RON-956

OSM 1.2 CPU Module with NXP i.MX95 Cortex-A55 and Neutron NPU

User's Manual

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iBASE

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Compliance

CE

The product described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cables and cabling techniques.

FC

This product has been tested and found to comply with the limits for a Class B device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer’s instructions, may cause harmful interference to radio communications.

WEEE

This product must not be disposed of as normal household waste, in accordance with the EU directive for waste electrical and electronic equipment (WEEE - 2012/19/EU). Instead, it should be disposed of by returning it to a municipal recycling collection point. Check local regulations for disposal of electronic products.

Green IBASE

This product complies with RoHS 2 restrictions, which prohibit the use of certain hazardous substances in electrical and electronic equipment. The following substances must not exceed the specified concentrations:

- Hexavalent chromium: 1,000 ppm
- Poly-brominated biphenyls (PBBs): 1,000 ppm
- Poly-brominated diphenyl ethers (PBDEs): 1,000 ppm
- Cadmium: 100 ppm
- Mercury: 1,000 ppm
- Lead: 1,000 ppm
- Bis(2-ethylhexyl) phthalate (DEHP): 1,000 ppm
- Butyl benzyl phthalate (BBP): 1,000 ppm
- Dibutyl phthalate (DBP): 1,000 ppm
- Diisobutyl phthalate (DIBP): 1,000 ppm

Important Handling and Safety Information

Carefully read the following handling and integration safety information before installing or operating the RON-956 module.

System Integration Notice

- The RON-956 module is intended for integration into a custom or standard OSM 1.2 carrier board.
- Do not power or operate the module independently. Always ensure the carrier board design complies with OSM electrical, mechanical, and thermal specifications.

Handling Precautions

- Handle the module only in an ESD-protected environment.
- Avoid mechanical shock, bending, or flexing of the PCB.
- Store the module in an anti-static bag when not in use.
- Avoid touching connector fingers or exposed components.
- The RON-956 is a sealed PCB assembly; do not disassemble, rework, or modify components unless authorized by the manufacturer.

Power Safety

- The supply voltage to the module must follow OSM 1.2 specifications.
- Always verify correct polarity and stable power rails before power-on.
- Do not insert or remove the module while the carrier board is powered.

Warranty Policy

IBASE warrants its RON-956 OSM module against defects in materials and workmanship for a period of 24 months from the date of shipment.
If the shipment date is unavailable, the serial number will be used to determine the approximate manufacturing date.

Third-party components supplied with or integrated into the module (e.g., memory, storage devices, power adapters, or display panels)
carry a 12-month warranty, or as defined by their respective manufacturers.

The warranty does not apply to products that have been:

- Damaged by accident, misuse, or improper installation
- Modified, repaired, or reworked without IBASE authorization
- Operated outside of rated electrical or environmental conditions

Out-of-warranty repairs may be performed at customer expense, including shipping and handling costs.

Technical Support & RMA Service

For product updates, technical assistance, or documentation, please visit the IBASE website: https://www.ibase.com.tw

If technical support is required, please contact your IBASE representative and provide the following information:

- Product model name and serial number
- Description of the issue and steps to reproduce it
- Firmware or operating system version
- Connected peripherals and configuration details
- Any error logs, console output, or screenshots (if available)

For repair or replacement service, please obtain a Return Material Authorization (RMA) number through the IBASE website before returning any product.

Table of Contents

Chapter 1
General Information

The information provided in this chapter includes:

- Features
- Specifications
- Product View
- Dimensions

1.1 Introduction

The RON-956 is a OSM 1.2 Computer-on-Module (COM) based on the NXP® i.MX 95 processor, featuring six Arm® Cortex®-A55 cores with integrated Cortex-M7 and Cortex-M33 cores for real-time and secure processing. It includes a Neutron™ NPU delivering up to 2.0 TOPS for AI acceleration. The module integrates 8 GB LPDDR5 memory, 16 GB eMMC storage (expandable to 256 GB), and supports dual-channel LVDS, optional 4-lane MIPI-DSI, dual Gigabit Ethernet with 10-GbE, USB 3.0 Type-C, USB 2.0, and dual PCIe® 3.0 interfaces. Designed for industrial applications, the RON-956 complies with the OSM 1.2 Size-L (45 × 45 mm) form factor, is validated with Yocto, and supports operating temperatures
from −40 °C to +85 °C.

1.2 Features

- 6x Arm Cortex-A55, 1x Cortex-M33 and 1x Cortex-M7
- Neutron NPU 2.0 TOPS
- Onboard 8GB LPDDR5, 16GB eMMC (expandable to 256GB)
- 1x Dual-channel LVDS, 1x 4 lane MIPI-DSI
- 1x 10 GbE, 2x Gigabit LAN, 1x USB 3.0 Type-C, 1x USB 2.0, 2x PCI-E 3.0 x1 lanes
- TPM 2.0 Security, EdgeLock Secure Enclave
- Validated with Yocto5
- Wide-range operating temperature from -40°C to +85°C

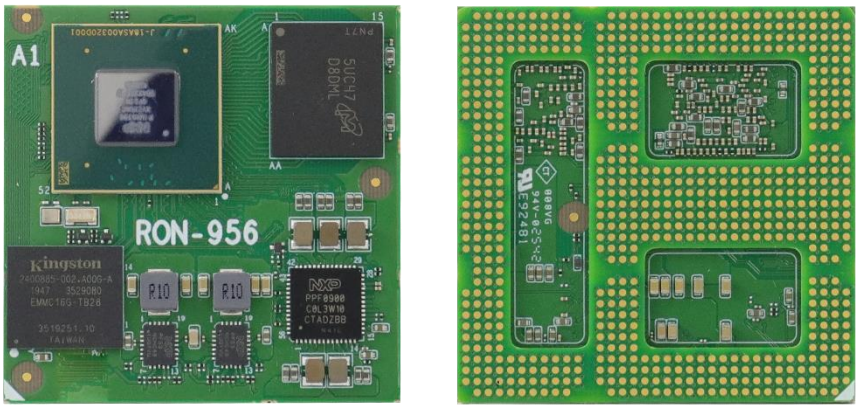
1.3 Specifications

Product Name	RON-956
Form Factor	OSM V1.2 Size-L compatible
CPU	NXP i.MX95 with Cortex-A55, six cores, 2.0 GHz (industrial grade); supports 64-bit Arm® v8.2 architecture.
MCU	1x Arm Cortex-M7 core 1x Arm Cortex-M33 core
Neural Processing Unit (NPU)	2.0 TOP/s Neural Network performance, up to 1.0 GHz
System Memory	8 GB LPDDR5x 6400 MT/s onboard (optional 4 GB or 16 GB)
Storage	16 GB eMMC NAND Flash for OS (optional configurations up to 256 GB)
H/W Video Codec	Decoder: H.265, H.264, 4Kp30 Encoder: H.265, H.264, 4Kp30
Graphics	Arm Mali-G310 V2 GPU 3D GPU OpenGL® ES 3.2 Vulkan® 1.3 OpenCL 3.0
I/O Ports	
Display	1x 4-lane MIPI-DSI supporting 4kp30 or 3840 x 1440p60 1x 8-lane or 2 x 4-lane LVDS (up to 1080p, or 1920x1200, or Dual 720P)
Image Capture Interface	1x 4-lane MIPI CSI-2 camera interface 1x 4-lane MIPI CSI-2 camera interface, shared with MIPI-DSI interface
Camera	1x 4-lane MIPI CSI-2 camera interface 1x 4-lane MIPI CSI-2 camera interface, shared with MIPI-DSI interface
Network Interface	2x GbE (RGMII) 1x 10 GbE (SGMII) with TSN support
Debug port	UART
USB	1x USB 2.0 Host/Client 1x USB 2.0/3.0 Host/Client
SDIO	2x MMC/SD/SDIO
UART	2x 4-wire UART (w/ RTS/CTS) 3x 2-wire UART (Rx, Tx only)
Audio	2x I2S
WDT	1~6553s, power on/off delay 4s
I2C	5x I2C up to 400 Kbit/s (2x for GP)
SPI	1x SPI (with two chip selects)

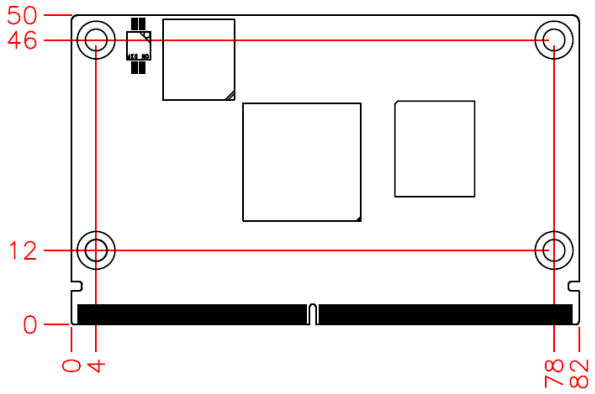
	1x QSPI/SPI (with two chip selects)
CAN	2x CAN-FD / CAN 2.0B 1x CAN-FD / CAN 2.0B on vendor defined pins
PCIe	2x PCIe 3.0 x 1-Lane
Miscellaneous	Temperature compensated RTC 24x GPIO, configurable as input or output 4x PWM 2x ADC inputs (12-bit) 4x ADC inputs (12-bit) on vendor defined pins
Operating System	
OS Support	Yocto 5.0 (Linux Kernel 6.6.52) Other OS (by request)
Dimensions	
PCB Dimensions	12-layer PCB 45mm x 45mm (1.77“ x 1.77“) Max component height - Top Side: TBD mm - Bottom Side: TBD mm Thickness: 1.6mm
Power	
Power	Power Supply +5V ±5%
Thermal	
Heat sink	TBD
Environment	
Temperature	Operating: 0°C to +60°C (Consumer grade, no heat-sink required) -40°C to +85°C (Industrial grade, with heat-sink) Storage: -40°C to 85°C(-40°F~185°F)
Humidity	0 % to 90 % RH at 60° C (non-condensing)
Shock	Non-Operating: 1G, 15 mins (x-, y-, z-axis)
Vibration	Non-operating: 3 Hz to 500 Hz, 15 mins
Certification	CE/FCC Class B

All specifications are subject to change without prior notice.

