

REV	DESCRIPTION	DATE	BY
A1	First Release	6/1/2018	MH

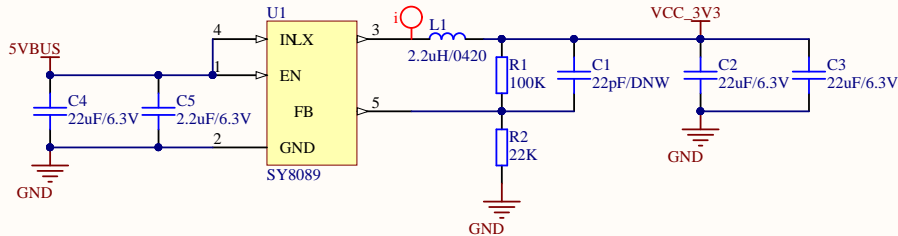
PAGE NO.	SCHEMATIC PAGE
1	COVER PAGE
2	POWER MANAGEMENT
3	ESP32 SUBSYSTEM
4	USB-UART & ACCESSORY

M5

STACK

Title	M5 M5Stack ESP32-CAM COVER	
Size	Number	Revision
A	20180601A0_REV1	REV1
Date:	6/1/2018	Sheet 0of 3
File:	C:\Users\...\A1-Cover.SchDoc	Drawn By: Han Xiao

5V -> 3.3V DCDC Buck



5.5V, 2A Synchronous Buck Regulator

PDF Link:
<http://www.hytec.net/upload/files/2016/09/SILERGY-SY8089AAC.pdf>

$$R2 = (0.6V) * (R1) / (Vout - 0.6V)$$

Vout = 3.3V, R1 = 100K
R2 = 22.22K = 22K, Vout = 3.327V

Typical Applications

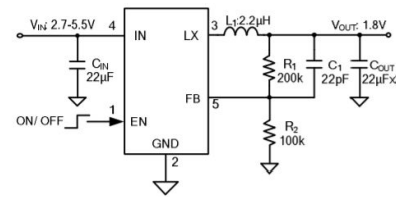


Figure 1. Schematic diagram

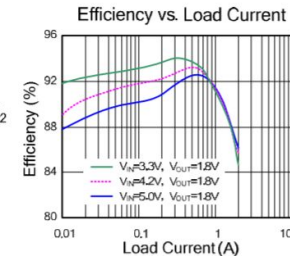
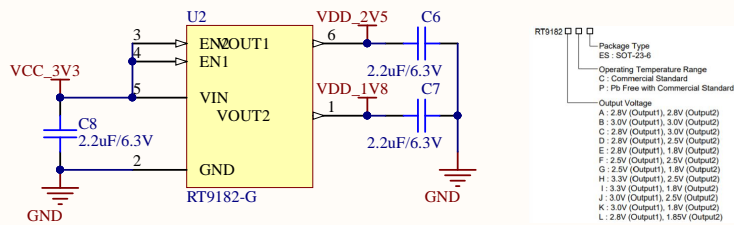


Figure 2. Efficiency vs Load Current

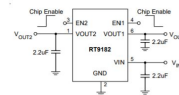
3.3V->2V5 & 1V8 LDO



Dual, Low-Noise, 200mA LDO Regulator

PDF Link:
<http://www.cheertech.com.tw/RichTek%20CD/Docs/DS9182-14P.pdf>

Typical Application Circuit

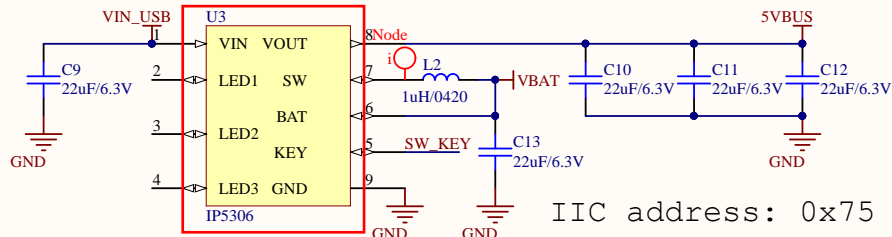


Functional Pin Description

Pin No.	Pin Name	Pin Function
1	VOUT2	Channel 2 Output Voltage
2	GND	Common Ground
3	EN2	Chip Enable (Active High)
4	EN1	Chip Enable (Active High)
5	VIN	Supply Input
6	VOUT1	Channel 1 Output Voltage

Note: If EN1 and EN2 are both low, both regulators and the reference turn off.

