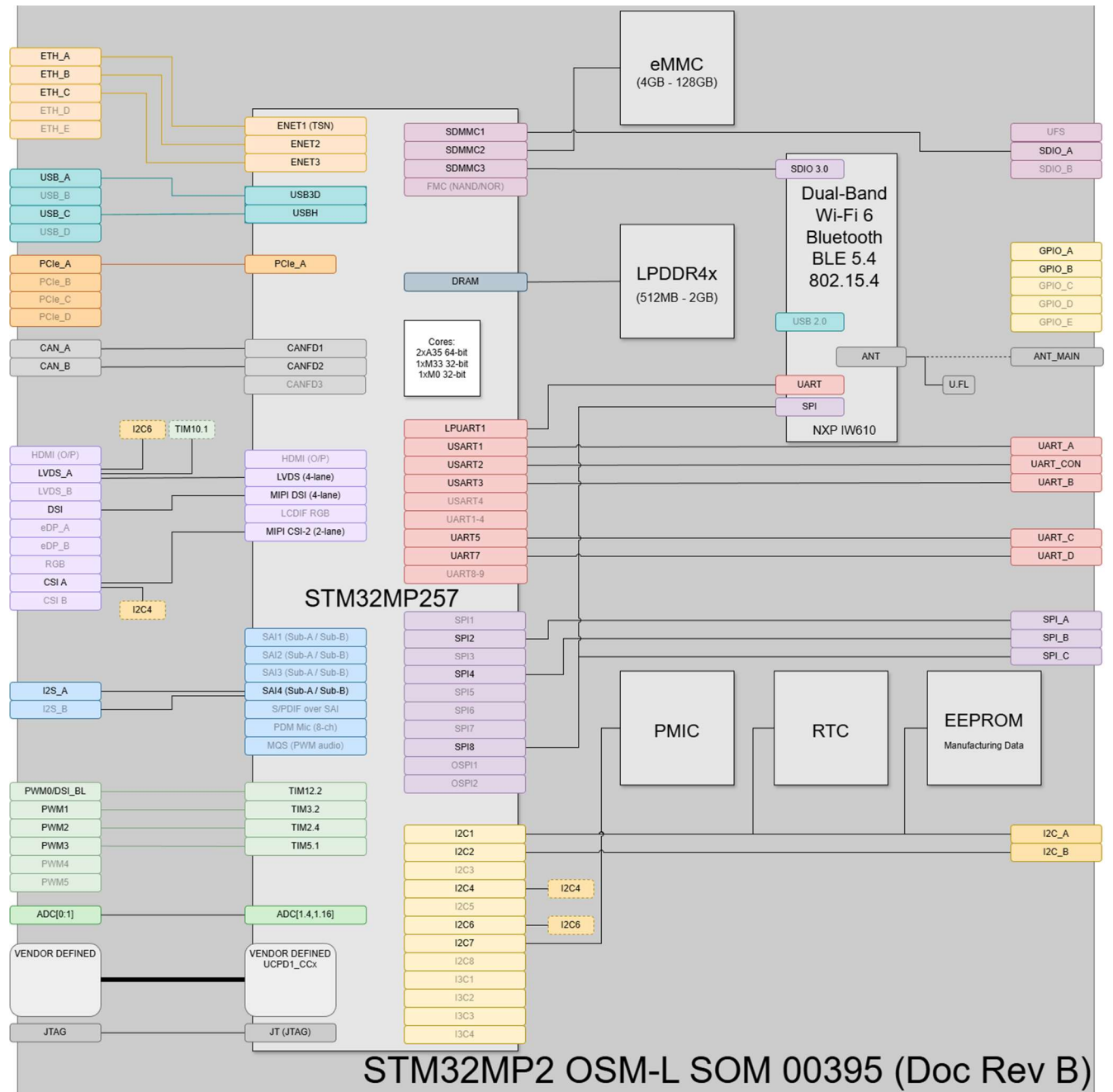


Figure 1 STM32MP257 OSM-L SOM Block Diagram

Features of the STM32MP257 OSM SOM include the following:

- eMMC up to 128GByte
- LPDDR4X up to 2GByte
- Wi-Fi 6 Dual Band
- Bluetooth 5.4
- Triple Gigabit Ethernet (2 + 1 switch)
- EEPROM (programmed by manufacturing)
- PMIC
- MIPI-CSI-2 2 lane
- MIPI-DSI 4 lane
- LVDS 4 lane
- 2x USB 2.0 Dual-Role (DRD)
- 2x FlexCAN

The above list summarizes the dedicated interfaces provided to the host, but many other standard interfaces can be configured through multiplexed IO pins (e.g., SPI, I2C, UART). Peripheral Specifications are listed in Section 4, Peripheral Specifications, of this document and the default configuration of the pin multiplexing is listed Section 0, Pin Descriptions & Functions.

3.3 Electrical Specifications

3.4 Temperature Specifications

4 Peripheral Specifications

4.1 Memory

4.1.1 Volatile Memory

Cargt's STM32MP2 SOM is equipped with a single-channel 16-bit LPDDR4X memory interface, supporting capacities up to 2 GB.

4.1.2 Non-volatile Memory

4.1.2.1 eMMC (uSDHC2)

The STM32MP2 SOM uses a dedicated eMMC flash device that interfaces directly with the processor's uSDHC2 controller. This eMMC operates over an 8-bit data bus and supports

transfer speeds up to HS200. The uSDHC3 interface is not exposed externally; its pins are only used internally within the SOM

4.1.2.2 SD Card (uSDHC1)

The STM32MP2 SOM exposes the processor's uSDHC1 interface on the OSM connector using a 4-bit SD 3.0 bus, enabling system designers to interface with external SD or SDIO peripherals. On Cargt's development boards, these uSDHC1 signals are routed to a microSD card slot, providing a convenient removable-storage option for evaluation and prototyping. The uSDHC1 pins are fully available to the host system and are not internally consumed by onboard SOM components.

NOTE: Card support for three different databus modes: 1-bit (default), 4-bit and 8-bit (HS200 speed limited by maximum allowed I/O speed, HS400 is not supported).

4.1.2.3 Wi-Fi/Bluetooth (uSDHC3)

The STM32MP2 SOM routes the processor's uSDHC3 interface internally to the onboard NXP IW610 wireless chip. This connection operates as a 4-bit SDIO 3.0 interface running at up to 200 MHz, providing a high-bandwidth link for Wi-Fi 6 and Bluetooth communication functions. The uSDHC3 pins are not exposed; they are dedicated exclusively to the IW610 subsystem.

4.1.2.4 EEPROM

The SOM contains a Cargt EEPROM containing data set during production, such as, Serial Number, SOM RAM size, etc.

4.2 Network Interfaces

4.2.1 Ethernet Interfaces

All three are routed to the SOM, but only 2 ports can be used at the same time depending on processor Ethernet module setup.

4.2.1.1 Gigabit Ethernet A

The processor ENET1 interface is connected to OSM's ETH_A interface.

4.2.1.2 Gigabit Ethernet B

The processor ENET2 interface is connected to OSM's ETH_B interface.

4.2.1.3 Gigabit Ethernet C

The processor ENET3 interface is connected to OSM's ETH_C interface. NOTE: Unavailable on current revision of hardware.

4.2.2 CAN Interfaces

The SOM provides two independent CAN-FD interfaces. The STM32MP2 CAN module implements the CAN-FD protocol as well as full compliance with the classical CAN 2.0B specification. The third CAN module is not routed to the SOM pins.

4.2.2.1 CAN A

The STM32MP2's CANFD1 interface is connected to OSM's CAN_A interface.

4.2.2.2 CAN B

The STM32MP2's CANFD2 interface is connected to OSM's CAN_B interface.

4.2.3 Wireless Interfaces

Cargt's STM32MP2 SOM includes NXP's IW610 tri-radio single-chip solution on-board. This solution supports the following technologies with a single antenna.

4.2.3.1 Wi-Fi 6

NXP's IW610 device provides support for the 802.11ax (Wi-Fi 6) standard and integrates the complete Wi-Fi subsystem, including the MAC, baseband processor, and direct-conversion radio, as well as an integrated power amplifier (PA), low-noise amplifier (LNA), and RF switching circuitry.

4.2.3.2 Bluetooth/Bluetooth Low Energy 5.4 and 802.15.4

The IW610 wireless solution includes an independent Bluetooth Low Energy 5.4 subsystem and an 802.15.4 radio supporting Thread and Zigbee networking. The Bluetooth LE subsystem supports a 2 Mbit/s high-speed PHY, long-range operation, and extended advertising. LE Audio is supported through isochronous channels, enabling next-generation low-energy audio applications.

4.3 Serial Communication Interfaces

4.3.1 USB

The SOM supports two independent High-Speed USB 2.0 Dual-Role interfaces.

4.3.1.1 USB_A

The STM32MP2's USB3 is connected to OSM's USB_A interface. It is intended to be used by the application.

4.3.1.2 USB_C

The STM32MP2's USBH is connected to OSM's USB_C interface. It is intended to be used by the application.

4.3.2 UART

Five UART interfaces are brought out from the STM32MP2 SOM. A sixth interface is routed directly to the IW610 for Bluetooth connectivity.

4.3.2.1 Console UART

The STM32MP2's USART2 is intended to be used as a dedicated Console UART but can be repurposed for other uses by the application. It is connected to the OSM's console UART interface with a 2-wire connection.

4.3.2.2 UART A

The STM32MP2's USART1 is connected to OSM's UART A interface and supports a 4-wire interface. It is intended to be used by the application.

4.3.2.3 UART B

The STM32MP2's USART3 is connected to OSM's UART B interface and supports a 4-wire interface. It is intended to be used by the application.

4.3.2.4 UART C

The STM32MP2's UART5 is connected to OSM's UART C interface and supports a 2-wire interface. It is intended to be used by the application.

4.3.2.5 UART D

The STM32MP2's UART7 is connected to OSM's UART C interface and supports a 2-wire interface. It is intended to be used by the application.

4.3.2.6 Bluetooth UART

The STM32MP2's LPUART1 is directly connected to the IW610 on the SOM for Bluetooth support and is not available for use by the application for any other purpose.

4.3.3 SPI

Two SPI interfaces are brought out on the i.MX 93 SOM for use by the application.

4.3.3.1 SPI A

The i.MX 93's SPI1 interface is connected to OSM's SPI A interface for use by the application.

4.3.3.2 SPI B

The i.MX 93's SPI8 interface is connected to OSM's SPI B interface for use by the application.

4.3.4 I2C

4.3.4.1 I2C A

The i.MX 93's I2C2 interface is connected to OSM's I2C A interface for use by the application.

4.3.4.2 I2C B

The i.MX 93's I2C3 interface is connected to OSM's I2C B interface for use by the application.

4.4 Display Interfaces

4.4.1 LVDS

The i.MX 93's LVDS interface is connected to OSM's LVDS A interface for use by the application. The backlight PWM is connected to TPM3 channel 3 and operates at 1.8V.

4.4.2 MIPI-DSI

The i.MX 93's MIPI DSI1 interface is connected to OSM's DSI interface for use by the application.

4.5 Camera Interfaces

4.5.1 MIPI-CSI

The i.MX 93's MIPI CSI1 interface is connected to OSM's CSI A interface for use by the application.

4.6 Audio Interfaces

4.6.1 I2S

The i.MX 93's SAI3 interface is connected to OSM's I2S A interface for use by the application.

4.7 Real-Time Clock

The i.MX93 SOC includes a real-time clock. For low power considerations, Cargt has added an I2C real-time clock as well.

5 System Integration

5.1 Boot Pins

The i.MX93 provides four Boot Mode pins that determine the processor's boot source during power-on initialization. All Boot Mode pins include internal pull-downs and are sampled on the rising edge of **POR_B**.

On Cargt's STM32MP2 OSM SOM, only **BOOT_MODE[1:0]** are routed to the carrier as **BOOT_SEL0#** and **BOOT_SEL1#**. These pins include external pull-ups on the SOM, allowing the carrier to override them and select a specific boot mode. The supported boot configurations for **BOOT_MODE[1:0]** are shown below.