1.4 Product View



1.5 Dimensions



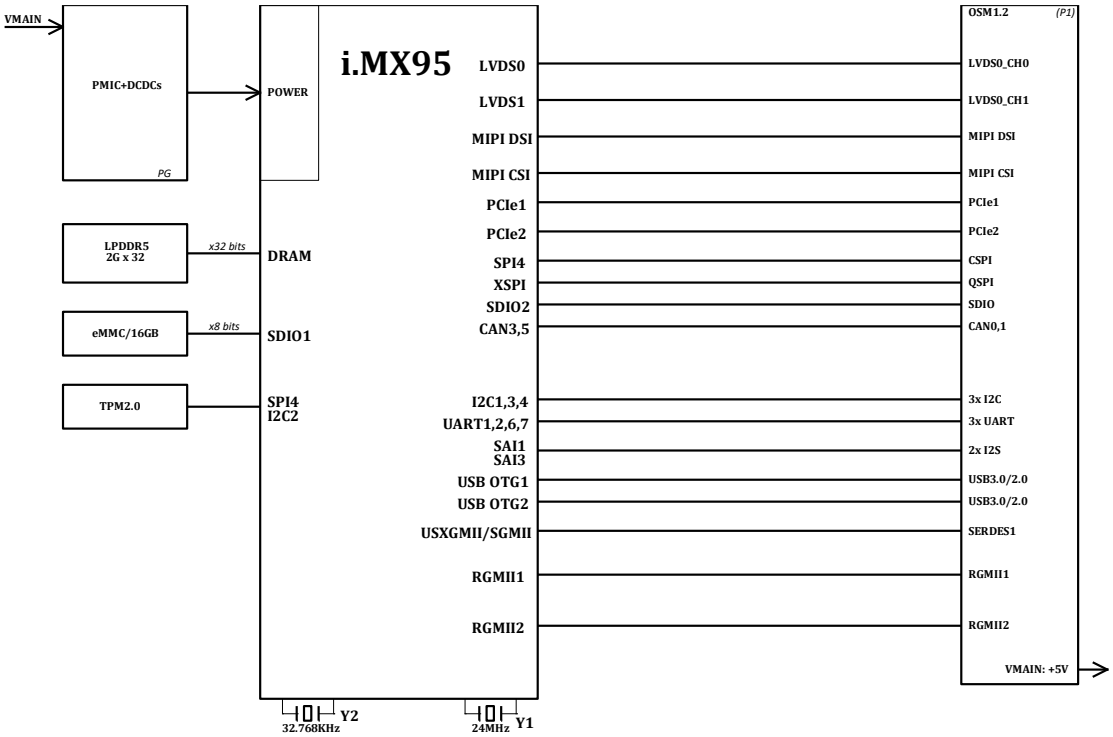
Unit: mm

Chapter 2
Hardware Configuration

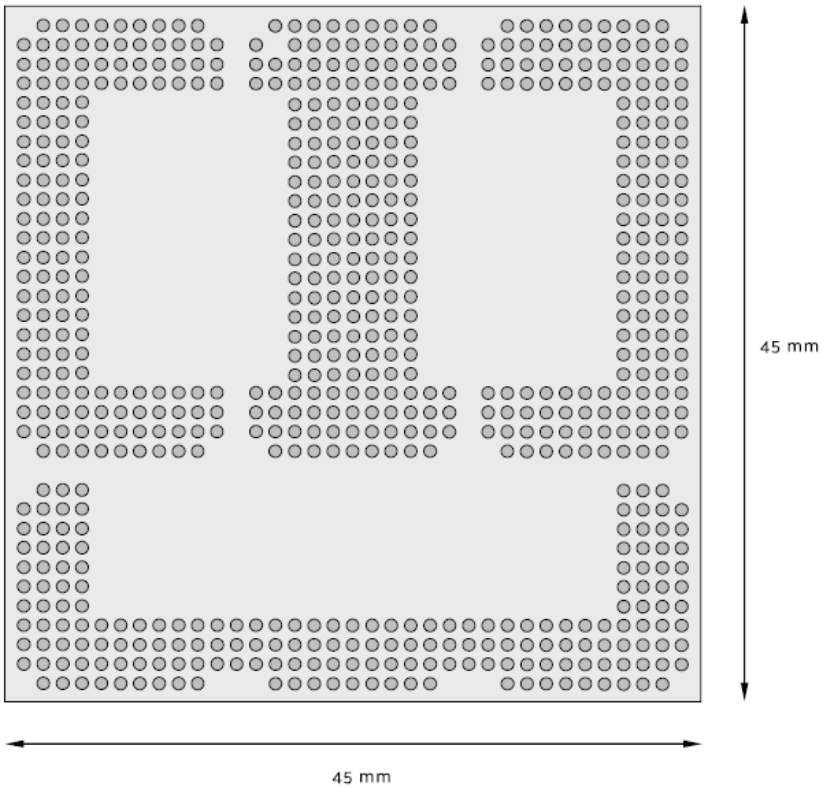
This section contains general information about:

- Block Diagram
- Module Outline
- Carrier Board Connector PCB Footprint
- Module Pin Assignments
- Signal Direction and Type Definitions

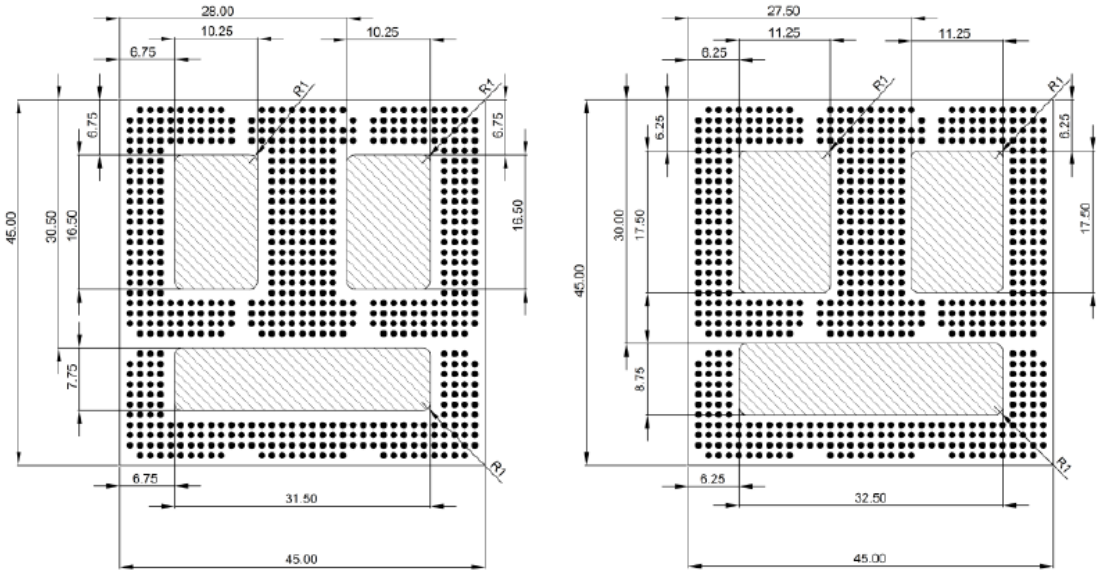
2.1. Block Diagram



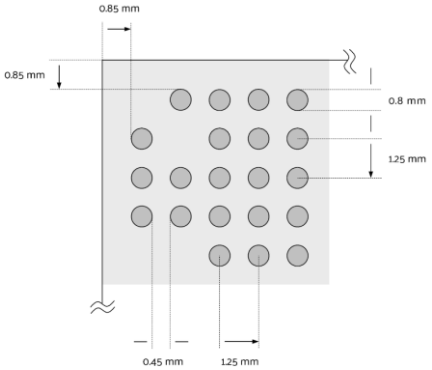
2.2. Module Outline



2.3. Module Cut-out and Placement Areas (bottom side)

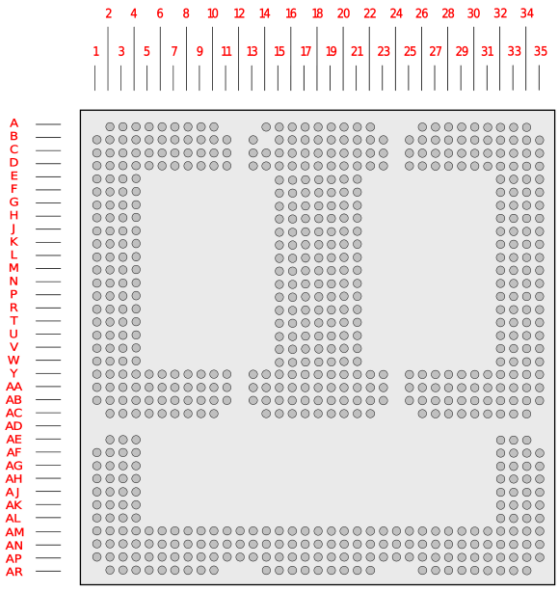


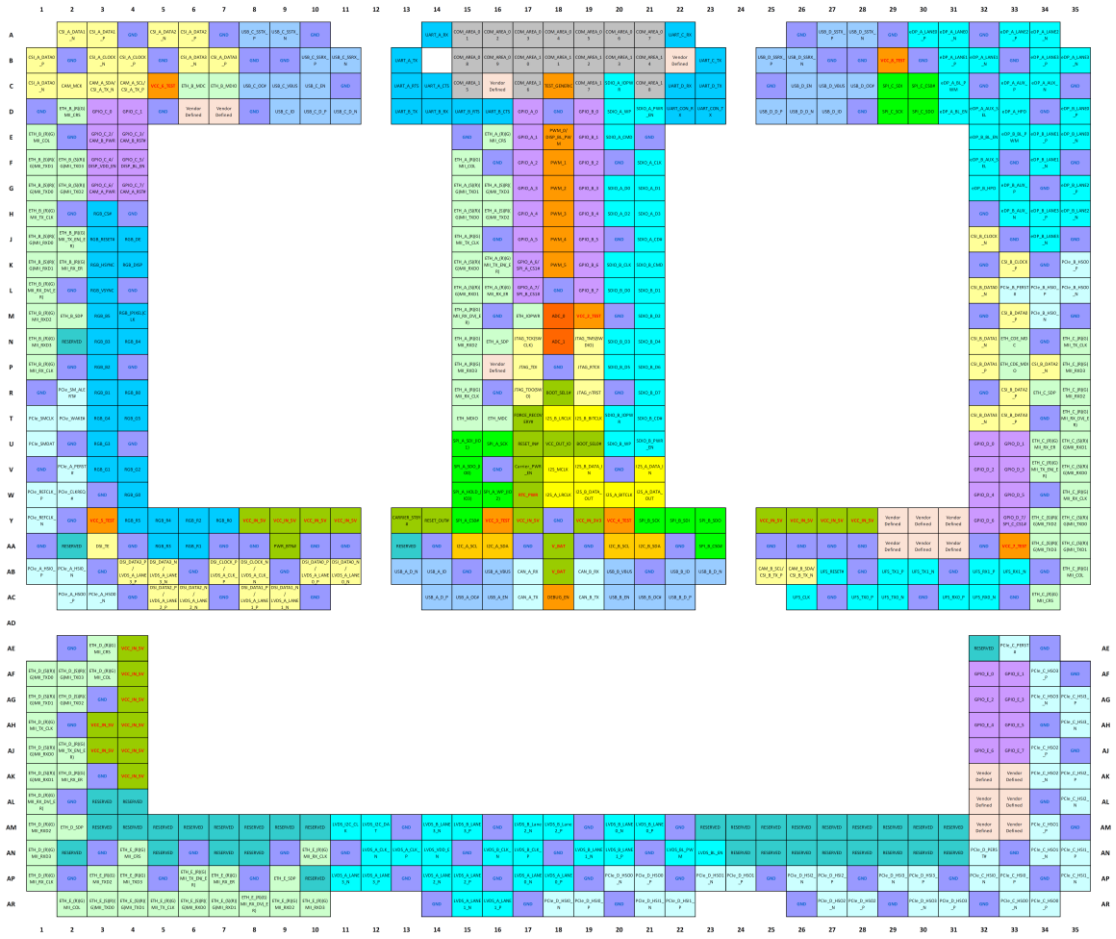
Footprint Grid



- Contact Diameter: 0.8 mm
- Contact Grid: 1.25 mm
- Contact-to-Contact: 0.45 mm
- Contact-to-Edge: 0.85 mm

2.4. Module Contact Grid and Overview





2.5. Signal Descriptions

2.5.1. Signal I/O Types

The I/O Type defines Contact Type and Buffer Type according following Tables
Contact Types:

Contact 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

Buffer Types:

Contact Type	Description
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.
MDI	Media Dependent Interface, differential signal
DIFF D-PHY	MIPI-DSI/CSI differential signal. Please refer to the MIPI D-PHY specification
DIFF M-PHY	MIPI-DSI/CSI differential signal. Please refer to the MIPI M-PHY specification
DIFF PCIE	PCI Express compatible differential signal. Please refer to the PCI Express Specification for details.
DIFF LCD	Low Voltage Differential signals for connecting an LCD. Please refer to the LDI/OLDI specification for details.

