System Block:

Leaving Blank ......

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Title	ESP32-S2-Kaluga-1	
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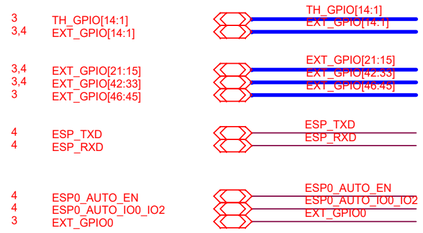
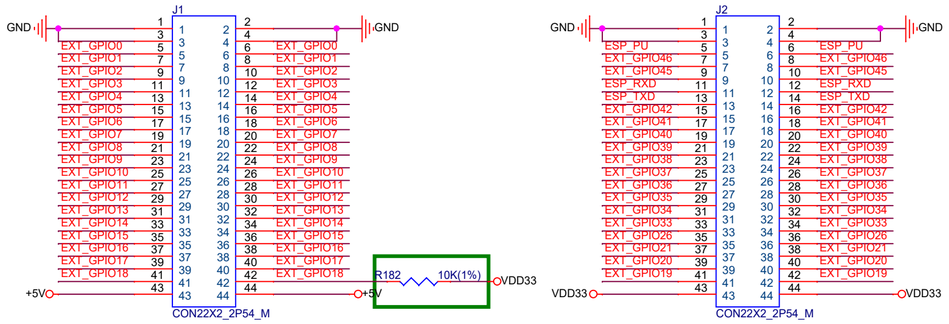
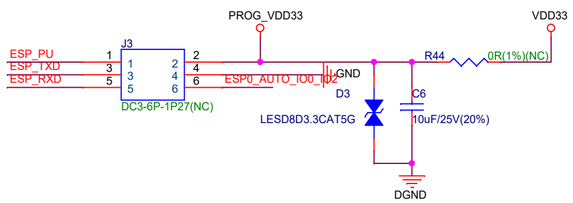


External Pin Header:

1. Default 2.54mm Pin Header;



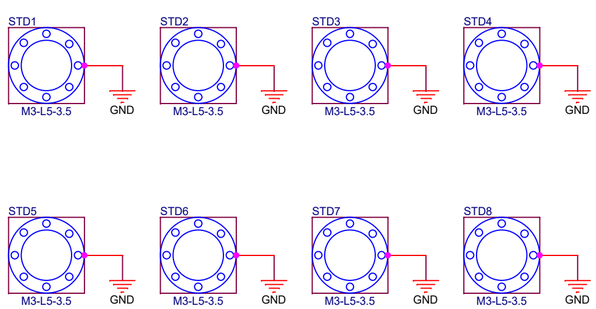
Programming CNN Reserved:



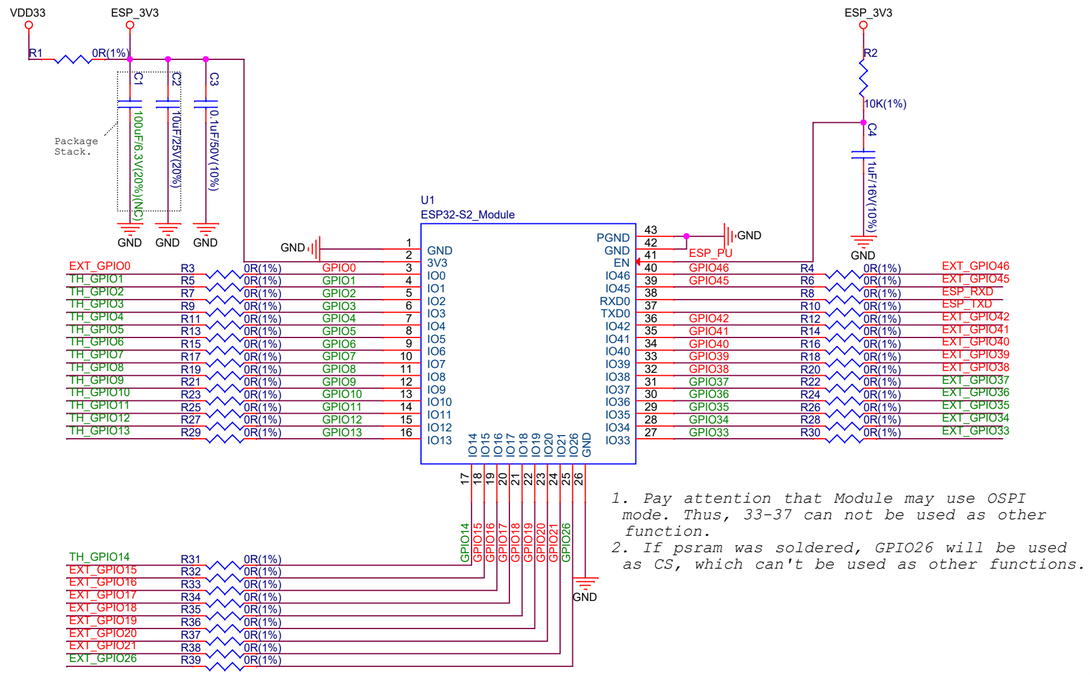
Locating Holes:

