

SOM-CKL138/6748/1808

版本：1.0

设计者： F

2020.12.31

修订历史

修订版本	描述	设计者	日期
1.0	初始版本	F	2021.09.09
	连接器 B2B 改改 SODIMM	F	2021.09.28
	1.2V 电源改为 1.3V	F	2021.12.17
	增加连接器为 B2B 版本		
	增加未引出引脚说明	F	2021.12.19
	修改封装		
	修改连接器信号顺序	F	2022.01.15

目录

- 01.OVERVIEW
- 02.POWER
- 03.DDR2
- 04.EMIFA
- 05.USB/SATA/CLOCK/JTAG
- 06.GPIO/SD NAND/LED
- 07.GPIO/FLASH/ETH
- 08.CONNECTOR

核心板未引出 CPU 引脚

外设	电压	引脚
EMAC LAN8710	3.3V	SPI0_ENA/EPWM0_B GPIO1[06]/SPI0_SCS0/TIMER64P1_IN12/TIMER64P1_OUT12 GPIO1[07]/SPI0_SCS1/TIMER64P0_IN12/TIMER64P0_OUT12 GPIO1[08]/SPI0_CLK/EPWM0_A GPIO1[09]/McASP_AXR01/McBSP0_DX0 GPIO1[10]/McASP_AXR02/McBSP0_DR0 GPIO1[11]/McASP_AXR03/McBSP0_FX0 GPIO1[12]/McASP_AXR04/McBSP0_FSR0 GPIO1[13]/McASP_AXR05/McBSP0_CLKX0 GPIO1[14]/McASP_AXR06/McBSP0_CLKR0 GPIO8[01]/SPI0_SCS2/UART0_RTS/SATA_CP_DET GPIO8[02]/SPI0_SCS3/UART0_CTS/SATA_MP_SWITCH GPIO8[03]/SPI0_SCS4/UART0_TXD GPIO8[04]/SPI0_SCS5/UART0_RXD GPIO8[05]/SPI0_SIM0/EPWM0_SYNC0 GPIO8[06]/SPI0_SOM1/EPWM0_SYNCI GPIO8[07]/McASP_AXR00/McBSP0_CLKS0/ECAP0_APWM0
DDR2	1.8V	所有 DDR2 相关引脚



SOM-CKL138

CoreKernel
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设计者 F

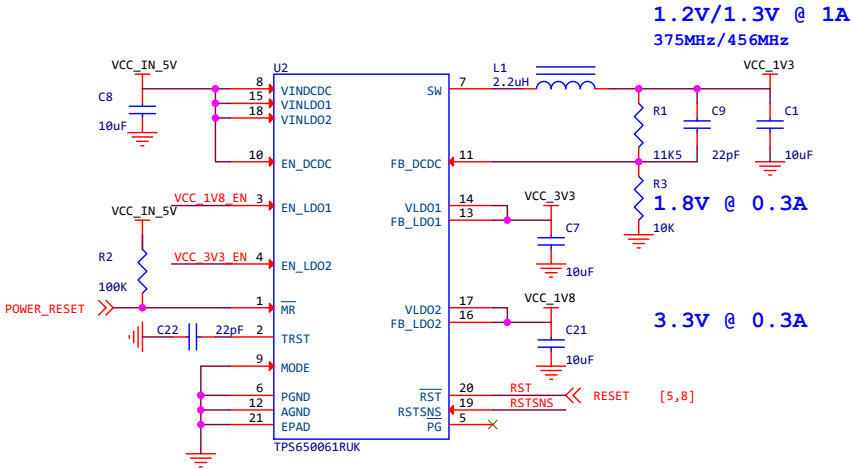
修订版本 1.0 尺寸 B

页面名称 OVERVIEW

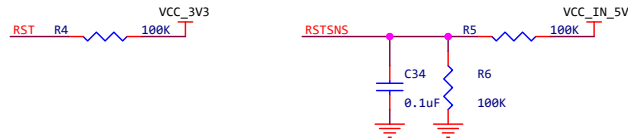
页面修改时间 Tuesday, January 25, 2022

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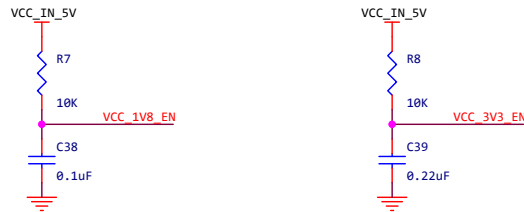
POWER