BOOT_MODE[1:0]	Boot Configuration	Notes
00	Boot from Internal Fuses	
01	Serial Downloader	Production Programming
10	USDHC1 8-bit eMMC 5.1	Recommended setting
11	USDCH2 4-bit SD	Default setting

Table 1 BOOT Mode Selection Switches Operation

If no pull-up or pull-down resistors are provided on the carrier, the SOM's internal configuration defaults the system to boot from the SD Card. For optimal performance, Cargt recommends configuring the system to boot from the eMMC device.

Because **BOOT_MODE[3:2]** are not exposed on the SOM, selecting Cortex-M33 boot modes is only possible through internal fuse settings.

6 Pin Descriptions & Functions

Table 2 Pin Mapping Table v2

00395 OSM-L Pin Mapping STM32MP257FAK3										
Interface Group	OSM Pin #	OSM Contact Name (functional)	SOC Pin Number	SOC Ball Name	Net Name	Direction	Voltage	Type	PU/PD	Notes
— Section 1: Active OSM Peripherals —										
ADC	M18	ADC_0	AD6	PG4	ADC1_IN4	Input	1.8V	Analog		
ADC	N18	ADC_1	AF11	PF3	ADC1_IN16	Input	1.8V	Analog		
Antenna	A16	ANT_MAIN	N/A	N/A - INT SOM WIRELESS	RF	Bidirectional	-	RF		Only available if R19 populated instead of R27
Boot	U19	BOOT_SEL0#	Y3	BOOT0	BOOT_MODE0	Input	1.8V	Open Drain	PU 1K	
Boot	R18	BOOT_SEL1#	AA3	BOOT1	BOOT_MODE1	Input	1.8V	Open Drain	PU 1K	
Boot	T17	FORCE_RECOVERY#	N/A	N/A						
Boot	AA9	PWR_BTN#	N/A	N/A - INT SOM PMIC	ONOFF	Input	5V	Open Drain	PU 110K	PMIC: PONKEYn; 10nF load capacitor
Boot	U17	RESET_IN#	AE1	NRST	NRST	Bidirectional	1.8V	Open Drain	PU (18.75K ~ 35.3K)	Also connected to PMIC RSTn pin. PU range calculated with PMIC and MPU pull-up resistors in parallel.
Boot	Y14	RESET_OUT#	N/A	N/A						
CAN A (CAN1)	AB17	CAN_A_RX	N3	PG12	FDCAN1_RX	Input	1.8V	CMOS		
CAN A (CAN1)	AC17	CAN_A_TX	N2	PG11	FDCAN1_TX	Output	1.8V	CMOS		
CAN B (CAN2)	AB19	CAN_B_RX	D16	PI10	FDCAN2_RX	Input	1.8V	CMOS		
CAN B (CAN2)	AC19	CAN_B_TX	U1	PI9	FDCAN2_TX	Output	1.8V	CMOS		
Debug	AC18	DEBUG_EN	N/A	N/A						
Debug	R19	JTAG_nTRST	AF3	NJTRST	NJTRST	Input	1.8V	CMOS	PU (30K ~ 50K)	
Debug	P19	JTAG_RTCK	N/A	N/A						
Debug	N17	JTAG_TCK(SWCLK)	AA5	JTCK-SWCLK	JTCK-SWCLK	Input	1.8V	CMOS	PU (30K ~ 50K)	
Debug	P17	JTAG_TDI	AE3	JTDI	JTDI	Input	1.8V	CMOS	PU (30K ~ 50K)	
Debug	R17	JTAG_TDO(SWO)	AC2	JTDO-TRACESWO	JTDO-TRACESWO	Output	1.8V	CMOS	PU (30K ~ 50K)	
Debug	N19	JTAG_TMS(SWDIO)	AE2	JTMS-SWDIO	JTMS-SWDIO	Bidirectional	1.8V	CMOS	PU (30K ~ 50K)	
Ethernet	M17	ETH_IOPWR	N/A	N/A	VDDIO_1V8	Output	1.8V	Power		Maximum 100mA load allowed
Ethernet A (ETH1)	F15	ETH_A_(R)(G)MII_COL	N/A	N/A						
Ethernet A (ETH1)	E16	ETH_A_(R)(G)MII_CRS	N/A	N/A						
Ethernet A (ETH1)	R15	ETH_A_(R)(G)MII_RX_CLK	AB12	PA14	ETH1_RXC	Input	1.8V	CMOS		
Ethernet A (ETH1)	M15	ETH_A_(R)(G)MII_RX_DV(ER)	AD12	PA11	ETH1_RX_CTL	Input	1.8V	CMOS		
Ethernet A (ETH1)	L16	ETH_A_(R)(G)MII_RX_ER	N/A	N/A						
Ethernet A (ETH1)	J15	ETH_A_(R)(G)MII_TX_CLK	AB14	PC0	ETH1_TXC	Output	1.8V	CMOS		
Ethernet A (ETH1)	K16	ETH_A_(R)(G)MII_TX_EN(ER)	AD14	PA13	ETH1_TX_CTL	Output	1.8V	CMOS		
Ethernet A (ETH1)	K15	ETH_A_(S)(R)(G)MII_RXD0	AE11	PF1	ETH1_RXD0	Input	1.8V	CMOS		
Ethernet A (ETH1)	L15	ETH_A_(S)(R)(G)MII_RXD1	AE12	PC2	ETH1_RXD1	Input	1.8V	CMOS		
Ethernet A (ETH1)	N15	ETH_A_(S)(R)(G)MII_RXD2	AF13	PH12	ETH1_RXD2	Input	1.8V	CMOS		
Ethernet A (ETH1)	P15	ETH_A_(S)(R)(G)MII_RXD3	AG13	PH13	ETH1_RXD3	Input	1.8V	CMOS		
Ethernet A (ETH1)	H15	ETH_A_(S)(R)(G)MII_TXD0	AE13	PA15	ETH1_TXD0	Output	1.8V	CMOS		
Ethernet A (ETH1)	G15	ETH_A_(S)(R)(G)MII_TXD1	AG14	PC1	ETH1_TXD1	Output	1.8V	CMOS		
Ethernet A (ETH1)	H16	ETH_A_(S)(R)(G)MII_TXD2	AF14	PH10	ETH1_TXD2	Output	1.8V	CMOS		
Ethernet A (ETH1)	G16	ETH_A_(S)(R)(G)MII_TXD3	AE14	PH11	ETH1_TXD3	Output	1.8V	CMOS		
Ethernet A (ETH1)	N16	ETH_A_SDP	N/A	N/A						
Ethernet A (ETH1)	T16	ETH_MDC	AA15	PF0	ETH1_MDC	Output	1.8V	CMOS		
Ethernet A (ETH1)	T15	ETH_MDIO	AC15	PF2	ETH1_MDIO	Bidirectional	1.8V	Open Drain		
Ethernet B (ETH2)	E1	ETH_B_(R)(G)MII_COL	N/A	N/A						
Ethernet B (ETH2)	D2	ETH_B_(R)(G)MII_CRS	N/A	N/A						
Ethernet B (ETH2)	P1	ETH_B_(R)(G)MII_RX_CLK	AC7	PF6	ETH2_RXC	Input	1.8V	CMOS		

Ethernet B (ETH2)	L1	ETH_B_(R)(G)MII_RX_DV(_ER)	AA9	PC3	ETH2_RX_CTL	Input	1.8V	CMOS		
Ethernet B (ETH2)	K2	ETH_B_(R)(G)MII_RX_ER	N/A	N/A						
Ethernet B (ETH2)	H1	ETH_B_(R)(G)MII_TX_CLK	AB8	PF7	ETH2_TXC	Output	1.8V	CMOS		
Ethernet B (ETH2)	J2	ETH_B_(R)(G)MII_TX_EN(_ER)	AC9	PC4	ETH2_TX_CTL	Output	1.8V	CMOS		
Ethernet B (ETH2)	J1	ETH_B_(S)(R)(G)MII_RXD0	AF7	PG0	ETH2_RXD0	Input	1.8V	CMOS		
Ethernet B (ETH2)	K1	ETH_B_(S)(R)(G)MII_RXD1	AE7	PC12	ETH2_RXD1	Input	1.8V	CMOS		
Ethernet B (ETH2)	M1	ETH_B_(S)(R)(G)MII_RXD2	AE8	PF9	ETH2_RXD2	Input	1.8V	CMOS		
Ethernet B (ETH2)	N1	ETH_B_(S)(R)(G)MII_RXD3	AD8	PC11	ETH2_RXD3	Input	1.8V	CMOS		
Ethernet B (ETH2)	G1	ETH_B_(S)(R)(G)MII_TXD0	AF9	PC7	ETH2_TXD0	Output	1.8V	CMOS		
Ethernet B (ETH2)	F1	ETH_B_(S)(R)(G)MII_TXD1	AG9	PC8	ETH2_TXD1	Output	1.8V	CMOS		
Ethernet B (ETH2)	G2	ETH_B_(S)(R)(G)MII_TXD2	AE9	PC9	ETH2_TXD2	Output	1.8V	CMOS		
Ethernet B (ETH2)	F2	ETH_B_(S)(R)(G)MII_TXD3	AG10	PC10	ETH2_TXD3	Output	1.8V	CMOS		
Ethernet B (ETH2)	C6	ETH_B_MDC	AB10	PC6	ETH2_MDC	Output	1.8V	CMOS		
Ethernet B (ETH2)	C7	ETH_B_MDIO	AD10	PC5	ETH2_MDIO	Bidirectional	1.8V	Open Drain		
Ethernet B (ETH2)	M2	ETH_B_SDP	N/A	N/A						
Ethernet C (ETH3)	AB35	ETH_C_(R)(G)MII_COL	N/A	N/A						
Ethernet C (ETH3)	AC34	ETH_C_(R)(G)MII_CRS	N/A	N/A						
Ethernet C (ETH3)	W35	ETH_C_(R)(G)MII_RX_CLK	AE17	PA5	ETH3_RXC	Input	1.8V	CMOS		
Ethernet C (ETH3)	T35	ETH_C_(R)(G)MII_RX_DV(_ER)	AF17	PA2	ETH3_RX_CTL	Input	1.8V	CMOS		
Ethernet C (ETH3)	U34	ETH_C_(R)(G)MII_RX_ER	N/A	N/A						
Ethernet C (ETH3)	N35	ETH_C_(R)(G)MII_TX_CLK	AC17	PH2	ETH3_TXC	Output	1.8V	CMOS		
Ethernet C (ETH3)	V34	ETH_C_(R)(G)MII_TX_EN(_ER)	AD18	PA3	ETH3_TX_CTL	Output	1.8V	CMOS		
Ethernet C (ETH3)	V35	ETH_C_(S)(R)(G)MII_RXD0	AF15	PA9	ETH3_RXD0	Input	1.8V	CMOS		
Ethernet C (ETH3)	U35	ETH_C_(S)(R)(G)MII_RXD1	AE15	PA10	ETH3_RXD1	Input	1.8V	CMOS		
Ethernet C (ETH3)	R35	ETH_C_(S)(R)(G)MII_RXD2	AE16	PH7	ETH3_RXD2	Input	1.8V	CMOS		
Ethernet C (ETH3)	P35	ETH_C_(S)(R)(G)MII_RXD3	AD16	PH8	ETH3_RXD3	Input	1.8V	CMOS		
Ethernet C (ETH3)	Y35	ETH_C_(S)(R)(G)MII_TXD0	AF18	PA6	ETH3_TXD0	Output	1.8V	CMOS		
Ethernet C (ETH3)	AA35	ETH_C_(S)(R)(G)MII_TXD1	AE18	PA7	ETH3_TXD1	Output	1.8V	CMOS		
Ethernet C (ETH3)	Y34	ETH_C_(S)(R)(G)MII_TXD2	AF19	PH6	ETH3_TXD2	Output	1.8V	CMOS		
Ethernet C (ETH3)	AA34	ETH_C_(S)(R)(G)MII_TXD3	AE19	PH3	ETH3_TXD3	Output	1.8V	CMOS		
Ethernet C (ETH3)	R34	ETH_C_SDP	N/A	N/A						
Ethernet C (ETH3)	N33	ETH_CDE_MDC	AA15	PF0	ETH1_MDC	Output	1.8V	CMOS		Connected to ETH_MDC
Ethernet C (ETH3)	P33	ETH_CDE_MDIO	AC15	PF2	ETH1_MDIO	Bidirectional	1.8V	Open Drain		Connected to ETH_MDIO
GPIO A	D17	GPIO_A_0	C11	PB7	PB7	I/O	1.8V	CMOS		
GPIO A	E17	GPIO_A_1	AF10	PF4	PF4	I/O	1.8V	CMOS		
GPIO A	F17	GPIO_A_2	AA11	PF5	PF5	I/O	1.8V	CMOS		
GPIO A	G17	GPIO_A_3	R2	PF15	PF15	I/O	1.8V	CMOS		
GPIO A	H17	GPIO_A_4	U2	PG7	PG7	I/O	1.8V	CMOS		
GPIO A	J17	GPIO_A_5	L5	PG8	PG8	I/O	1.8V	CMOS		
GPIO A	K17	GPIO_A_6/SPI_A_CS1#	K4	PI5	PI5	I/O	1.8V	CMOS		
GPIO A	L17	GPIO_A_7/SPI_B_CS1#	U5	PI8	PI8	I/O	1.8V	CMOS		
GPIO B	D19	GPIO_B_0	AG5	PG2	PG2	I/O	1.8V	CMOS		
GPIO B	E19	GPIO_B_1	AG18	PH5	PH5	I/O	1.8V	CMOS		
GPIO B	F19	GPIO_B_2	N/A	N/A						
GPIO B	G19	GPIO_B_3	N/A	N/A						
GPIO B	H19	GPIO_B_4	N/A	N/A						
GPIO B	J19	GPIO_B_5	N/A	N/A						
GPIO B	K19	GPIO_B_6	N/A	N/A						
GPIO B	L19	GPIO_B_7	N/A	N/A						
I2C A (I2C2)	AA15	I2C_A_SCL	P1	PG13	I2C1_SCL	Output	1.8V	Open Drain	PU 2.2K	Device addresses 0x32 and 0x50 reserved for RTC and EEPROM on SOM
I2C A (I2C2)	AA16	I2C_A_SDA	M6	PI1	I2C1_SDA	Bidirectional	1.8V	Open Drain	PU 2.2K	Device addresses 0x32 and 0x50 reserved for RTC and EEPROM on SOM
I2C B (I2C3)	AA20	I2C_B_SCL	C14	PB5	I2C2_SCL	Output	1.8V	Open Drain	PU 2.2K	
I2C B (I2C3)	AA21	I2C_B_SDA	B15	PB4	I2C2_SDA	Bidirectional	1.8V	Open Drain	PU 2.2K	
I2S (SAI3)	V18	I2S_MCLK	L7	PI0	SAI4_MCLK_B	Output	1.8V	CMOS		