1. Supporting Motherboard;
2. Drilling vias around holes;
3. D = 3MM;

1. Supporting Daughterboards;
2. Drilling vias around holes;
3. D = 3MM;

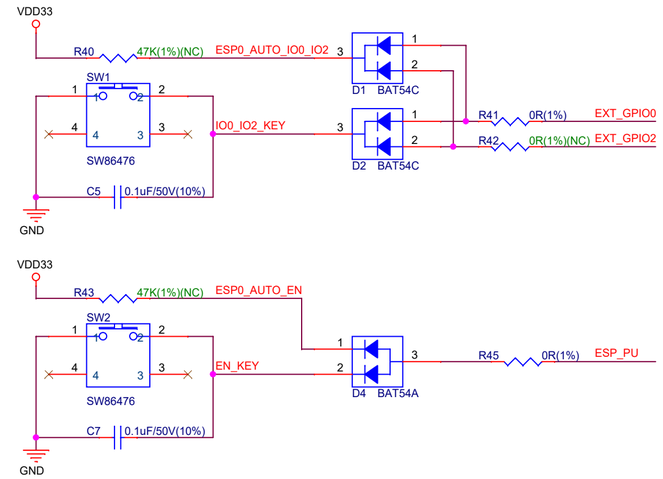


ESP32-S2 Module:



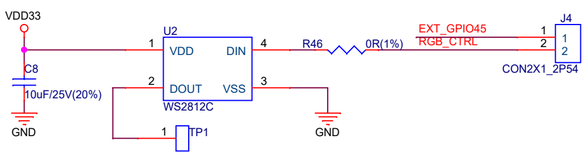
1. Pay attention that Module may use OSPI mode. Thus, 33-37 can not be used as other function.
2. If psram was soldered, GPIO26 will be used as CS, which can't be used as other functions.

Reset Download & Button:



RGB LED:

1. Put J4 jumper on if wanna control RGB.



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Title: ESP32-S2-Kaluga-1		
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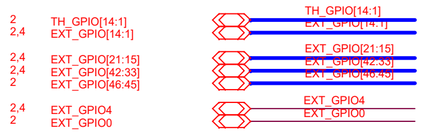
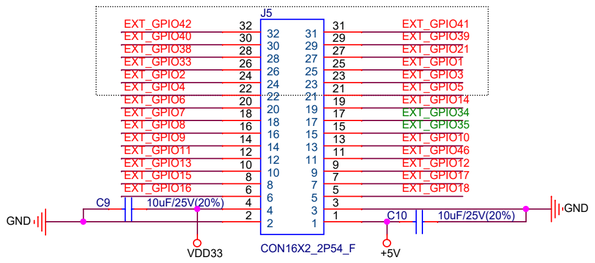
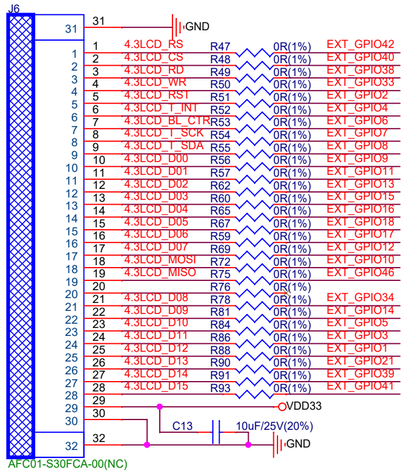