复位



上电顺序



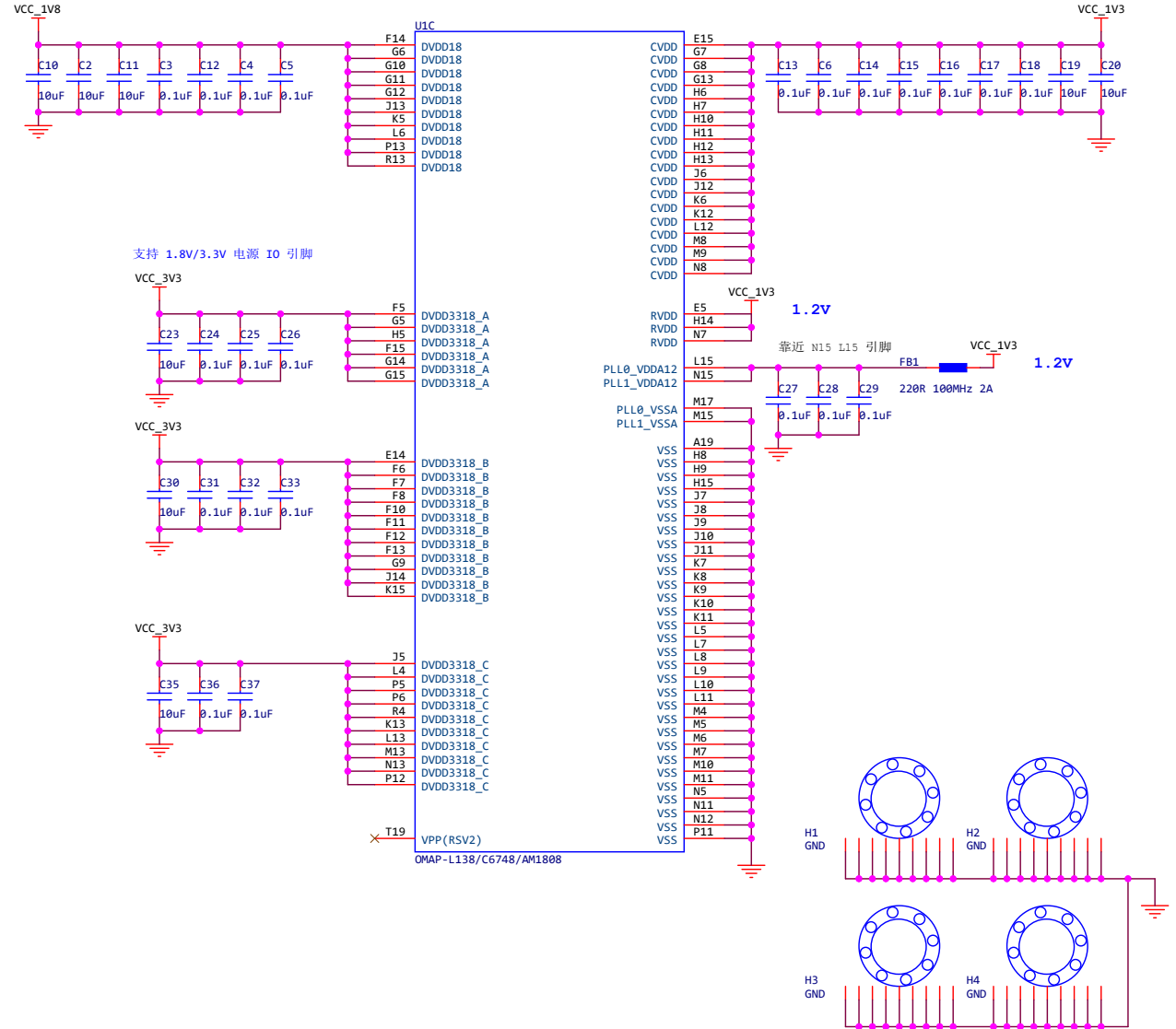
延迟时间 931.558us

延迟时间 2.049ms

上电顺序

- [1] RTC CVDD 1.2V(电池)/1.3V(CVDD)
- [2A] CVDD 1.0V/1.1V/1.2V/1.3V
- [2B] PLL0 VDDA/PLL1 VDDA/SATA VDD/USB CVDD/USB0 VDDA12 1.2V
- [3] USB0 VDDA18/USB1 VDDA18/DDR DVDD18/SATA_VDDR/DVDD18 1.8V
