

IDO-SOM5301-S1 核心板规格书



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深圳触觉智能科技有限公司

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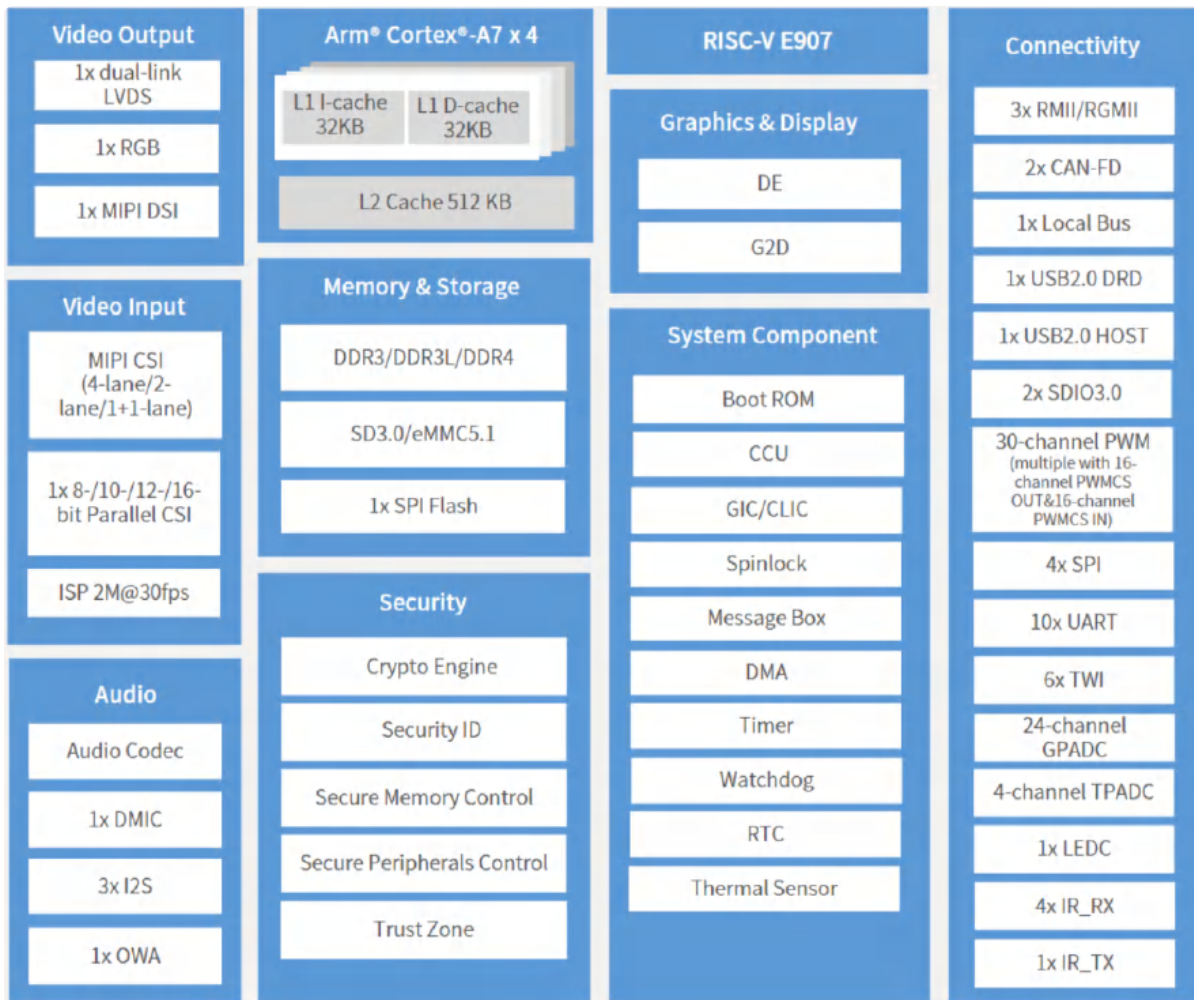
文档修订历史

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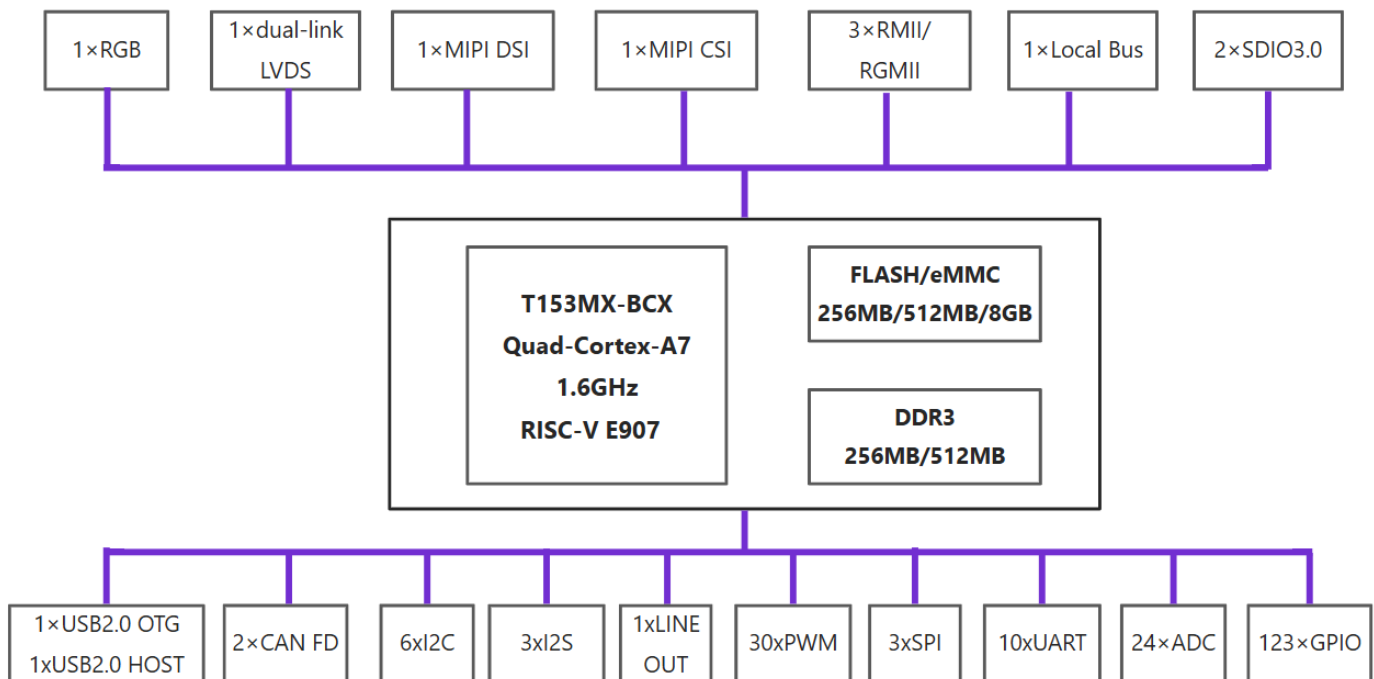
1、产品概述

IDO-SOM5301-S1是触觉智能基于全志科技T153四核ARM Cortex-A7 + RISC-V E907异构多核处理器设计的全国产工业核心板，Cortex-A7核心主频高达1.6GHz。

核心板引出3x GMAC、2x CAN FD、2x USB 2.0、10x UART、3x SPI、3x SMHC、Local Bus、LVDS Display、LCD Display、MIPI DSI、2x MIPI CSI、Parallel CSI等接口，内置2M@30fps ISP。适用于工业PLC、工业HMI、工业网关、数据采集、配网DTU等场景。T153 SoC 内部框图，如下图所示：



IDO-SOM5301-S1核心板进行了严格的电源 完整性和信号完整性仿真设计，通过各项电磁兼容、温度冲击、高温高湿老化、长时间存储压力等测试， 稳定可靠， 批量供货。用户仅需设计外围电路即可快速实现项目的稳定量产， IDO-SOM5301-S1模块逻辑框图， 如下图所示：