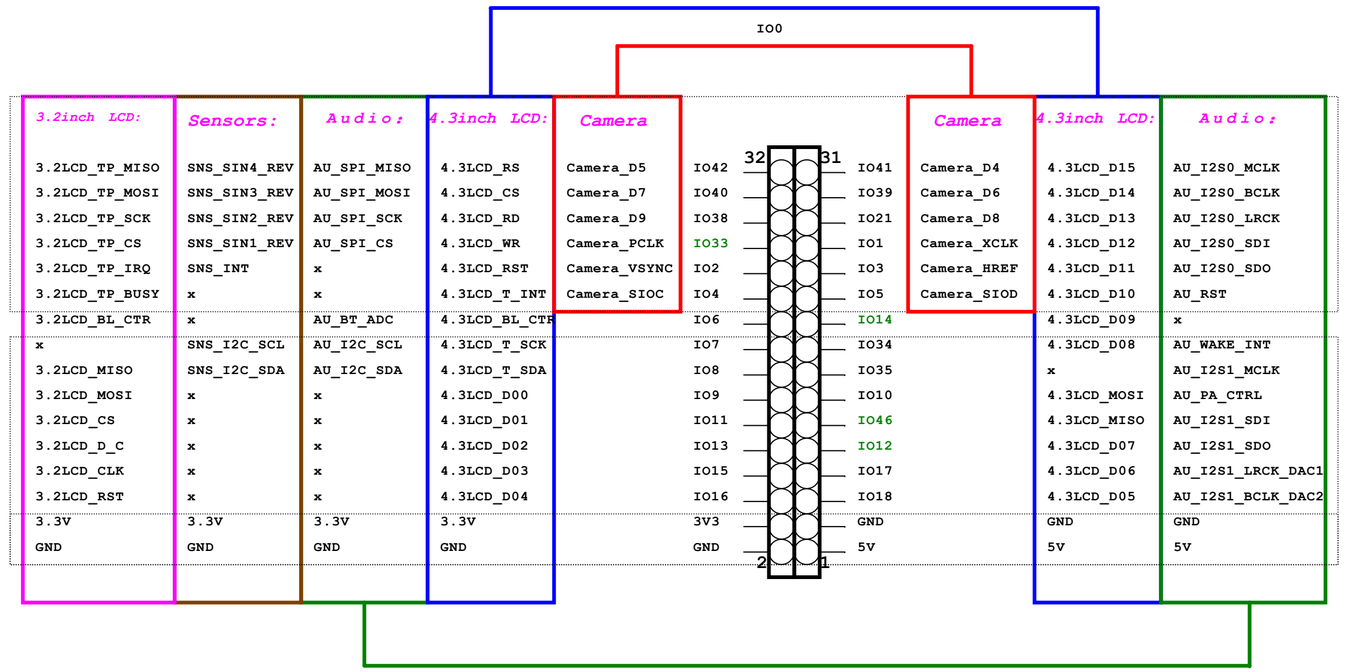


1. Block on right shows Pin configuration for different Subboard;

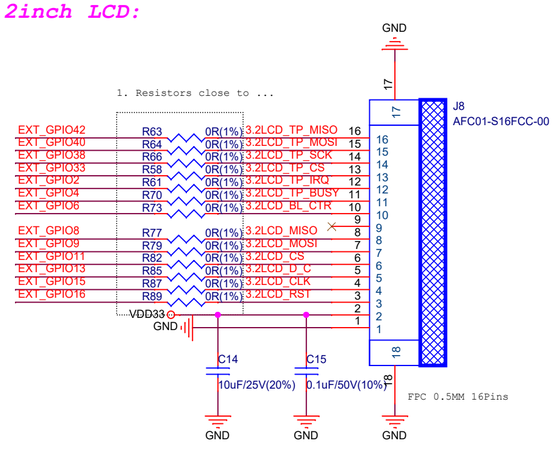
FPC for 4.3inch LCD:



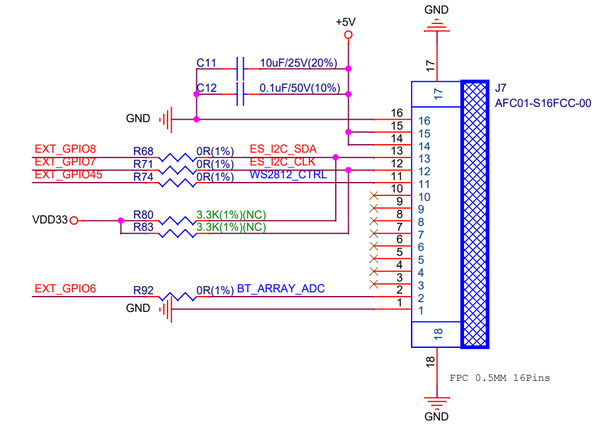
Pin Configuration for Subboard:



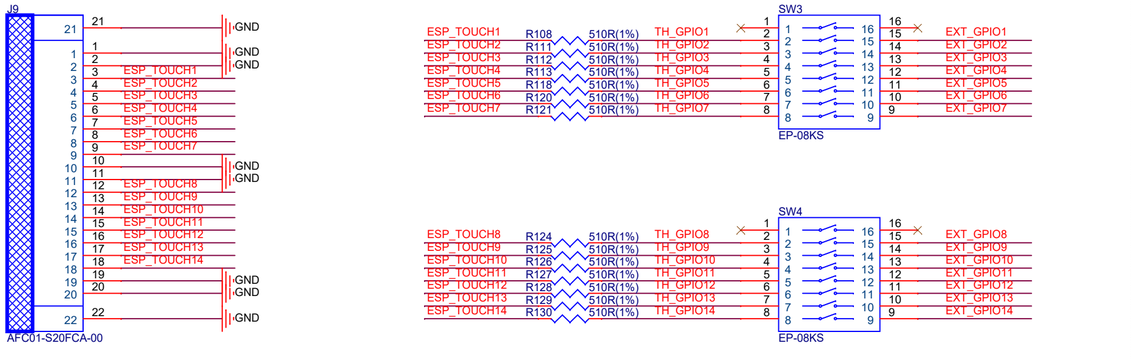
FPC for 3.2inch LCD:



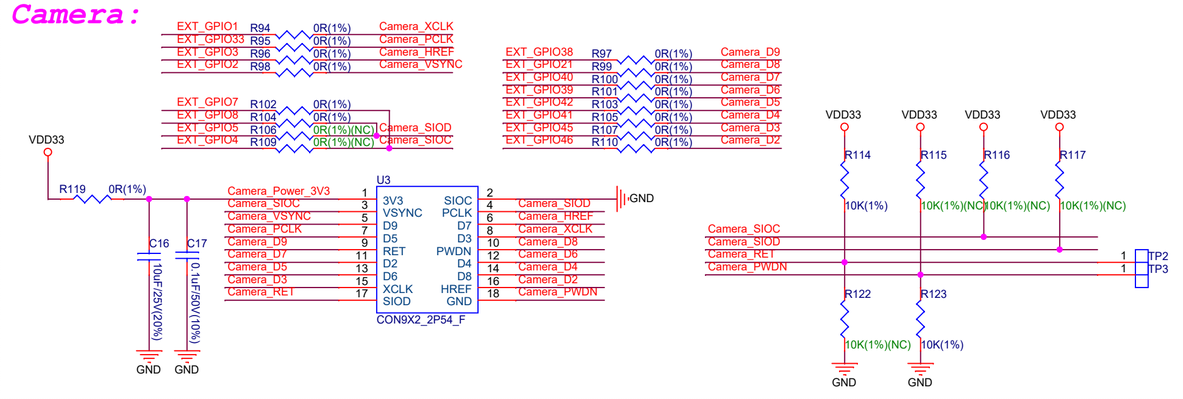
FPC for LED Subboard:



FPC Connector For Touch:



Camera:



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2,3 EXT_GPIO[42:39] — EXT_GPIO[42:39]