I2S A (SAI3)	W20	I2S_A_BITCLK	N5	PI2	SAI4_SCK_B	Output	1.8V	CMOS		
I2S A (SAI3)	V21	I2S_A_DATA_IN	N/A	N/A						
I2S A (SAI3)	W21	I2S_A_DATA_OUT	A19	PD1	SAI4_SD_A	Output	1.8V	CMOS		
I2S A (SAI3)	W18	I2S_A_LRCLK	P6	PI4	SAI4_FS_B	Output	1.8V	CMOS		
I2S B	T19	I2S_B_BITCLK	N/A	N/A						
I2S B	V19	I2S_B_DATA_IN	N/A	N/A						
I2S B	W19	I2S_B_DATA_OUT	N7	PI3	SAI4_SD_B	Output	1.8V	CMOS		
I2S B	T18	I2S_B_LRCLK	N/A	N/A						
LVDS	AN23	LVDS_BL_EN	N/A	N/A						
LVDS	AN22	LVDS_BL_PWM	F10	PB9	TIM10_CH1	Output	1.8V	CMOS		
LVDS	AM11	LVDS_I2C_CLK	T3	PG6	I2C6_SCL	Output	1.8V	Open Drain	PU 2.2K	
LVDS	AM12	LVDS_I2C_DAT	R3	PG5	I2C6_SDA	Bidirectional	1.8V	Open Drain	PU 2.2K	
LVDS	AN14	LVDS_VDD_EN	N/A	N/A						
LVDS A (LVDS1)	AN12	LVDS_A_CLK_N	K2	LVDS1_D4N	LVDS1_CLK_N	Output	LVDS	PHY		
LVDS A (LVDS1)	AN13	LVDS_A_CLK_P	K1	LVDS1_D4P	LVDS1_CLK_P	Output	LVDS	PHY		
LVDS A (LVDS1)	AP17	LVDS_A_LANE0_N	G3	LVDS1_D0N	LVDS1_TX0_N	Output	LVDS	PHY		
LVDS A (LVDS1)	AP18	LVDS_A_LANE0_P	G2	LVDS1_D0P	LVDS1_TX0_P	Output	LVDS	PHY		
LVDS A (LVDS1)	AR15	LVDS_A_LANE1_N	H4	LVDS1_D1N	LVDS1_TX1_N	Output	LVDS	PHY		
LVDS A (LVDS1)	AR16	LVDS_A_LANE1_P	H3	LVDS1_D1P	LVDS1_TX1_P	Output	LVDS	PHY		
LVDS A (LVDS1)	AP14	LVDS_A_LANE2_N	J2	LVDS1_D2N	LVDS1_TX2_N	Output	LVDS	PHY		
LVDS A (LVDS1)	AP15	LVDS_A_LANE2_P	J1	LVDS1_D2P	LVDS1_TX2_P	Output	LVDS	PHY		
LVDS A (LVDS1)	AP11	LVDS_A_LANE3_N	L3	LVDS1_D3N	LVDS1_TX3_N	Output	LVDS	PHY		
LVDS A (LVDS1)	AP12	LVDS_A_LANE3_P	L2	LVDS1_D3P	LVDS1_TX3_P	Output	LVDS	PHY		
MIPI CSI A (CSI)	B3	CSI_A_CLOCK_N	D4	CSI_CKN	CSI_CLK_N	Input	LVDS	PHY		
MIPI CSI A (CSI)	B4	CSI_A_CLOCK_P	C4	CSI_CKP	CSI_CLK_P	Input	LVDS	PHY		
MIPI CSI A (CSI)	C1	CSI_A_DATA0_N	A3	CSI_D0N	CSI_D0_N	Input	LVDS	PHY		
MIPI CSI A (CSI)	B1	CSI_A_DATA0_P	B3	CSI_D0P	CSI_D0_P	Input	LVDS	PHY		
MIPI CSI A (CSI)	A2	CSI_A_DATA1_N	C5	CSI_D1N	CSI_D1_N	Input	LVDS	PHY		
MIPI CSI A (CSI)	A3	CSI_A_DATA1_P	B5	CSI_D1P	CSI_D1_P	Input	LVDS	PHY		
MIPI CSI A (CSI)	A5	CSI_A_DATA2_N	N/A	N/A						
MIPI CSI A (CSI)	A6	CSI_A_DATA2_P	N/A	N/A						
MIPI CSI A (CSI)	B6	CSI_A_DATA3_N	N/A	N/A						
MIPI CSI A (CSI)	B7	CSI_A_DATA3_P	N/A	N/A						
MIPI CSI A (CSI)	N/A	N/A	F6	CSI_REXT	NetR47_2	Input	1.8V	Analog	PD 200R	
MIPI CSI A (CSI)	C4	CAM_A_SCL/CSI_A_TX_P	A15	PD11	I2C4_SCL	Output	1.8V	Open Drain	PU 2.2K	
MIPI CSI A (CSI)	C3	CAM_A_SDA/CSI_A_TX_N	C17	PD10	I2C4_SDA	Bidirectional	1.8V	Open Drain	PU 2.2K	
MIPI DSI (DSI)	AB8	DSI_CLOCK_N/LVDS_A_CLK_N	C8	DSI_CKN	DSI_CLK_N	Output	LVDS	PHY		
MIPI DSI (DSI)	AB7	DSI_CLOCK_P/LVDS_A_CLK_P	C7	DSI_CKP	DSI_CLK_P	Output	LVDS	PHY		
MIPI DSI (DSI)	AB11	DSI_DATA0_N/LVDS_A_LANE0_N	C9	DSI_D0N	DSI_D0_N	Output	LVDS	PHY		
MIPI DSI (DSI)	AB10	DSI_DATA0_P/LVDS_A_LANE0_P	B9	DSI_D0P	DSI_D0_P	Output	LVDS	PHY		
MIPI DSI (DSI)	AC9	DSI_DATA1_N/LVDS_A_LANE1_N	A10	DSI_D1N	DSI_D1_N	Output	LVDS	PHY		
MIPI DSI (DSI)	AC8	DSI_DATA1_P/LVDS_A_LANE1_P	B10	DSI_D1P	DSI_D1_P	Output	LVDS	PHY		
MIPI DSI (DSI)	AC6	DSI_DATA2_N/LVDS_A_LANE2_N	A7	DSI_D2N	DSI_D2_N	Output	LVDS	PHY		
MIPI DSI (DSI)	AC5	DSI_DATA2_P/LVDS_A_LANE2_P	B7	DSI_D2P	DSI_D2_P	Output	LVDS	PHY		
MIPI DSI (DSI)	AB5	DSI_DATA3_N/LVDS_A_LANE3_N	B6	DSI_D3N	DSI_D3_N	Output	LVDS	PHY		
MIPI DSI (DSI)	AB4	DSI_DATA3_P/LVDS_A_LANE3_P	A6	DSI_D3P	DSI_D3_P	Output	LVDS	PHY		
MIPI DSI (DSI)	N/A	N/A	D6	DSI_REXT	NetR51_2	Input	1.8V	Analog	PD 200R	
MIPI DSI (DSI)	AA3	DSI_TE	N/A	N/A						
PCIe (PCIe)	W2	PCIe_CLKREQ#	D8	PB8	PCIe_nCLKREQ	Input	1.8V	CMOS	PU 10K	
PCIe (PCIe)	Y1	PCIe_REFCLK_N	AG26	PCIe_CLKOUTN	PCIe_CLKOUT_N	Output	LVDS	PHY		
PCIe (PCIe)	W1	PCIe_REFCLK_P	AF26	PCIe_CLKOUTP	PCIe_CLKOUT_P	Output	LVDS	PHY		
PCIe (PCIe)	R2	PCIe_SM_ALERT#	N/A	N/A						
PCIe (PCIe)	T1	PCIe_SMCLK	N/A	N/A						
PCIe (PCIe)	U1	PCIe_SMDAT	N/A	N/A						
PCIe (PCIe)	T2	PCIe_WAKE#	AA13	PH9	PCIe_nWAKE	Input	1.8V	CMOS	PU 10K	
PCIe (PCIe)	N/A	N/A	AF27	COMBOPHY_REXT	NetR48_2	Input		Analog	PD 200R	Grounded with resistor