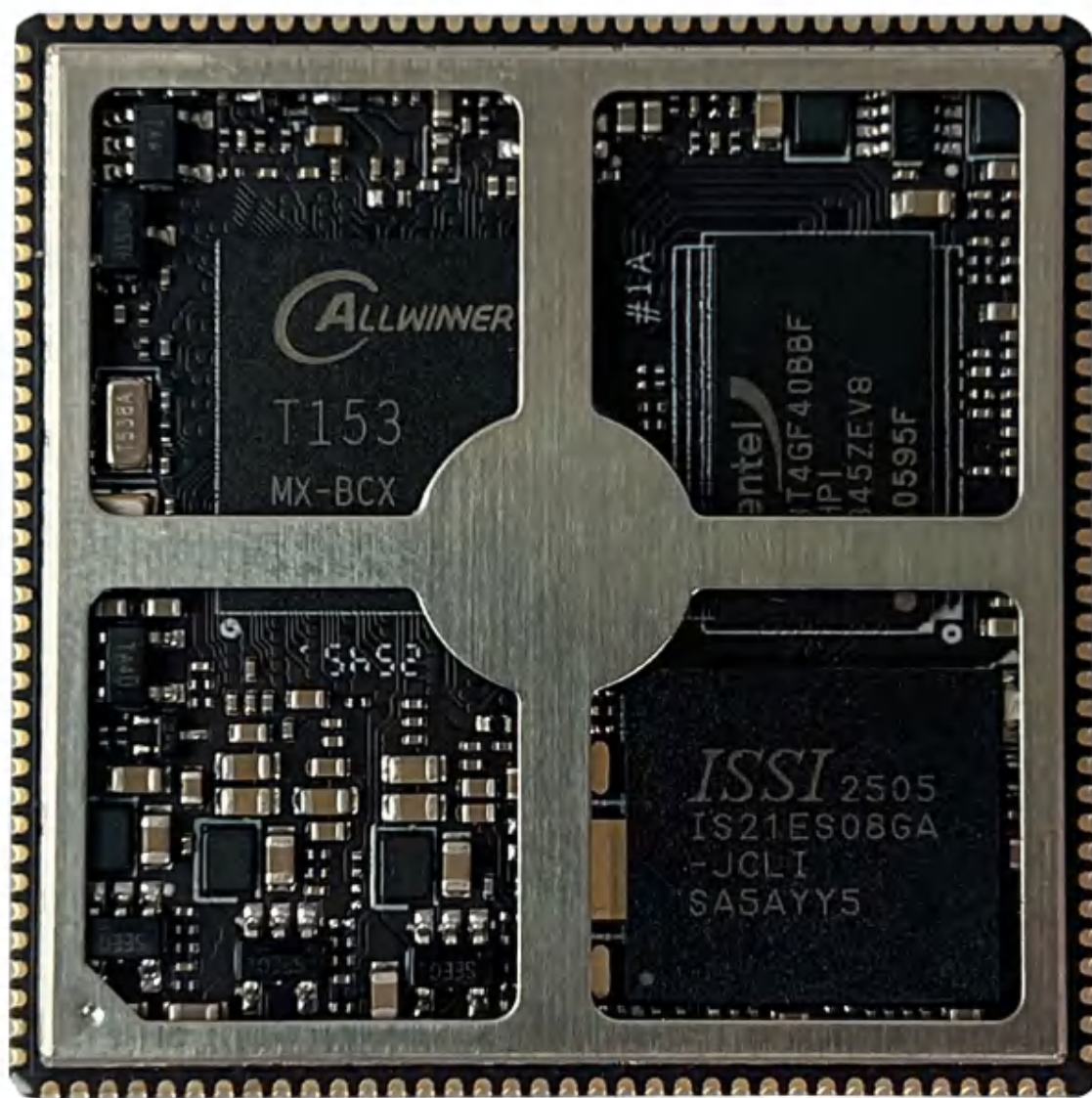


1.1 产品特点

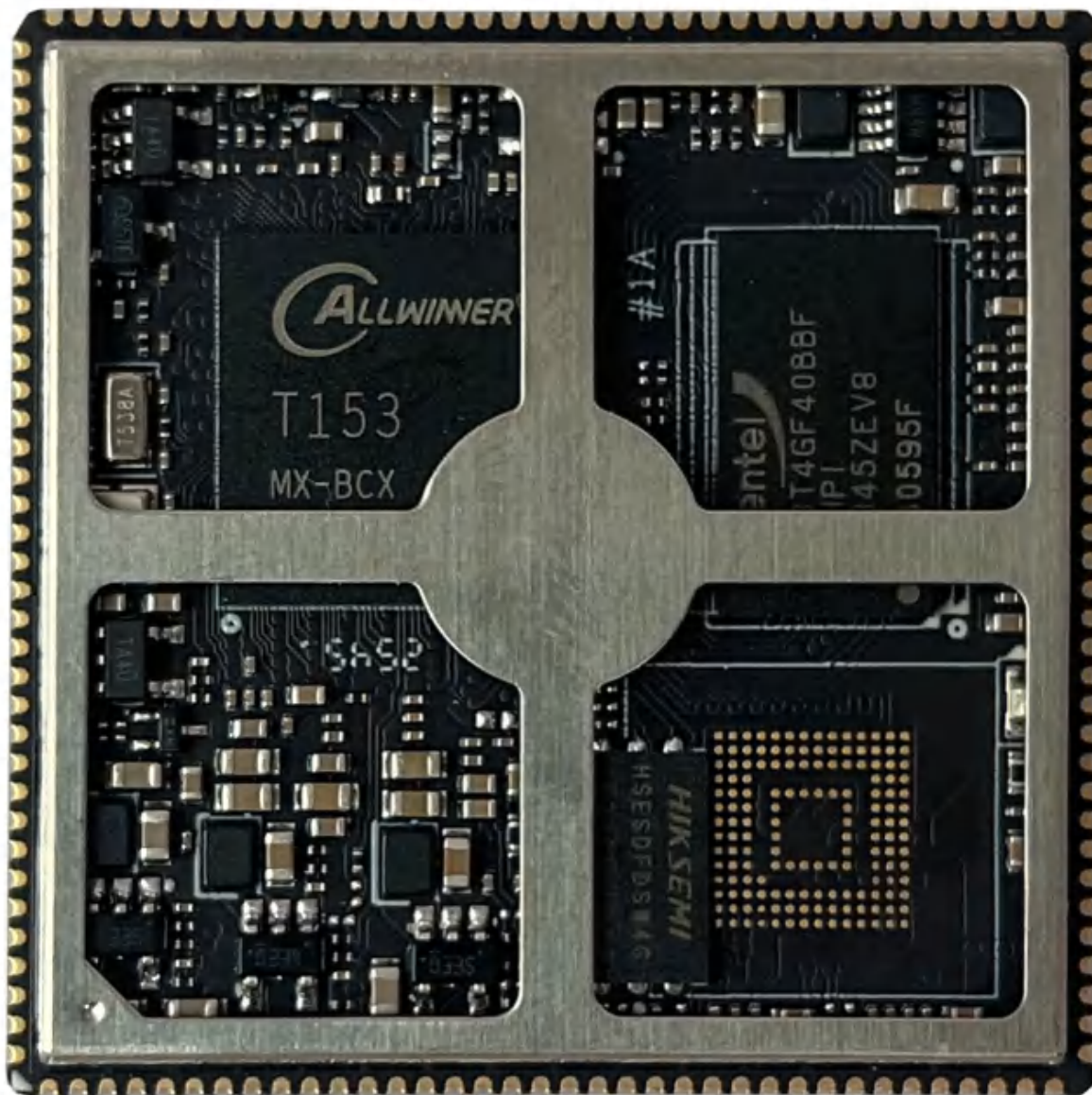
1. 处理器采用4核Arm Cortex-A7，频率最高1.6GHz；
2. 3.8*3.8CM超小尺寸邮票孔LCC+LGA封装160Pin，8层板沉金工艺；
3. 独特的叠层设计，PCB背面完整平面无走线，优异的EMC性能和稳定性。
4. -40℃~+85℃工业级工作温度。

1.2 产品图片

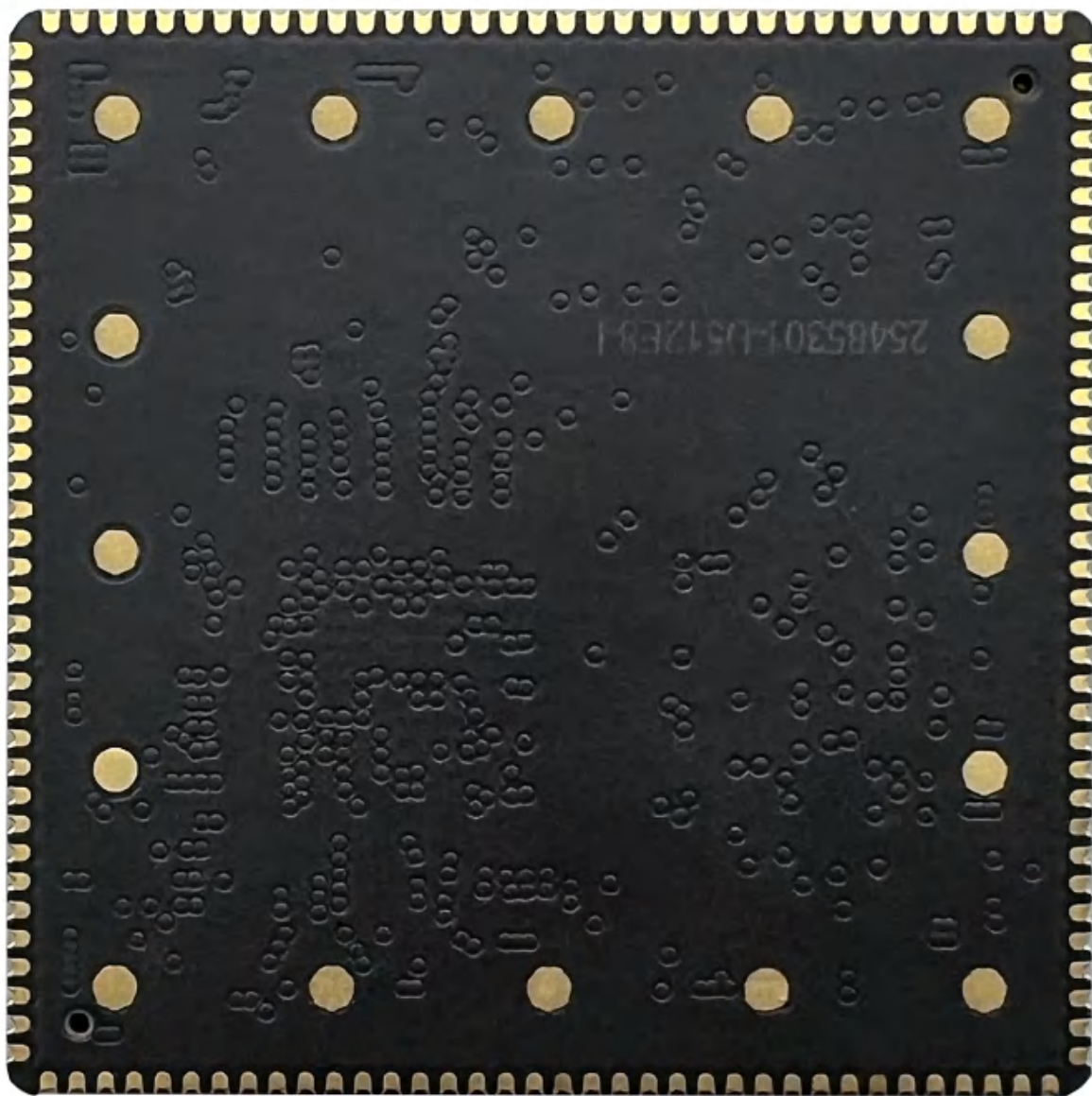
IDO-SOM5301-S1核心板正面（eMMC），如下图所示：



IDO-SOM5301-S1核心板正面（FLASH），如下图所示：



IDO-SOM5301-S1核心板背面，如下图所示：



1.3 适用场景

IDO-SOM5301-S1 采用了面向工业应用的四核处理器T153，可广泛应用在适用于可编程逻辑控制器(PLC)、人机界面(HMI)、机器人、工业网关等应用等行业领域。

