MangOH Red Platform

Project Variants

	1600643		
DNI	N		
MIC_OMTP	N		
MIC_CTIA	Y		

Variants description

DNI = Do Not Install
MIC_OMTP = OMTP headphones config (do not define MIC_CTIA)
MIC_CTIA = CTIA/AHJ headphones config (do not define MIC_OMTP)

I2C address list

08h = 3503 USB hub
3Eh = I/O expander
51h = EEPROM with Board ID
64h = Battery gauge
68h = 6 Axis IMU
6Bh = Buck+batt charger
71h = I2C Hub
76h = Pressure Sensor

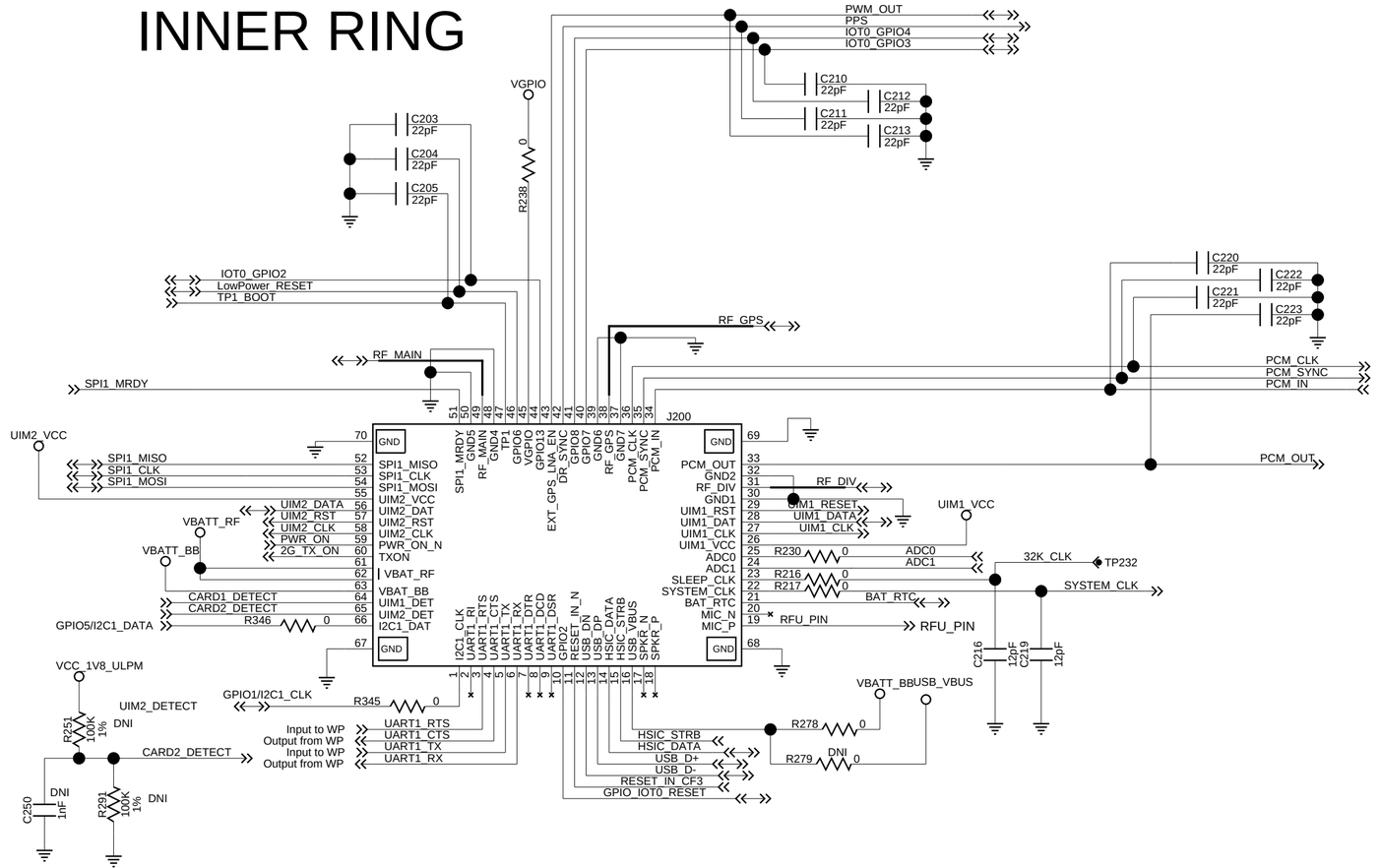
REFERENCE

1600674 PCA, MANGOH
5302303 PCB, MANGOH

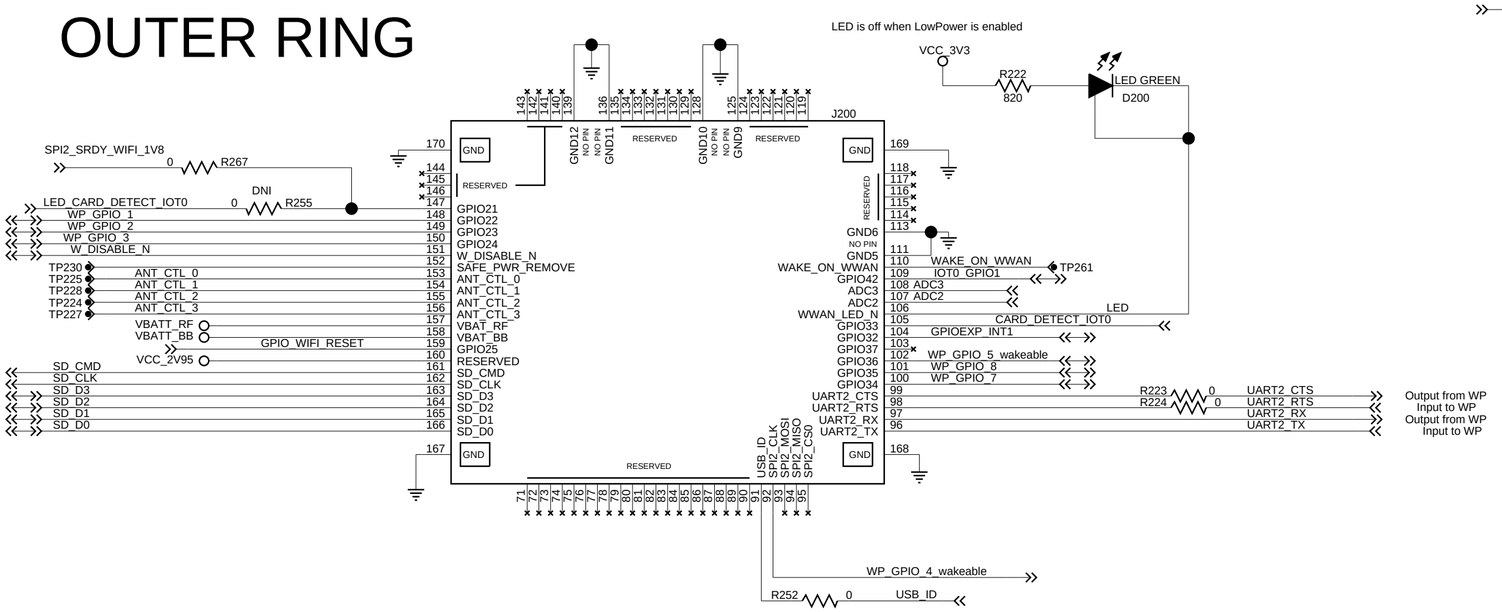
SIERRA WIRELESS™

SITE	CTO Office
LEAD ENGINEER	Ashish Syal
REV SCH	50
REV PCB	5
PROJECT	MANGO RED
DATE/TIME	14-09-2017_13:26
SCHEMATIC	2500927
PAGE	1 OF 10