2.5.2. Size-0 Basic Functionality

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Power	M19	VDD_SOC	-	-	PO	0.61-0.955V	-
Power	Y16	VDD_DDR	-	-	PO	0.8375V	-
Power	Y20	VDDQ_DDR	-	-	PO	0.5-0.6V	-
Power	Y17	VMAIN	-	-	P	3.5-5V	-
Power	Y19	N.C.	-	-	-	-	-
Power	AA18	N.C.	-	-	-	-	-
Power	AB18	N.C.	-	-	-	-	-
Power	D18	GND	-	-	P	0V	-
Power	E15	GND	-	-	P	0V	-
Power	E21	GND	-	-	P	0V	-
Power	F16	GND	-	-	P	0V	-
Power	F20	GND	-	-	P	0V	-
Power	J16	GND	-	-	P	0V	-
Power	J20	GND	-	-	P	0V	-
Power	L18	GND	-	-	P	0V	-
Power	M16	GND	-	-	P	0V	-
Power	M20	GND	-	-	P	0V	-
Power	P18	GND	-	-	P	0V	-
Power	R16	GND	-	-	P	0V	-
Power	R20	GND	-	-	P	0V	-
Power	V16	GND	-	-	P	0V	-
Power	V20	GND	-	-	P	0V	-
Power	Y18	GND	-	-	P	0V	-
Power	AA14	GND	-	-	P	0V	-
Power	AA17	GND	-	-	P	0V	-
Power	AA19	GND	-	-	P	0V	-
Power	AA22	GND	-	-	P	0V	-
Power	AB15	GND	-	-	P	0V	-
Power	AB21	GND	-	-	P	0V	-
Power	U17	RESET_IN_B	-	-	I OD CMOS	1.8V	-
Power	Y14	RESET_OUT_B	-	-	O CMOS	1.8V	PU 10K
Power	V17	P23/PWR_ON	-	-	O CMOS	1.8V	-
Power	Y13	SYSTEM_STBY_B	-	-	O CMOS	1.8V	-
Power	U18	VDD_1V8	-	-	PO	1.8V	-
Power	W17	N.C.	-	-	-	-	-
Power	U19	BOOT_MODE0	-	-	I OD CMOS	1.8V	-
Power	R18	BOOT_MODE1	-	-	I OD CMOS	1.8V	-
Power	T17	N.C.	-	-	-	-	-
JTAG	N17	N.C.	-	-	-	-	-
JTAG	N19	N.C.	-	-	-	-	-
JTAG	P17	N.C.	-	-	-	-	-
JTAG	P19	N.C.	-	-	-	-	-
JTAG	R17	N.C.	-	-	-	-	-
JTAG	R19	N.C.	-	-	-	-	-
JTAG	AC18	N.C.	-	-	-	-	-
JTAG	C18	N.C.	-	-	-	-	-
UART	A14	UART6_RXD	L45	GPIO_IO05	I CMOS	1.8V	-
UART	B13	UART6_TXD	K46	GPIO_IO04	O CMOS	1.8V	-
UART	C13	UART6_RTS	L51	GPIO_IO07	O CMOS	1.8V	-
UART	C14	UART6_CTS	L49	GPIO_IO06	I CMOS	1.8V	-
UART	D14	UART7_RXD	M46	GPIO_IO09	I CMOS	1.8V	-
UART	D13	UART7_TXD	M44	GPIO_IO08	O CMOS	1.8V	-
UART	D15	UART7_RTS	M52	GPIO_IO11	O CMOS	1.8V	-
UART	D16	UART7_CTS	M48	GPIO_IO10	I CMOS	1.8V	-
UART	A22	UART1_RXD	E49	UART1_RXD	I CMOS	1.8V	-
UART	B23	UART1_TXD	F52	UART1_TXD	O CMOS	1.8V	PU 10K

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
UART	C22	UART2_RXD	E51	UART2_RXD	I CMOS	1.8V	–
UART	C23	UART2_TXD	F58	UART2_TXD	O CMOS	1.8V	PU 10K
UART	D22	N.C.	–	–	–	–	–
UART	D23	N.C.	–	–	–	–	–
LAN	E16	N.C.	–	–	–	–	–
LAN	F15	N.C.	–	–	–	–	–
LAN	H15	ETH1_RGMII_TXD0	AG33	ENET1_TD0	O CMOS	1.8V/2.5V/3.3V	–
LAN	G15	ETH1_RGMII_TXD1	AG35	ENET1_TD1	O CMOS	1.8V/2.5V/3.3V	–
LAN	H16	ETH1_RGMII_TXD2	AF36	ENET1_TD2	O CMOS	1.8V/2.5V/3.3V	–
LAN	G16	ETH1_RGMII_TXD3	AG37	ENET1_TD3	O CMOS	1.8V/2.5V/3.3V	–
LAN	K16	ETH1_RGMII_TX_CTL	AF32	ENET1_TX_CTL	O CMOS	1.8V/2.5V/3.3V	–
LAN	J15	ETH1_RGMII_TXC	AG31	ENET1_TXC	I/O CMOS	1.8V/2.5V/3.3V	–
LAN	K15	ETH1_RGMII_RXD0	AJ35	ENET1_RD0	I CMOS	1.8V/2.5V/3.3V	–
LAN	L15	ETH1_RGMII_RXD1	AK36	ENET1_RD1	I CMOS	1.8V/2.5V/3.3V	–
LAN	N15	ETH1_RGMII_RXD2	AJ37	ENET1_RD2	I CMOS	1.8V/2.5V/3.3V	–
LAN	P15	ETH1_RGMII_RXD3	AH38	ENET1_RD3	I CMOS	1.8V/2.5V/3.3V	–
LAN	L16	N.C.	–	–	I CMOS	1.8V/2.5V/3.3V	–
LAN	M15	ETH1_RGMII_RX_CTL	AH34	ENET1_RX_CTL	I CMOS	1.8V/2.5V/3.3V	–
LAN	R15	ETH1_RGMII_RXC	AJ33	ENET1_RXC	I/O CMOS	1.8V/2.5V/3.3V	–
LAN	N16	ETH1_1588PPS_OUT	AF20	CCM_CLKO2	I/O CMOS	1.8V/2.5V/3.3V	–
LAN	T15	RGMII_MDIO	AJ39	ENET1_MDIO	I/O CMOS	1.8V/2.5V/3.3V	–
LAN	T16	RGMII_MDC	AK40	ENET1_MDC	O CMOS	1.8V/2.5V/3.3V	–
LAN	M17	ETH_VDDIO	–	–	PO	1.8V/2.5V/3.3V	–
GPIO	D17	GPIO5_08/XSPI_DQS	AK44	XSPI1_DQS	I/O CMOS	1.8V	–
GPIO	E17	GPIO5_07/XSPI_RST_B	AH50	XSPI1_DATA7	I/O CMOS	1.8V	–
GPIO	F17	TACHIN/GPIO3_29/WIFI_REGON	AH22	DAP_TMS_SWDIO	I/O CMOS	1.8V	–
GPIO	G17	CHR_PRSNT_B/GPIO3_28/BT_WAKE_B	AK24	DAP_TDI	I/O CMOS	1.8V	–
GPIO	H17	GPIO2_25/ETH1_RST_B	T52	GPIO_IO25	I/O CMOS	1.8V	–
GPIO	J17	GPIO2_24/ETH0_RST_B	T48	GPIO_IO24	I/O CMOS	1.8V	–
GPIO	K17	GPIO5_11/XSPI_SS1	AH42	XSPI1_SS1_B	I/O CMOS	1.8V	–
GPIO	L17	SPI4_SS1	W45	GPIO_IO33	I/O CMOS	1.8V	–
GPIO	D19	N.C.	–	–	–	–	–
GPIO	E19	SATA_ACT_B/GPIO3_20/SD3_CLK	AG51	SD3_CLK	I/O CMOS	1.8V	–
GPIO	F19	LID_B/GPIO3_21/SD3_CMD	AF48	SD3_CMD	I/O CMOS	1.8V	–
GPIO	G19	SLEEP_B/GPIO3_25/SD3_DATA3	AF52	SD3_DATA3	I/O CMOS	1.8V	–
GPIO	H19	CHARGING_B/GPIO3_22/SD3_DATA0	AG49	SD3_DATA0	I/O CMOS	1.8V	–

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
GPIO	J19	F_RECOV_B/GPIO3_23/SD3_DATA1	AH52	SD3_DATA1	I/O CMOS	1.8V	-
GPIO	K19	BATLOW_B/GPIO2_12/WIFI_CK	N45	GPIO_IO12	I/O CMOS	1.8V	-
GPIO	L19	SPDIF_OUT	T46	GPIO_IO23	I/O CMOS	1.8V	-
SDIO	E20	SD2_CMD	AB52	SD2_CMD	I/O CMOS	1.8V/3.3V	-
SDIO	F21	SD2_CLK	AB48	SD2_CLK	O CMOS	1.8V/3.3V	-
SDIO	G20	SD2_DATA0	AC51	SD2_DATA0	I/O CMOS	1.8V/3.3V	-
SDIO	G21	SD2_DATA1	AC49	SD2_DATA1	I/O CMOS	1.8V/3.3V	-
SDIO	H20	SD2_DATA2	AA51	SD2_DATA2	I/O CMOS	1.8V/3.3V	-
SDIO	H21	SD2_DATA3	AA49	SD2_DATA3	I/O CMOS	1.8V/3.3V	-
SDIO	J21	SD2_CD_B	AD48	SD2_CD_B	I OD CMOS	1.8V/3.3V	-
SDIO	D20	N.C.	-	-	-	-	-
SDIO	D21	SD2_RESET_B	AD52	SD2_RESET_B	O CMOS	1.8V/3.3V	-
SDIO	C20	VDD_SDIO2	-	-	PO	1.8V/3.3V	-
SDIO	K20	N.C.	-	-	-	-	-
SDIO	K21	N.C.	-	-	-	-	-
SDIO	L20	N.C.	-	-	-	-	-
SDIO	L21	N.C.	-	-	-	-	-
SDIO	M21	N.C.	-	-	-	-	-
SDIO	N20	N.C.	-	-	-	-	-
SDIO	N21	N.C.	-	-	-	-	-
SDIO	P20	N.C.	-	-	-	-	-
SDIO	P21	N.C.	-	-	-	-	-
SDIO	R21	N.C.	-	-	-	-	-
SDIO	T21	N.C.	-	-	-	-	-
SDIO	U20	N.C.	-	-	-	-	-
SDIO	U21	N.C.	-	-	-	-	-
SDIO	T20	N.C.	-	-	-	-	-
PWM	E18	GPIO5_27/LCD_BL_PWM	U49	GPIO_IO27	O CMOS	1.8V	-
PWM	F18	GPIO2_13/PWM3_OUT	N49	GPIO_IO13	O CMOS	1.8V	-
PWM	G18	N.C.	-	-	-	-	-
PWM	H18	N.C.	-	-	-	-	-
PWM	J18	N.C.	-	-	-	-	-
PWM	K18	N.C.	-	-	-	-	-
Analog	M18	ADC_IN0	A37	ADC_IN0	Analog	0-1.8V	-
Analog	N18	ADC_IN1	B38	ADC_IN1	Analog	0-1.8V	-
SPI	U15	GPIO5_01/XSPI_DATA1	AH46	XSPI1_DATA1	IO CMOS	1.8V	-
SPI	V15	GPIO5_00/XSPI_DATA0	AJ45	XSPI1_DATA0	IO CMOS	1.8V	-
SPI	W16	GPIO5_02/XSPI_DATA2	AJ47	XSPI1_DATA2	IO CMOS	1.8V	-
SPI	W15	GPIO5_03/XSPI_DATA3	AK48	XSPI1_DATA3	IO CMOS	1.8V	-
SPI	Y15	GPIO5_10/XSPI_SS0	AJ41	XSPI1_SS0_B	O CMOS	1.8V	-
SPI	K17	GPIO5_11/XSPI_SS1	AH42	XSPI1_SS1_B	O CMOS	1.8V	-
SPI	U16	GPIO5_09/XSPI_SCLK	AJ43	XSPI1_SCLK	O CMOS	1.8V	-
SPI	Y22	SPI4_MOSI	W51	GPIO_IO35	I CMOS	1.8V	-
SPI	Y23	SPI4_MISO	Y48	GPIO_IO36	O CMOS	1.8V	-
SPI	AA23	SPI4_SS0	W49	GPIO_IO34	O CMOS	1.8V	-
SPI	L17	SPI4_SS1	W45	GPIO_IO33	O CMOS	1.8V	-
SPI	Y21	SPI4_SCLK	Y52	GPIO_IO37	O CMOS	1.8V	-
I2S	V21	SAI1_RXD	H52	SAI1_RXD0	I/O CMOS	1.8V	-
I2S	W21	SAI1_TXD	H48	SAI1_TXD0	I/O CMOS	1.8V	PD 10K