2、硬件参数规格

2.1 基本参数

基本参数如下图所示：

基本参数	
SOC	Allwinner T153MX-BCX

CPU	4x ARM Cortex-A7, 主频高达1.6GHz
MCU	1 × RISC-V E907, 主频高达600MHz
ISP	2M@30fps（离线模式），1M@30fps（在线模式），支持RAW8/10/12
内存	256MB/512MB DDR3
存储	256MB/512MB SPI NAND FLASH 8GB eMMC eMMC 与 FLASH 二选一
硬件参数	
视频输入	1 × MIPI CSI Interface（支持4Lane/2Lane模式；up to 1.0 Gbit/s per lane）
视频输出	1 × RGB(up to 1920x1080@60fps) 1 × dual-link LVDS(up to 1920x1080@60fps) 1 × 4-lane MIPI DSI output（up to 1920x1080@60fps and 1.0 Gbit/s per lane）
音频	1 × LINEOUTP/N 3 × I2S 1 × 8-channel DMIC（up to 8 KHz-48 KHz sampling rate） 1 x OWA input
USB	1 × USB2.0 OTG 1 × USB2.0 Host
网络	3 × RMII/RGMII
扩展接口	1 × Local Bus, 8/16/32bit位宽 2 × SDIO 3.0 10 × UART, 波特率高达10Mbps 3 × SPI, 支持主从模式 2 × CAN FD, 支持CAN 2.0A和CAN 2.0B协议, 通信速率高达10Mbps 6 × I2C 4 × TPADC(Touch Panel ADC) 30 × PWM, 支持红外输入, 时钟计数 24 × GPADC(General Purpose ADC), 12bit分辨率 123 × GPIO 注：各接口之间存在引脚复用关系。

其他	
核心板尺寸	38mm × 38mm × 3mm
接口类型	160Pin LCC（邮票孔144PIN）+LGA（背面焊盘16PIN）封装
PCB规格	1.5mm 多层PCB，沉金工艺
重量	10g

2.2 工作环境

工作环境如下表所示：

工作环境	
工作环境温度	-40℃~+85℃
工作环境湿度	0%~90% RH（无凝露）

2.3 系统支持

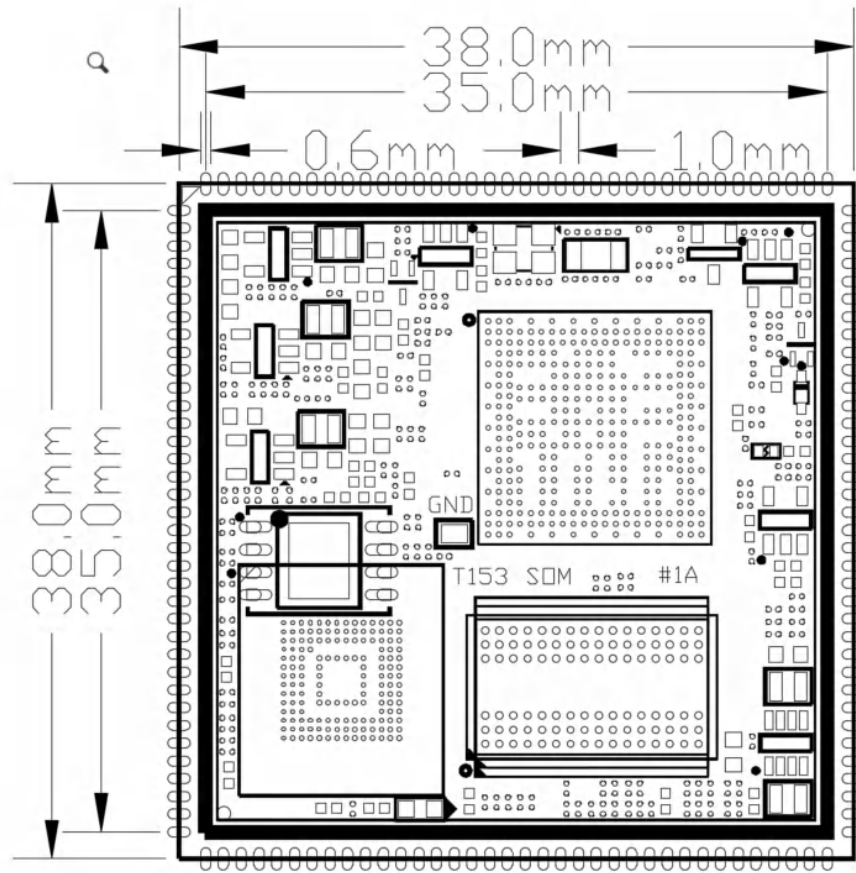
系统支持如下表所示：

序号	操作系统	支持	说明
1	Linux		/

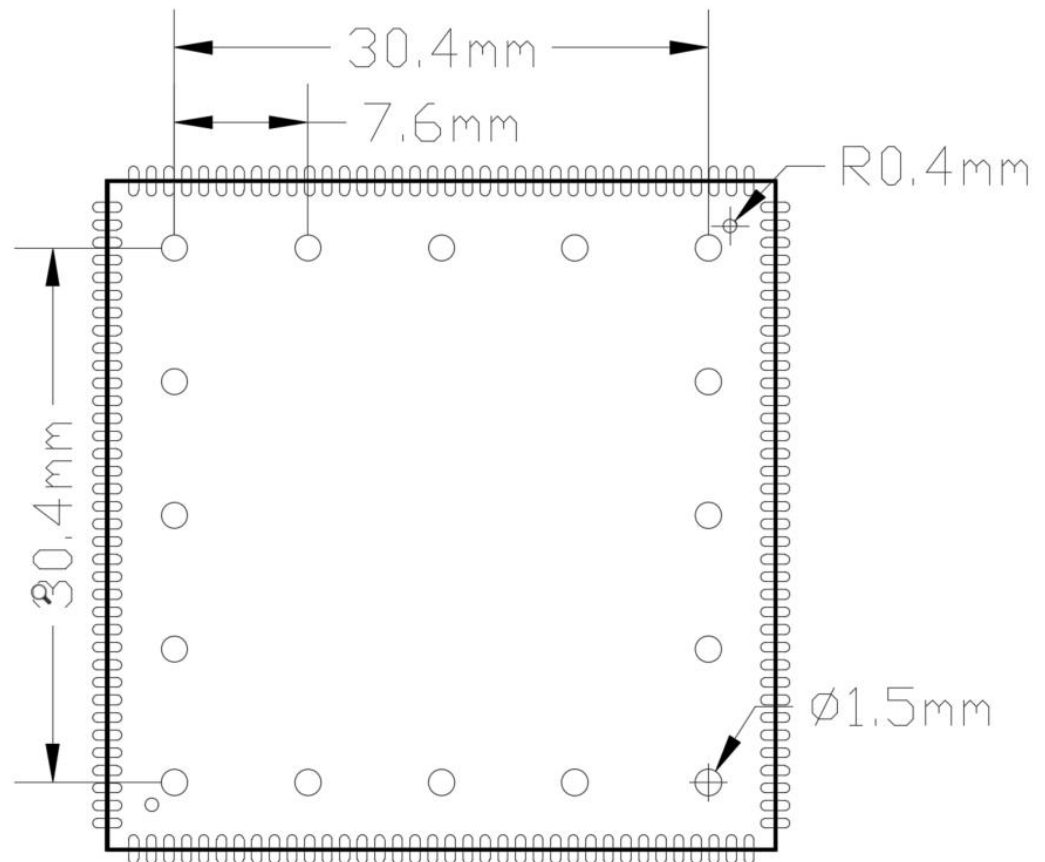
3、PCB 尺寸和电气参数

3.1 PCB尺寸

IDO-SOM5301-S1核心板正面尺寸，如下表所示：



IDO-SOM5301-S1核心板背面尺寸，如下图所示：



3.2 电气参数

3.2.1 主电源输入

电源输入如下表所示：

电源名称	最小电压	标称值	最大电压	峰值电流	待机电流	关机电流
VCC_5V-SYS	4.5V	5.0V	5.5V	5V/330mA	5V/5mA	<1mA

3.2.2 IO电源选择

网络名称	悬空	接地	备注
VCC-PG_SEL	VCC-PG电源域电压 3.3V	VCC-PG电源域电压 1.8V	VCC-PG电源域电压选择
VCC-PE/VCC-PK_SEL	VCC-PE与VCC-PK 电源域电压 3.3V	VCC-PE与VCC-PK 电源域电压 1.8V	VCC-PE与VCC-PK 电源域电压选择

4、采购型号

常规采购型号如下表所示：

采购型号	DDR3	FLASH/eMMC	标称工作温度
IDO-SOM5301-S1-D256N256-I	256MB	256MB	-40℃ ~ +85℃
IDO-SOM5301-S1-D512N512-I	512MB	512MB	-40℃ ~ +85℃
IDO-SOM5301-S1-D512E8-I	512MB	8GB	-40℃ ~ +85℃

5、引脚定义说明

5.1 核心板引脚示意图

9	AP-CK32K-OUT	A11	AP-CK32K-OUT		1.8V	
10	PF3/SDC0-CMD/JTAG-DO/DMIC-DATA0/SPI3-CS0/RJTAG-DO/IR3-RX/PF-EINT3	C6	PF3		1.8V	
			SDC0-CMD	Default		
			JTAG-DO			
			DMIC-DATA0			
			SPI3-CS0			
			RJTAG-DO			
			IR3-RX			
			PF-EINT3			
11	PF5/SDC0-D2/JTAG-CK/DMIC-DATA2/SPI3-MISO/RJTAG-CK/PF-EINT5	B5	PF5		1.8V	
			SDC0-D2	Default		
			JTAG-CK			
			DMIC-DATA2			
			SPI3-MISO			
			RJTAG-CK			
			PF-EINT5			
12	PF4/SDC0-D3/UART0-RX/DMIC-DATA1/SPI3-MOSI/IR-TX/PF-EINT4	A5	PF4		1.8V	
			SDC0-D3	Default		
			UART0-RX			
			DMIC-DATA1			
			SPI3-MOSI			
			IR-TX			
			PF-EINT4			

13	PF1/SDC0-D0/JTAG-DI/UART1-RX/RJTAG-DI/IR1-RX/LBUS-DRQ1/PF-EINT1	C7	PF1		1.8V	
			SDC0-D0	Default		
			JTAG-DI			
			UART1-RX			
			RJTAG-DI			
			IR1-RX			
			LBUS-DRQ1			
			PF-EINT1			
14	PF2/SDC0-CLK/UART0-TX/DMIC-CLK/SPI3-CLK/IR2-RX/PF-EINT2	B6	PF2		1.8V	
			SDC0-CLK	Default		
			UART0-TX			
			DMIC-CLK			
			SPI3-CLK			
			IR2-RX			
			PF-EINT2			
15	PF0/SDC0-D1/JTAG-MS/UART1-TX/RJTAG-MS/IR0-RX/LBUS-DRQ0/PF-EINT0	B7	PF0		1.8V	
			SDC0-D1	Default		
			JTAG-MS			
			UART1-TX			
			RJTAG-MS			
			IR0-RX			
			LBUS-DRQ0			
			PF-EINT0			