- [4] USB0 VDDA33/USB1 VDDA33 3.3V
- [4] DVDD3318_A/B/C 1.8V/3.3V

DSP POWER



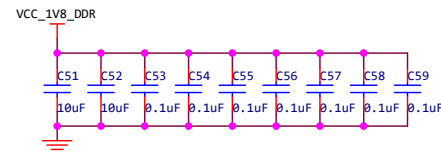
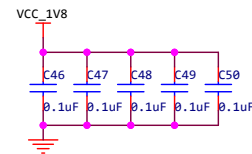
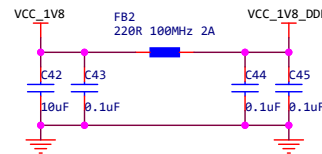
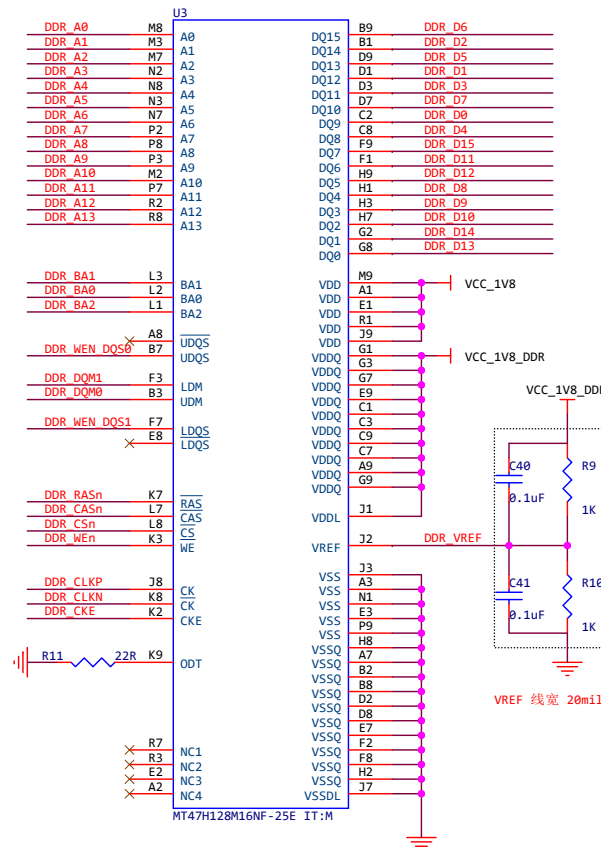
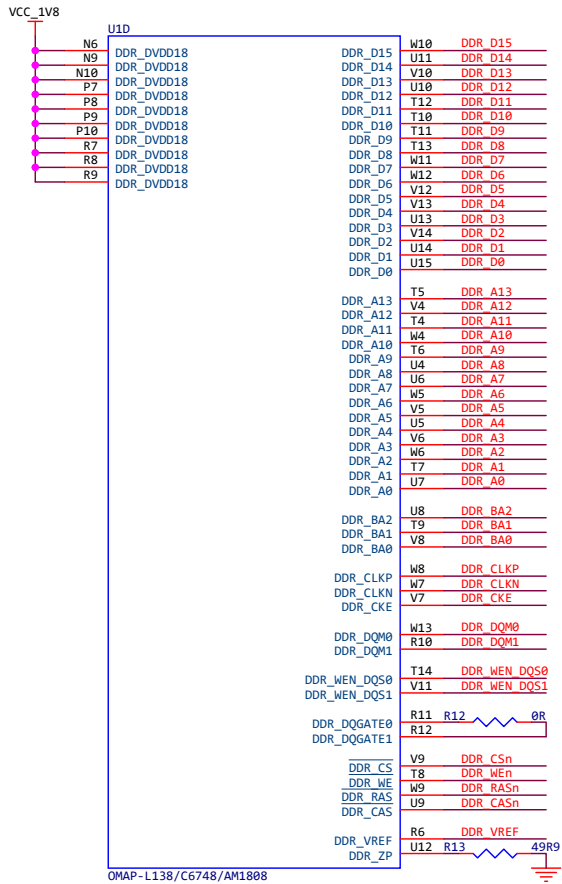
SOM-CKL138