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
I2S	V19	HDA_SAI3_RXD	R49	GPIO_IO20	I/O CMOS	1.8V	-
I2S	W19	HDA_SAI3_TXD	R51	GPIO_IO21	I/O CMOS	1.8V	-
I2S	V18	AP_CODEC_MCLK	P48	GPIO_IO17	I/O CMOS	1.8V	-
I2S	W18	SAI1_TXFS	G49	SAI1_TXFS	I/O CMOS	1.8V	PD 10K
I2S	W20	SAI1_TXC	G51	SAI1_TXC	I/O CMOS	1.8V	-
I2S	T18	HDA_SAI3_TXFS	U45	GPIO_IO26	I/O CMOS	1.8V	-
I2S	T19	HDA_SAI3_TXC	P46	GPIO_IO16	I/O CMOS	1.8V	-
CAN	AC17	CAN3_TX	U51	GPIO_IO28	O CMOS	1.8V	-
CAN	AB17	CAN3_RX	V44	GPIO_IO29	I CMOS	1.8V	-
CAN	AC19	CAN5_TX	V46	GPIO_IO30	O CMOS	1.8V	-
CAN	AB19	CAN5_RX	V48	GPIO_IO31	I CMOS	1.8V	-
USB	AB13	USB2_DN	A25	USB2_D_N	I/O USB	1.8V	-
USB	AC14	USB2_DP	B24	USB2_D_P	I/O USB	1.8V	-
USB	AB14	N.C.	-	-	-	-	-
USB	AC15	N.C.	-	-	-	-	-
USB	AB16	USB_OTG2_VBUS_DET	E27	USB2_VBUS	I USB VBUS 5V	5V	-
USB	AC16	N.C.	-	-	-	-	-
USB	AB23	USB1_DN	B18	USB1_D_N	I/O USB	I/O USB	-
USB	AC22	USB1_DP	C19	USB1_D_P	I/O USB	I/O USB	-
USB	AB22	GPIO2_18/USBOTG1_ID	P52	GPIO_IO18	I OD CMOS	1.8V	-
USB	AC21	GPIO5_04/USBOTG1_OC_B	AJ49	XSPI1_DATA4	I OD CMOS	1.8V	-
USB	AB20	USB_OTG1_VBUS_DET	E23	USB1_VBUS	I USB VBUS 5V	5V	-
USB	AC20	GPIO5_05/USBOTG1_PWR	AK50	XSPI1_DATA5	O CMOS	1.8V	-
I2C	AA15	I2C1_SCL	D48	I2C1_SCL	I/O OD CMOS	1.8V	PU 2K2
I2C	AA16	I2C1_SDA	D52	I2C1_SDA	I/O OD CMOS	1.8V	PU 2K2
I2C	AA20	I2C3_SCL	J51	GPIO_IO01	I/O OD CMOS	1.8V	PU 2K2
I2C	AA21	I2C3_SDA	J49	GPIO_IO00	I/O OD CMOS	1.8V	PU 2K2
Wireless/ Fieldbus	A15	N.C.	-	-	-	-	-
Wireless/ Fieldbus	A16	N.C.	-	-	-	-	-
Wireless/ Fieldbus	A17	N.C.	-	-	-	-	-
Wireless/ Fieldbus	A18	N.C.	-	-	-	-	-
Wireless/ Fieldbus	A19	N.C.	-	-	-	-	-
Wireless/ Fieldbus	A20	N.C.	-	-	-	-	-
Wireless/ Fieldbus	A21	N.C.	-	-	-	-	-
Wireless/ Fieldbus	B15	N.C.	-	-	-	-	-
Wireless/ Fieldbus	B16	N.C.	-	-	-	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Wireless/ Fieldbus	B17	N.C.	-	-	-	-	-
Wireless/ Fieldbus	B18	N.C.	-	-	-	-	-
Wireless/ Fieldbus	B19	N.C.	-	-	-	-	-
Wireless/ Fieldbus	B20	N.C.	-	-	-	-	-
Wireless/ Fieldbus	B21	N.C.	-	-	-	-	-
Wireless/ Fieldbus	C15	N.C.	-	-	-	-	-
Wireless/ Fieldbus	C17	N.C.	-	-	-	-	-
Wireless/ Fieldbus	C19	N.C.	-	-	-	-	-
Wireless/ Fieldbus	C21	N.C.	-	-	-	-	-
Reserved	AA13	N.C.	-	-	-	-	-
Vendor Defined	B22	EARC_AUX	AA45	EARC_AUX	-	1.8V	-
Vendor Defined	C16	EARC_UTIL_P	Y44	EARC_P_UTIL	-	1.8V	-
Vendor Defined	P16	EARC_HPD_N	Y46	EARC_N_HPD	-	1.8V	-