16	PF6/DMIC-DATA3/PF-EINT6	A7	PF6		1.8V	
			DMIC-DATA3	Default		
			PF-EINT6			
17	PJ0/PWM2-0/I2S2-MCLK/TWI4-SCK/RGMII0-RXD1/RMII0-RXD1/DMIC-CLK/UART5-TX/PJ-EINT0	C2	PJ0		3.3V	
			PWM2-0			
			I2S2-MCLK			
			TWI4-SCK			
			RGMII0-RXD1			
			RMII0-RXD1	Default		
			DMIC-CLK			
			UART5-TX			
			PJ-EINT0			
18	PJ1/PWM2-1/I2S2-BCLK/TWI4-SDA/RGMII0-RXD0/RMII0-RXD0/DMIC-DATA0/UART5-RX/PJ-EINT1	C1	PJ1		3.3V	
			PWM2-1			
			I2S2-BCLK			
			TWI4-SDA			
			RGMII0-RXD0			
			RMII0-RXD0	Default		
			DMIC-DATA0			
			UART5-RX			
			PJ-EINT1			

19	PJ2/PWM2-2/I2S2-LRCK/RGMII0-RXCTL/RMII0-CRS-DV/DMIC-DATA1/UART5-RTS/PJ-EINT2	C3	PJ2		3.3V	
			PWM2-2			
			I2S2-LRCK			
			RGMII0-RXCTL			
			RMII0-CRS-DV	Default		
			DMIC-DATA1			
			UART5-RTS			
			PJ-EINT2			
20	PJ3/PWM2-3/I2S2-DOUT0/I2S2-DIN1/RGMII0-CLKIN/RMII0-RXER/DMIC-DATA2/UART5-CTS/PJ-EINT3	B1	PJ3		3.3V	
			PWM2-3			
			I2S2-DOUT0			
			I2S2-DIN1			
			RGMII0-CLKIN			
			RMII0-RXER	Default		
			DMIC-DATA2			
			UART5-CTS			
			PJ-EINT3			

21	PJ4/PWM2-4/I2S2-DIN0/I2S2-DOUT1/RGMII0-TXD1/RMII0-TXD1/DMIC-DATA3/UART7-TX/PJ-EINT4	A3	PJ4		3.3V	
			PWM2-4			
			I2S2-DIN0			
			I2S2-DOUT1			
			RGMII0-TXD1			
			RMII0-TXD1	Default		
			DMIC-DATA3			
			UART7-TX			
			PJ-EINT4			
22	PJ5/PWM2-5/I2S2-DIN2/I2S2-DOUT2/RGMII0-TXD0/RMII0-TXD0/UART7-RX/PJ-EINT5	B3	PJ5		3.3V	
			PWM2-5			
			I2S2-DIN2			
			I2S2-DOUT2			
			RGMII0-TXD0			
			RMII0-TXD0	Default		
			UART7-RX			
			PJ-EINT5			

23	PJ6/PWM2-6/I2S2-DIN3/I2S2-DOUT3/RGMII0-TXCK/RMII0-TXCK/UART7-RTS/PJ-EINT6	A2	PJ6		3.3V	
			PWM2-6			
			I2S2-DIN3			
			I2S2-DOUT3			
			RGMII0-TXCK			
			RMII0-TXCK	Default		
			UART7-RTS			
			PJ-EINT6			
24	PJ7/PWM2-7/I2S1-MCLK/RGMII0-TXCTL/RMII0-TXEN/UART7-CTS/PJ-EINT7	B2	PJ7		3.3V	
			PWM2-7			
			I2S1-MCLK			
			RGMII0-TXCTL			
			RMII0-TXEN	Default		
			UART7-CTS			
			PJ-EINT7			
25	PJ8/PWM2-8/I2S1-BCLK/LEDC/RGMII0-MDC/UART2-TX/PJ-EINT8	B4	PJ8		3.3V	
			PWM2-8			
			I2S1-BCLK			
			LEDC			
			RGMII0-MDC	Default		
			UART2-TX			
			PJ-EINT8			

26	PJ10/PWM2-10/I2S1-DOUT0/I2S1-DIN1/RGMII0-EPHY-25/50M/UART2-RTS/PJ-EINT10	E1	PJ10	Default	3.3V	
			PWM2-10			
			I2S1-DOUT0			
			I2S1-DIN1			
			RGMII0-EPHY-25			
			50M			
			UART2-RTS			
			PJ-EINT10			
27	PJ13/PWM2-13/CAN0-RX0/IR1-RX/RGMII0-RXCK/RMII0-NULL/TWI0-SDA/UART9-RX/PJ-EINT13	D3	PJ13	Default	3.3V	
			PWM2-13			
			CAN0-RX0			
			IR1-RX			
			RGMII0-RXCK			
			RMII0-NULL			
			TWI0-SDA			
			UART9-RX			
			PJ-EINT13			

28	PJ12/PWM2-12/CAN0-TX0/IR0-RX/RGMII0-RXD2/RMII0-NULL/TWI0-SCK/UART9-TX/PJ-EINT12	D2	PJ12	Default	3.3V	
			PWM2-12			
			CAN0-TX0			
			IR0-RX			
			RGMII0-RXD2			
			RMII0-NULL			
			TWI0-SCK			
			UART9-TX			
			PJ-EINT12			
29	PJ9/PWM2-9/I2S1-LRCK/IR-TX/RGMII0-MDIO/UART2-RX/PJ-EINT9	C4	PJ9		3.3V	
			PWM2-9			
			I2S1-LRCK			
			IR-TX			
			RGMII0-MDIO	Default		
			UART2-RX			
			PJ-EINT9			

30	PJ14/CAN1-TX0/IR2-RX/RGMII0-TXD3/RMII0-NULL/TWI5-SCK/UART9-RTS/PJ-EINT14	1A2	PJ14	Default	3.3V	
			CAN1-TX0			
			IR2-RX			
			RGMII0-TXD3			
			RMII0-NULL			
			TWI5-SCK			
			UART9-RTS			
			PJ-EINT14			
31	PJ15/CAN1-RX0/IR3-RX/RGMII0-TXD2/RMII0-NULL/TWI5-SDA/UART9-CTS/PJ-EINT15	1A1	PJ15	Default	3.3V	
			CAN1-RX0			
			IR3-RX			
			RGMII0-TXD2			
			RMII0-NULL			
			TWI5-SDA			
			UART9-CTS			
			PJ-EINT15			

32	PJ11/PWM2-11/I2S1-DIN0/I2S1-DOUT1/RGMII0-RXD3/RMII0-NULL/UART2-CTS/PJ-EINT11	E3	PJ11	Default	3.3V	
			PWM2-11			
			I2S1-DIN0			
			I2S1-DOUT1			
			RGMII0-RXD3			
			RMII0-NULL			
			UART2-CTS			
			PJ-EINT11			
33	PB2/UART2-RTS/SPI3-MOSI/JTAG-DO/TWI2-SCK/RJTAG-DO/RGMII2-RXCTL/RMII2-CRS-DV/PB-EINT2	G2	PB2	Default	3.3V	
			UART2-RTS			
			SPI3-MOSI			
			JTAG-DO			
			TWI2-SCK			
			RJTAG-DO			
			RGMII2-RXCTL			
			RMII2-CRS-DV			
			PB-EINT2			

34	PB3/UART2-CTS/SPI3-MISO/JTAG-DI/TWI2-SDA/RJTAG-DI/RGMII2-CLKIN/RMII2-RXER/PB-EINT3	G1	PB3	Default	3.3V	
			UART2-CTS			
			SPI3-MISO			
			JTAG-DI			
			TWI2-SDA			
			RJTAG-DI			
			RGMII2-CLKIN			
			RMII2-RXER			
			PB-EINT3			
35	PB1/UART2-RX/SPI3-CLK/JTAG-CK/PWM0-7/RJTAG-CK/RGMII2-RXD0/RMII2-RXD0/PB-EINT1	G3	PB1	Default	3.3V	
			UART2-RX			
			SPI3-CLK			
			JTAG-CK			
			PWM0-7			
			RJTAG-CK			
			RGMII2-RXD0			
			RMII2-RXD0			
			PB-EINT1			

36	PB0/UART2-TX/SPI3-CS0/JTAG-MS/PWM0-6/RJTAG-MS/RGMII2-RXD1/RMII2-RXD1/PB-EINT0	H2	PB0	Default	3.3V	
			UART2-TX			
			SPI3-CS0			
			JTAG-MS			
			PWM0-6			
			RJTAG-MS			
			RGMII2-RXD1			
			RMII2-RXD1			
			PB-EINT0			
37	PB7/OWA-IN/I2S0-DOUT0/I2S0-DIN1/PWM1-3/CAN1-TX0/UART8-CTS/TWI0-SDA/RGMII2-TXCTL/RMII2-TXEN/PB-EINT7	J3	PB7	Default	3.3V	
			OWA-IN			
			I2S0-DOUT0			
			I2S0-DIN1			
			PWM1-3			
			CAN1-TX0			
			UART8-CTS			
			TWI0-SDA			
			RGMII2-TXCTL			
			RMII2-TXEN			
			PB-EINT7			

38	PB4/TWI1-SCK/I2S0-MCLK/SPI3-CS1/PWM1-0/IR0-RX/UART8-TX/RGMII2-TXD1/RMII2-TXD1/PB-EINT4	J2	PB4	Default	3.3V	
			TWI1-SCK			
			I2S0-MCLK			
			SPI3-CS1			
			PWM1-0			
			IR0-RX			
			UART8-TX			
			RGMII2-TXD1			
			RMII2-TXD1			
			PB-EINT4			
39	PB5/TWI1-SDA/I2S0-BCLK/SPI3-CS2/PWM1-1/IR1-RX/UART8-RX/RGMII2-TXD0/RMII2-TXD0/PB-EINT5	J1	PB5	Default	3.3V	
			TWI1-SDA			
			I2S0-BCLK			
			SPI3-CS2			
			PWM1-1			
			IR1-RX			
			UART8-RX			
			RGMII2-TXD0			
			RMII2-TXD0			
			PB-EINT5			