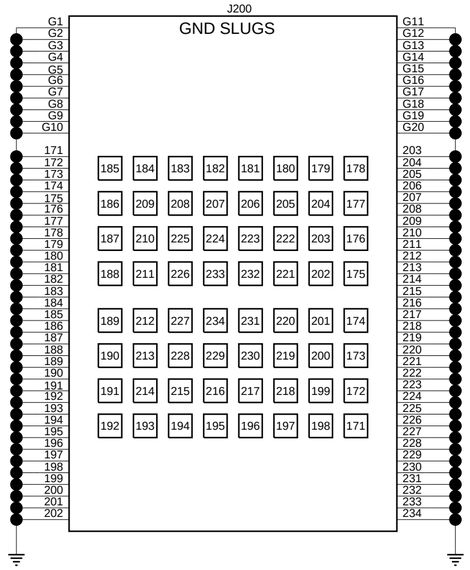
INNER RING



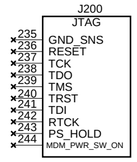
OUTER RING

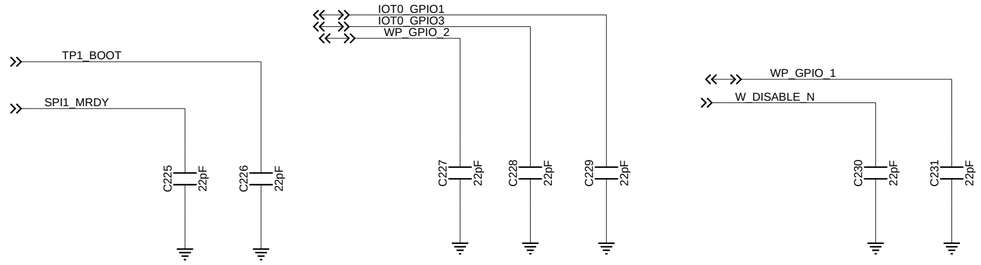


GROUND SLUG

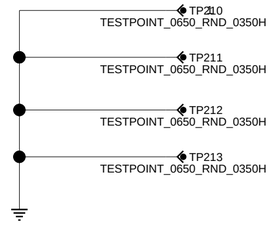


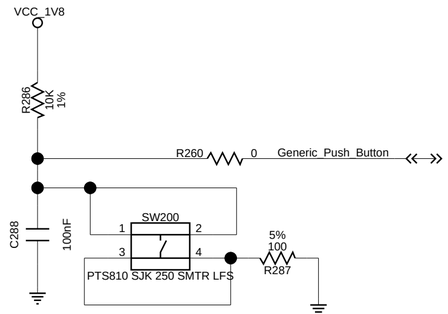
JTAG





Mounting Holes





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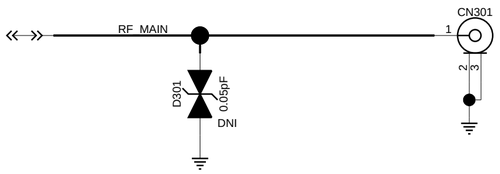
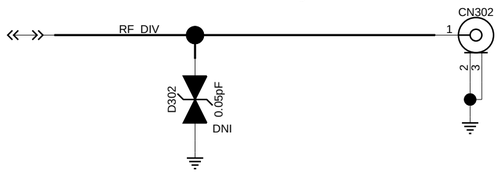
REV SCH	See P1
REV PCB	See P1
PROJECT	MANGO RED
DATE/TIME	14-09-2017_13:34
SCHEMATIC	2500927
PAGE	2 OF 10