PCle_A (PCle)	AB2	PCle_A_HSI0_N	AF25	COMBOPHY_RX1N	PCIE_RX1_N	Input	LVDS	PHY		
PCle_A (PCle)	AB1	PCle_A_HSI0_P	AG25	COMBOPHY_RX1P	PCIE_RX1_P	Input	LVDS	PHY		
PCle_A (PCle)	AC3	PCle_A_HSO0_N	AD24	COMBOPHY_TX1N	PCIE_TX1_N	Output	LVDS	PHY		
PCle_A (PCle)	AC2	PCle_A_HSO0_P	AE24	COMBOPHY_TX1P	PCIE_TX1_P	Output	LVDS	PHY		
PCle_A (PCle)	V2	PCle_A_PERST#	AC13	PA12	PCIE_nRST	Output	1.8V	CMOS		
PWM	E18	PWM_0/DISP_BL_PWM	AE10	PF8	TIM12_CH2	Output	1.8V	CMOS		
PWM	F18	PWM_1	AE6	PB15	TIM3_CH2	Output	1.8V	CMOS		
PWM	G18	PWM_2	AE4	PF11	TIM2_CH4	Output	1.8V	CMOS		
PWM	H18	PWM_3	P4	PF12	TIM5_CH1	Output	1.8V	CMOS		
PWM	J18	PWM_4	N/A	N/A						
PWM	K18	PWM_5	N/A	N/A						
SDIO A (SDMMC1)	J21	SDIO_A_CD#	C15	PD9	uSD_nDETECT	Input	1.8V	CMOS		Needs a 10K pull-up
SDIO A (SDMMC1)	F21	SDIO_A_CLK	C21	PE3	SDMMC1_CK	Output	3.3V/1.8V	CMOS		22-ohm series resistor on SOM
SDIO A (SDMMC1)	E20	SDIO_A_CMD	C20	PE2	SDMMC1_CMD	Bidirectional	3.3V/1.8V	CMOS		
SDIO A (SDMMC1)	G20	SDIO_A_D0	B21	PE4	SDMMC1_D0	Bidirectional	3.3V/1.8V	CMOS		
SDIO A (SDMMC1)	G21	SDIO_A_D1	C22	PE5	SDMMC1_D1	Bidirectional	3.3V/1.8V	CMOS		
SDIO A (SDMMC1)	H20	SDIO_A_D2	B19	PE0	SDMMC1_D2	Bidirectional	3.3V/1.8V	CMOS		
SDIO A (SDMMC1)	H21	SDIO_A_D3	C19	PE1	SDMMC1_D3	Bidirectional	3.3V/1.8V	CMOS		
SDIO A (SDMMC1)	C20	SDIO_A_IOPWR	N/A	N/A	VDD_SDMMC1	Output	3.3V/1.8V	Power		Maximum 100mA load allowed
SDIO A (SDMMC1)	D21	SDIO_A_PWR_EN	N/A	N/A - INT SOM PMIC	uSD_PWRON	Output	1.8V	Power		PMIC LDO; Prototypes used SOC: [D12:GPIO_PD2]
SDIO A (SDMMC1)	D20	SDIO_A_WP	N/A	N/A						
SPI A (SPI2)	Y15	SPI_A_CS0#	B14	PB3	SPI2_NSS	Output	1.8V	CMOS		
SPI A (SPI2)	W15	SPI_A_HOLD_(IO3)	N/A	N/A						
SPI A (SPI2)	U16	SPI_A_SCK	B13	PB0	SPI2_SCK	Output	1.8V	CMOS		
SPI A (SPI2)	U15	SPI_A_SDI_(IO1)	C13	PB6	SPI2_MISO	Input	1.8V	CMOS		
SPI A (SPI2)	V15	SPI_A_SDO_(IO0)	A14	PB2	SPI2_MOSI	Output	1.8V	CMOS		
SPI A (SPI2)	W16	SPI_A_WP_(IO2)	N/A	N/A						
SPI B (SPI4)	AA23	SPI_B_CS0#	B18	PD5	SPI4_NSS	Output	1.8V	CMOS		
SPI B (SPI4)	Y21	SPI_B_SCK	D20	PD7	SPI4_SCK	Output	1.8V	CMOS		
SPI B (SPI4)	Y22	SPI_B_SDI	C18	PD4	SPI4_MISO	Input	1.8V	CMOS		
SPI B (SPI4)	Y23	SPI_B_SDO	A18	PD6	SPI4_MOSI	Output	1.8V	CMOS		
SPI C (SPI8)	C30	SPI_C_CS0#	V3	PZ4	PZ4	Output	1.8V	CMOS		
SPI C (SPI8)	D29	SPI_C_SCK	R5	PZ5	SPI8_SCK	Output	1.8V	CMOS		Shared with WIRELESS: GPIO[9] SPI_CLK
SPI C (SPI8)	C29	SPI_C_SDI	V1	PZ8	SPI8_MISO	Input	1.8V	CMOS		Shared with WIRELESS: GPIO[6] SPI_TXD
SPI C (SPI8)	D30	SPI_C_SDO	V2	PZ7	SPI8_MOSI	Output	1.8V	CMOS		Shared with WIRELESS: GPIO[7] SPI_RXD
Test	C18	TEST_GENERIC	N/A	N/A						
Test	M19	VCC_2_TEST	Multiple	VDDCPU	VDDCPU_0V8	Output	0.8V	Analog		1K series resistor on SOM
Test	Y16	VCC_3_TEST	Multiple	VDDCORE	VDDCORE_0V8	Output	0.8V	Analog		1K series resistor on SOM
Test	Y20	VCC_4_TEST	Multiple	VDDGPU	VDDGPU_0V8	Output	0.8V	Analog		1K series resistor on SOM
Test	Y3	VCC_5_TEST	N/A	N/A	VDD1DDR_1V8	Output	1.8V	Analog		1K series resistor on SOM
Test	C5	VCC_6_TEST	Multiple	VDDQDDR	VDD2DDR_1V1	Output	1.1V	Analog		1K series resistor on SOM
Test	AA33	VCC_7_TEST	N/A	N/A	VDDMEMC_2V9	Output	2.9V	Analog		1K series resistor on SOM
Test	B29	VCC_8_TEST	AB3	VDD18AON	VDDAON_1V8	Output	1.8V	Analog		1K series resistor on SOM
UART A (USART1)	C14	UART_A_CTS	A11	PB11	USART1_CTS	Input	1.8V	CMOS		
UART A (USART1)	C13	UART_A_RTS	AC19	PA1	USART1_RTS	Output	1.8V	CMOS		
UART A (USART1)	A14	UART_A_RX	K6	PG15	USART1_RX	Input	1.8V	CMOS		
UART A (USART1)	B13	UART_A_TX	N1	PG14	USART1_TX	Output	1.8V	CMOS		
UART B (USART3)	D16	UART_B_CTS	P2	PF13	USART3_CTS	Input	1.8V	CMOS		
UART B (USART3)	D15	UART_B_RTS	P3	PF14	USART3_RTS	Output	1.8V	CMOS		
UART B (USART3)	D14	UART_B_RX	J5	PI7	USART3_RX	Input	1.8V	CMOS		
UART B (USART3)	D13	UART_B_TX	J3	PI6	USART3_TX	Output	1.8V	CMOS		
UART C (UART5)	A22	UART_C_RX	M4	PG10	UART5_RX	Input	1.8V	CMOS		
UART C (UART5)	B23	UART_C_TX	M3	PG9	UART5_TX	Output	1.8V	CMOS		
UART Console (USART2)	D22	UART_CON_RX	AA17	PA8	USART2_RX	Input	1.8V	CMOS		
UART Console (USART2)	D23	UART_CON_TX	AG17	PA4	USART2_TX	Output	1.8V	CMOS		
UART D (UART7)	C22	UART_D_RX	B17	PD0	UART7_RX	Input	1.8V	CMOS		

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UART D (UART7)	C23	UART_D_TX	G13	PD3	UART7_TX	Output	1.8V	CMOS		
USB A (USBC_A)	AB13	USB_A_D_N	AG22	USB3DR_DM	USBDN_N	Bidirectional	LVDS	PHY		
USB A (USBC_A)	AC14	USB_A_D_P	AF22	USB3DR_DP	USBDN_P	Bidirectional	LVDS	PHY		
USB A (USBC_A)	N/A	N/A - INT SOM	AF23	USB3DR_TXRTUNE	NetR50_2	Input	1.8V	Analog	PD	Grounded with resistor
USB A (USBC_A)	AC16	USB_A_EN	N/A	N/A						
USB A (USBC_A)	AB14	USB_A_ID	AA7	PG3	USBDN_ID	Input	1.8V	CMOS		
USB A (USBC_A)	AC15	USB_A_OC#	AD4	PG1	USBDN_nOC	Input	1.8V	CMOS		
USB A (USBC_A)	AB16	USB_A_VBUS	AE5	PF10	USBDN_VBUS_DET	Input	5V	Analog		Divided down to safe level on SOM for MPU I/O
USB C (USBC_C)	D11	USB_C_D_N	AG21	USBH_HS_DM	USBH_N	Bidirectional	LVDS	PHY		
USB C (USBC_C)	D10	USB_C_D_P	AF21	USBH_HS_DP	USBH_P	Bidirectional	LVDS	PHY		
USB C (USBC_C)	N/A	N/A - INT SOM	AE20	USBH_HS_TXRTUNE	NetR49_2	Input	1.8V	Analog	PD	Grounded with resistor
USB C (USBC_C)	C10	USB_C_EN	N/A	N/A						
USB C (USBC_C)	D9	USB_C_ID	N/A	N/A						
USB C (USBC_C)	C8	USB_C_OC#	AB16	PH4	USBH_nOC	Input	1.8V	CMOS		
USB C (USBC_C)	B11	USB_C_SSRX_N	N/A	N/A						
USB C (USBC_C)	B10	USB_C_SSRX_P	N/A	N/A						
USB C (USBC_C)	A9	USB_C_SSTX_N	N/A	N/A						
USB C (USBC_C)	A8	USB_C_SSTX_P	N/A	N/A						
USB C (USBC_C)	C9	USB_C_VBUS	N/A	N/A						
Vendor	B22	VENDOR_DEFINED	N/A	N/A						
Vendor	C16	VENDOR_DEFINED	N/A	N/A						
Vendor	D6	VENDOR_DEFINED	AB18	UCPD1_CC1	UCPD1_CC1	Bidirectional	3.3V	Analog		
Vendor	D7	VENDOR_DEFINED	AA19	UCPD1_CC2	UCPD1_CC2	Bidirectional	3.3V	Analog		
Vendor	P16	VENDOR_DEFINED	N/A	N/A						
Vendor	Y29	VENDOR_DEFINED	N/A	N/A						
Vendor	Y30	VENDOR_DEFINED	N/A	N/A						
Vendor	Y31	VENDOR_DEFINED	N/A	N/A						
Vendor	AA29	VENDOR_DEFINED	N/A	N/A						
Vendor	AA30	VENDOR_DEFINED	N/A	N/A						
Vendor	AA31	VENDOR_DEFINED	N/A	N/A						
Vendor	AK32	VENDOR_DEFINED	N/A	N/A						
Vendor	AK33	VENDOR_DEFINED	N/A	N/A						
Vendor	AL32	VENDOR_DEFINED	N/A	N/A						
Vendor	AL33	VENDOR_DEFINED	N/A	N/A						
Vendor	AM32	VENDOR_DEFINED	N/A	N/A						
Vendor	AM33	VENDOR_DEFINED	N/A	N/A						
— Section 2: Power & Ground —										
Power	V17	CARRIER_PWR_EN	N/A	N/A	CARRIER_PWR_EN	Output	1.8V	CMOS		Buffered output of NRST
Power	Y13	CARRIER_STBY#	N/A	N/A		NC				
Power	W17	RTC_PWR	T6	VBAT	VBACKUP	Input	3V	Power		RTC backup battery or supercap (1.2V - 5.5V range accepted)
Power	Y25	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	Y26	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	Y27	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	Y28	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	AE4	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	AF4	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	AG4	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	AH3	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	AH4	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	AJ3	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	AJ4	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	AK4	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	Y8	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	Y9	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	Y10	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		