2.5.3. Size-S Additional Functionality

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Power	Y3	VDD_ARM	-	-	PO	0.61-1.05V	-
Power	C5	VDD_3V3	-	-	PO	3.3V	-
Power	Y8	VMAIN	-	-	P	3.5-5V	-
Power	Y9	VMAIN	-	-	P	3.5-5V	-
Power	Y10	VMAIN	-	-	P	3.5-5V	-
Power	Y11	VMAIN	-	-	P	3.5-5V	-
Power	A4	GND	-	-	P	0V	-
Power	A7	GND	-	-	P	0V	-
Power	A10	GND	-	-	P	0V	-
Power	B2	GND	-	-	P	0V	-
Power	B5	GND	-	-	P	0V	-
Power	B8	GND	-	-	P	0V	-
Power	B9	GND	-	-	P	0V	-
Power	C11	GND	-	-	P	0V	-
Power	D1	GND	-	-	P	0V	-
Power	D5	GND	-	-	P	0V	-
Power	D8	GND	-	-	P	0V	-
Power	E2	GND	-	-	P	0V	-
Power	H2	GND	-	-	P	0V	-
Power	H4	GND	-	-	P	0V	-
Power	L2	GND	-	-	P	0V	-
Power	L4	GND	-	-	P	0V	-
Power	P2	GND	-	-	P	0V	-
Power	P4	GND	-	-	P	0V	-
Power	R1	GND	-	-	P	0V	-
Power	U2	GND	-	-	P	0V	-
Power	U4	GND	-	-	P	0V	-
Power	V1	GND	-	-	P	0V	-
Power	W3	GND	-	-	P	0V	-
Power	Y2	GND	-	-	P	0V	-
Power	AA1	GND	-	-	P	0V	-
Power	AA4	GND	-	-	P	0V	-
Power	AA7	GND	-	-	P	0V	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Power	AA8	GND	-	-	P	0V	-
Power	AA10	GND	-	-	P	0V	-
Power	AA11	GND	-	-	P	0V	-
Power	AB3	GND	-	-	P	0V	-
Power	AB6	GND	-	-	P	0V	-
Power	AB9	GND	-	-	P	0V	-
Power	AC4	GND	-	-	P	0V	-
Power	AC7	GND	-	-	P	0V	-
Power	AC10	GND	-	-	P	0V	-
Power	AA9	ONOFF_B	F40	ONOFF	I OD CMOS	1.8V	PU 100K
LAN	D2	N.C.	-	-	-	-	-
LAN	E1	N.C.	-	-	-	-	-
LAN	G1	ETH2_RGMII_TXD0	AG25	ENET2_TD0	O CMOS	1.8V/2.5V/3.3V	-
LAN	F1	ETH2_RGMII_TXD1	AG27	ENET2_TD1	O CMOS	1.8V/2.5V/3.3V	-
LAN	G2	ETH2_RGMII_TXD2	AF28	ENET2_TD2	O CMOS	1.8V/2.5V/3.3V	-
LAN	F2	ETH2_RGMII_TXD3	AG29	ENET2_TD3	O CMOS	1.8V/2.5V/3.3V	-
LAN	J2	ETH2_RGMII_TX_CTL	AF24	ENET2_TX_CTL	O CMOS	1.8V/2.5V/3.3V	-
LAN	H1	ETH2_RGMII_TXC	AG23	ENET2_TXC	I/O CMOS	1.8V/2.5V/3.3V	-
LAN	J1	ETH2_RGMII_RXD0	AJ27	ENET2_RD0	I CMOS	1.8V/2.5V/3.3V	-
LAN	K1	ETH2_RGMII_RXD1	AK28	ENET2_RD1	I CMOS	1.8V/2.5V/3.3V	-
LAN	M1	ETH2_RGMII_RXD2	AJ29	ENET2_RD2	I CMOS	1.8V/2.5V/3.3V	-
LAN	N1	ETH2_RGMII_RXD3	AH30	ENET2_RD3	I CMOS	1.8V/2.5V/3.3V	-
LAN	K2	N.C.	-	-	-	-	-
LAN	L1	ETH2_RGMII_RX_CTL	AH26	ENET2_RX_CTL	I CMOS	1.8V/2.5V/3.3V	-
LAN	P1	ETH2_RGMII_RXC	AJ25	ENET2_RXC	I/O CMOS	1.8V/2.5V/3.3V	-
LAN	M2	ETH2_1588PPS_OUT	AJ21	CCM_CLKO4	I/O CMOS	1.8V/2.5V/3.3V	-
LAN	C7	RGMII_MDIO	AJ39	ENET1_MDIO	I/O CMOS	1.8V/2.5V/3.3V	-
LAN	C6	RGMII_MDC	AK41	ENET1_MDC	O CMOS	1.8V/2.5V/3.3V	-
GPIO	D3	GPIO2_19/EXT_INT_B	R45	GPIO_IO19	I/O CMOS	1.8V	-
GPIO	D4	GPIO2_22	T44	GPIO_IO22	I/O CMOS	1.8V	-
GPIO	E3	GPIO2_14/CSI1_PWEN_B	N51	GPIO_IO14	I/O CMOS	1.8V	-
GPIO	E4	GPIO2_15/CSI1_RST_B	P44	GPIO_IO15	I/O CMOS	1.8V	-
GPIO	F3	N.C.	-	-	-	-	-
GPIO	F4	GPIO1_10/LCD_BL_PWEN	H46	PDM_BIT_STREAM1	I/O CMOS	1.8V	-
GPIO	G3	N.C.	-	-	-	-	-
GPIO	G4	N.C.	-	-	-	-	-
MIPI DSI	AB11	DSI_DN0	C15	MIPI_DSICSI1_D0_N	O LVDS D-PHY / O LVDS LCD	-	-
MIPI DSI	AB10	DSI_DP0	B14	MIPI_DSICSI1_D0_P	O LVDS D-PHY / O	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
					LVDS LCD		
MIPI DSI	AC9	DSI_DN1	A13	MIPI_DSICSI1_D1_N	O LVDS D-PHY / O LVDS LCD	-	-
MIPI DSI	AC8	DSI_DP1	B12	MIPI_DSICSI1_D1_P	O LVDS D-PHY / O LVDS LCD	-	-
MIPI DSI	AC6	DSI_DN2	A9	MIPI_DSICSI1_D2_N	O LVDS D-PHY / O LVDS LCD	-	-
MIPI DSI	AC5	DSI_DP2	B8	MIPI_DSICSI1_D2_P	O LVDS D-PHY / O LVDS LCD	-	-
MIPI DSI	AB5	DSI_DN3	C7	MIPI_DSICSI1_D3_N	O LVDS D-PHY / O LVDS LCD	-	-
MIPI DSI	AB4	DSI_DP3	B6	MIPI_DSICSI1_D3_P	O LVDS D-PHY / O LVDS LCD	-	-
MIPI DSI	AB8	DSI_CKN	C11	MIPI_DSICSI1_CLK_N	O LVDS D-PHY / O LVDS LCD	-	-
MIPI DSI	AB7	DSI_CKP	B10	MIPI_DSICSI1_CLK_P	O LVDS D-PHY / O LVDS LCD	-	-
MIPI DSI	AA3	GPIO3_31/LCD_EN	AJ23	DAP_TDO_TRACESWO	I CMOS	1.8V	-
MIPI DSI	F3	N.C.	-	-	-	-	-
MIPI DSI	F4	GPIO1_10/LCD_BL_PWEN	H46	PDM_BIT_STREAM1	O CMOS	1.8V	-
MIPI DSI	E18	GPIO5_27/LCD_BL_PWM	U49	GPIO_IO27	O CMOS	1.8V	-
MIPI CSI	C1	CSI_DN0	F20	MIPI_CSI1_D0_N	I LVDS D-PHY/ I LVDS M-PHY	-	-
MIPI CSI	B1	CSI_DP0	E19	MIPI_CSI1_D0_P	I LVDS D-PHY / I LVDS M-PHY	-	-
MIPI CSI	A2	CSI_DN1	D18	MIPI_CSI1_D1_N	I LVDS D-PHY / I LVDS M-PHY	-	-
MIPI CSI	A3	CSI_DP1	E17	MIPI_CSI1_D1_P	I LVDS D-PHY / I LVDS M-PHY	-	-
MIPI CSI	A5	CSI_DN2	D14	MIPI_CSI1_D2_N	I LVDS D-PHY	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
					/ I LVDS M-PHY		
MIPI CSI	A6	CSI_DP2	E13	MIPI_CSI1_D2_P	I LVDS D-PHY / I LVDS M-PHY	-	-
MIPI CSI	B6	CSI_DN3	F12	MIPI_CSI1_D3_N	I LVDS D-PHY / I LVDS M-PHY	-	-
MIPI CSI	B7	CSI_DP3	E11	MIPI_CSI1_D3_P	I LVDS D-PHY / I LVDS M-PHY	-	-
MIPI CSI	B3	CSI_CKN	F16	MIPI_CSI1_CLK_N	I LVDS D-PHY	-	-
MIPI CSI	B4	CSI_CKP	E15	MIPI_CSI1_CLK_P	I LVDS D-PHY	-	-
MIPI CSI	C2	CLKO1_CSI_MCLK	AH20	CCM_CLKO1	O CMOS	1.8V	-
MIPI CSI	C3	I2C3_SDA	J49	GPIO_IO00	I/O OD CMOS / O LVDS M-PHY	1.8V	PU 2K2
MIPI CSI	C4	I2C3_SCL	J51	GPIO_IO01	I/O OD CMOS / O LVDS M-PHY	1.8V	PU 2K2
MIPI CSI	G3	N.C.	-	-	-	-	-
MIPI CSI	G4	N.C.	-	-	-	-	-
Parallel RGB	Y7	N.C.	-	-	-	-	-
Parallel RGB	AA6	N.C.	-	-	-	-	-
Parallel RGB	Y6	N.C.	-	-	-	-	-
Parallel RGB	AA5	N.C.	-	-	-	-	-
Parallel RGB	Y5	N.C.	-	-	-	-	-
Parallel RGB	Y4	N.C.	-	-	-	-	-
Parallel RGB	W4	N.C.	-	-	-	-	-
Parallel RGB	V3	N.C.	-	-	-	-	-
Parallel RGB	V4	N.C.	-	-	-	-	-
Parallel RGB	U3	N.C.	-	-	-	-	-
Parallel RGB	T3	N.C.	-	-	-	-	-
Parallel RGB	T4	N.C.	-	-	-	-	-
Parallel RGB	R4	N.C.	-	-	-	-	-
Parallel RGB	R3	N.C.	-	-	-	-	-
Parallel RGB	P3	N.C.	-	-	-	-	-
Parallel RGB	N3	N.C.	-	-	-	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Parallel RGB	N4	N.C.	-	-	-	-	-
Parallel RGB	M3	N.C.	-	-	-	-	-
Parallel RGB	M4	N.C.	-	-	-	-	-
Parallel RGB	L3	N.C.	-	-	-	-	-
Parallel RGB	K3	N.C.	-	-	-	-	-
Parallel RGB	K4	N.C.	-	-	-	-	-
Parallel RGB	J4	N.C.	-	-	-	-	-
Parallel RGB	J3	N.C.	-	-	-	-	-
Parallel RGB	H3	N.C.	-	-	-	-	-
Parallel RGB	F3	N.C.	-	-	-	-	-
Parallel RGB	F4	GPIO1_10/LCD_BL_PWEN	H46	PDM_BIT_STREAM1	O CMOS	1.8V	-
Parallel RGB	E18	GPIO5_27/LCD_BL_PWM	U49	GPIO_IO27	O CMOS	1.8V	-
USB	D11	N.C.	-	-	-	-	-
USB	D10	N.C.	-	-	-	-	-
USB	D9	N.C.	-	-	-	-	-
USB	C8	N.C.	-	-	-	-	-
USB	C9	N.C.	-	-	-	-	-
USB	C10	N.C.	-	-	-	-	-
USB	A9	USB1_TXN	E25	USB1_TX0_N	O USB SS	USB SS	-
USB	A8	USB1_TXP	E26	USB1_TX0_P	O USB SS	USB SS	-
USB	B11	USB1_RXN	B20	USB1_RX0_N	I USB SS	USB SS	-
USB	B10	USB1_RXP	A21	USB1_RX0_P	I USB SS	USB SS	-
PCIe	AB1	PCIe1_RX0_P	B28	PCIE1_RX0_P	I LVDS PCIE	-	-
PCIe	AB2	PCIe1_RX0_N	A29	PCIE1_RX0_N	I LVDS PCIE	-	-
PCIe	AC2	PCIe1_TX0_P	E29	PCIE1_TX0_P	O LVDS PCIE	-	-
PCIe	AC3	PCIe1_TX0_N	D30	PCIE1_TX0_N	O LVDS PCIE	-	-
PCIe	W2	PCIe_CLKREQ_B	V52	GPIO_IO32	I OD CMOS	1.8V	-
PCIe	V2	GPIO3_30/M2_RST_B	AG21	DAP_TCLK_SWCLK	O CMOS	1.8V	-
PCIe	W1	PCIE1_CLKIN_P	B30	PCIE1_REF_PAD_CLK_P	O LVDS PCIE	-	-
PCIe	Y1	PCIE1_CLKIN_N	C31	PCIE1_REF_PAD_CLK_N	O LVDS PCIE	-	-
PCIe	T2	PCIe_WAKE_B/GPIO3_24/ SD3_DATA2	AE49	SD3_DATA2	I OD CMOS	1.8V	-
PCIe	U1	I2C4_SDA	K48	GPIO_IO02	I/O OD CMOS	1.8V	PU 2K2
PCIe	T1	I2C4_SCL	K52	GPIO_IO03	O OD CMOS	1.8V	PU 2K2
PCIe	R2	SMB_ALT_B/GPIO5_06/ BT_RESET	AJ51	XSPI1_DATA6	I OD CMOS	1.8V	-
Reserved	N2	N.C.	-	-	-	-	-
Reserved	AA2	N.C.	-	-	-	-	-
Vendor Defined	D6	PCIE2_CLKIN_N	A33	PCIE2_REF_PAD_CLK_N	O LVDS PCIE	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Vendor Defined	D7	PCIE2_CLKIN_P	B32	PCIE2_REF_PAD_CLK_P	O LVDS PCIE	-	-