设计者 F
修订版本 1.0 尺寸 B
页面名称 POWER
页面修改时间 Sunday, January 16, 2022

CoreKernel
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DDR2



SOM-CKL138			
设计者 F			
修订版本 1.0	尺寸 B		
页面名称 DDR2			
页面修改时间 Sunday, January 16, 2022		第 3 页 共 8 页	

EMIFA

POWER GROUP 8

U1A

EMIFA_D15/GPIO3[07]	E6	GPIO3[07]/EMIFA_D15	[8]
EMIFA_D14/GPIO3[06]	C7	GPIO3[06]/EMIFA_D14	[8]
EMIFA_D13/GPIO3[05]	B6	GPIO3[05]/EMIFA_D13	[8]
EMIFA_D12/GPIO3[04]	A6	GPIO3[04]/EMIFA_D12	[8]
EMIFA_D11/GPIO3[03]	D6	GPIO3[03]/EMIFA_D11	[8]
EMIFA_D10/GPIO3[02]	A7	GPIO3[02]/EMIFA_D10	[8]
EMIFA_D09/GPIO3[01]	D9	GPIO3[01]/EMIFA_D09	[8]
EMIFA_D08/GPIO3[00]	E10	GPIO3[00]/EMIFA_D08	[8]
EMIFA_D07/GPIO4[15]	D7	GPIO3[00]/EMIFA_D08	[8]
EMIFA_D06/GPIO4[14]	C6	GPIO4[15]/EMIFA_D07	[8]
EMIFA_D05/GPIO4[13]	E7	GPIO4[14]/EMIFA_D06	[8]
EMIFA_D04/GPIO4[12]	B5	GPIO4[13]/EMIFA_D05	[8]
EMIFA_D03/GPIO4[11]	E8	GPIO4[12]/EMIFA_D04	[8]
EMIFA_D02/GPIO4[10]	B8	GPIO4[11]/EMIFA_D03	[8]
EMIFA_D01/GPIO4[09]	A8	GPIO4[10]/EMIFA_D02	[8]
EMIFA_D00/GPIO4[08]	C9	GPIO4[09]/EMIFA_D01	[8]
		GPIO4[08]/EMIFA_D00	[8]
MMCSDB_CLK/GPIO4[07]	E9	GPIO4[07]/MMCSDB_CLK	[8]
MMCSDB_CMD/EMIFA_A22/GPIO4[06]	A10	GPIO4[06]/EMIFA_A22/MMCSDB_CMD	[8]
MMCSDB_D0/EMIFA_A21/GPIO4[05]	B10	GPIO4[05]/EMIFA_A21/MMCSDB_D0	[8]
MMCSDB_D1/EMIFA_A20/GPIO4[04]	A11	GPIO4[04]/EMIFA_A20/MMCSDB_D1	[8]
MMCSDB_D2/EMIFA_A19/GPIO4[03]	C10	GPIO4[03]/EMIFA_A19/MMCSDB_D2	[8]
MMCSDB_D3/EMIFA_A18/GPIO4[02]	E11	GPIO4[02]/EMIFA_A18/MMCSDB_D3	[8]
MMCSDB_D4/EMIFA_A17/GPIO4[01]	B11	GPIO4[01]/EMIFA_A17/MMCSDB_D4	[8]
MMCSDB_D5/EMIFA_A16/GPIO4[00]	E12	GPIO4[00]/EMIFA_A16/MMCSDB_D5	[8]
MMCSDB_D6/EMIFA_A15/GPIO5[15]	C11	GPIO5[15]/EMIFA_A15/MMCSDB_D6	[8]