2 EXT_GPIO19 — EXT_GPIO19
2 EXT_GPIO20 — EXT_GPIO20

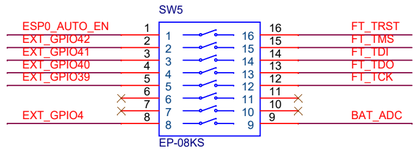
2 ESP_TXD — FT_RXD
2 ESP_RXD — FT_TXD

2 ESP0_AUTO_EN — ESP0_AUTO_EN
2 ESP0_AUTO_IO0_IO2 — ESP0_AUTO_IO0_IO2

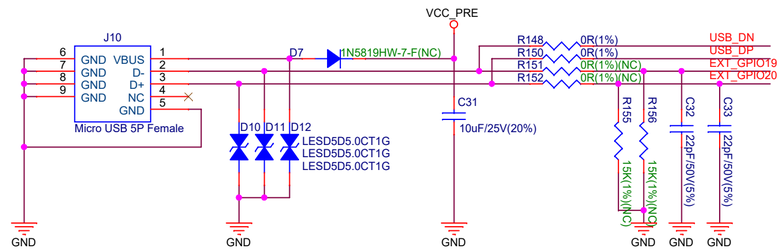
2,3 EXT_GPIO4 — EXT_GPIO4

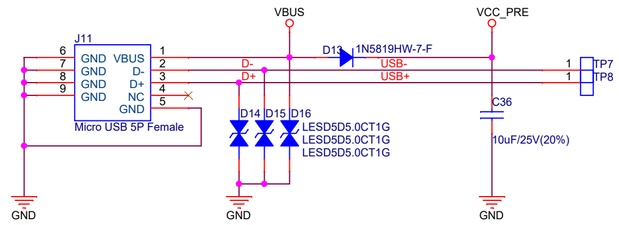
JTAG Switch:

1. Switch for JTAG: default, JTAG off/NC.
2. Switch ON for JTAG debug;

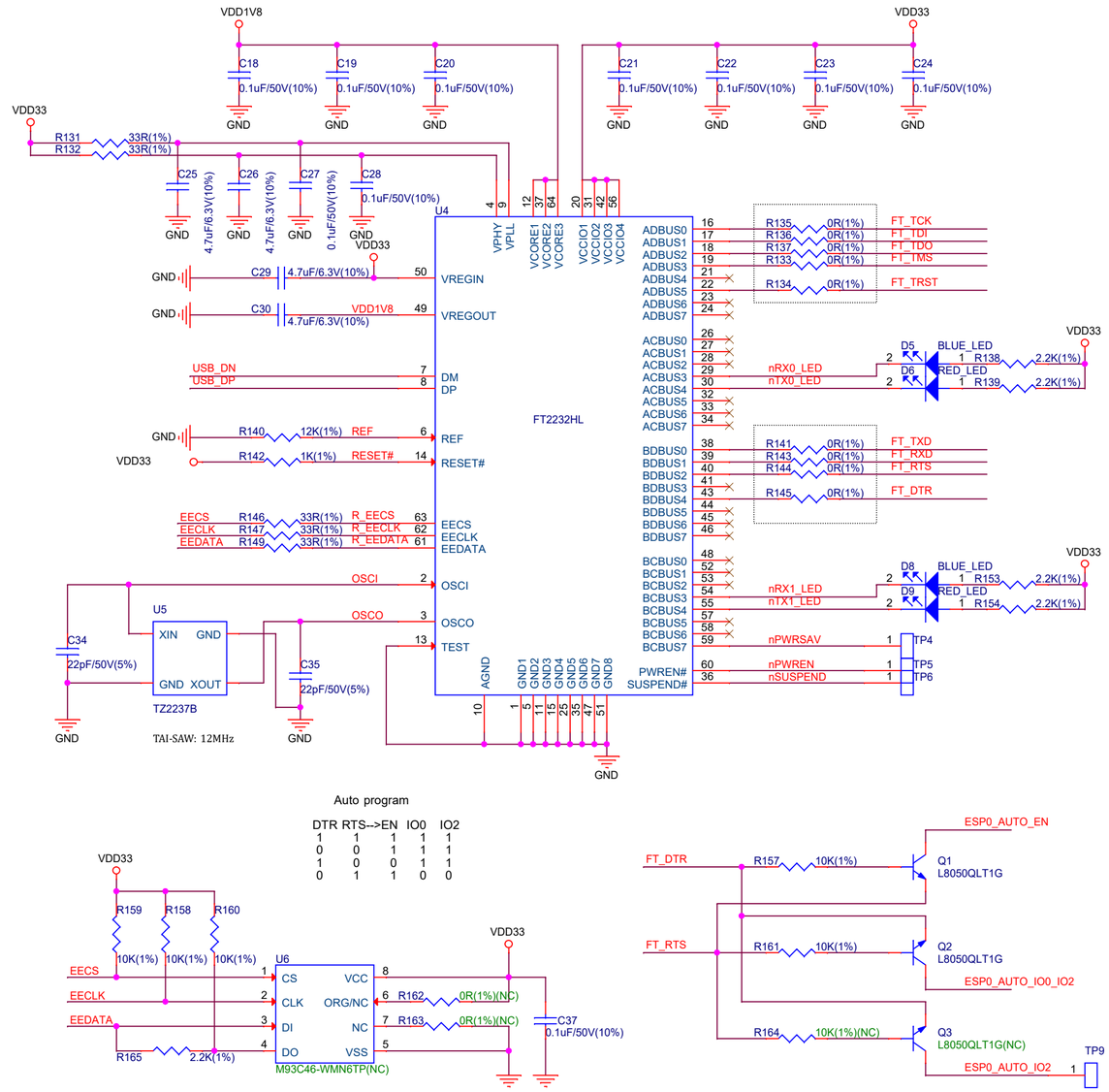


USB Power&Communication:





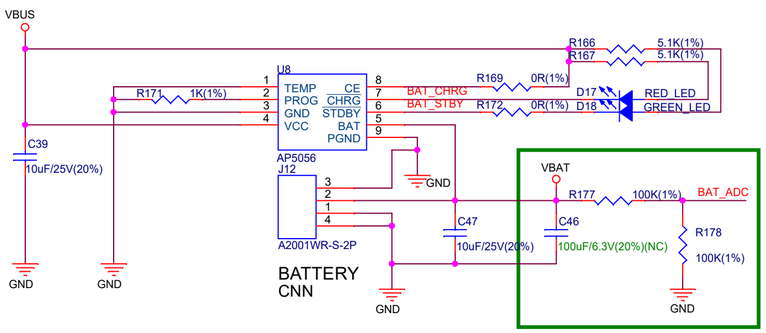
FT2232HL:

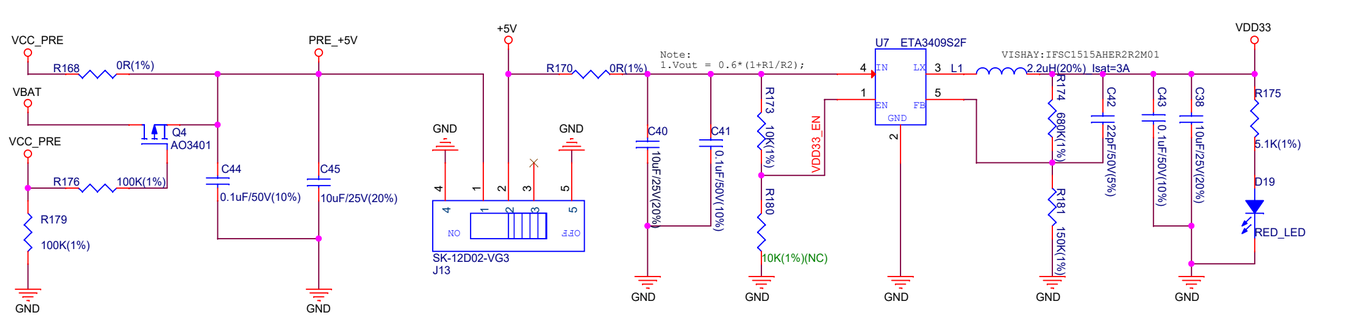


Auto program

DTR	RTS-->EN	IO0	IO2
1	1	1	1
0	0	1	1
1	0	0	1
0	1	1	0

Power Charge:





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Title: ESP32-S2-Kaluga-1			
Size: C	Document Number: 04_Power		Rev: V1.2
Date: Tuesday, October 13, 2020	Sheet 4 of 4		