40	PB6/I2S0-LRCK/PWM1-2/IR-TX/UART8-RTS/TWI0-SCK/RGMII2-TXCK/RMII2-TXCK/PB-EINT6	H3	PB6	Default	3.3V	
			I2S0-LRCK			
			PWM1-2			
			IR-TX			
			UART8-RTS			
			TWI0-SCK			
			RGMII2-TXCK			
			RMII2-TXCK			
			PB-EINT6			
41	PB9/UART0-TX/I2S0-DIN2/I2S0-DOUT2/TWI0-SCK/UART8-DSR/PB-EINT9	K3	PB9		3.3V	
			UART0-TX	Default		
			I2S0-DIN2			
			I2S0-DOUT2			
			TWI0-SCK			
			UART8-DSR			
			PB-EINT9			

42	PB10/UART0-RX/I2S0-DIN3/I2S0-DOUT3/PWM0-1/TWI0-SDA/UART8-DTR/PB-EINT10	L1	PB10		3.3V	
			UART0-RX	Default		
			I2S0-DIN3			
			I2S0-DOUT3			
			PWM0-1			
			TWI0-SDA			
			UART8-DTR			
			PB-EINT10			
43	PB11/TWI5-SCK/UART7-RTS/SPI3-CS0/PWM0-2/WATCHDOG-SIG/UART8-RI/RGMII2-MDC/PB-EINT11	F3	PB11	Default	3.3V	
			TWI5-SCK			
			UART7-RTS			
			SPI3-CS0			
			PWM0-2			
			WATCHDOG-SIG			
			UART8-RI			
			RGMII2-MDC			
			PB-EINT11			

44	PB12/TWI5-SDA/UART7-CTS/SPI3-CLK/PWM0-3/PLL-LOCK-DBG/RGMII2-MDIO/PB-EINT12	F2	PB12	Default	3.3V	
			TWI5-SDA			
			UART7-CTS			
			SPI3-CLK			
			PWM0-3			
			PLL-LOCK-DBG			
			RGMII2-MDIO			
			PB-EINT12			
45	PB13/TWI4-SCK/UART7-TX/SPI3-MOSI/PWM0-4/IR2-RX/CLK-FANOUT0/RGMII2-EPHY-25/50M/PB-EINT13	1B1	PB13	Default	3.3V	
			TWI4-SCK			
			UART7-TX			
			SPI3-MOSI			
			PWM0-4			
			IR2-RX			
			CLK-FANOUT0			
			RGMII2-EPHY-25			
			50M			
			PB-EINT13			

46	PB14/TWI4-SDA/UART7-RX/SPI3-MISO/PWM0-5/IR3-RX/CLK-FANOUT1/PB-EINT14/PB-EINT14	1B2	PB14	Default	3.3V	
			TWI4-SDA			
			UART7-RX			
			SPI3-MISO			
			PWM0-5			
			IR3-RX			
			CLK-FANOUT1			
			PB-EINT14			
			PB-EINT14			
47	GND3		GND			
48	PG6/UART1-TX/TWI4-SCK/UART9-CTS/RGMII1-RXD1/RMII1-RXD1/I2S2-MCLK/PG-EINT6	M3	PG6		VCC-PG	
			UART1-TX			
			TWI4-SCK			
			UART9-CTS			
			RGMII1-RXD1	Default		
			RMII1-RXD1			
			I2S2-MCLK			
			PG-EINT6			

49	PG7/UART1–RX/TWI4–SDA/UART9–RTS/RGMII1–RXD0/RMII1–RXD0/I2S2–BCLK/PG–EINT7	M2	PG7		VCC–PG	
			UART1–RX			
			TWI4–SDA			
			UART9–RTS			
			RGMII1–RXD0	Default		
			RMII1–RXD0			
			I2S2–BCLK			
			PG–EINT7			
50	PG0/SDC1–CLK/UART8–TX/RGMII1–RXD3/RMII1–NULL/PG–EINT0	N3	PG0		VCC–PG	
			SDC1–CLK			
			UART8–TX			
			RGMII1–RXD3	Default		
			RMII1–NULL			
			PG–EINT0			
51	PG4/SDC1–D2/CAN0–TX0/RGMII1–TXD2/RMII1–NULL/PG–EINT4	R1	PG4		VCC–PG	
			SDC1–D2			
			CAN0–TX0			
			RGMII1–TXD2	Default		
			RMII1–NULL			
			PG–EINT4			

52	PG3/SDC1-D1/UART8-CTS/RGMII1-TXD3/RMII1-NULL/PG-EINT3	N1	PG3		VCC-PG	
			SDC1-D1			
			UART8-CTS			
			RGMII1-TXD3	Default		
			RMII1-NULL			
			PG-EINT3			
53	PG5/SDC1-D3/CAN0-RX0/RGMII1-EPHY-25/50M/PG-EINT5	P3	PG5	Default	VCC-PG	
			SDC1-D3			
			CAN0-RX0			
			RGMII1-EPHY-25			
			50M			
			PG-EINT5			
54	PG1/SDC1-CMD/UART8-RX/RGMII1-RXD2/RMII1-NULL/PG-EINT1	P2	PG1		VCC-PG	
			SDC1-CMD			
			UART8-RX			
			RGMII1-RXD2	Default		
			RMII1-NULL			
			PG-EINT1			

55	PG2/SDC1-D0/UART8-RTS/RGMII1-RXCK/RMII1-NULL/PG-EINT2	N2	PG2		VCC-PG	
			SDC1-D0			
			UART8-RTS			
			RGMII1-RXCK	Default		
			RMII1-NULL			
			PG-EINT2			
56	PG8/UART1-RTS/TWI5-SCK/UART9-TX/RGMII1-RXCTL/RMII1-CRS-DV/I2S2-LRCK/PG-EINT8	L3	PG8		VCC-PG	
			UART1-RTS			
			TWI5-SCK			
			UART9-TX			
			RGMII1-RXCTL	Default		
			RMII1-CRS-DV			
			I2S2-LRCK			
			PG-EINT8			
57	PG9/UART1-CTS/TWI5-SDA/UART9-RX/RGMII1-CLKIN/RMII1-RXER/I2S2-DOUT0/I2S2-DIN1/PG-EINT9	1J2	PG9		VCC-PG	
			UART1-CTS			
			TWI5-SDA			
			UART9-RX			
			RGMII1-CLKIN	Default		
			RMII1-RXER			
			I2S2-DOUT0			
			I2S2-DIN1			
			PG-EINT9			

58	PG12/UART4–RTS/I2S1–LRCK/RGMII1–TXCK/RMII1–TXCK/DMIC–DATA0/PG–EINT12	1G3	PG12		VCC–PG	
			UART4–RTS			
			I2S1–LRCK			
			RGMII1–TXCK	Default		
			RMII1–TXCK			
			DMIC–DATA0			
			PG–EINT12			
59	PG13/UART4–CTS/I2S1–DOUT0/I2S1–DIN1/RGMII1–TXCTL/RMII1–TXEN/DMIC–DATA1/PG–EINT13	1H3	PG13		1.8V/ 3.3V	
			UART4–CTS			
			I2S1–DOUT0			
			I2S1–DIN1			
			RGMII1–TXCTL	Default		
			RMII1–TXEN			
			DMIC–DATA1			
			PG–EINT13			

60	PG10/UART4-TX/I2S1-MCLK/TWI2-SCK/RGMII1-TXD1/RMII1-TXD1/I2S2-DIN0/I2S2-DOUT1/PG-EINT10	1H2	PG10		VCC-PG	
			UART4-TX			
			I2S1-MCLK			
			TWI2-SCK			
			RGMII1-TXD1	Default		
			RMII1-TXD1			
			I2S2-DIN0			
			I2S2-DOUT1			
			PG-EINT10			
61	PG11/UART4-RX/I2S1-BCLK/TWI2-SDA/RGMII1-TXD0/RMII1-TXD0/DMIC-CLK/PG-EINT11	1J3	PG11		VCC-PG	
			UART4-RX			
			I2S1-BCLK			
			TWI2-SDA			
			RGMII1-TXD0	Default		
			RMII1-TXD0			
			DMIC-CLK			
			PG-EINT11			
62	PG15/CAN1-RX0/RGMII1-MDIO/DMIC-DATA3/LBUS-DRQ1/PG-EINT15	1G1	PG15		VCC-PG	
			CAN1-RX0			
			RGMII1-MDIO	Default		
			DMIC-DATA3			
			LBUS-DRQ1			
			PG-EINT15			

63	PG14/CAN1-TX0/I2S1-DIN0/I2S1-DOUT1/RGMII1-MDC/DMIC-DATA2/LBUS-DRQ0/PG-EINT14	1G2	PG14		VCC-PG	
			CAN1-TX0			
			I2S1-DIN0			
			I2S1-DOUT1			
			RGMII1-MDC	Default		
			DMIC-DATA2			
			LBUS-DRQ0			
			PG-EINT14			
64	GND4		GND			
65	PD23/PWM2-7/UART3-CTS/TWI4-SDA/TWI0-SDA/CSI1-XHS/LBUS-DRQ1/PWMCS-I7/PD-EINT23	1J13	PD23	Default	3.3V	
			PWM2-7			
			UART3-CTS			
			TWI4-SDA			
			TWI0-SDA			
			CSI1-XHS			
			LBUS-DRQ1			
			PWMCS-I7			
			PD-EINT23			

66	PD22/PWM2-6/UART3-RTS/TWI4-SCK/TWI0-SCK/CSI0-XHS/LBUS-DRQ0/PWMCS-I6/PD-EINT22	1J14	PD22	Default	3.3V	
			PWM2-6			
			UART3-RTS			
			TWI4-SCK			
			TWI0-SCK			
			CSI0-XHS			
			LBUS-DRQ0			
			PWMCS-I6			
			PD-EINT22			
67	PD21/LCD-VSYNC/PWM2-5/UART3-RX/TWI5-SDA/LBUS-OE/PWMCS-I5/RGMII2-TXD2/RMII2-NULL/PD-EINT21	L20	PD21	Default	3.3V	
			LCD-VSYNC			
			PWM2-5			
			UART3-RX			
			TWI5-SDA			
			LBUS-OE			
			PWMCS-I5			
			RGMII2-TXD2			
			RMII2-NULL			
			PD-EINT21			

