

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_SYNC1 GPIO8[07]/McASP_AXR00/McBSP0_CLKS0/ECAP0_APWM0
DDR2	1.8V	所有 DDR2 相关引脚



SOM-CKL138

设计者 F

修订版本 1.0 尺寸 B

页面名称 OVERVIEW

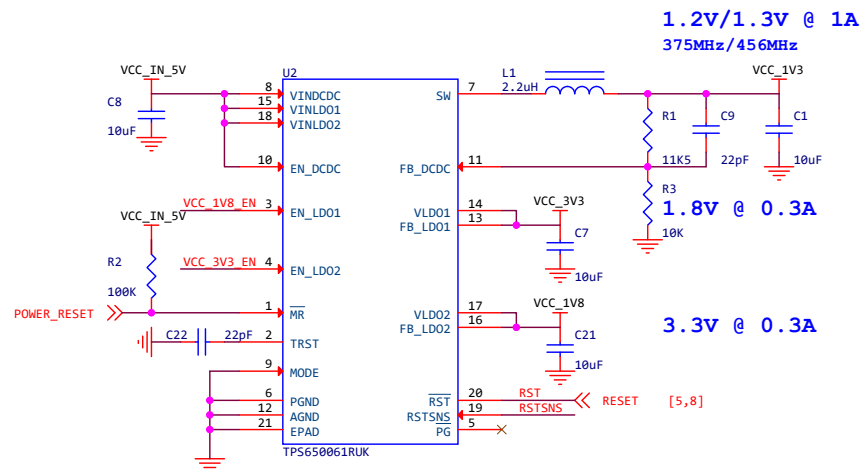
页面修改时间 Tuesday, January 25, 2022

CoreKernel

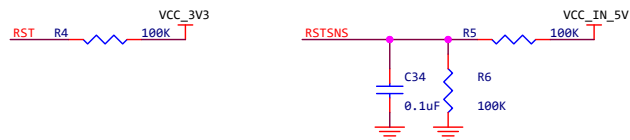
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POWER