Power	Y11	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	Y17	VCC_IN_5V	N/A	N/A	VSYS_5V	Input	5V	Power		
Power	U18	VCC_OUT_IO	N/A	N/A		NC				
Power	AA18	VBAT	N/A	N/A		NC				
Power	AB18	VBAT	N/A	N/A		NC				
Power	Y19	VCC_IN_3V3	N/A	N/A		NC				
Ground	E15	GND	Multiple	VSS	GND		0V	Power		
Ground	E21	GND	Multiple	VSS	GND		0V	Power		
Ground	F16	GND	Multiple	VSS	GND		0V	Power		
Ground	F20	GND	Multiple	VSS	GND		0V	Power		
Ground	J16	GND	Multiple	VSS	GND		0V	Power		
Ground	J20	GND	Multiple	VSS	GND		0V	Power		
Ground	L18	GND	Multiple	VSS	GND		0V	Power		
Ground	M16	GND	Multiple	VSS	GND		0V	Power		
Ground	M20	GND	Multiple	VSS	GND		0V	Power		
Ground	P18	GND	Multiple	VSS	GND		0V	Power		
Ground	R16	GND	Multiple	VSS	GND		0V	Power		
Ground	R20	GND	Multiple	VSS	GND		0V	Power		
Ground	V16	GND	Multiple	VSS	GND		0V	Power		
Ground	V20	GND	Multiple	VSS	GND		0V	Power		
Ground	Y18	GND	Multiple	VSS	GND		0V	Power		
Ground	AA14	GND	Multiple	VSS	GND		0V	Power		
Ground	AA17	GND	Multiple	VSS	GND		0V	Power		
Ground	AA19	GND	Multiple	VSS	GND		0V	Power		
Ground	AA22	GND	Multiple	VSS	GND		0V	Power		
Ground	AB15	GND	Multiple	VSS	GND		0V	Power		
Ground	AB21	GND	Multiple	VSS	GND		0V	Power		
Ground	A4	GND	Multiple	VSS	GND		0V	Power		
Ground	A7	GND	Multiple	VSS	GND		0V	Power		
Ground	A10	GND	Multiple	VSS	GND		0V	Power		
Ground	B2	GND	Multiple	VSS	GND		0V	Power		
Ground	B5	GND	Multiple	VSS	GND		0V	Power		
Ground	B8	GND	Multiple	VSS	GND		0V	Power		
Ground	B9	GND	Multiple	VSS	GND		0V	Power		
Ground	C11	GND	Multiple	VSS	GND		0V	Power		
Ground	D1	GND	Multiple	VSS	GND		0V	Power		
Ground	D5	GND	Multiple	VSS	GND		0V	Power		
Ground	D8	GND	Multiple	VSS	GND		0V	Power		
Ground	D18	GND	Multiple	VSS	GND		0V	Power		
Ground	E2	GND	Multiple	VSS	GND		0V	Power		
Ground	H2	GND	Multiple	VSS	GND		0V	Power		
Ground	H4	GND	Multiple	VSS	GND		0V	Power		
Ground	L2	GND	Multiple	VSS	GND		0V	Power		
Ground	L4	GND	Multiple	VSS	GND		0V	Power		
Ground	P2	GND	Multiple	VSS	GND		0V	Power		
Ground	P4	GND	Multiple	VSS	GND		0V	Power		
Ground	R1	GND	Multiple	VSS	GND		0V	Power		
Ground	U2	GND	Multiple	VSS	GND		0V	Power		
Ground	U4	GND	Multiple	VSS	GND		0V	Power		
Ground	V1	GND	Multiple	VSS	GND		0V	Power		
Ground	W3	GND	Multiple	VSS	GND		0V	Power		
Ground	Y2	GND	Multiple	VSS	GND		0V	Power		
Ground	AA1	GND	Multiple	VSS	GND		0V	Power		
Ground	AA4	GND	Multiple	VSS	GND		0V	Power		
Ground	AA7	GND	Multiple	VSS	GND		0V	Power		
Ground	AA8	GND	Multiple	VSS	GND		0V	Power		

Ground	AA10	GND	Multiple	VSS	GND	0V	Power
Ground	AA11	GND	Multiple	VSS	GND	0V	Power
Ground	AB3	GND	Multiple	VSS	GND	0V	Power
Ground	AB6	GND	Multiple	VSS	GND	0V	Power
Ground	AB9	GND	Multiple	VSS	GND	0V	Power
Ground	AC4	GND	Multiple	VSS	GND	0V	Power
Ground	AC7	GND	Multiple	VSS	GND	0V	Power
Ground	AC10	GND	Multiple	VSS	GND	0V	Power
Ground	A26	GND	Multiple	VSS	GND	0V	Power
Ground	A29	GND	Multiple	VSS	GND	0V	Power
Ground	A32	GND	Multiple	VSS	GND	0V	Power
Ground	B27	GND	Multiple	VSS	GND	0V	Power
Ground	B28	GND	Multiple	VSS	GND	0V	Power
Ground	B30	GND	Multiple	VSS	GND	0V	Power
Ground	B33	GND	Multiple	VSS	GND	0V	Power
Ground	C25	GND	Multiple	VSS	GND	0V	Power
Ground	C32	GND	Multiple	VSS	GND	0V	Power
Ground	C35	GND	Multiple	VSS	GND	0V	Power
Ground	D28	GND	Multiple	VSS	GND	0V	Power
Ground	D34	GND	Multiple	VSS	GND	0V	Power
Ground	F33	GND	Multiple	VSS	GND	0V	Power
Ground	F35	GND	Multiple	VSS	GND	0V	Power
Ground	G34	GND	Multiple	VSS	GND	0V	Power
Ground	H32	GND	Multiple	VSS	GND	0V	Power
Ground	J33	GND	Multiple	VSS	GND	0V	Power
Ground	J35	GND	Multiple	VSS	GND	0V	Power
Ground	K34	GND	Multiple	VSS	GND	0V	Power
Ground	M35	GND	Multiple	VSS	GND	0V	Power
Ground	N34	GND	Multiple	VSS	GND	0V	Power
Ground	T34	GND	Multiple	VSS	GND	0V	Power
Ground	W34	GND	Multiple	VSS	GND	0V	Power
Ground	AA25	GND	Multiple	VSS	GND	0V	Power
Ground	AA26	GND	Multiple	VSS	GND	0V	Power
Ground	AA27	GND	Multiple	VSS	GND	0V	Power
Ground	AA28	GND	Multiple	VSS	GND	0V	Power
Ground	AA32	GND	Multiple	VSS	GND	0V	Power
Ground	AB28	GND	Multiple	VSS	GND	0V	Power
Ground	AB31	GND	Multiple	VSS	GND	0V	Power
Ground	AB34	GND	Multiple	VSS	GND	0V	Power
Ground	AC27	GND	Multiple	VSS	GND	0V	Power
Ground	AC30	GND	Multiple	VSS	GND	0V	Power
Ground	AC33	GND	Multiple	VSS	GND	0V	Power
Ground	AE2	GND	Multiple	VSS	GND	0V	Power
Ground	AE34	GND	Multiple	VSS	GND	0V	Power
Ground	AF35	GND	Multiple	VSS	GND	0V	Power
Ground	AG3	GND	Multiple	VSS	GND	0V	Power
Ground	AH2	GND	Multiple	VSS	GND	0V	Power
Ground	AH34	GND	Multiple	VSS	GND	0V	Power
Ground	AJ35	GND	Multiple	VSS	GND	0V	Power
Ground	AK3	GND	Multiple	VSS	GND	0V	Power
Ground	AL2	GND	Multiple	VSS	GND	0V	Power
Ground	AL34	GND	Multiple	VSS	GND	0V	Power
Ground	AM13	GND	Multiple	VSS	GND	0V	Power
Ground	AM16	GND	Multiple	VSS	GND	0V	Power
Ground	AM19	GND	Multiple	VSS	GND	0V	Power
Ground	AM22	GND	Multiple	VSS	GND	0V	Power

Ground	AM35	GND	Multiple	VSS	GND	0V	Power
Ground	AN3	GND	Multiple	VSS	GND	0V	Power
Ground	AN6	GND	Multiple	VSS	GND	0V	Power
Ground	AN9	GND	Multiple	VSS	GND	0V	Power
Ground	AN11	GND	Multiple	VSS	GND	0V	Power
Ground	AN15	GND	Multiple	VSS	GND	0V	Power
Ground	AN18	GND	Multiple	VSS	GND	0V	Power
Ground	AN21	GND	Multiple	VSS	GND	0V	Power
Ground	AN33	GND	Multiple	VSS	GND	0V	Power
Ground	AP2	GND	Multiple	VSS	GND	0V	Power
Ground	AP5	GND	Multiple	VSS	GND	0V	Power
Ground	AP8	GND	Multiple	VSS	GND	0V	Power
Ground	AP13	GND	Multiple	VSS	GND	0V	Power
Ground	AP16	GND	Multiple	VSS	GND	0V	Power
Ground	AP19	GND	Multiple	VSS	GND	0V	Power
Ground	AP22	GND	Multiple	VSS	GND	0V	Power
Ground	AP25	GND	Multiple	VSS	GND	0V	Power
Ground	AP28	GND	Multiple	VSS	GND	0V	Power
Ground	AP31	GND	Multiple	VSS	GND	0V	Power
Ground	AP34	GND	Multiple	VSS	GND	0V	Power
Ground	AR14	GND	Multiple	VSS	GND	0V	Power
Ground	AR17	GND	Multiple	VSS	GND	0V	Power
Ground	AR20	GND	Multiple	VSS	GND	0V	Power
Ground	AR26	GND	Multiple	VSS	GND	0V	Power
Ground	AR29	GND	Multiple	VSS	GND	0V	Power
Ground	AR32	GND	Multiple	VSS	GND	0V	Power
Ground	K32	GND	Multiple	VSS	GND	0V	Power
Ground	M32	GND	Multiple	VSS	GND	0V	Power
Ground	R32	GND	Multiple	VSS	GND	0V	Power
Antenna	A15	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	A17	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	A18	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	A19	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	A21	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	B15	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	B16	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	B17	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	B18	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	B19	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	B20	ANT_GND	Multiple	VSS	GND	0V	Power
Antenna	B21	ANT_GND	Multiple	VSS	GND	0V	Power

— Section 3: Unused OSM Peripherals —

Antenna	A20	ANT_AUX	N/A	N/A
Antenna	C21	ANT_AUX_TEST	N/A	N/A
Antenna	C19	ANT_B_AUX_TEST	N/A	N/A
Antenna	C17	ANT_B_MAIN_TEST	N/A	N/A
Antenna	C15	ANT_MAIN_TEST	N/A	N/A
Embedded Display Port A	C34	eDP_A_AUX_N	N/A	N/A
Embedded Display Port A	C33	eDP_A_AUX_P	N/A	N/A
Embedded Display Port A	D32	eDP_A_AUX_SEL	N/A	N/A
Embedded Display Port A	D31	eDP_A_BL_EN	N/A	N/A
Embedded Display Port A	C31	eDP_A_BL_PWM	N/A	N/A
Embedded Display Port A	D33	eDP_A_HPDP	N/A	N/A
Embedded Display Port A	A31	eDP_A_LANE0_N	N/A	N/A
Embedded Display Port A	A30	eDP_A_LANE0_P	N/A	N/A
Embedded Display Port A	B32	eDP_A_LANE1_N	N/A	N/A

Embedded Display Port A	B31	eDP_A_LANE1_P	N/A	N/A						
Embedded Display Port A	A34	eDP_A_LANE2_N	N/A	N/A						
Embedded Display Port A	A33	eDP_A_LANE2_P	N/A	N/A						
Embedded Display Port A	B35	eDP_A_LANE3_N	N/A	N/A						
Embedded Display Port A	B34	eDP_A_LANE3_P	N/A	N/A						
Embedded Display Port B	H33	eDP_B_AUX_N	N/A	N/A						
Embedded Display Port B	G33	eDP_B_AUX_P	N/A	N/A						
Embedded Display Port B	F32	eDP_B_AUX_SEL	N/A	N/A						
Embedded Display Port B	E32	eDP_B_BL_EN	N/A	N/A						
Embedded Display Port B	E33	eDP_B_BL_PWM	N/A	N/A						
Embedded Display Port B	G32	eDP_B_HPD	N/A	N/A						
Embedded Display Port B	E35	eDP_B_LANE0_N	N/A	N/A						
Embedded Display Port B	D35	eDP_B_LANE0_P	N/A	N/A						
Embedded Display Port B	F34	eDP_B_LANE1_N	N/A	N/A						
Embedded Display Port B	E34	eDP_B_LANE1_P	N/A	N/A						
Embedded Display Port B	H35	eDP_B_LANE2_N	N/A	N/A						
Embedded Display Port B	G35	eDP_B_LANE2_P	N/A	N/A						
Embedded Display Port B	J34	eDP_B_LANE3_N	N/A	N/A						
Embedded Display Port B	H34	eDP_B_LANE3_P	N/A	N/A						
Ethernet D	AF3	ETH_D_(R)(G)MII_COL	N/A	N/A						
Ethernet D	AE3	ETH_D_(R)(G)MII_CRS	N/A	N/A						
Ethernet D	AP1	ETH_D_(R)(G)MII_RX_CLK	N/A	N/A						
Ethernet D	AL1	ETH_D_(R)(G)MII_RX_DV(_ER)	N/A	N/A						
Ethernet D	AK2	ETH_D_(R)(G)MII_RX_ER	N/A	N/A						
Ethernet D	AH1	ETH_D_(R)(G)MII_TX_CLK	N/A	N/A						
Ethernet D	AJ2	ETH_D_(R)(G)MII_TX_EN(_ER)	N/A	N/A						
Ethernet D	AJ1	ETH_D_(S)(R)(G)MII_RXD0	N/A	N/A						
Ethernet D	AK1	ETH_D_(S)(R)(G)MII_RXD1	N/A	N/A						
Ethernet D	AM1	ETH_D_(S)(R)(G)MII_RXD2	N/A	N/A						
Ethernet D	AN1	ETH_D_(S)(R)(G)MII_RXD3	N/A	N/A						
Ethernet D	AF1	ETH_D_(S)(R)(G)MII_TXD0	N/A	N/A						
Ethernet D	AG1	ETH_D_(S)(R)(G)MII_TXD1	N/A	N/A						
Ethernet D	AG2	ETH_D_(S)(R)(G)MII_TXD2	N/A	N/A						
Ethernet D	AF2	ETH_D_(S)(R)(G)MII_TXD3	N/A	N/A						
Ethernet D	AM2	ETH_D_SDP	N/A	N/A						
Ethernet E	AR2	ETH_E_(R)(G)MII_COL	N/A	N/A						
Ethernet E	AN4	ETH_E_(R)(G)MII_CRS	N/A	N/A						
Ethernet E	AN10	ETH_E_(R)(G)MII_RX_CLK	N/A	N/A						
Ethernet E	AR8	ETH_E_(R)(G)MII_RX_DV(_ER)	N/A	N/A						
Ethernet E	AP7	ETH_E_(R)(G)MII_RX_ER	N/A	N/A						
Ethernet E	AR5	ETH_E_(R)(G)MII_TX_CLK	N/A	N/A						
Ethernet E	AP6	ETH_E_(R)(G)MII_TX_EN(_ER)	N/A	N/A						
Ethernet E	AR6	ETH_E_(S)(R)(G)MII_RXD0	N/A	N/A						
Ethernet E	AR7	ETH_E_(S)(R)(G)MII_RXD1	N/A	N/A						
Ethernet E	AR9	ETH_E_(S)(R)(G)MII_RXD2	N/A	N/A						
Ethernet E	AR10	ETH_E_(S)(R)(G)MII_RXD3	N/A	N/A						
Ethernet E	AR3	ETH_E_(S)(R)(G)MII_TXD0	N/A	N/A						
Ethernet E	AR4	ETH_E_(S)(R)(G)MII_TXD1	N/A	N/A						
Ethernet E	AP3	ETH_E_(S)(R)(G)MII_TXD2	N/A	N/A						
Ethernet E	AP4	ETH_E_(S)(R)(G)MII_TXD3	N/A	N/A						
Ethernet E	AP9	ETH_E_SDP	N/A	N/A						
GPIO C	D3	GPIO_C_0	N/A	N/A						
GPIO C	D4	GPIO_C_1	N/A	N/A						
GPIO C	E3	GPIO_C_2/CAM_B_PWR	N/A	N/A						
GPIO C	E4	GPIO_C_3/CAM_B_RST#	N/A	N/A						
GPIO C	F3	GPIO_C_4/DISP_VDD_EN	N/A	N/A						