MMCSDB_D7/EMIFA_A14/GPIO5[14]	A12	GPIO5[14]/EMIFA_A14/MMCSDB_D7	[8]
EMIFA_A13/GPIO5[13]	D11	GPIO5[13]/EMIFA_A13	[8]
EMIFA_A12/GPIO5[12]	D13	GPIO5[12]/EMIFA_A12	[8]
EMIFA_A11/GPIO5[11]	B12	GPIO5[11]/EMIFA_A11	[8]
EMIFA_A10/GPIO5[10]	C12	GPIO5[10]/EMIFA_A10	[8]
EMIFA_A09/GPIO5[09]	D12	GPIO5[09]/EMIFA_A09	[8]
EMIFA_A08/GPIO5[08]	A13	GPIO5[08]/EMIFA_A08	[8]
EMIFA_A07/GPIO5[07]	B13	GPIO5[07]/EMIFA_A07	[8]
EMIFA_A06/GPIO5[06]	E13	GPIO5[06]/EMIFA_A06	[8]
EMIFA_A05/GPIO5[05]	C13	GPIO5[05]/EMIFA_A05	[8]
EMIFA_A04/GPIO5[04]	A14	GPIO5[04]/EMIFA_A04	[8]
EMIFA_A03/GPIO5[03]	D14	GPIO5[03]/EMIFA_A03	[8]
EMIFA_A02/GPIO5[02]	B14	GPIO5[02]/EMIFA_A02	[8]
EMIFA_A01/GPIO5[01]	D15	GPIO5[01]/EMIFA_A01	[8]
EMIFA_A00/GPIO5[00]	C14	GPIO5[00]/EMIFA_A00	[8]
EMIFA_BA1/GPIO2[09]	A15	GPIO2[09]/EMIFA_BA1	[8]
EMIFA_BA0/GPIO2[08]	C15	GPIO2[08]/EMIFA_BA0	[8]
EMIFA_CLK/GPIO2[07]	B7	GPIO2[07]/EMIFA_CLK	[8]
EMIFA_SDCKE/GPIO2[06]	D8	GPIO2[06]/EMIFA_SDCKE	[8]
EMIFA_RAS/GPIO2[05]	A16	GPIO2[05]/EMIFA_RAS	[8]
EMIFA_CAS/GPIO2[04]	A9	GPIO2[04]/EMIFA_CAS	[8]
EMIFA_CS0/GPIO2[00]	A18	GPIO2[00]/EMIFA_CS0	[8]
EMIFA_CS2/GPIO3[15]	B17	GPIO3[15]/EMIFA_CS2	[8]
EMIFA_CS3/GPIO3[14]	A17	GPIO3[14]/EMIFA_CS3	[8]
EMIFA_CS4/GPIO3[13]	F9	GPIO3[13]/EMIFA_CS4	[8]
EMIFA_CS5/GPIO3[12]	B16	GPIO3[12]/EMIFA_CS5	[8]
EMIFA_WE/GPIO3[11]	B9	GPIO3[11]/EMIFA_WE	[8]
EMIFA_OE/GPIO3[10]	B15	GPIO3[10]/EMIFA_OE	[8]
EMIFA_A_RW/GPIO3[09]	D10	GPIO3[09]/EMIFA_A_RW	[8]
EMIFA_WEN_DQM0/GPIO2[03]	C8	GPIO2[03]/EMIFA_WEN_DQM0	[8]
EMIFA_WEN_DQM1/GPIO2[02]	A5	GPIO2[02]/EMIFA_WEN_DQM1	[8]
EMIFA_WAIT0/GPIO3[08]	B18	GPIO3[08]/EMIFA_WAIT0	[8]
EMIFA_WAIT1/GPIO2[01]	B19	GPIO2[01]/EMIFA_WAIT1	[8]

OMAP-L138/C6748/AM1808

GPIO BANK3/4/5[15-0]
GPIO BANK2[9-0]