2.5.4. Size-M Additional Functionality

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Power	AA33	VDD2_DDR	-	-	PO	1.05/1.1V	-
Power	B29	VDD_1V8	-	-	PO	1.8V	-
Power	Y25	VMAIN	-	-	P	3.5-5V	-
Power	Y26	VMAIN	-	-	P	3.5-5V	-
Power	Y27	VMAIN	-	-	P	3.5-5V	-
Power	Y28	VMAIN	-	-	P	3.5-5V	-
Power	A26	GND	-	-	P	0V	-
Power	A29	GND	-	-	P	0V	-
Power	A32	GND	-	-	P	0V	-
Power	B27	GND	-	-	P	0V	-
Power	B28	GND	-	-	P	0V	-
Power	B30	GND	-	-	P	0V	-
Power	B33	GND	-	-	P	0V	-
Power	C25	GND	-	-	P	0V	-
Power	C32	GND	-	-	P	0V	-
Power	C35	GND	-	-	P	0V	-
Power	D28	GND	-	-	P	0V	-
Power	D34	GND	-	-	P	0V	-
Power	F33	GND	-	-	P	0V	-
Power	F35	GND	-	-	P	0V	-
Power	G34	GND	-	-	P	0V	-
Power	H32	GND	-	-	P	0V	-
Power	J33	GND	-	-	P	0V	-
Power	J35	GND	-	-	P	0V	-
Power	K34	GND	-	-	P	0V	-
Power	M35	GND	-	-	P	0V	-
Power	N34	GND	-	-	P	0V	-
Power	T34	GND	-	-	P	0V	-
Power	W34	GND	-	-	P	0V	-
Power	AA25	GND	-	-	P	0V	-
Power	AA26	GND	-	-	P	0V	-
Power	AA27	GND	-	-	P	0V	-
Power	AA28	GND	-	-	P	0V	-
Power	AA32	GND	-	-	P	0V	-
Power	AB28	GND	-	-	P	0V	-
Power	AB31	GND	-	-	P	0V	-
Power	AB34	GND	-	-	P	0V	-
Power	AC27	GND	-	-	P	0V	-
Power	AC30	GND	-	-	P	0V	-
Power	AC33	GND	-	-	P	0V	-
Power	K32	GND	-	-	P	0V	-
Power	M32	GND	-	-	P	0V	-
Power	R32	GND	-	-	P	0V	-
LAN	AC34	N.C.	-	-	-	-	-
LAN	AB35	N.C.	-	-	-	-	-
LAN	Y35	N.C.	-	-	-	-	-
LAN	AA35	N.C.	-	-	-	-	-
LAN	Y34	N.C.	-	-	-	-	-
LAN	AA34	N.C.	-	-	-	-	-
LAN	V34	N.C.	-	-	-	-	-
LAN	N35	N.C.	-	-	-	-	-
LAN	V35	N.C.	-	-	-	-	-
LAN	U35	N.C.	-	-	-	-	-
LAN	R35	N.C.	-	-	-	-	-
LAN	P35	N.C.	-	-	-	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
LAN	U34	N.C.	-	-	-	-	-
LAN	T35	N.C.	-	-	-	-	-
LAN	W35	N.C.	-	-	-	-	-
LAN	R34	N.C.	-	-	-	-	-
LAN	P33	N.C.	-	-	-	-	-
LAN	N33	N.C.	-	-	-	-	-
GPIO	U32	WDOG1_OUTPUT_B	J45	WDOG_ANY	I/O CMOS	1.8V	ICPU 22K
GPIO	U33	PO1/PF09_PG	-	-	I/O CMOS	1.8V	PU 10K
GPIO	V32	PO2/PF53_SOC_PG	-	-	I/O CMOS	1.8V	-
GPIO	V33	PO3/PF53_ARM_PG	-	-	I/O CMOS	1.8V	-
GPIO	W32	PO4/PF09_INT_B	-	-	I/O CMOS	1.8V	PU 10K
GPIO	W33	N.C.	-	-	-	-	-
GPIO	Y32	N.C.	-	-	-	-	-
GPIO	Y33	N.C.	-	-	-	-	-
SPI	C29	N.C.	-	-	-	-	-
SPI	D30	N.C.	-	-	-	-	-
SPI	C30	N.C.	-	-	-	-	-
SPI	Y33	N.C.	-	-	-	-	-
SPI	D29	N.C.	-	-	-	-	-
UFS	AC29	N.C.	-	-	-	-	-
UFS	AC28	N.C.	-	-	-	-	-
UFS	AC32	N.C.	-	-	-	-	-
UFS	AC31	N.C.	-	-	-	-	-
UFS	AB30	N.C.	-	-	-	-	-
UFS	AB29	N.C.	-	-	-	-	-
UFS	AB33	N.C.	-	-	-	-	-
UFS	AB32	N.C.	-	-	-	-	-
UFS	AB27	N.C.	-	-	-	-	-
UFS	AC26	N.C.	-	-	-	-	-
USB	D26	N.C.	-	-	-	-	-
USB	D25	N.C.	-	-	-	-	-
USB	D27	N.C.	-	-	-	-	-
USB	C28	N.C.	-	-	-	-	-
USB	C27	N.C.	-	-	-	-	-
USB	C26	N.C.	-	-	-	-	-
USB	A28	USB2_TXN	D22	USB1_TX1_N	O USB SS	USB SS	-
USB	A27	USB2_TXP	E21	USB1_TX1_P	O USB SS	USB SS	-
USB	B26	USB2_RXN	A17	USB1_RX1_N	I USB SS	USB SS	-
USB	B25	USB2_RXP	B16	USB1_RX1_P	I USB SS	USB SS	-
PCIe	L34	PCIe2_RX0_P	B32	PCIE2_RX0_P	I LVDS PCIE	-	-
PCIe	M34	PCIe2_RX0_N	C35	PCIE2_RX0_N	I LVDS PCIE	-	-
PCIe	K35	PCIe2_TX0_P	E31	PCIE2_TX0_P	O LVDS PCIE	-	-
PCIe	L35	PCIe2_TX0_N	F32	PCIE2_TX0_N	O LVDS PCIE	-	-
PCIe	L33	N.C.	-	-	-	-	-
eDP	A30	N.C.	-	-	-	-	-
eDP	A31	N.C.	-	-	-	-	-
eDP	B31	N.C.	-	-	-	-	-
eDP	B32	N.C.	-	-	-	-	-
eDP	A33	N.C.	-	-	-	-	-
eDP	A34	N.C.	-	-	-	-	-
eDP	B34	N.C.	-	-	-	-	-
eDP	B35	N.C.	-	-	-	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
eDP	C33	N.C.	-	-	-	-	-
eDP	C34	N.C.	-	-	-	-	-
eDP	D32	N.C.	-	-	-	-	-
eDP	D33	N.C.	-	-	-	-	-
eDP	D31	N.C.	-	-	-	-	-
eDP	C31	N.C.	-	-	-	-	-
eDP	D35	N.C.	-	-	-	-	-
eDP	E35	N.C.	-	-	-	-	-
eDP	E34	N.C.	-	-	-	-	-
eDP	F34	N.C.	-	-	-	-	-
eDP	G35	N.C.	-	-	-	-	-
eDP	H35	N.C.	-	-	-	-	-
eDP	H34	N.C.	-	-	-	-	-
eDP	J34	N.C.	-	-	-	-	-
eDP	G33	N.C.	-	-	-	-	-
eDP	H33	N.C.	-	-	-	-	-
eDP	F32	N.C.	-	-	-	-	-
eDP	G32	N.C.	-	-	-	-	-
eDP	E32	N.C.	-	-	-	-	-
eDP	E33	N.C.	-	-	-	-	-
MIPI CSI	L32	N.C.	-	-	-	-	-
MIPI CSI	M33	N.C.	-	-	-	-	-
MIPI CSI	N32	N.C.	-	-	-	-	-
MIPI CSI	P32	N.C.	-	-	-	-	-
MIPI CSI	P34	N.C.	-	-	-	-	-
MIPI CSI	R33	N.C.	-	-	-	-	-
MIPI CSI	T32	N.C.	-	-	-	-	-
MIPI CSI	T33	N.C.	-	-	-	-	-
MIPI CSI	J32	N.C.	-	-	-	-	-
MIPI CSI	K33	N.C.	-	-	-	-	-
MIPI CSI	C2	CLKO1_CSI_MCLK	AH20	CCM_CLKO1	O CMOS	1.8V	-
MIPI CSI	AB26	N.C.	-	-	-	-	-
MIPI CSI	AB25	N.C.	-	-	-	-	-
MIPI CSI	E3	GPIO2_14/CSI1_PWEN_B	N51	GPIO_IO14	O CMOS	1.8V	-
MIPI CSI	E4	GPIO2_15/CSI1_RST_B	P44	GPIO_IO15	O CMOS	1.8V	-
Vendor Defined	Y29	ETH_CLKIN_N	AF14	ETH_REF_PAD_CLK_N	I LVDS SERDES	-	-
Vendor Defined	Y30	ETH_TXO_N	AK16	ETH_TXO_N	O LVDS SERDES	-	-
Vendor Defined	Y31	ETH_RXO_N	AK12	ETH_RXO_N	I LVDS SERDES	-	-
Vendor Defined	AA29	ETH_CLKIN_P	AG15	ETH_REF_PAD_CLK_P	I LVDS SERDES	-	-
Vendor Defined	AA30	ETH_TXO_P	AJ17	ETH_TXO_P	O LVDS SERDES	-	-
Vendor Defined	AA31	ETH_RXO_P	AJ13	ETH_RXO_P	I LVDS SERDES	-	-

2.5.5. Size-L Additional Functionality

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Power	AE4	VMAIN	-	-	P	3.5-5V	-
Power	AF4	VMAIN	-	-	P	3.5-5V	-
Power	AG4	VMAIN	-	-	P	3.5-5V	-
Power	AH3	VMAIN	-	-	P	3.5-5V	-
Power	AH4	VMAIN	-	-	P	3.5-5V	-
Power	AJ3	VMAIN	-	-	P	3.5-5V	-
Power	AJ4	VMAIN	-	-	P	3.5-5V	-
Power	AK4	VMAIN	-	-	P	3.5-5V	-
Power	AE2	GND	-	-	P	0V	-
Power	AE34	GND	-	-	P	0V	-
Power	AF35	GND	-	-	P	0V	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Power	AG3	GND	-	-	P	0V	-
Power	AH2	GND	-	-	P	0V	-
Power	AH34	GND	-	-	P	0V	-
Power	AJ35	GND	-	-	P	0V	-
Power	AK3	GND	-	-	P	0V	-
Power	AL2	GND	-	-	P	0V	-
Power	AL34	GND	-	-	P	0V	-
Power	AM13	GND	-	-	P	0V	-
Power	AM16	GND	-	-	P	0V	-
Power	AM19	GND	-	-	P	0V	-
Power	AM22	GND	-	-	P	0V	-
Power	AM35	GND	-	-	P	0V	-
Power	AN3	GND	-	-	P	0V	-
Power	AN6	GND	-	-	P	0V	-
Power	AN9	GND	-	-	P	0V	-
Power	AN11	GND	-	-	P	0V	-
Power	AN15	GND	-	-	P	0V	-
Power	AN18	GND	-	-	P	0V	-
Power	AN21	GND	-	-	P	0V	-
Power	AN33	GND	-	-	P	0V	-
Power	AP2	GND	-	-	P	0V	-
Power	AP5	GND	-	-	P	0V	-
Power	AP8	GND	-	-	P	0V	-
Power	AP13	GND	-	-	P	0V	-
Power	AP16	GND	-	-	P	0V	-
Power	AP19	GND	-	-	P	0V	-
Power	AP22	GND	-	-	P	0V	-
Power	AP25	GND	-	-	P	0V	-
Power	AP28	GND	-	-	P	0V	-
Power	AP31	GND	-	-	P	0V	-
Power	AP34	GND	-	-	P	0V	-
Power	AR14	GND	-	-	P	0V	-
Power	AR17	GND	-	-	P	0V	-
Power	AR20	GND	-	-	P	0V	-
Power	AR26	GND	-	-	P	0V	-
Power	AR29	GND	-	-	P	0V	-
Power	AR32	GND	-	-	P	0V	-
LAN	AE3	N.C.	-	-	-	-	-
LAN	AF3	N.C.	-	-	-	-	-
LAN	AF1	N.C.	-	-	-	-	-
LAN	AG1	N.C.	-	-	-	-	-
LAN	AG2	N.C.	-	-	-	-	-
LAN	AF2	N.C.	-	-	-	-	-
LAN	AJ2	N.C.	-	-	-	-	-
LAN	AH1	N.C.	-	-	-	-	-
LAN	AJ1	N.C.	-	-	-	-	-
LAN	AK1	N.C.	-	-	-	-	-
LAN	AM1	N.C.	-	-	-	-	-
LAN	AN1	N.C.	-	-	-	-	-
LAN	AK2	N.C.	-	-	-	-	-
LAN	AL1	N.C.	-	-	-	-	-
LAN	AP1	N.C.	-	-	-	-	-
LAN	AM2	N.C.	-	-	-	-	-
LAN	AN4	N.C.	-	-	-	-	-
LAN	AR2	N.C.	-	-	-	-	-
LAN	AR3	N.C.	-	-	-	-	-
LAN	AR4	N.C.	-	-	-	-	-
LAN	AP3	N.C.	-	-	-	-	-
LAN	AP4	N.C.	-	-	-	-	-
LAN	AP6	N.C.	-	-	-	-	-
LAN	AR5	N.C.	-	-	-	-	-
LAN	AR6	N.C.	-	-	-	-	-
LAN	AR7	N.C.	-	-	-	-	-
LAN	AR9	N.C.	-	-	-	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
LAN	AR10	N.C.	-	-	-	-	-
LAN	AP7	N.C.	-	-	-	-	-
LAN	AR8	N.C.	-	-	-	-	-
LAN	AN10	N.C.	-	-	-	-	-
LAN	AP9	N.C.	-	-	-	-	-
GPIO	AF32	N.C.	-	-	-	-	-
GPIO	AF33	N.C.	-	-	-	-	-
GPIO	AG32	N.C.	-	-	-	-	-
GPIO	AG33	N.C.	-	-	-	-	-
GPIO	AH32	N.C.	-	-	-	-	-
GPIO	AH33	N.C.	-	-	-	-	-
GPIO	AJ32	N.C.	-	-	-	-	-
GPIO	AJ33	N.C.	-	-	-	-	-
LVDS	AM11	I2C4_SCL	K52	GPIO_IO03	O OD CMOS	1.8V	-
LVDS	AM12	I2C4_SDA	K48	GPIO_IO02	I/O OD CMOS	1.8V	-
LVDS	AN14	GPIO1_09/LVDS_EN	G45	PDM_BIT_STREAM0	O CMOS	1.8V	-
LVDS	AN22	GPIO4_28/LVDS_BL_PWM	AK20	CCM_CLKO3	O CMOS	1.8V	-
LVDS	AN23	GPIO1_08/LVDS_BL_PWEN	F46	PDM_CLK	O CMOS	1.8V	-
LVDS	AN13	LVDS0_CLK_P	B4	LVDS0_CLK_P	O LVDS LCD	-	-
LVDS	AN12	LVDS0_CLK_N	A5	LVDS0_CLK_N	O LVDS LCD	-	-
LVDS	AP18	LVDS0_TX0_P	G7	LVDS0_D0_P	O LVDS LCD	-	-
LVDS	AP17	LVDS0_TX0_N	G9	LVDS0_D0_N	O LVDS LCD	-	-
LVDS	AR16	LVDS0_TX1_P	F6	LVDS0_D1_P	O LVDS LCD	-	-
LVDS	AR15	LVDS0_TX1_N	F8	LVDS0_D1_N	O LVDS LCD	-	-
LVDS	AP15	LVDS0_TX2_P	D6	LVDS0_D2_P	O LVDS LCD	-	-
LVDS	AP14	LVDS0_TX2_N	E7	LVDS0_D2_N	O LVDS LCD	-	-
LVDS	AP12	LVDS0_TX3_P	D8	LVDS0_D3_P	O LVDS LCD	-	-
LVDS	AP11	LVDS0_TX3_N	E9	LVDS0_D3_N	O LVDS LCD	-	-
LVDS	AN17	LVDS1_CLK_P	D2	LVDS1_CLK_P	O LVDS LCD	-	-
LVDS	AN16	LVDS1_CLK_N	D4	LVDS1_CLK_N	O LVDS LCD	-	-
LVDS	AM21	LVDS1_TX0_P	B2	LVDS1_D0_P	O LVDS LCD	-	-
LVDS	AM20	LVDS1_TX0_N	N3	LVDS1_D0_N	O LVDS LCD	-	-
LVDS	AN20	LVDS1_TX1_P	C1	LVDS1_D1_P	O LVDS LCD	-	-
LVDS	AN19	LVDS1_TX1_N	C3	LVDS1_D1_N	O LVDS LCD	-	-
LVDS	AM18	LVDS1_TX2_P	E1	LVDS1_D2_P	O LVDS LCD	-	-
LVDS	AM17	LVDS1_TX2_N	E3	LVDS1_D2_N	O LVDS LCD	-	-
LVDS	AM15	LVDS1_TX3_P	F2	LVDS1_D3_P	O LVDS LCD	-	-
LVDS	AM14	LVDS1_TX3_N	F4	LVDS1_D3_N	O LVDS LCD	-	-
PCIe	AP33	N.C.	-	-	-	-	-
PCIe	AP32	N.C.	-	-	-	-	-
PCIe	AR34	N.C.	-	-	-	-	-
PCIe	AR33	N.C.	-	-	-	-	-
PCIe	AN35	N.C.	-	-	-	-	-
PCIe	AP35	N.C.	-	-	-	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
PCIe	AM34	N.C.	-	-	-	-	-
PCIe	AN34	N.C.	-	-	-	-	-
PCIe	AK35	N.C.	-	-	-	-	-
PCIe	AL35	N.C.	-	-	-	-	-
PCIe	AJ34	N.C.	-	-	-	-	-
PCIe	AK34	N.C.	-	-	-	-	-
PCIe	AG35	N.C.	-	-	-	-	-
PCIe	AH35	N.C.	-	-	-	-	-
PCIe	AF34	N.C.	-	-	-	-	-
PCIe	AG34	N.C.	-	-	-	-	-
PCIe	AE33	N.C.	-	-	-	-	-
PCIe	AR19	N.C.	-	-	-	-	-
PCIe	AR18	N.C.	-	-	-	-	-
PCIe	AP21	N.C.	-	-	-	-	-
PCIe	AP20	N.C.	-	-	-	-	-
PCIe	AR22	N.C.	-	-	-	-	-
PCIe	AR21	N.C.	-	-	-	-	-
PCIe	AP24	N.C.	-	-	-	-	-
PCIe	AP23	N.C.	-	-	-	-	-
PCIe	AP27	N.C.	-	-	-	-	-
PCIe	AP26	N.C.	-	-	-	-	-
PCIe	AR28	N.C.	-	-	-	-	-
PCIe	AR27	N.C.	-	-	-	-	-
PCIe	AP30	N.C.	-	-	-	-	-
PCIe	AP29	N.C.	-	-	-	-	-
PCIe	AR31	N.C.	-	-	-	-	-
PCIe	AR30	N.C.	-	-	-	-	-
PCIe	AN32	N.C.	-	-	-	-	-
Reserved	AE32	N.C.	-	-	-	-	-
Reserved	AL3	N.C.	-	-	-	-	-
Reserved	AL4	N.C.	-	-	-	-	-
Reserved	AM3	N.C.	-	-	-	-	-
Reserved	AM4	N.C.	-	-	-	-	-
Reserved	AM5	N.C.	-	-	-	-	-
Reserved	AM6	N.C.	-	-	-	-	-
Reserved	AM7	N.C.	-	-	-	-	-
Reserved	AM8	N.C.	-	-	-	-	-
Reserved	AM9	N.C.	-	-	-	-	-
Reserved	AM10	N.C.	-	-	-	-	-
Reserved	AM23	N.C.	-	-	-	-	-
Reserved	AM24	N.C.	-	-	-	-	-
Reserved	AM25	N.C.	-	-	-	-	-
Reserved	AM26	N.C.	-	-	-	-	-
Reserved	AM27	N.C.	-	-	-	-	-
Reserved	AM28	N.C.	-	-	-	-	-
Reserved	AM29	N.C.	-	-	-	-	-
Reserved	AM30	N.C.	-	-	-	-	-
Reserved	AM31	N.C.	-	-	-	-	-
Reserved	AN2	N.C.	-	-	-	-	-
Reserved	AN5	N.C.	-	-	-	-	-
Reserved	AN7	N.C.	-	-	-	-	-
Reserved	AN8	N.C.	-	-	-	-	-
Reserved	AN24	N.C.	-	-	-	-	-
Reserved	AN25	N.C.	-	-	-	-	-
Reserved	AN26	N.C.	-	-	-	-	-
Reserved	AN27	N.C.	-	-	-	-	-
Reserved	AN28	N.C.	-	-	-	-	-
Reserved	AN29	N.C.	-	-	-	-	-
Reserved	AN30	N.C.	-	-	-	-	-
Reserved	AN31	N.C.	-	-	-	-	-
Reserved	AP10	N.C.	-	-	-	-	-
Vendor Defined	AK32	N.C.	-	-	-	-	-
Vendor Defined	AK33	N.C.	-	-	-	-	-