GPIO C	F4	GPIO_C_5/DISP_BL_EN	N/A	N/A
GPIO C	G3	GPIO_C_6/CAM_A_PWR	N/A	N/A
GPIO C	G4	GPIO_C_7/CAM_A_RST#	N/A	N/A
GPIO D	U32	GPIO_D_0	N/A	N/A
GPIO D	U33	GPIO_D_1	N/A	N/A
GPIO D	V32	GPIO_D_2	N/A	N/A
GPIO D	V33	GPIO_D_3	N/A	N/A
GPIO D	W32	GPIO_D_4	N/A	N/A
GPIO D	W33	GPIO_D_5	N/A	N/A
GPIO D	Y32	GPIO_D_6	N/A	N/A
GPIO D	Y33	GPIO_D_7/SPI_C_CS1#	N/A	N/A
GPIO E	AF32	GPIO_E_0	N/A	N/A
GPIO E	AF33	GPIO_E_1	N/A	N/A
GPIO E	AG32	GPIO_E_2	N/A	N/A
GPIO E	AG33	GPIO_E_3	N/A	N/A
GPIO E	AH32	GPIO_E_4	N/A	N/A
GPIO E	AH33	GPIO_E_5	N/A	N/A
GPIO E	AJ32	GPIO_E_6	N/A	N/A
GPIO E	AJ33	GPIO_E_7	N/A	N/A
LVDS B	AN16	LVDS_B_CLK_N	N/A	N/A
LVDS B	AN17	LVDS_B_CLK_P	N/A	N/A
LVDS B	AM20	LVDS_B_LANE0_N	N/A	N/A
LVDS B	AM21	LVDS_B_LANE0_P	N/A	N/A
LVDS B	AN19	LVDS_B_LANE1_N	N/A	N/A
LVDS B	AN20	LVDS_B_LANE1_P	N/A	N/A
LVDS B	AM17	LVDS_B_LANE2_N	N/A	N/A
LVDS B	AM18	LVDS_B_LANE2_P	N/A	N/A
LVDS B	AM14	LVDS_B_LANE3_N	N/A	N/A
LVDS B	AM15	LVDS_B_LANE3_P	N/A	N/A
MIPI CSI	C2	CAM_MCK	N/A	N/A
MIPI CSI B	AB25	CAM_B_SCL/CSI_B_TX_P	N/A	N/A
MIPI CSI B	AB26	CAM_B_SDA/CSI_B_TX_N	N/A	N/A
MIPI CSI B	J32	CSI_B_CLOCK_N	N/A	N/A
MIPI CSI B	K33	CSI_B_CLOCK_P	N/A	N/A
MIPI CSI B	L32	CSI_B_DATA0_N	N/A	N/A
MIPI CSI B	M33	CSI_B_DATA0_P	N/A	N/A
MIPI CSI B	N32	CSI_B_DATA1_N	N/A	N/A
MIPI CSI B	P32	CSI_B_DATA1_P	N/A	N/A
MIPI CSI B	P34	CSI_B_DATA2_N	N/A	N/A
MIPI CSI B	R33	CSI_B_DATA2_P	N/A	N/A
MIPI CSI B	T32	CSI_B_DATA3_N	N/A	N/A
MIPI CSI B	T33	CSI_B_DATA3_P	N/A	N/A
Parallel RGB Display	M4	RGB_(PIXEL)CLK	N/A	N/A
Parallel RGB Display	R4	RGB_B0	N/A	N/A
Parallel RGB Display	R3	RGB_B1	N/A	N/A
Parallel RGB Display	P3	RGB_B2	N/A	N/A
Parallel RGB Display	N3	RGB_B3	N/A	N/A
Parallel RGB Display	N4	RGB_B4	N/A	N/A
Parallel RGB Display	M3	RGB_B5	N/A	N/A
Parallel RGB Display	H3	RGB_CS#	N/A	N/A
Parallel RGB Display	J4	RGB_DE	N/A	N/A
Parallel RGB Display	K4	RGB_DISP	N/A	N/A
Parallel RGB Display	W4	RGB_G0	N/A	N/A
Parallel RGB Display	V3	RGB_G1	N/A	N/A
Parallel RGB Display	V4	RGB_G2	N/A	N/A
Parallel RGB Display	U3	RGB_G3	N/A	N/A

Parallel RGB Display	T3	RGB_G4	N/A	N/A						
Parallel RGB Display	T4	RGB_G5	N/A	N/A						
Parallel RGB Display	K3	RGB_HSYNC	N/A	N/A						
Parallel RGB Display	Y7	RGB_R0	N/A	N/A						
Parallel RGB Display	AA6	RGB_R1	N/A	N/A						
Parallel RGB Display	Y6	RGB_R2	N/A	N/A						
Parallel RGB Display	AA5	RGB_R3	N/A	N/A						
Parallel RGB Display	Y5	RGB_R4	N/A	N/A						
Parallel RGB Display	Y4	RGB_R5	N/A	N/A						
Parallel RGB Display	J3	RGB_RESET#	N/A	N/A						
Parallel RGB Display	L3	RGB_VSYNC	N/A	N/A						
PCI Express B	M34	PCIe_B_HSI0_N	N/A	N/A						
PCI Express B	L34	PCIe_B_HSI0_P	N/A	N/A						
PCI Express B	L35	PCIe_B_HSO0_N	N/A	N/A						
PCI Express B	K35	PCIe_B_HSO0_P	N/A	N/A						
PCI Express B	L33	PCIe_B_PERST#	N/A	N/A						
PCI Express C	AP32	PCIe_C_HSI0_N	N/A	N/A						
PCI Express C	AP33	PCIe_C_HSI0_P	N/A	N/A						
PCI Express C	AP35	PCIe_C_HSI1_N	N/A	N/A						
PCI Express C	AN35	PCIe_C_HSI1_P	N/A	N/A						
PCI Express C	AL35	PCIe_C_HSI2_N	N/A	N/A						
PCI Express C	AK35	PCIe_C_HSI2_P	N/A	N/A						
PCI Express C	AH35	PCIe_C_HSI3_N	N/A	N/A						
PCI Express C	AG35	PCIe_C_HSI3_P	N/A	N/A						
PCI Express C	AR33	PCIe_C_HSO0_N	N/A	N/A						
PCI Express C	AR34	PCIe_C_HSO0_P	N/A	N/A						
PCI Express C	AN34	PCIe_C_HSO1_N	N/A	N/A						
PCI Express C	AM34	PCIe_C_HSO1_P	N/A	N/A						
PCI Express C	AK34	PCIe_C_HSO2_N	N/A	N/A						
PCI Express C	AJ34	PCIe_C_HSO2_P	N/A	N/A						
PCI Express C	AG34	PCIe_C_HSO3_N	N/A	N/A						
PCI Express C	AF34	PCIe_C_HSO3_P	N/A	N/A						
PCI Express C	AE33	PCIe_C_PERST#	N/A	N/A						
PCI Express D	AR18	PCIe_D_HSI0_N	N/A	N/A						
PCI Express D	AR19	PCIe_D_HSI0_P	N/A	N/A						
PCI Express D	AR21	PCIe_D_HSI1_N	N/A	N/A						
PCI Express D	AR22	PCIe_D_HSI1_P	N/A	N/A						
PCI Express D	AP26	PCIe_D_HSI2_N	N/A	N/A						
PCI Express D	AP27	PCIe_D_HSI2_P	N/A	N/A						
PCI Express D	AP29	PCIe_D_HSI3_N	N/A	N/A						
PCI Express D	AP30	PCIe_D_HSI3_P	N/A	N/A						
PCI Express D	AP20	PCIe_D_HSO0_N	N/A	N/A						
PCI Express D	AP21	PCIe_D_HSO0_P	N/A	N/A						
PCI Express D	AP23	PCIe_D_HSO1_N	N/A	N/A						
PCI Express D	AP24	PCIe_D_HSO1_P	N/A	N/A						
PCI Express D	AR27	PCIe_D_HSO2_N	N/A	N/A						
PCI Express D	AR28	PCIe_D_HSO2_P	N/A	N/A						
PCI Express D	AR30	PCIe_D_HSO3_N	N/A	N/A						
PCI Express D	AR31	PCIe_D_HSO3_P	N/A	N/A						
PCI Express D	AN32	PCIe_D_PERST#	N/A	N/A						
Reserved	AA13	RESERVED	N/A	N/A						
Reserved	N2	RESERVED	N/A	N/A						
Reserved	AA2	RESERVED	N/A	N/A						
Reserved	AE32	RESERVED	N/A	N/A						
Reserved	AL3	RESERVED	N/A	N/A						
Reserved	AL4	RESERVED	N/A	N/A						