复位



上电顺序



延迟时间 931.558us

延迟时间 2.049ms

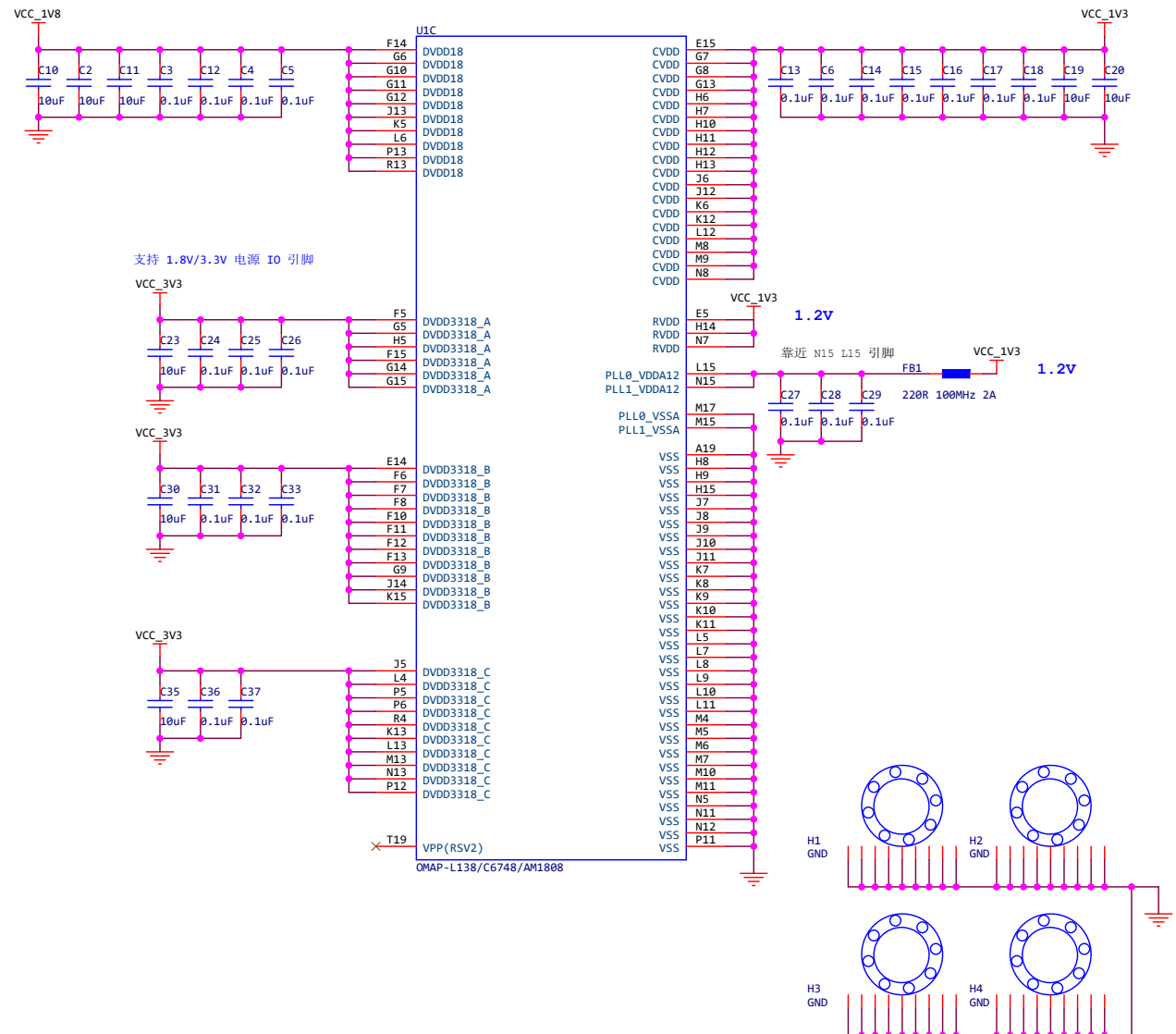
上电顺序

- ```

[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/D0R_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**

CoreKernel  
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|     |   |
|-----|---|
| 设计者 | F |
|-----|---|

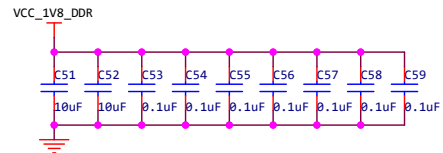
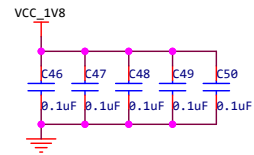
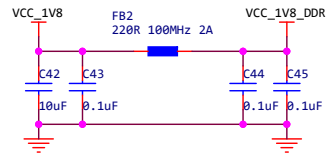
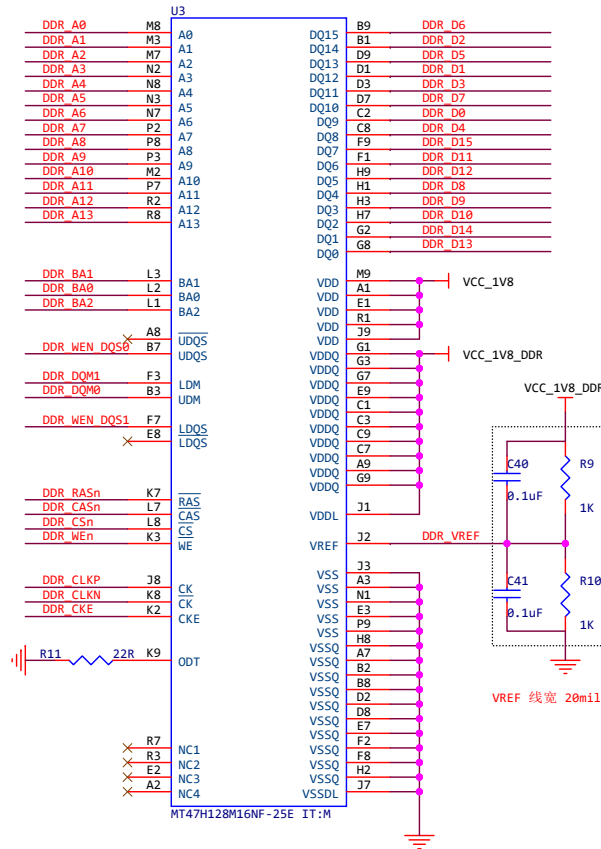
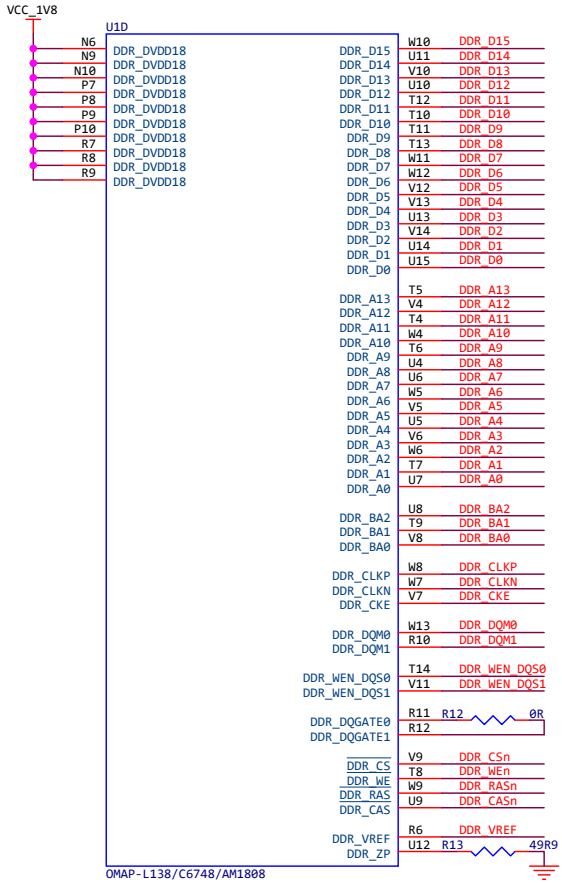
|      |     |
|------|-----|
| 修订版本 | 1.0 |
|------|-----|

|      |       |
|------|-------|
| 页面名称 | POWER |
|------|-------|

页面修改时间 Sunday, January 16, 2022

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## DDR2