Function Group	Pin# (OSM)	Signal Name (OSM)	MX95 Pin#	MX95 Pin Name	I/O Type	I/O Lever	PU/PD
Vendor Defined	AL32	N.C.	-	-	-	-	-
Vendor Defined	AL33	N.C.	-	-	-	-	-
Vendor Defined	AM32	N.C.	-	-	-	-	-
Vendor Defined	AM33	N.C.	-	-	-	-	-

2.6. Module Pin Assignments

2.6.1. Size-0 Pin Assignments

Pin	Assignment	Pin	Assignment
A14	UART6_RXD	M19	VDD_SOC
A15	N.C.	M20	GND
A16	N.C.	M21	N.C.
A17	N.C.	N15	ETH1_RGMII_RXD2
A18	N.C.	N16	ETH1_1588PPS_OUT
A19	N.C.	N17	N.C.
A20	N.C.	N18	ADC_IN1
A21	N.C.	N19	N.C.
A22	UART1_RXD	N20	N.C.
B13	UART6_TXD	N21	N.C.
B15	N.C.	P15	ETH1_RGMII_RXD3
B16	N.C.	P16	EARC_HPD_N
B17	N.C.	P17	N.C.
B18	N.C.	P18	GND
B19	N.C.	P19	N.C.
B20	N.C.	P20	N.C.
B21	N.C.	P21	N.C.
B22	EARC_AUX	R15	ETH1_RGMII_RXC
B23	UART1_TXD	R16	GND
C13	UART6_RTS	R17	N.C.
C14	UART6_CTS	R18	BOOT_MODE1
C15	N.C.	R19	N.C.
C16	EARC_UTIL_P	R20	GND
C17	N.C.	R21	N.C.
C18	N.C.	T15	RGMII_MDIO
C19	N.C.	T16	RGMII_MDC
C20	VDD_SDIO2	T17	N.C.
C21	N.C.	T18	HDA_SAI3_TXFS
C22	UART2_RXD	T19	HDA_SAI3_TXC
C23	UART2_TXD	T20	N.C.

Pin	Assignment	Pin	Assignment
D13	UART7_TXD	T21	N.C.
D14	UART7_RXD	U15	GPIO5_01/XSPI_DATA1
D15	UART7_RTS	U16	GPIO5_09/XSPI_SCLK
D16	UART7_CTS	U17	RESET_IN_B
D17	GPIO5_08/XSPI_DQS	U18	VDD_1V8
D18	GND	U19	BOOT_MODE0
D19	N.C.	U20	N.C.
D20	N.C.	U21	N.C.
D21	SD2_RESET_B	V15	GPIO5_00/XSPI_DATA0
D22	N.C.	V16	GND
D23	N.C.	V17	P23/PWR_ON
E15	GND	V18	AP_CODEC_MCLK
E16	N.C.	V19	HDA_SAI3_RXD
E17	GPIO5_07/XSPI_RST_B	V20	GND
E18	GPIO5_27/LCD_BL_PWM	V21	SAI1_RXD
E19	SATA_ACT_B/GPIO3_20/SD3_CLK	W15	GPIO5_03/XSPI_DATA3
E20	SD2_CMD	W16	GPIO5_02/XSPI_DATA2
E21	GND	W17	N.C.
F15	N.C.	W18	SAI1_TXFS
F16	GND	W19	HDA_SAI3_TXD
F17	TACHIN/GPIO3_29/WIFI_REGON	W20	SAI1_TXC
F18	GPIO2_13/PWM3_OUT	W21	SAI1_TXD
F19	LID_B/GPIO3_21/SD3_CMD	Y13	SYSTEM_STBY_B
F20	GND	Y14	RESET_OUT_B
F21	SD2_CLK	Y15	GPIO5_10/XSPI_SS0
G15	ETH1_RGMII_TXD1	Y16	VDD_DDR
G16	ETH1_RGMII_TXD3	Y17	VMAIN
G17	CHR_PRSNT_B/GPIO3_28/BT_WAKE_B	Y18	GND
G18	N.C.	Y19	N.C.
G19	SLEEP_B/GPIO3_25/SD3_DATA3	Y20	VDDQ_DDR
G20	SD2_DATA0	Y21	SPI4_SCLK
G21	SD2_DATA1	Y22	SPI4_MOSI
H15	ETH1_RGMII_TXD0	Y23	SPI4_MISO
H16	ETH1_RGMII_TXD2	AA13	N.C.
H17	GPIO2_25/ETH1_RST_B	AA14	GND
H18	N.C.	AA15	I2C1_SCL
H19	CHARGING_B/GPIO3_22/SD3_DATA0	AA16	I2C1_SDA
H20	SD2_DATA2	AA17	GND
H21	SD2_DATA3	AA18	N.C.
J15	ETH1_RGMII_TXC	AA19	GND
J16	GND	AA20	I2C3_SCL

Pin	Assignment	Pin	Assignment
J17	GPIO2_24/ETH0_RST_B	AA21	I2C3_SDA
J18	N.C.	AA22	GND
J19	F_RECOV_B/GPIO3_23/SD3_DATA1	AA23	SPI4_SS0
J20	GND	AB13	USB2_DN
J21	SD2_CD_B	AB14	N.C.
K15	ETH1_RGMII_RXD0	AB15	GND
K16	ETH1_RGMII_TX_CTL	AB16	USB_OTG2_VBUS_DET
K17	GPIO5_11/XSPI_SS1	AB17	CAN3_RX
K18	N.C.	AB18	N.C.
K19	BATLOW_B/GPIO2_12/WIFI_CK	AB19	CAN5_RX
K20	N.C.	AB20	USB_OTG1_VBUS_DET
K21	N.C.	AB21	GND
L15	ETH1_RGMII_RXD1	AB22	GPIO2_18/USBOTG1_ID
L16	N.C.	AB23	USB1_DN
L17	SPI4_SS1	AC14	USB2_DP
L18	GND	AC15	N.C.
L19	SPDIF_OUT	AC16	N.C.
L20	N.C.	AC17	CAN3_TX
L21	N.C.	AC18	N.C.
M15	ETH1_RGMII_RX_CTL	AC19	CAN5_TX
M16	GND	AC20	GPIO5_05/USBOTG1_PWR
M17	ETH_VDDIO	AC21	GPIO5_04/USBOTG1_OC_B
M18	ADC_IN0	AC22	USB1_DP