68	PD20/LCD-HSYNC/PWM2-4/UART3-TX/TWI5-SCK/LBUS-WR/PWMCS-I4/RGMII2-TXD3/RMII2-NULL/PD-EINT20	L21	PD20	Default	3.3V	
			LCD-HSYNC			
			PWM2-4			
			UART3-TX			
			TWI5-SCK			
			LBUS-WR			
			PWMCS-I4			
			RGMII2-TXD3			
			RMII2-NULL			
			PD-EINT20			
69	PD17/LCD-D23/LVDS1-CKN/PWM2-1/UART3-CTS/UART8-RI/LBUS-LD5/PWMCS-I1/RGMII2-RXD3/RMII2-NULL/PD-EINT17	U19	PD17	Default	3.3V	
			LCD-D23			
			LVDS1-CKN			
			PWM2-1			
			UART3-CTS			
			UART8-RI			
			LBUS-LD5			
			PWMCS-I1			
			RGMII2-RXD3			
			RMII2-NULL			
			PD-EINT17			

70	PD16/LCD-D22/LVDS1-CKP/PWM2-0/UART3-RTS/UART8-DTR/LBUS-LD4/PWMCS-I0/RGMII2-EPHY-25/50M/PD-EINT16	U20	PD16	Default	3.3V	
			LCD-D22			
			LVDS1-CKP			
			PWM2-0			
			UART3-RTS			
			UART8-DTR			
			LBUS-LD4			
			PWMCS-I0			
			RGMII2-EPHY-25			
			50M			
			PD-EINT16			
71	PD18/LCD-CLK/LVDS1-D3P/TWI5-SCK/PWM2-2/CAN0-TX0/LBUS-LD6/PWMCS-I2/RGMII2-RXD2/RMII2-NULL/PD-EINT18	T19	PD18	Default	3.3V	
			LCD-CLK			
			LVDS1-D3P			
			TWI5-SCK			
			PWM2-2			
			CAN0-TX0			
			LBUS-LD6			
			PWMCS-I2			
			RGMII2-RXD2			
			RMII2-NULL			
			PD-EINT18			

72	PD19/LCD-DE/LVDS1-D3N/TWI5-SDA/PWM2-3/CAN0-RX0/LBUS-LD7/PWMCS-I3/RGMII2-RXCK/RMII2-NULL/PD-EINT19	U21	PD19	Default	3.3V	
			LCD-DE			
			LVDS1-D3N			
			TWI5-SDA			
			PWM2-3			
			CAN0-RX0			
			LBUS-LD7			
			PWMCS-I3			
			RGMII2-RXCK			
			RMII2-NULL			
			PD-EINT19			
73	PD15/LCD-D21/LVDS1-D2N/SPI1-WP<DBI-TE>/PWM1-7/UART3-RX/UART8-DSR/LBUS-LD3/PWMCS-OF/PD-EINT15	V19	PD15	Default	3.3V	
			LCD-D21			
			LVDS1-D2N			
			SPI1-WP<DBI-TE>			
			PWM1-7			
			UART3-RX			
			UART8-DSR			
			LBUS-LD3			
			PWMCS-OF			
			PD-EINT15			

74	PD14/LCD-D20/LVDS1-D2P/SPI1-HOLD<DBI-DCX/DBI-WRX>/PWM1-6/UART3-TX/UART8-DCD/LBUS-LD2/PWMCS-OE/PD-EINT14	V20	PD14	Default	3.3V	
			LCD-D20			
			LVDS1-D2P			
			SPI1-HOLD<DBI-DCX			
			DBI-WRX>			
			PWM1-6			
			UART3-TX			
			UART8-DCD			
			LBUS-LD2			
			PWMCS-OE			
			PD-EINT14			
75	PD13/LCD-D19/LVDS1-D1N/SPI1-MISO<DBI-SDI/DBI-TE/DBI-DCX>/PWM1-5/DMIC-DATA3/UART8-CTS/LBUS-LD1/PWMCS-OD/PD-EINT13	W20	PD13	Default	3.3V	
			LCD-D19			
			LVDS1-D1N			
			SPI1-MISO<DBI-SDI			
			DBI-TE			
			DBI-DCX>			
			PWM1-5			
			DMIC-DATA3			
			UART8-CTS			
			LBUS-LD1			
			PWMCS-OD			
			PD-EINT13			

77	PD11/LCD-D15/LVDS1-D0N/SPI1-CLK<DBI-SCLK>/PWM1-3/DMIC-DATA1/UART8-RX/LBUS-LD31/PWMCS-OB/LBUS-READY0/PD-EINT11	Y20	PD11	Default	3.3V	
			LCD-D15			
			LVDS1-D0N			
			SPI1-CLK<DBI-SCLK>			
			PWM1-3			
			DMIC-DATA1			
			UART8-RX			
			LBUS-LD31			
			PWMCS-OB			
			LBUS-READY0			
			PD-EINT11			
78	PD10/LCD-D14/LVDS1-D0P/SPI1-CS0<DBI-CSX>/PWM1-2/DMIC-DATA0/UART8-TX/LBUS-LD30/PWMCS-OA/LBUS-READY1/PD-EINT10	Y21	PD10	Default	3.3V	
			LCD-D14			
			LVDS1-D0P			
			SPI1-CS0<DBI-CSX>			
			PWM1-2			
			DMIC-DATA0			
			UART8-TX			
			LBUS-LD30			
			PWMCS-OA			
			LBUS-READY1			
			PD-EINT10			
79	GND5		GND		3.3V	

80	PD1/LCD-D3/LVDS0-D0N/DSI-D0N/PWM0-1/UART2-RTS/UART9-RX/LBUS-LD21/PWMCS-O1/RGMII2-RXD0/RMII2-RXD0/PD-EINT1	R19	PD1	Default	3.3V	
			LCD-D3			
			LVDS0-D0N			
			DSI-D0N			
			PWM0-1			
			UART2-RTS			
			UART9-RX			
			LBUS-LD21			
			PWMCS-O1			
			RGMII2-RXD0			
			RMII2-RXD0			
			PD-EINT1			
81	PD0/LCD-D2/LVDS0-D0P/DSI-D0P/PWM0-0/UART2-CTS/UART9-TX/LBUS-LD20/PWMCS-O0/RGMII2-RXD1/RMII2-RXD1/PD-EINT0	R20	PD0	Default	3.3V	
			LCD-D2			
			LVDS0-D0P			
			DSI-D0P			
			PWM0-0			
			UART2-CTS			
			UART9-TX			
			LBUS-LD20			
			PWMCS-O0			
			RGMII2-RXD1			
			RMII2-RXD1			
			PD-EINT0			

82	PD5/LCD-D7/LVDS0-D2N/DSI-CKN/PWM0-5/UART4-RTS/UART6-RX/LBUS-LD25/PWMCS-O5/LBUS-CS3/RGMII2-TXD0/RMII2-TXD0/PD-EINT5	P20	PD5	Default	3.3V	
			LCD-D7			
			LVDS0-D2N			
			DSI-CKN			
			PWM0-5			
			UART4-RTS			
			UART6-RX			
			LBUS-LD25			
			PWMCS-O5			
			LBUS-CS3			
			RGMII2-TXD0			
			RMII2-TXD0			
			PD-EINT5			

83	PD4/LCD-D6/LVDS0-D2P/DSI-CKP/PWM0-4/UART4-CTS/UART6-TX/LBUS-LD24/PWMCS-O4/RGMII2-TXD1/RMII2-TXD1/PD-EINT4	N19	PD4	Default	3.3V	
			LCD-D6			
			LVDS0-D2P			
			DSI-CKP			
			PWM0-4			
			UART4-CTS			
			UART6-TX			
			LBUS-LD24			
			PWMCS-O4			
			RGMII2-TXD1			
			RMII2-TXD1			
			PD-EINT4			
84	PD3/LCD-D5/LVDS0-D1N/DSI-D1N/PWM0-3/UART2-RX/UART9-CTS/LBUS-LD23/PWMCS-O3/RGMII2-CLKIN/RMII2-RXER/PD-EINT3	R21	PD3	Default	3.3V	
			LCD-D5			
			LVDS0-D1N			
			DSI-D1N			
			PWM0-3			
			UART2-RX			
			UART9-CTS			
			LBUS-LD23			
			PWMCS-O3			
			RGMII2-CLKIN			
			RMII2-RXER			
			PD-EINT3			

85	PD2/LCD-D4/LVDS0-D1P/DSI-D1P/PWM0-2/UART2-TX/UART9-RTS/LBUS-LD22/PWMCS-O2/RGMII2-RXCTL/RMII2-CRS-DV/PD-EINT2	P19	PD2	Default	3.3V	
			LCD-D4			
			LVDS0-D1P			
			DSI-D1P			
			PWM0-2			
			UART2-TX			
			UART9-RTS			
			LBUS-LD22			
			PWMCS-O2			
			RGMII2-RXCTL			
			RMII2-CRS-DV			
			PD-EINT2			

86	PD7/LCD-D11/LVDS0-CKN/DSI-D2N/PWM0-7/UART4-RX/UART6-CTS/LBUS-LD27/PWMCS-O7/LBUS-READY3/RGMII2-TXCTL/RMII2-TXEN/PD-EINT7	N20	PD7	Default	3.3V	
			LCD-D11			
			LVDS0-CKN			
			DSI-D2N			
			PWM0-7			
			UART4-RX			
			UART6-CTS			
			LBUS-LD27			
			PWMCS-O7			
			LBUS-READY3			
			RGMII2-TXCTL			
			RMII2-TXEN			
			PD-EINT7			

87	PD6/LCD-D10/LVDS0-CKP/DSI-D2P/PWM0-6/UART4-TX/UART6-RTS/LBUS-LD26/PWMCS-O6/LBUS-CS2/RGMII2-TXCK/RMII2-TXCK/PD-EINT6	N21	PD6	Default	3.3V	
			LCD-D10			
			LVDS0-CKP			
			DSI-D2P			
			PWM0-6			
			UART4-TX			
			UART6-RTS			
			LBUS-LD26			
			PWMCS-O6			
			LBUS-CS2			
			RGMII2-TXCK			
			RMII2-TXCK			
			PD-EINT6			