|            |                          |                    |             |
|------------|--------------------------|--------------------|-------------|
| SOM-CKL138 |                          | CoreKernel<br>新核科技 |             |
| 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 B

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] |

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

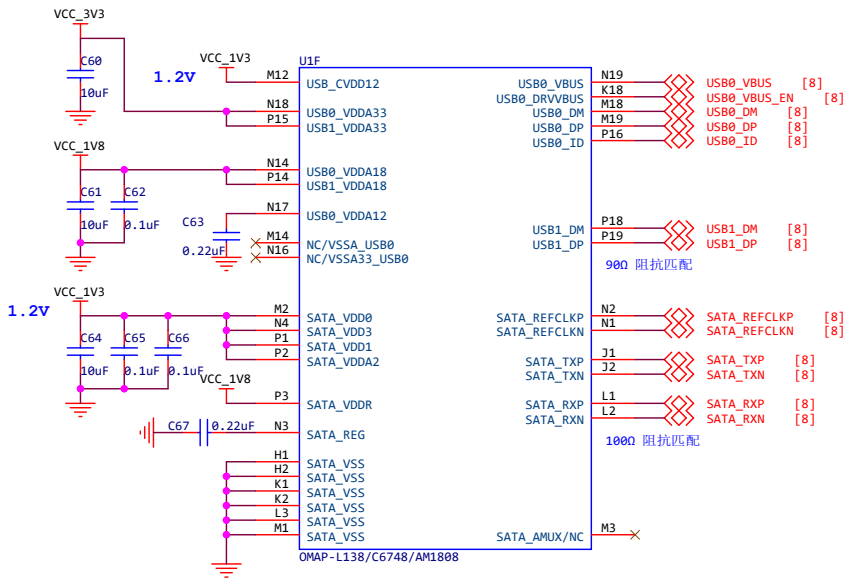
SOM-CKL138

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

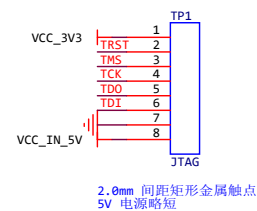
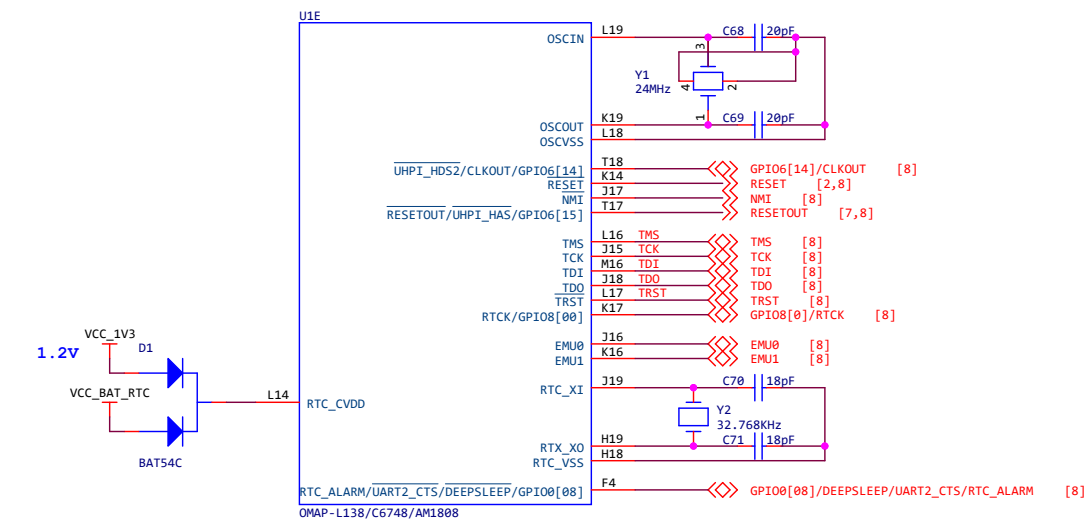
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# USB/SATA



# CLOCK/JTAG

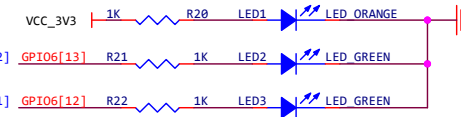
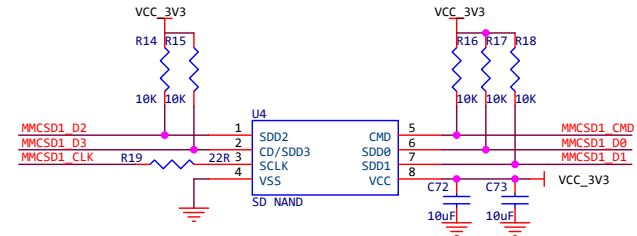


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|--------------------------|-----|--------------------------|-------|
| SOM-CKL138               |     | CoreKernel<br>新核科技       |       |
| 设计者                      | F   |                          |       |
| 修订版本                     | 1.0 | 尺寸                       | B     |
| 页面名称 USB/SATA/CLOCK/JTAG |     |                          |       |
| 页面修改时间                   |     | Sunday, January 16, 2022 |       |
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# GPIO/SD NAND/LED



OMAP-L138/C6748/AM1808



SOM-CKL138

设计者 F  
修订版本 1.0 尺寸 B  
页面名称 GPIO/SD NAND/LED

页面修改时间 Sunday, January 16, 2022

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# GPIO/FLASH/ETH