Reserved	AM3	RESERVED	N/A	N/A						
Reserved	AM4	RESERVED	N/A	N/A						
Reserved	AM5	RESERVED	N/A	N/A						
Reserved	AM6	RESERVED	N/A	N/A						
Reserved	AM7	RESERVED	N/A	N/A						
Reserved	AM8	RESERVED	N/A	N/A						
Reserved	AM9	RESERVED	N/A	N/A						
Reserved	AM10	RESERVED	N/A	N/A						
Reserved	AM23	RESERVED	N/A	N/A						
Reserved	AM24	RESERVED	N/A	N/A						
Reserved	AM25	RESERVED	N/A	N/A						
Reserved	AM26	RESERVED	N/A	N/A						
Reserved	AM27	RESERVED	N/A	N/A						
Reserved	AM28	RESERVED	N/A	N/A						
Reserved	AM29	RESERVED	N/A	N/A						
Reserved	AM30	RESERVED	N/A	N/A						
Reserved	AM31	RESERVED	N/A	N/A						
Reserved	AN2	RESERVED	N/A	N/A						
Reserved	AN5	RESERVED	N/A	N/A						
Reserved	AN7	RESERVED	N/A	N/A						
Reserved	AN8	RESERVED	N/A	N/A						
Reserved	AN24	RESERVED	N/A	N/A						
Reserved	AN25	RESERVED	N/A	N/A						
Reserved	AN26	RESERVED	N/A	N/A						
Reserved	AN27	RESERVED	N/A	N/A						
Reserved	AN28	RESERVED	N/A	N/A						
Reserved	AN29	RESERVED	N/A	N/A						
Reserved	AN30	RESERVED	N/A	N/A						
Reserved	AN31	RESERVED	N/A	N/A						
Reserved	AP10	RESERVED	N/A	N/A						
SDIO B	T21	SDIO_B_CD#	N/A	N/A						
SDIO B	K20	SDIO_B_CLK	N/A	N/A						
SDIO B	K21	SDIO_B_CMD	N/A	N/A						
SDIO B	L20	SDIO_B_D0	N/A	N/A						
SDIO B	L21	SDIO_B_D1	N/A	N/A						
SDIO B	M21	SDIO_B_D2	N/A	N/A						
SDIO B	N20	SDIO_B_D3	N/A	N/A						
SDIO B	N21	SDIO_B_D4	N/A	N/A						
SDIO B	P20	SDIO_B_D5	N/A	N/A						
SDIO B	P21	SDIO_B_D6	N/A	N/A						
SDIO B	R21	SDIO_B_D7	N/A	N/A						
SDIO B	T20	SDIO_B_IOPWR	N/A	N/A						
SDIO B	U21	SDIO_B_PWR_EN	N/A	N/A						
SDIO B	U20	SDIO_B_WP	N/A	N/A						
Universal Flash Storage	AC26	UFS_CLK	N/A	N/A						
Universal Flash Storage	AB27	UFS_RESET#	N/A	N/A						
Universal Flash Storage	AC32	UFS_RX0_N	N/A	N/A						
Universal Flash Storage	AC31	UFS_RX0_P	N/A	N/A						
Universal Flash Storage	AB33	UFS_RX1_N	N/A	N/A						
Universal Flash Storage	AB32	UFS_RX1_P	N/A	N/A						
Universal Flash Storage	AC29	UFS_TX0_N	N/A	N/A						
Universal Flash Storage	AC28	UFS_TX0_P	N/A	N/A						
Universal Flash Storage	AB30	UFS_TX1_N	N/A	N/A						
Universal Flash Storage	AB29	UFS_TX1_P	N/A	N/A						
USB B	AB23	USB_B_D_N	N/A	N/A						
USB B	AC22	USB_B_D_P	N/A	N/A						

USB B	AC20	USB_B_EN	N/A	N/A						
USB B	AB22	USB_B_ID	N/A	N/A						
USB B	AC21	USB_B_OC#	N/A	N/A						
USB B	AB20	USB_B_VBUS	N/A	N/A						
USB D	D26	USB_D_D_N	N/A	N/A						
USB D	D25	USB_D_D_P	N/A	N/A						
USB D	C26	USB_D_EN	N/A	N/A						
USB D	D27	USB_D_ID	N/A	N/A						
USB D	C28	USB_D_OC#	N/A	N/A						
USB D	B26	USB_D_SSRX_N	N/A	N/A						
USB D	B25	USB_D_SSRX_P	N/A	N/A						
USB D	A28	USB_D_SSTX_N	N/A	N/A						
USB D	A27	USB_D_SSTX_P	N/A	N/A						
USB D	C27	USB_D_VBUS	N/A	N/A						

— Section 4: Internal SOM Connections —

Internal SOM - (Boot)	N/A	N/A	AB1	BOOT2		Input	1.8V	CMOS	PD	Grounded; PD (Programmable)
Internal SOM - (Boot)	N/A	N/A	AB2	BOOT3		Input	1.8V	CMOS	PD	Grounded; PD (Programmable)
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	V24	DDR_A2	DDR_A_CA0	Output	1.2V	CMOS	None	LPDDR4: CA0_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	P22	DDR_A3	DDR_A_CA1	Output	1.2V	CMOS	None	LPDDR4: CA1_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	V22	DDR_A8	DDR_A_CA2	Output	1.2V	CMOS	None	LPDDR4: CA2_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	T22	DDR_A9	DDR_A_CA3	Output	1.2V	CMOS	None	LPDDR4: CA3_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	R23	DDR_A10	DDR_A_CA4	Output	1.2V	CMOS	None	LPDDR4: CA4_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	P24	DDR_A11	DDR_A_CA5	Output	1.2V	CMOS	None	LPDDR4: CA5_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	U21	DDR_A0	DDR_A_CKE0	Output	1.2V	CMOS	None	LPDDR4: CKE0_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	T24	DDR_A5	DDR_A_CK_N	Output	LVDS	PHY	None	LPDDR4: CK_C_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	U23	DDR_A4	DDR_A_CK_P	Output	LVDS	PHY	None	LPDDR4: CK_T_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AB26	DDR_DQ0	DDR_A_DATA0	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ0_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AC26	DDR_DQ1	DDR_A_DATA1	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ1_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AB27	DDR_DQ2	DDR_A_DATA2	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ2_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AC27	DDR_DQ3	DDR_A_DATA3	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ3_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	W25	DDR_DQ4	DDR_A_DATA4	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ4_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	W27	DDR_DQ5	DDR_A_DATA5	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ5_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	W26	DDR_DQ6	DDR_A_DATA6	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ6_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	Y25	DDR_DQ7	DDR_A_DATA7	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ7_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	R27	DDR_DQ8	DDR_A_DATA8	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ8_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	R26	DDR_DQ9	DDR_A_DATA9	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ9_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	P27	DDR_DQ10	DDR_A_DATA10	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ10_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	P26	DDR_DQ11	DDR_A_DATA11	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ11_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	V26	DDR_DQ12	DDR_A_DATA12	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ12_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	V27	DDR_DQ13	DDR_A_DATA13	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ13_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	V25	DDR_DQ14	DDR_A_DATA14	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ14_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	U25	DDR_DQ15	DDR_A_DATA15	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ15_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AB25	DDR_DQM0	DDR_A_DMI0	Output	1.2V	CMOS	None	LPDDR4: DMI0_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	U26	DDR_DQM1	DDR_A_DMI1	Output	1.2V	CMOS	None	LPDDR4: DMI1_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	Y24	DDR_A6	DDR_A_nCS0	Output	1.2V	CMOS	None	LPDDR4: CS0_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AA26	DDR_DQS0N	DDR_A_SDQS0_N	Bidirectional	LVDS	PHY	None	LPDDR4: DQS0_C_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AA25	DDR_DQS0P	DDR_A_SDQS0_P	Bidirectional	LVDS	PHY	None	LPDDR4: DQS0_T_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	R25	DDR_DQS1N	DDR_A_SDQS1_N	Bidirectional	LVDS	PHY	None	LPDDR4: DQS1_C_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	T25	DDR_DQS1P	DDR_A_SDQS1_P	Bidirectional	LVDS	PHY	None	LPDDR4: DQS1_T_A
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	M24	DDR_A14	DDR_B_CA0	Output	1.2V	CMOS	None	LPDDR4: CA0_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	N23	DDR_A15	DDR_B_CA1	Output	1.2V	CMOS	None	LPDDR4: CA1_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	J21	DDR_A20	DDR_B_CA2	Output	1.2V	CMOS	None	LPDDR4: CA2_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	H22	DDR_A21	DDR_B_CA3	Output	1.2V	CMOS	None	LPDDR4: CA3_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	F22	DDR_A22	DDR_B_CA4	Output	1.2V	CMOS	None	LPDDR4: CA4_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	E23	DDR_A23	DDR_B_CA5	Output	1.2V	CMOS	None	LPDDR4: CA5_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	H24	DDR_A17	DDR_B_CK_N	Output	LVDS	PHY	None	LPDDR4: CK_C_B

Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	J23	DDR_A16	DDR_B_CK_P	Output	LVDS	PHY	None	LPDDR4: CK_T_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	L23	DDR_A12	DDR_B_CKE0	Output	1.2V	CMOS	None	LPDDR4: CKE0_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	F25	DDR_DQ16	DDR_B_DATA0	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ0_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	E26	DDR_DQ17	DDR_B_DATA1	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ1_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	F24	DDR_DQ18	DDR_B_DATA2	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ2_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	E25	DDR_DQ19	DDR_B_DATA3	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ3_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	J25	DDR_DQ20	DDR_B_DATA4	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ4_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	H25	DDR_DQ21	DDR_B_DATA5	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ5_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	G26	DDR_DQ22	DDR_B_DATA6	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ6_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	G25	DDR_DQ23	DDR_B_DATA7	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ7_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	J26	DDR_DQ24	DDR_B_DATA8	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ8_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	K25	DDR_DQ25	DDR_B_DATA9	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ9_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	K26	DDR_DQ26	DDR_B_DATA10	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ10_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	K27	DDR_DQ27	DDR_B_DATA11	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ11_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	L25	DDR_DQ28	DDR_B_DATA12	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ12_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	N25	DDR_DQ29	DDR_B_DATA13	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ13_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	N26	DDR_DQ30	DDR_B_DATA14	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ14_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	P25	DDR_DQ31	DDR_B_DATA15	Bidirectional	1.2V	CMOS	None	LPDDR4: DQ15_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	G27	DDR_DQM2	DDR_B_DMI0	Output	1.2V	CMOS	None	LPDDR4: DMI0_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	M25	DDR_DQM3	DDR_B_DMI1	Output	1.2V	CMOS	None	LPDDR4: DMI1_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	G23	DDR_A18	DDR_B_nCS0	Output	1.2V	CMOS	None	LPDDR4: CS0_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	F26	DDR_DQS2N	DDR_B_SDQS0_N	Bidirectional	LVDS	PHY	None	LPDDR4: DQS0_C_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	F27	DDR_DQS2P	DDR_B_SDQS0_P	Bidirectional	LVDS	PHY	None	LPDDR4: DQS0_T_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	L27	DDR_DQS3N	DDR_B_SDQS1_N	Bidirectional	LVDS	PHY	None	LPDDR4: DQS1_C_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	L26	DDR_DQS3P	DDR_B_SDQS1_P	Bidirectional	LVDS	PHY	None	LPDDR4: DQS1_T_B
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	E21	DDR_RESETN	DDR_nRESET	Output	1.2V	CMOS	None	LPDDR4: RESET_N
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	K22	DDR_ZQ	MPU_DDR_ZQ	Input		Analog	PD 240R	Calibration pull-down resistor
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	W21	DDR_A25	NC					
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AB24	DDR_A26	NC					
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AA23	DDR_A27	NC					
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AC23	DDR_A28	NC					
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	Y22	DDR_A29	NC					
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	AA21	DDR_A30	NC					
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	W23	DDR_A31	NC					
Internal SOM - (DRAM)	N/A	N/A - INT SOM DRAM	G21	DDR_VREF	NC					
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	B25	PE14	SDMMC2_CK	Output	1.8V	CMOS		eMMC: CLK
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	D24	PE15	SDMMC2_CMD	Bidirectional	1.8V	CMOS		eMMC: CMD
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	C24	PE13	SDMMC2_D0	Bidirectional	1.8V	CMOS		eMMC: DAT0
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	B23	PE11	SDMMC2_D1	Bidirectional	1.8V	CMOS		eMMC: DAT1
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	C23	PE8	SDMMC2_D2	Bidirectional	1.8V	CMOS		eMMC: DAT2
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	C25	PE12	SDMMC2_D3	Bidirectional	1.8V	CMOS		eMMC: DAT3
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	D22	PE10	SDMMC2_D4	Bidirectional	1.8V	CMOS		eMMC: DAT4
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	A23	PE9	SDMMC2_D5	Bidirectional	1.8V	CMOS		eMMC: DAT5
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	A22	PE6	SDMMC2_D6	Bidirectional	1.8V	CMOS		eMMC: DAT6
Internal SOM - (eMMC)	N/A	N/A - INT SOM EMMC	B22	PE7	SDMMC2_D7	Bidirectional	1.8V	CMOS		eMMC: DAT7
Internal SOM - (LVDS)	N/A	N/A	F2	LVDS1_D4N	NC					
Internal SOM - (LVDS)	N/A	N/A	F1	LVDS1_D4P	NC					
Internal SOM - (LVDS)	N/A	N/A	B2	LVDS1_D0N	NC					
Internal SOM - (LVDS)	N/A	N/A	B11	LVDS1_D0P	NC					
Internal SOM - (LVDS)	N/A	N/A	C3	LVDS1_D1N	NC					
Internal SOM - (LVDS)	N/A	N/A	C2	LVDS1_D1P	NC					
Internal SOM - (LVDS)	N/A	N/A	D3	LVDS1_D2N	NC					
Internal SOM - (LVDS)	N/A	N/A	E3	LVDS1_D2P	NC					
Internal SOM - (LVDS)	N/A	N/A	F2	LVDS1_D3N	NC					
Internal SOM - (LVDS)	N/A	N/A	F1	LVDS1_D3P	NC					
Internal SOM - (PMIC)	N/A	N/A - INT SOM PMIC	E15	PD15	I2C7_SCL	Output	1.8V	Open Drain	PU 2.2K	PMIC: SCL