BAT PMIC



IIC address: 0x75

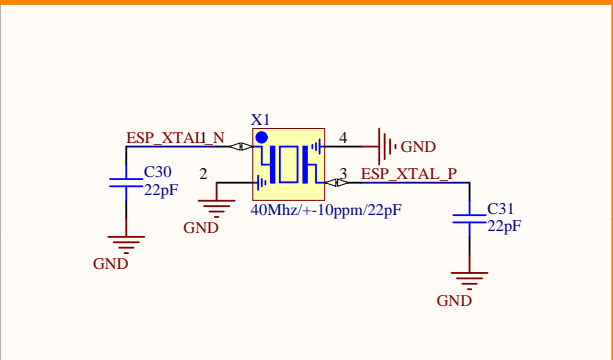
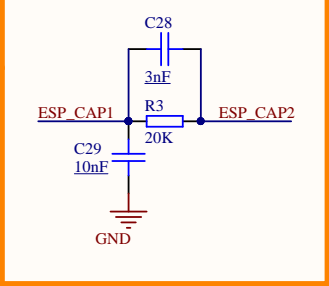
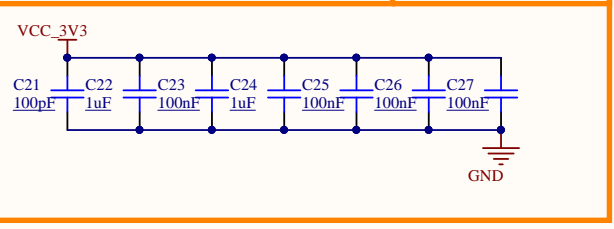
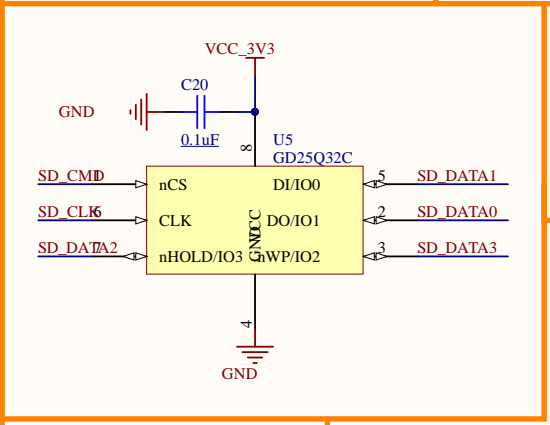
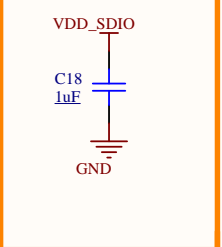
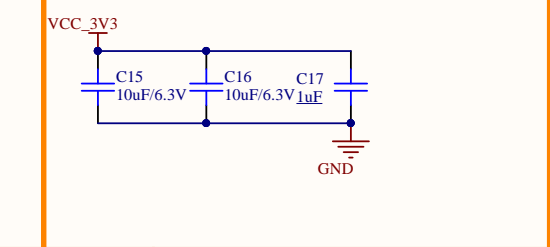
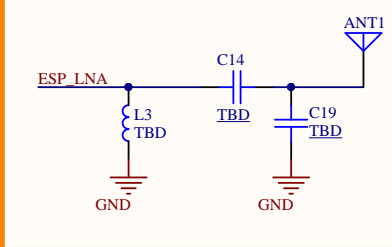
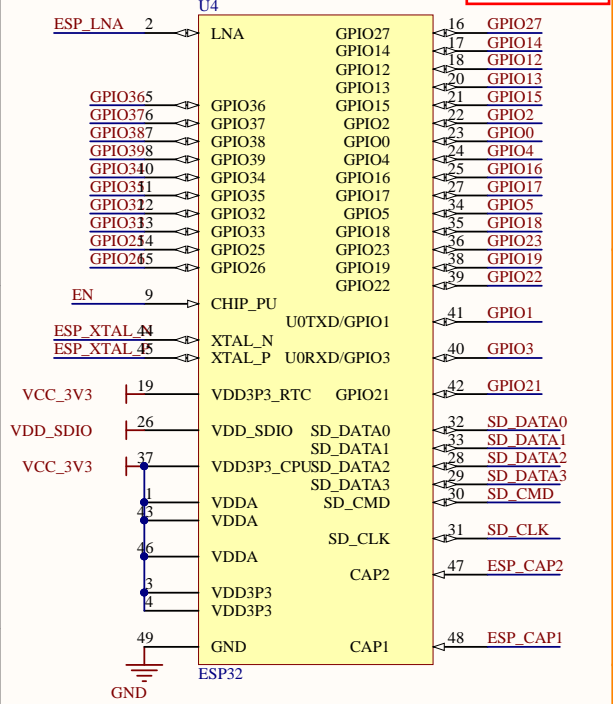
2.1A Charge, 2.4A Boost, Power Mangement SoC for Powerbank