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修订版本 1.0 尺寸 B

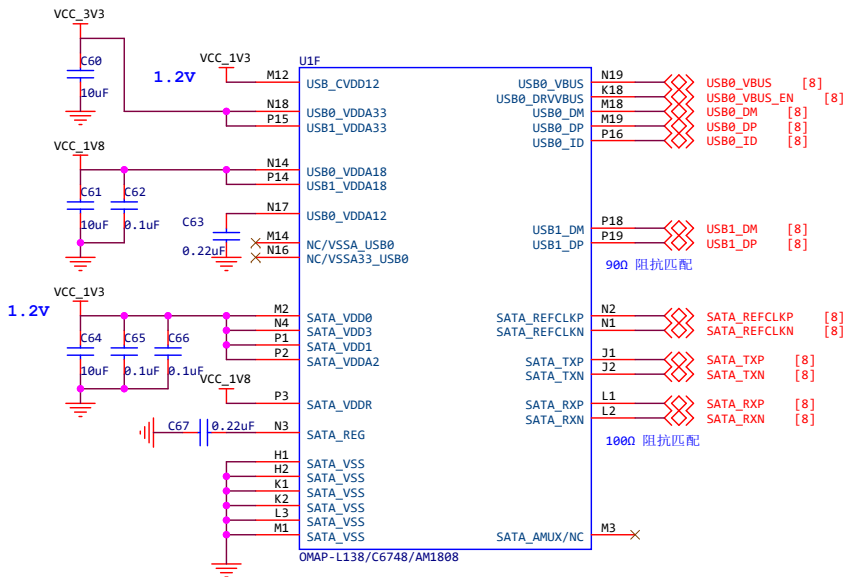
页面名称 EMIFA

页面修改时间 Sunday, January 16, 2022

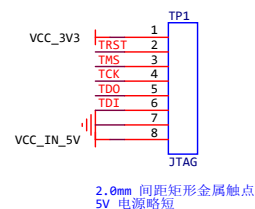
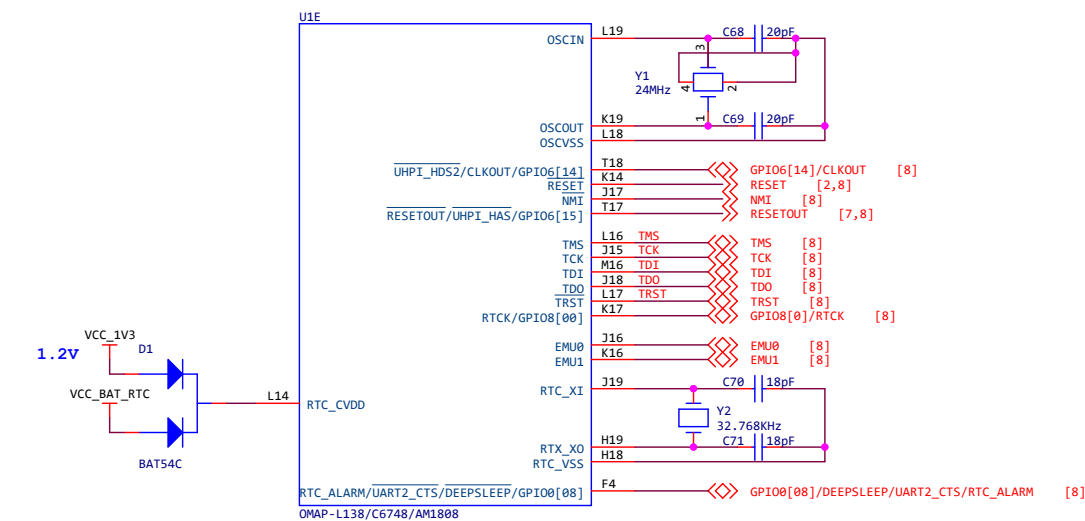
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USB/SATA



CLOCK/JTAG



SOM-CKL138		CoreKernel 新核科技	
设计者	F		
修订版本	1.0	尺寸	B
页面名称	USB/SATA/CLOCK/JTAG		
页面修改时间	Sunday, January 16, 2022		第 5 页 共 8 页

GPIO/FLASH/ETH