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Internal SOM - (PMIC)	N/A	N/A - INT SOM PMIC	E19	PD14	I2C7_SDA	Bidirectional	1.8V	Open Drain	PU 2.2K	PMIC: SDA
Internal SOM - (PMIC)	N/A	N/A - INT SOM PMIC	AB4	PWR_CPU_ON	PWR_CPU_ON	Output	1.8V	CMOS	PU 20K	PMIC: PWRCTRL2 (Also connected to NRSTC1MS via 10k)
Internal SOM - (PMIC)	N/A	N/A - INT SOM PMIC	AD3	PWR_ON	PWR_ON	Output	1.8V	CMOS		PMIC: PWRCTRL1
Internal SOM - (PMIC)	N/A	N/A - INT SOM PMIC	AF5	PA0	MPU_WAKEUP	Input	1.8V	CMOS		PMIC: INTn
Internal SOM - (PMIC)	N/A	N/A - INT SOM PMIC	W3	NRSTC1MS	NRSTC1MS	Output	1.8V	CMOS	PU 10K	PMIC: PWRCTRL3
Internal SOM - (PMIC)	N/A	N/A - INT SOM PMIC	W7	PC13	PMIC_WAKEUPn	Output	1.8V	CMOS		PMIC: WAKEUPn
Internal SOM - (RTC)	N/A	N/A - INT SOM RTC	B11	PB10	RTC_nINT	Input	1.8V	CMOS		RTC: INT
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	C12	PB10	IW610_nRST	Output	1.8V	CMOS		IW610: PDn
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	C16	PD8	WL_HOST_WAKE	Input	1.8V	CMOS		IW610: GPIO[4] (WL_WAKE_OUT)
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	T4	P20	LPUART1_TX	Output	1.8V	CMOS		IW610: GPIO[14] (UART_SIN)
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	U3	P29	BT_HOST_WAKE	Input	1.8V	CMOS		IW610: GPIO[5] (NB_WAKE_OUT)
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	U7	P21	LPUART1_RX	Input	1.8V	CMOS		IW610: GPIO[15] (UART_SOUT)
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	W5	P22	LPUART1_RTS	Output	1.8V	CMOS		IW610: GPIO[12] (UART_CTSn)
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	Y6	P23	LPUART1_CTS	Input	1.8V	CMOS		IW610: GPIO[13] (UART_RTSn)
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	A26	PB13	SDMMC3_CK	Output	1.8V	CMOS		IW610: SD_CLK
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	B26	PD12	SDMMC3_CMD	Bidirectional	1.8V	CMOS		IW610: SD_CMD
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	C27	PB14	SDMMC3_D0	Bidirectional	1.8V	CMOS		IW610: SD_DAT[0]
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	D25	PD13	SDMMC3_D1	Bidirectional	1.8V	CMOS		IW610: SD_DAT[1]
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	C26	PB12	SDMMC3_D2	Bidirectional	1.8V	CMOS		IW610: SD_DAT[2]
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	B27	PI11	SDMMC3_D3	Bidirectional	1.8V	CMOS		IW610: SD_DAT[3]
Internal SOM - (Wireless)	N/A	N/A - INT SOM WIRELESS	V4	P26	SPI8_NSS	Output	1.8V	CMOS		IW610: GPIO[8] (SPI_FRM)

7 Mechanical

7.1 Description

The SOM PCB uses the OSM-L standard. See 3D CAD model for the most accurate dimensions. The attached drawing Figure 2 OSM-L Mechanical Drawing is for reference only. Height is dependent on the components that are available at the time of manufacture. See Cargt for the absolute maximum values regardless of supplier availability.

7.2 Dimensions

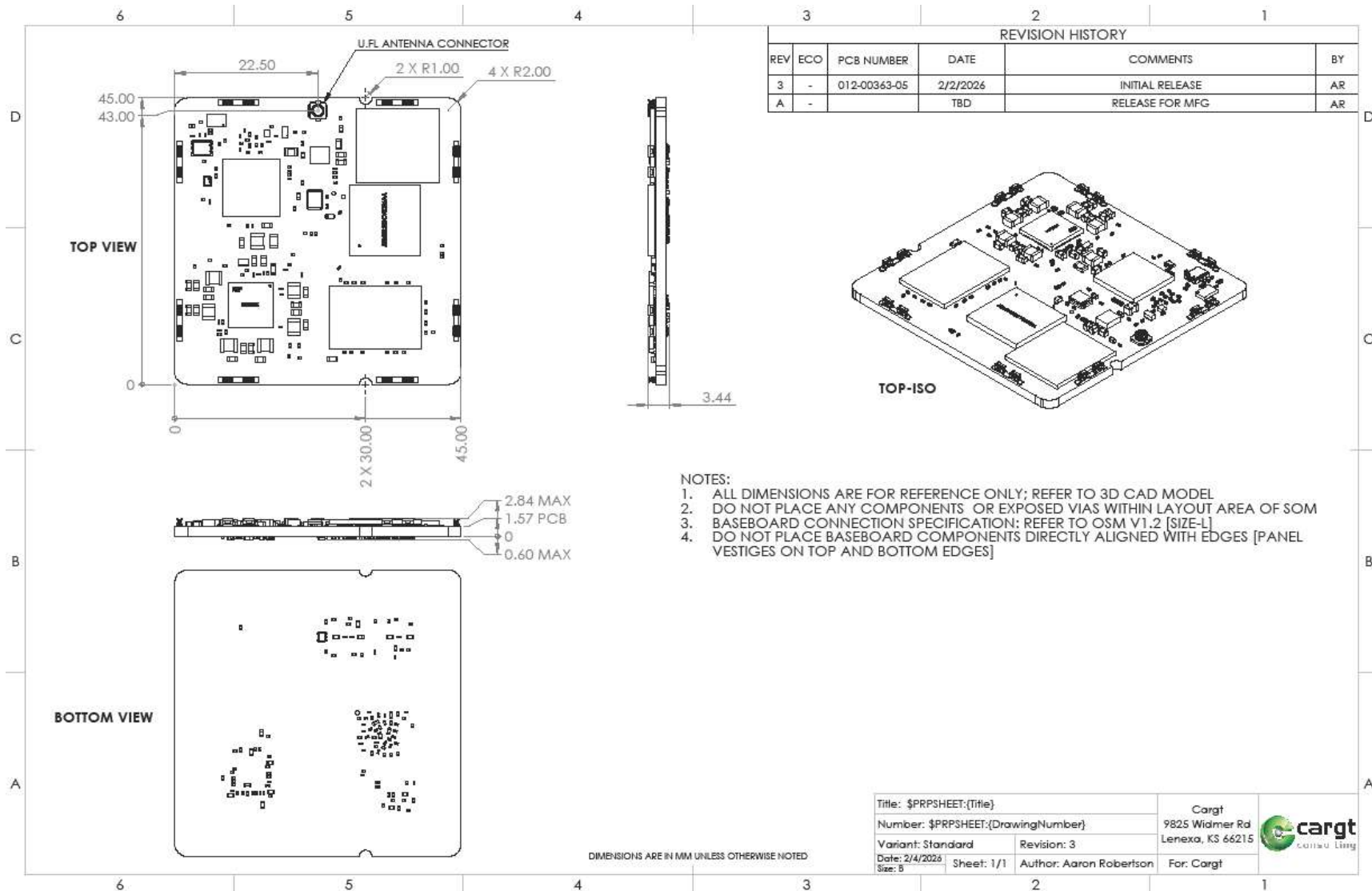


Figure 2 OSM-L Mechanical Drawing

7.3 Soldering - Generic Reflow Profile

The profile should be similar to the graph below. Solder paste supplier requirements should be considered. All carrier PCB's should be profiled, with special care taken for carrier PCB's thicker than 1.6mm.

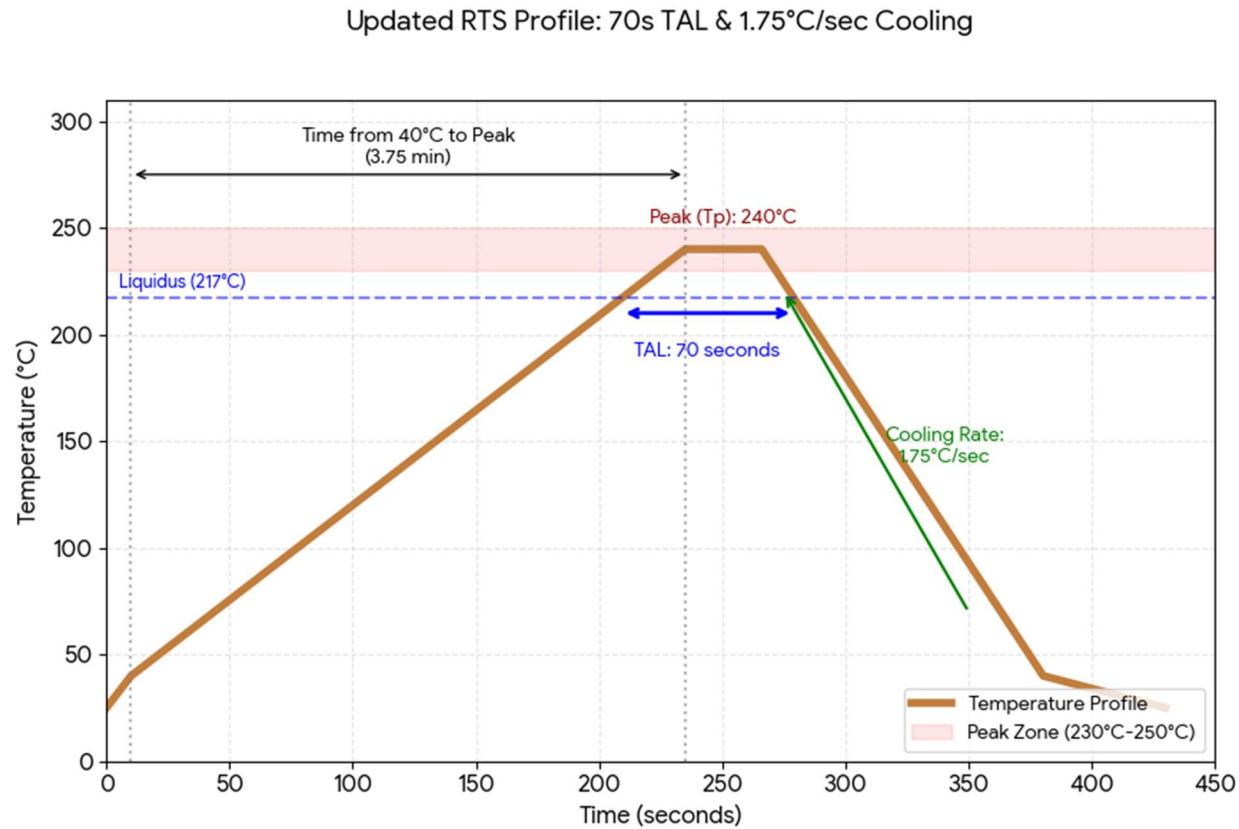


Figure 3 Reflow Profile Graph

Profile Feature	General Profile (IPC/JEDEC)	No Clean Flux (Recommended Starting Point)
Ramp Up Rate	<3°C	1-3°C/second
Time Above Liquidus (TAL)	30-90 seconds	30-90 seconds
Peak Temperature (Tp)	230°C-260°C	230°C-250°C
Cooling Rate	<-6°C	<-3°C/second
Time From 40°C to Peak	<6 minutes	180-270 seconds

Table 3 Reflow Profile Temperatures and Timings