88	PD9/LCD-D13/LVDS0-D3N/DSI-D3N/PWM1-1/DMIC-CLK/CAN1-RX0/LBUS-LD29/PWMCS-O9/LBUS-READY2/RGMII2-MDIO/PD-EINT9	M19	PD9	Default	3.3V	
			LCD-D13			
			LVDS0-D3N			
			DSI-D3N			
			PWM1-1			
			DMIC-CLK			
			CAN1-RX0			
			LBUS-LD29			
			PWMCS-O9			
			LBUS-READY2			
			RGMII2-MDIO			
			PD-EINT9			
89	PD8/LCD-D12/LVDS0-D3P/DSI-D3P/PWM1-0/CAN1-TX0/LBUS-LD28/PWMCS-O8/LBUS-DE/RGMII2-MDC/PD-EINT8	M20	PD8	Default	3.3V	
			LCD-D12			
			LVDS0-D3P			
			DSI-D3P			
			PWM1-0			
			CAN1-TX0			
			LBUS-LD28			
			PWMCS-O8			
			LBUS-DE			
			RGMII2-MDC			
			PD-EINT8			
90	GND6		GND6			

91	PA20/GPADC1-6/NCSI-D12/LBUS-WAIT/PA-EINT20	1G14	PA20	Default	3.3V	
			GPADC1-6			
			NCSI-D12			
			LBUS-WAIT			
			PA-EINT20			
92	PA22/GPADC1-8/NCSI-D14/LBUS-CS2/PA-EINT22	1G13	PA22	Default	3.3V	
			GPADC1-8			
			NCSI-D14			
			LBUS-CS2			
			PA-EINT22			
93	PA21/GPADC1-7/NCSI-D13/LBUS-CS3/SPI2-CS1/PA-EINT21	1F14	PA21	Default	3.3V	
			GPADC1-7			
			NCSI-D13			
			LBUS-CS3			
			SPI2-CS1			
			PA-EINT21			
94	PA23/GPADC1-9/NCSI-D15/LBUS-DE/PA-EINT23	1F12	PA23	Default	3.3V	
			GPADC1-9			
			NCSI-D15			
			LBUS-DE			
			PA-EINT23			

95	PA9/GPADC0-5/RGMII0-TXD0/RMII0-TXD0/NCSI-D1/LBUS-DP1/PWMCS-IB/LBUS-LBE3/LCD-D9/PA-EINT9	G21	PA9	Default	3.3V	
			GPADC0-5			
			RGMII0-TXD0			
			RMII0-TXD0			
			NCSI-D1			
			LBUS-DP1			
			PWMCS-IB			
			LBUS-LBE3			
			LCD-D9			
			PA-EINT9			
96	PA8/GPADC0-4/RGMII0-TXD1/RMII0-TXD1/NCSI-D0/LBUS-DP0/PWMCS-IA/LCD-D8/PA-EINT8	G19	PA8	Default	3.3V	
			GPADC0-4			
			RGMII0-TXD1			
			RMII0-TXD1			
			NCSI-D0			
			LBUS-DP0			
			PWMCS-IA			
			LCD-D8			
			PA-EINT8			

97	PA17/GPADC1-3/RGMII0-RXCK/RMII0-NULL/NCSI-D9/LBUS-LD13/TWI3-SDA/PA-EINT17	K20	PA17	Default	3.3V	
			GPADC1-3			
			RGMII0-RXCK			
			RMII0-NULL			
			NCSI-D9			
			LBUS-LD13			
			TWI3-SDA			
			PA-EINT17			
98	PA6/GPADC0-2/RGMII0-RXCTL/RMII0-CRS-DV/NCSI-MCLK/LBUS-CS1/PWMCS-I8/LCD-D0/PA-EINT6	K19	PA6	Default	3.3V	
			GPADC0-2			
			RGMII0-RXCTL			
			RMII0-CRS-DV			
			NCSI-MCLK			
			LBUS-CS1			
			PWMCS-I8			
			LCD-D0			
			PA-EINT6			

99	PA4/GPADC0-0/RGMII0-RXD1/RMII0-RXD1/NCSI-HSYNC/LBUS-CLK/PA-EINT4	J21	PA4	Default	3.3V	
			GPADC0-0			
			RGMII0-RXD1			
			RMII0-RXD1			
			NCSI-HSYNC			
			LBUS-CLK			
			PA-EINT4			
100	PA14/GPADC1-0/RGMII0-EPHY-25/50M/NCSI-D6/LBUS-LD10/UART6-TX/PA-EINT14	1D12	PA14	Default	3.3V	
			GPADC1-0			
			RGMII0-EPHY-25			
			50M			
			NCSI-D6			
			LBUS-LD10			
			UART6-TX			
101	PA12/GPADC0-8/RGMII0-MDC/NCSI-D4/LBUS-LD8/PWMCS-IE/PA-EINT12	1F13	PA12	Default	3.3V	
			GPADC0-8			
			RGMII0-MDC			
			NCSI-D4			
			LBUS-LD8			
			PWMCS-IE			
			PA-EINT12			

102	PA13/GPADC0-9/RGMII0-MDIO/NCSI-D5/LBUS-LD9/PWMCS-IF/PA-EINT13	1D13	PA13	Default	3.3V	
			GPADC0-9			
			RGMII0-MDIO			
			NCSI-D5			
			LBUS-LD9			
			PWMCS-IF			
			PA-EINT13			
103	PA11/GPADC0-7/RGMII0-TXCTL/RMII0-TXEN/NCSI-D3/LBUS-LBE1/PWMCS-ID/LCD-D17/PA-EINT11	G20	PA11	Default	3.3V	
			GPADC0-7			
			RGMII0-TXCTL			
			RMII0-TXEN			
			NCSI-D3			
			LBUS-LBE1			
			PWMCS-ID			
			LCD-D17			
			PA-EINT11			

104	PA10/GPADC0-6/RGMII0-TXCK/RMII0-TXCK/NCSI-D2/LBUS-LBE0/PWMCS-IC/LCD-D16/PA-EINT10	H19	PA10	Default	3.3V	
			GPADC0-6			
			RGMII0-TXCK			
			RMII0-TXCK			
			NCSI-D2			
			LBUS-LBE0			
			PWMCS-IC			
			LCD-D16			
			PA-EINT10			
105	PA19/GPADC1-5/RGMII0-TXD2/RMII0-NULL/NCSI-D11/LBUS-LD15/PA-EINT19	F20	PA19	Default	3.3V	
			GPADC1-5			
			RGMII0-TXD2			
			RMII0-NULL			
			NCSI-D11			
			LBUS-LD15			
			PA-EINT19			
106	PA18/GPADC1-4/RGMII0-TXD3/RMII0-NULL/NCSI-D10/LBUS-LD14/PA-EINT18	F19	PA18	Default	3.3V	
			GPADC1-4			
			RGMII0-TXD3			
			RMII0-NULL			
			NCSI-D10			
			LBUS-LD14			
			PA-EINT18			

107	PA7/GPADC0-3/RGMII0-CLKIN/RMII0-RXER/NCSI-PCLK/LBUS-CS0/PWMCS-I9/LCD-D1/PA-EINT7	1D14	PA7	Default	3.3V	
			GPADC0-3			
			RGMII0-CLKIN			
			RMII0-RXER			
			NCSI-PCLK			
			LBUS-CS0			
			PWMCS-I9			
			LCD-D1			
			PA-EINT7			
108	PA5/GPADC0-1/RGMII0-RXD0/RMII0-RXD0/NCSI-VSYNC/LBUS-ALE/PA-EINT5	J20	PA5	Default	3.3V	
			GPADC0-1			
			RGMII0-RXD0			
			RMII0-RXD0			
			NCSI-VSYNC			
			LBUS-ALE			
			PA-EINT5			

109	PA16/GPADC1-2/RGMII0-RXD2/RMII0-NULL/NCSI-D8/LBUS-LD12/TWI3-SCK/PA-EINT16	J19	PA16	Default	3.3V	
			GPADC1-2			
			RGMII0-RXD2			
			RMII0-NULL			
			NCSI-D8			
			LBUS-LD12			
			TWI3-SCK			
			PA-EINT16			
110	PA15/GPADC1-1/RGMII0-RXD3/RMII0-NULL/NCSI-D7/LBUS-LD11/UART6-RX/PA-EINT15	H20	PA15	Default	3.3V	
			GPADC1-1			
			RGMII0-RXD3			
			RMII0-NULL			
			NCSI-D7			
			LBUS-LD11			
			UART6-RX			
			PA-EINT15			
111	VCC-PE/VCC-PK_SEL		VCC-PE/VCC-PK_SEL			
112	PA3/GPADC2-3/TP-Y2/LBUS-DP3/PA-EINT3	E20	PA3	Default	3.3V	
			GPADC2-3			
			TP-Y2			
			LBUS-DP3			
			PA-EINT3			

113	PA2/GPADC2-2/TP-Y1/LBUS-DP2/PA-EINT2	1C12	PA2	Default	3.3V	
			GPADC2-2			
			TP-Y1			
			LBUS-DP2			
			PA-EINT2			
114	PA0/GPADC2-0/TP-X1/LBUS-READY3/LBUS-LBE2/PA-EINT0	1C13	PA0	Default	3.3V	
			GPADC2-0			
			TP-X1			
			LBUS-READY3			
			LBUS-LBE2			
115	PA1/GPADC2-1/TP-X2/LBUS-READY2/LBUS-DP1/PA-EINT1	1C14	PA1	Default	3.3V	
			GPADC2-1			
			TP-X2			
			LBUS-READY2			
			LBUS-DP1			
116	AP-RESET	C11	AP-RESET		3.3V	
			AP-RESET			

117	PE0/MCSI0-MCLK/NCSI-D8/CLK-FANOUT1/DMIC-CLK/SDC3-CLK/PE-EINT0	C20	PE0		VCC-PE	
			MCSI0-MCLK	Default		
			NCSI-D8			
			CLK-FANOUT1			
			DMIC-CLK			
			SDC3-CLK			
			PE-EINT0			
118	PE1/TWI1-SCK/NCSI-D9/SPI2-CS0/DMIC-DATA0/PE-EINT1	D19	PE1		VCC-PE	
			TWI1-SCK	Default		
			NCSI-D9			
			SPI2-CS0			
			DMIC-DATA0			
			PE-EINT1			
119	PE2/TWI1-SDA/PWM0-3/NCSI-D10/SPI2-CLK/DMIC-DATA1/PE-EINT2	E21	PE2		VCC-PE	
			TWI1-SDA	Default		
			PWM0-3			
			NCSI-D10			
			SPI2-CLK			
			DMIC-DATA1			
			PE-EINT2			