2.6.2. Size-S Pin Assignments

Pin	Assignment	Pin	Assignment
A2	CSI_DN1	M2	ETH2_1588PPS_OUT
A3	CSI_DP1	M3	N.C.
A4	GND	M4	N.C.
A5	CSI_DN2	N1	ETH2_RGMII_RXD3
A6	CSI_DP2	N2	N.C.
A7	GND	N3	N.C.
A8	USB1_TXP	N4	N.C.
A9	USB1_TXN	P1	ETH2_RGMII_RXC
A10	GND	P2	GND
B1	CSI_DP0	P3	N.C.
B2	GND	P4	GND
B3	CSI_CKN	R1	GND
B4	CSI_CKP	R2	SMB_ALT_B/GPIO5_06/BT_RESET

Pin	Assignment	Pin	Assignment
B5	GND	R3	N.C.
B6	CSI_DN3	R4	N.C.
B7	CSI_DP3	T1	I2C4_SCL
B8	GND	T2	PCIe_WAKE_B/GPIO3_24/SD3_DATA2
B9	GND	T3	N.C.
B10	USB1_RXP	T4	N.C.
B11	USB1_RXN	U1	I2C4_SDA
C1	CSI_DN0	U2	GND
C2	CLKO1_CSI_MCLK	U3	N.C.
C3	I2C3_SDA	U4	GND
C4	I2C3_SCL	V1	GND
C5	VDD_3V3	V2	GPIO3_30/M2_RST_B
C6	RGMII_MDC	V3	N.C.
C7	RGMII_MDIO	V4	N.C.
C8	N.C.	W1	PCIE1_CLKIN_P
C9	N.C.	W2	PCIe_CLKREQ_B
C10	N.C.	W3	GND
C11	GND	W4	N.C.
D1	GND	Y1	PCIE1_CLKIN_N
D2	N.C.	Y2	GND
D3	GPIO2_19/EXT_INT_B	Y3	VDD_ARM
D4	GPIO2_22	Y4	N.C.
D5	GND	Y5	N.C.
D6	PCIE2_CLKIN_N	Y6	N.C.
D7	PCIE2_CLKIN_P	Y7	N.C.
D8	GND	Y8	VMAIN
D9	N.C.	Y9	VMAIN
D10	N.C.	Y10	VMAIN
D11	N.C.	Y11	VMAIN
E1	N.C.	AA1	GND
E2	GND	AA2	N.C.
E3	GPIO2_14/CSI1_PWEN_B	AA3	GPIO3_31/LCD_EN
E4	GPIO2_15/CSI1_RST_B	AA4	GND
E18	GPIO5_27/LCD_BL_PWM	AA5	N.C.
F1	ETH2_RGMII_TXD1	AA6	N.C.
F2	ETH2_RGMII_TXD3	AA7	GND
F3	N.C.	AA8	GND
F4	GPIO1_10/LCD_BL_PWEN	AA9	ONOFF_B
G1	ETH2_RGMII_TXD0	AA10	GND
G2	ETH2_RGMII_TXD2	AA11	GND
G3	N.C.	AB1	PCIe1_RX0_P

Pin	Assignment	Pin	Assignment
G3	N.C.	AB2	PCIe1_RX0_N
G4	N.C.	AB3	GND
H1	ETH2_RGMII_TXC	AB4	DSI_DP3
H2	GND	AB5	DSI_DN3
H3	N.C.	AB6	GND
H4	GND	AB7	DSI_CKP
J1	ETH2_RGMII_RXD0	AB8	DSI_CKN
J2	ETH2_RGMII_TX_CTL	AB9	GND
J3	N.C.	AB10	DSI_DP0
J4	N.C.	AB11	DSI_DN0
K1	ETH2_RGMII_RXD1	AC2	PCIe1_TX0_P
K2	N.C.	AC3	PCIe1_TX0_N
K3	N.C.	AC4	GND
K4	N.C.	AC5	DSI_DP2
L1	ETH2_RGMII_RX_CTL	AC6	DSI_DN2
L2	GND	AC7	GND
L3	N.C.	AC8	DSI_DP1
L4	GND	AC9	DSI_DN1
M1	ETH2_RGMII_RXD2	AC10	GND

2.6.3. Size-M Pin Assignments

Pin	Assignment	Pin	Assignment
A26	GND	M33	N.C.
A27	USB2_TXP	M34	PCIe2_RX0_N
A28	USB2_TXN	M35	GND
A29	GND	N32	N.C.
A30	N.C.	N33	N.C.
A31	N.C.	N34	GND
A32	GND	N35	N.C.
A33	N.C.	P32	N.C.
A34	N.C.	P33	N.C.
B25	USB2_RXP	P34	N.C.
B26	USB2_RXN	P35	N.C.
B27	GND	R32	GND
B28	GND	R33	N.C.
B29	VDD_1V8	R34	N.C.
B30	GND	R35	N.C.
B31	N.C.	T32	N.C.
B32	N.C.	T33	N.C.

Pin	Assignment	Pin	Assignment
B33	GND	T34	GND
B34	N.C.	T35	N.C.
B35	N.C.	U32	WDOG1_OUTPUT_B
C2	CLKO1_CSI_MCLK	U33	PO1/PF09_PG
C25	GND	U34	N.C.
C26	N.C.	U35	N.C.
C27	N.C.	V32	PO2/PF53_SOC_PG
C28	N.C.	V33	PO3/PF53_ARM_PG
C29	N.C.	V34	N.C.
C30	N.C.	V35	N.C.
C31	N.C.	W32	PO4/PF09_INT_B
C32	GND	W33	N.C.
C33	N.C.	W34	GND
C34	N.C.	W35	N.C.
C35	GND	Y25	VMAIN
D25	N.C.	Y26	VMAIN
D26	N.C.	Y27	VMAIN
D27	N.C.	Y28	VMAIN
D28	GND	Y29	ETH_CLKIN_N
D29	N.C.	Y30	ETH_TXO_N
D30	N.C.	Y31	ETH_RXO_N
D31	N.C.	Y32	N.C.
D32	N.C.	Y33	N.C.
D33	N.C.	Y34	N.C.
D34	GND	Y35	N.C.
D35	N.C.	AA25	GND
E3	GPIO2_14/CSI1_PWEN_B	AA26	GND
E32	N.C.	AA27	GND
E33	N.C.	AA28	GND
E34	N.C.	AA29	ETH_CLKIN_P
E35	N.C.	AA30	ETH_TXO_P
E4	GPIO2_15/CSI1_RST_B	AA31	ETH_RXO_P
F32	N.C.	AA32	GND
F33	GND	AA33	VDD2_DDR
F34	N.C.	AA34	N.C.
F35	GND	AA35	N.C.
G32	N.C.	AB25	N.C.
G33	N.C.	AB26	N.C.
G34	GND	AB27	N.C.
G35	N.C.	AB28	GND
H32	GND	AB29	N.C.

Pin	Assignment	Pin	Assignment
H33	N.C.	AB30	N.C.
H34	N.C.	AB31	GND
H35	N.C.	AB32	N.C.
J32	N.C.	AB33	N.C.
J33	GND	AB34	GND
J34	N.C.	AB35	N.C.
J35	GND	AC26	N.C.
K32	GND	AC27	GND
K33	N.C.	AC28	N.C.
K34	GND	AC29	N.C.
K35	PCIe2_TX0_P	AC30	GND
L32	N.C.	AC31	N.C.
L33	N.C.	AC32	N.C.
L34	PCIe2_RX0_P	AC33	GND
L35	PCIe2_TX0_N	AC34	N.C.
M32	GND		

2.6.4. Size-L Pin Assignments

Pin	Assignment	Pin	Assignment
AE2	GND	AN5	N.C.
AE3	N.C.	AN6	GND
AE4	VMAIN	AN7	N.C.
AE32	N.C.	AN8	N.C.
AE33	N.C.	AN9	GND
AE34	GND	AN10	N.C.
AF1	N.C.	AN11	GND
AF2	N.C.	AN12	LVDS0_CLK_N
AF3	N.C.	AN13	LVDS0_CLK_P
AF4	VMAIN	AN14	GPIO1_09/LVDS_EN
AF32	N.C.	AN15	GND
AF33	N.C.	AN16	LVDS1_CLK_N
AF34	N.C.	AN17	LVDS1_CLK_P
AF35	GND	AN18	GND
AG1	N.C.	AN19	LVDS1_TX1_N
AG2	N.C.	AN20	LVDS1_TX1_P
AG3	GND	AN21	GND
AG4	VMAIN	AN22	GPIO4_28/LVDS_BL_PWM
AG32	N.C.	AN23	GPIO1_08/LVDS_BL_PWEN
AG33	N.C.	AN24	N.C.

Pin	Assignment	Pin	Assignment
AG34	N.C.	AN25	N.C.
AG35	N.C.	AN26	N.C.
AH1	N.C.	AN27	N.C.
AH2	GND	AN28	N.C.
AH3	VMAIN	AN29	N.C.
AH4	VMAIN	AN30	N.C.
AH32	N.C.	AN31	N.C.
AH33	N.C.	AN32	N.C.
AH34	GND	AN33	GND
AH35	N.C.	AN34	N.C.
AJ1	N.C.	AN35	N.C.
AJ2	N.C.	AP1	N.C.
AJ3	VMAIN	AP2	GND
AJ4	VMAIN	AP3	N.C.
AJ32	N.C.	AP4	N.C.
AJ33	N.C.	AP5	GND
AJ34	N.C.	AP6	N.C.
AJ35	GND	AP7	N.C.
AK1	N.C.	AP8	GND
AK2	N.C.	AP9	N.C.
AK3	GND	AP10	N.C.
AK4	VMAIN	AP11	LVDSO_TX3_N
AK32	N.C.	AP12	LVDSO_TX3_P
AK33	N.C.	AP13	GND
AK34	N.C.	AP14	LVDSO_TX2_N
AK35	N.C.	AP15	LVDSO_TX2_P
AL1	N.C.	AP16	GND
AL2	GND	AP17	LVDSO_TX0_N
AL3	N.C.	AP18	LVDSO_TX0_P
AL4	N.C.	AP19	GND
AL32	N.C.	AP20	N.C.
AL33	N.C.	AP21	N.C.
AL34	GND	AP22	GND
AL35	N.C.	AP23	N.C.
AM1	N.C.	AP24	N.C.
AM2	N.C.	AP25	GND
AM3	N.C.	AP26	N.C.
AM4	N.C.	AP27	N.C.
AM5	N.C.	AP28	GND
AM6	N.C.	AP29	N.C.
AM7	N.C.	AP30	N.C.

Pin	Assignment	Pin	Assignment
AM8	N.C.	AP31	GND
AM9	N.C.	AP32	N.C.
AM10	N.C.	AP33	N.C.
AM11	I2C4_SCL	AP34	GND
AM12	I2C4_SDA	AP35	N.C.
AM13	GND	AR2	N.C.
AM14	LVDS1_TX3_N	AR3	N.C.
AM15	LVDS1_TX3_P	AR4	N.C.
AM16	GND	AR5	N.C.
AM17	LVDS1_TX2_N	AR6	N.C.
AM18	LVDS1_TX2_P	AR7	N.C.
AM19	GND	AR8	N.C.
AM20	LVDS1_TX0_N	AR9	N.C.
AM21	LVDS1_TX0_P	AR10	N.C.
AM22	GND	AR14	GND
AM23	N.C.	AR15	LVDS0_TX1_N
AM24	N.C.	AR16	LVDS0_TX1_P
AM25	N.C.	AR17	GND
AM26	N.C.	AR18	N.C.
AM27	N.C.	AR19	N.C.
AM28	N.C.	AR20	GND
AM29	N.C.	AR21	N.C.
AM30	N.C.	AR22	N.C.
AM31	N.C.	AR26	GND
AM32	N.C.	AR27	N.C.
AM33	N.C.	AR28	N.C.
AM34	N.C.	AR29	GND
AM35	GND	AR30	N.C.
AN1	N.C.	AR31	N.C.
AN2	N.C.	AR32	GND
AN3	GND	AR33	N.C.
AN4	N.C.	AR34	N.C.

Chapter 3
Software Suport

The standard OS is Yocto

All features are supported on the Yocto 64-bit BSP, based on the latest kernel supported by NXP.