PDF Link:
<http://www.injoinic.com/doc/IP5306%C2%A0datasheet%C2%A0v1.01.pdf>

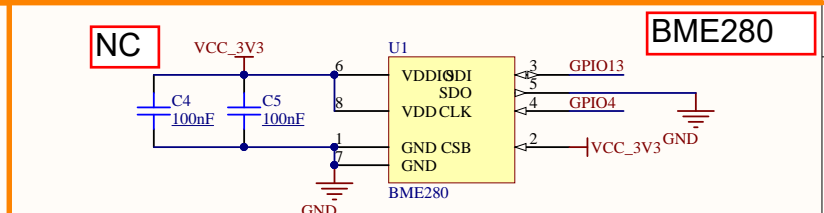
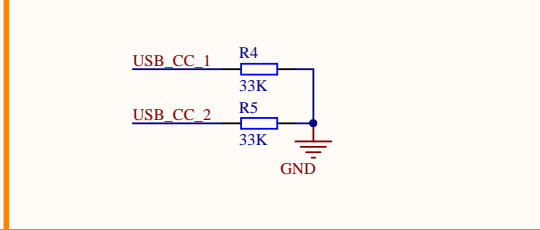
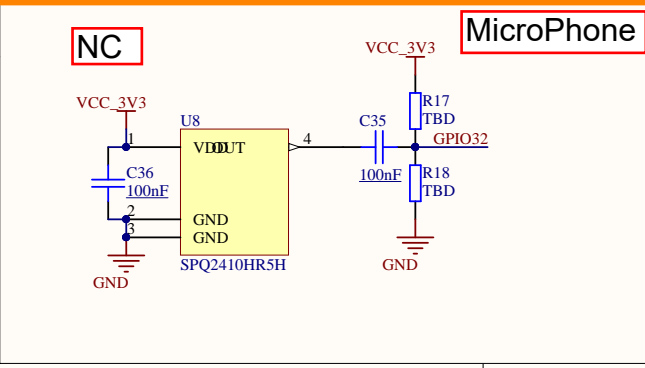
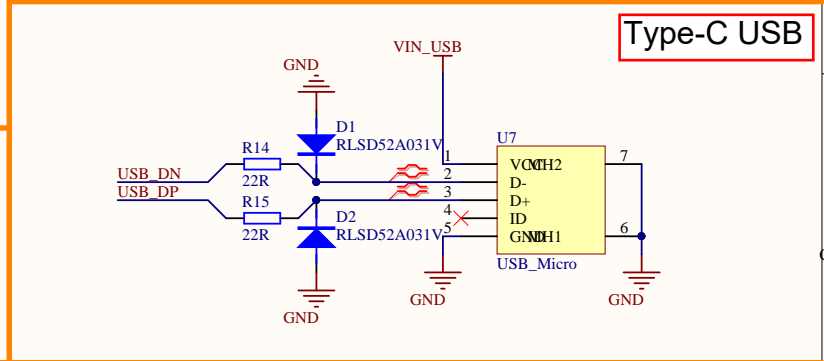
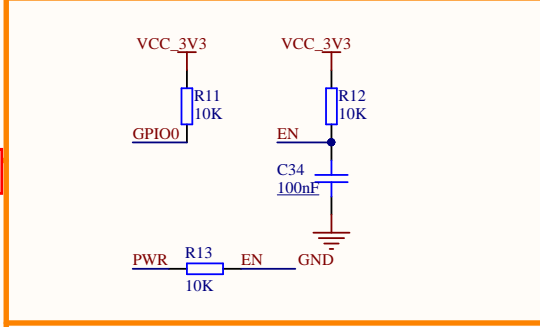
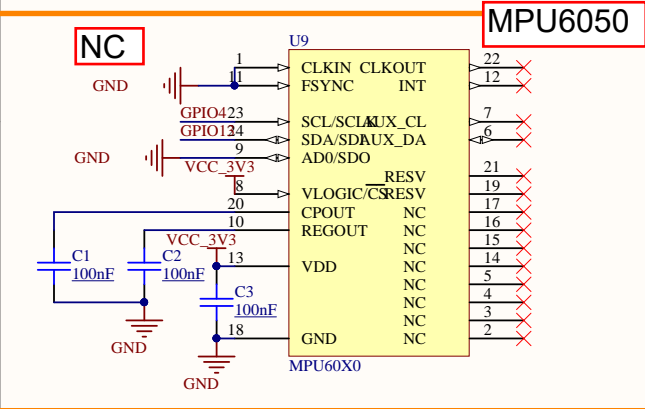
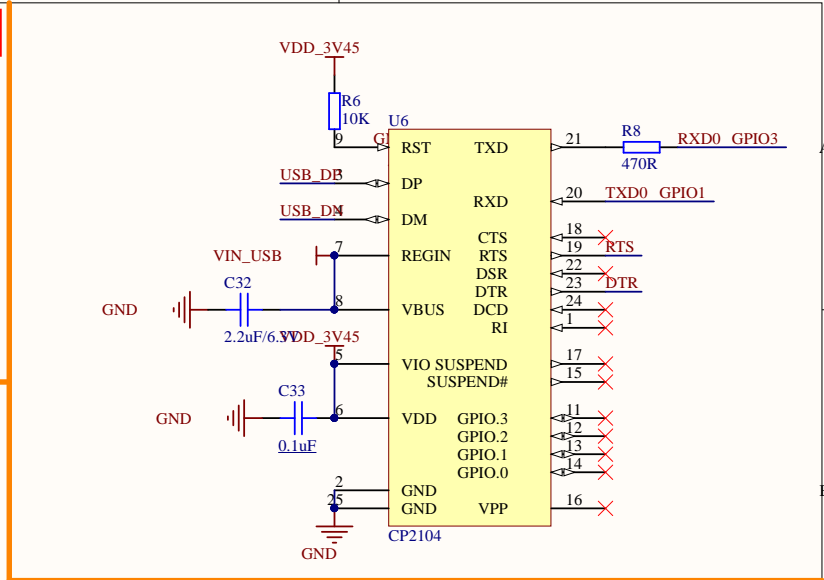
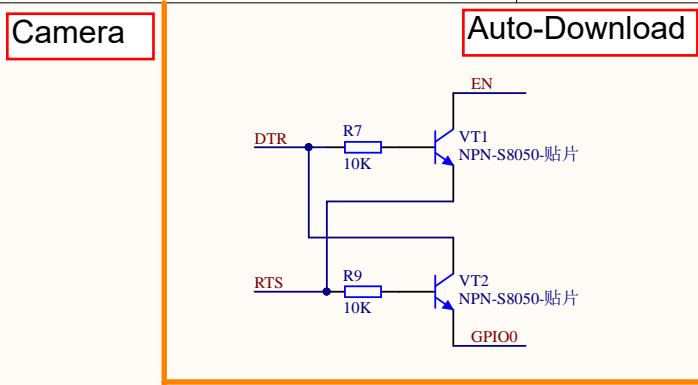
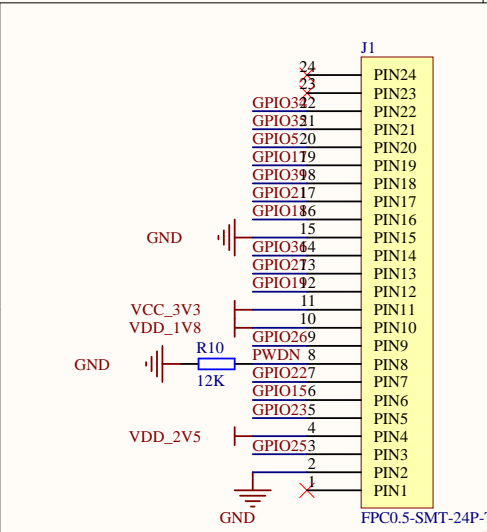
IP5306 communicates with ESP32 through IIC for ESP32CAM.

Title			M5 Stack ESP32-CAM A1-POWER		
Size	Number	Revision		Revision	
A4	20180601A1_REV1			REV1	
Date:	6/1/2018	Sheet	1	of	3
File:	C:\Users\...\A1-POWER.SchDoc	Drawn By:	Han Xiao		

ESP32



Title		M5 Stack		M5Stack ESP32-CAM A2-ESP	
Size	Number	20180601A2_REV1		Revision	
A4				REV1	
Date:	6/1/2018	Sheet 2 of 3		Drawn By: Han Xiao	
File:	C:\Users\...\A2-ESP.SchDoc				



Title: M5Stack ESP32-CAM A2-USB&ACS		
Size: A4	Number: 20180601A3_REV1	Revision: REV1
Date: 6/1/2018	Sheet: 3 of 3	Drawn By: Han Xiao
File: C:\Users\...\A3-USB.SchDoc		