120	PE6/TWI3-SCK/UART5-RX/NCSI-D14/UART6-CTS/SPI2-HOLD/SDC3-D0/PE-EINT6	1A14	PE6	Default	VCC-PE	
			TWI3-SCK			
			UART5-RX			
			NCSI-D14			
			UART6-CTS			
			SPI2-HOLD			
			SDC3-D0			
			PE-EINT6			
121	PE5/MCSI1-MCLK/UART5-TX/NCSI-D13/UART6-RTS/SPI2-WP/SDC3-CMD/PE-EINT5	C21	PE5	Default	VCC-PE	
			MCSI1-MCLK			
			UART5-TX			
			NCSI-D13			
			UART6-RTS			
			SPI2-WP			
			SDC3-CMD			
			PE-EINT5			

122	PE3/TWI2-SCK/UART5-RTS/NCSI-D11/UART6-TX/SPI2-MOSI/DMIC-DATA2/PE-EINT3	E19	PE3	Default	VCC-PE	
			TWI2-SCK			
			UART5-RTS			
			NCSI-D11			
			UART6-TX			
			SPI2-MOSI			
			DMIC-DATA2			
			PE-EINT3			
123	PE4/TWI2-SDA/UART5-CTS/NCSI-D12/UART6-RX/SPI2-MISO/DMIC-DATA3/PE-EINT4	1A13	PE4	Default	VCC-PE	
			TWI2-SDA			
			UART5-CTS			
			NCSI-D12			
			UART6-RX			
			SPI2-MISO			
			DMIC-DATA3			
			PE-EINT4			
124	PE7/TWI3-SDA/PWM0-2/NCSI-D15/SPI2-CS1/SDC3-D1/PE-EINT7	D20	PE7	Default	VCC-PE	
			TWI3-SDA			
			PWM0-2			
			NCSI-D15			
			SPI2-CS1			
			SDC3-D1			
			PE-EINT7			

125	PE8/MCSI2-MCLK/PWM0-4/CSI0-XVS-FSYNC/CLK-FANOUT0/SPI2-CS2/SDC3-D2/PE-EINT8	B21	PE8	Default	VCC-PE	
			MCSI2-MCLK			
			PWM0-4			
			CSI0-XVS-FSYNC			
			CLK-FANOUT0			
			SPI2-CS2			
			SDC3-D2			
			PE-EINT8			
126	PE9/TCON-FSYNC0<TCON-LCD0>/PWM0-5/CSI1-XVS-FSYNC/SDC3-D3/PE-EINT9	C19	PE9	Default	VCC-PE	
			TCON-FSYNC0<TCON-LCD0>			
			PWM0-5			
			CSI1-XVS-FSYNC			
			SDC3-D3			
			PE-EINT9			
127	VCC-PG_SEL		VCC-PG_SEL			
128	GND7		GND			

129	PK5/MCSIA-D1N/MCSIA-D1N/MCSIC-D0N/TWI1-SDA/SPI1-MISO/NCSI-D5/LBUS-LD16/LBUS-CS2/LCD-D17	A20	PK5		VCC-PK	
			MCSIA-D1N	Default		
			MCSIA-D1N			
			MCSIC-D0N			
			TWI1-SDA			
			SPI1-MISO			
			NCSI-D5			
			LBUS-LD16			
			LBUS-CS2			
			LCD-D17			
130	PK4/MCSIA-D1P/MCSIA-D1P/MCSIC-D0P/TWI1-SCK/SPI1-MOSI/NCSI-D4/LBUS-LD17/I2S1-DIN0/LBUS-CS3/LCD-D16	B20	PK4		VCC-PK	
			MCSIA-D1P	Default		
			MCSIA-D1P			
			MCSIC-D0P			
			TWI1-SCK			
			SPI1-MOSI			
			NCSI-D4			
			LBUS-LD17			
			I2S1-DIN0			
			LBUS-CS3			
			LCD-D16			

131	PK1/MCSIA-CKN/MCSIA-CKN/MCSIA-CKN/UART7-RX/TWI1-SDA/NCSI-D1/LBUS-READY0/I2S1-BCLK/LBUS-DRQ1/LCD-D1	A19	PK1		VCC-PK	
			MCSIA-CKN	Default		
			MCSIA-CKN			
			MCSIA-CKN			
			UART7-RX			
			TWI1-SDA			
			NCSI-D1			
			LBUS-READY0			
			I2S1-BCLK			
			LBUS-DRQ1			
			LCD-D1			
132	PK0/MCSIA-CKP/MCSIA-CKP/MCSIA-CKP/UART7-TX/TWI1-SCK/NCSI-D0/LBUS-READY1/I2S1-MCLK/LBUS-DRQ0/LCD-D0	B19	PK0		VCC-PK	
			MCSIA-CKP	Default		
			MCSIA-CKP			
			MCSIA-CKP			
			UART7-TX			
			TWI1-SCK			
			NCSI-D0			
			LBUS-READY1			
			I2S1-MCLK			
			LBUS-DRQ0			
			LCD-D0			

133	PK2/MCSIA-D0P/MCSIA-D0P/MCSIA-D0P/UART7-RTS/SPI1-CS0/NCSI-D2/LBUS-LD19/I2S1-LRCK/LBUS-LBE3/LCD-D8	C18	PK2		VCC-PK	
			MCSIA-D0P	Default		
			MCSIA-D0P			
			MCSIA-D0P			
			UART7-RTS			
			SPI1-CS0			
			NCSI-D2			
			LBUS-LD19			
			I2S1-LRCK			
			LBUS-LBE3			
			LCD-D8			
134	PK3/MCSIA-D0N/MCSIA-D0N/MCSIA-D0N/UART7-CTS/SPI1-CLK/NCSI-D3/LBUS-LD18/I2S1-DOUT0/LBUS-DE/LCD-D9	B18	PK3		VCC-PK	
			MCSIA-D0N	Default		
			MCSIA-D0N			
			MCSIA-D0N			
			UART7-CTS			
			SPI1-CLK			
			NCSI-D3			
			LBUS-LD18			
			I2S1-DOUT0			
			LBUS-DE			
			LCD-D9			

135	PK6/MCSIA-D2P/MCSIB-D1P/MCSIC-CKP/MCSIO-MCLK/SPI1-WP/NCSI-D6/LBUS-LD15/UART3-RTS/RGMII0-RXD3/RMII0-NULL	B17	PK6	Default	VCC-PK	
			MCSIA-D2P			
			MCSIB-D1P			
			MCSIC-CKP			
			MCSIO-MCLK			
			SPI1-WP			
			NCSI-D6			
			LBUS-LD15			
			UART3-RTS			
			RGMII0-RXD3			
			RMII0-NULL			
136	PK7/MCSIA-D2N/MCSIB-D1N/MCSIC-CKN/TWI2-SCK/SPI1-HOLD/NCSI-D7/LBUS-LD14/RGMII0-RXD2/RMII0-NULL	A17	PK7		VCC-PK	
			MCSIA-D2N			
			MCSIB-D1N			
			MCSIC-CKN			
			TWI2-SCK	Default		
			SPI1-HOLD			
			NCSI-D7			
			LBUS-LD14			
			RGMII0-RXD2			
			RMII0-NULL			

137	PK10/MCSIB-CKP/MCSIB-CKP/TWI3-SCK/PWM0-6/NCSI-HSYNC/LBUS-WAIT/UART3-RX/LBUS-LBE2/RGMII0-TXD2/RMII0-NULL	C16	PK10		VCC-PK	
			MCSIB-CKP			
			MCSIB-CKP			
			TWI3-SCK			
			PWM0-6			
			NCSI-HSYNC			
			LBUS-WAIT			
			UART3-RX	Default		
			LBUS-LBE2			
			RGMII0-TXD2			
			RMII0-NULL			
138	PK11/MCSIB-CKN/MCSIB-CKN/TWI3-SDA/PWM0-7/NCSI-VSYNC/LBUS-CS2/UART3-CTS/	B16	PK11	Default	VCC-PK	
			MCSIB-CKN			
			MCSIB-CKN			
			TWI3-SDA			
			PWM0-7			
			NCSI-VSYNC			
			LBUS-CS2			
			UART3-CTS			

139	PK8/MCSIA-D3P/MCSIB-D0P/MCSIB-D0P/TWI2-SDA/SPI1-CS1/NCSI-PCLK/LBUS-LD13/CLK-FANOUT0/RGMII0-RXCK/RMII0-NULL	B15	PK8		VCC-PK	
			MCSIA-D3P			
			MCSIB-D0P			
			MCSIB-D0P			
			TWI2-SDA	Default		
			SPI1-CS1			
			NCSI-PCLK			
			LBUS-LD13			
			CLK-FANOUT0			
			RGMII0-RXCK			
			RMII0-NULL			
140	PK9/MCSIA-D3N/MCSIB-D0N/MCSIB-D0N/MCSI1-MCLK/SPI1-CS2/NCSI-MCLK/LBUS-LD12/UART3-TX/CLK-FANOUT1/RGMII0-TXD3/RMII0-NULL	A15	PK9		VCC-PK	
			MCSIA-D3N			
			MCSIB-D0N			
			MCSIB-D0N			
			MCSI1-MCLK			
			SPI1-CS2			
			NCSI-MCLK			
			LBUS-LD12			
			UART3-TX	Default		
			CLK-FANOUT1			
			RGMII0-TXD3			
			RMII0-NULL			
141	USB0-DM	B13	USB0-DM			

142	USB0-DP	C13	USB0-DP			
143	USB1-DM	B14	USB1-DM			
144	USB1-DP	C14	USB1-DP			
145	GND8		GND			
146	PWR-IRQ1	1A4	PWR-IRQ1			
147	PWR-IRQ0	C8	PWR-IRQ0			
148	GND9		GND			
149	GND10		GND			
150	GND11		GND			
151	GND12		GND			
152	GND13		GND			
153	GND14		GND			
154	GND15		GND			
155	GND16		GND			
156	GND17		GND			
157	GND18		GND			
158	PWR-IRQ2	1B5	I2C6_SCL_M1			
159	PWR-IRQ4	C9	SPI2_CSN1_M1			
160	AP-CK24M-OUT	B8	AP-CK24M-OUT			