MAIN CF3 Socket

Main Antenna

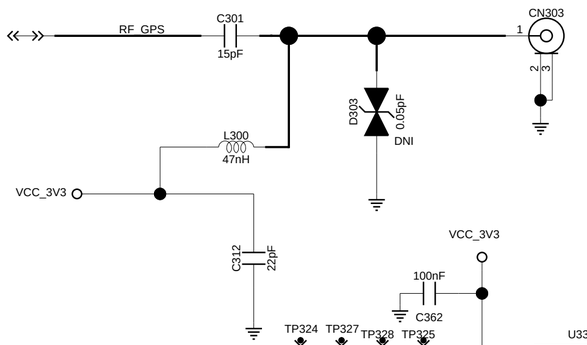


Diversity

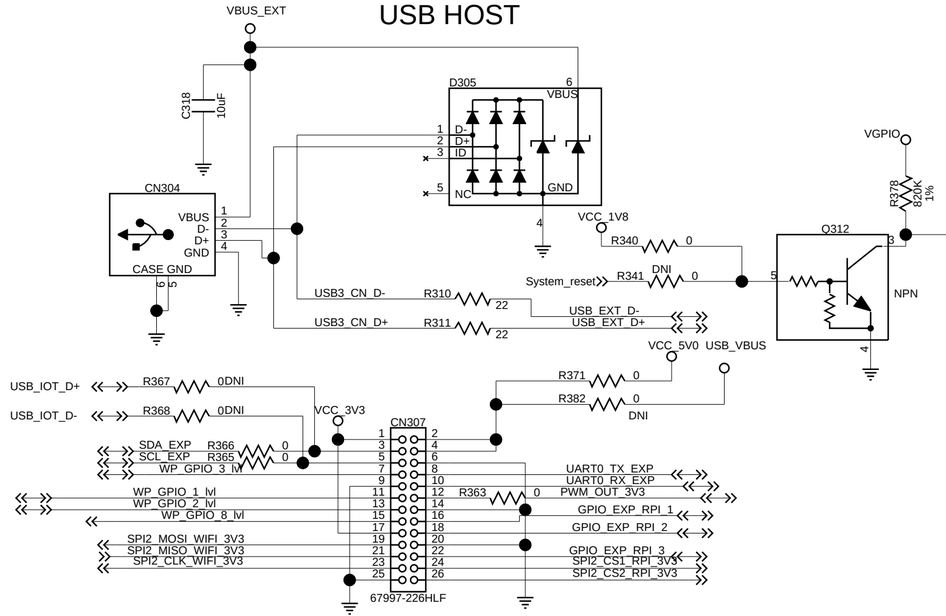


GPS

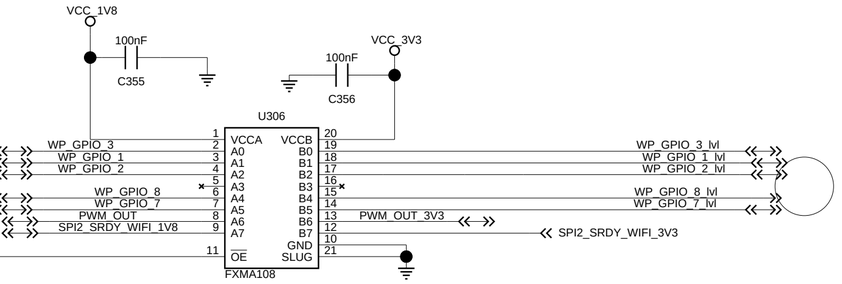
Active Antenna Supply

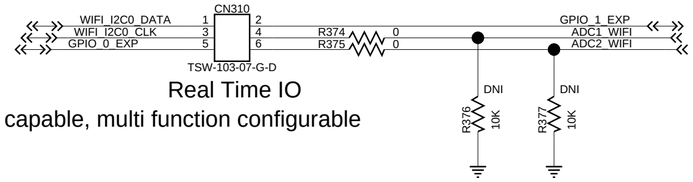


USB HOST



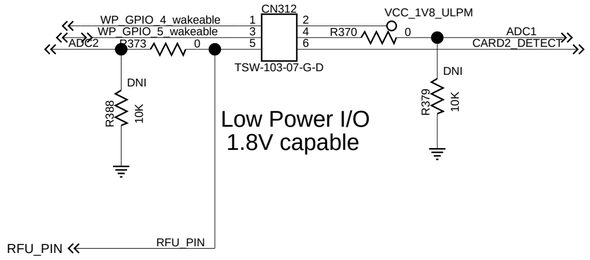
26 pin Raspberry Pi Compatible
3.3V capable





Real Time IO

3.3V capable, multi function configurable



Low Power I/O
1.8V capable

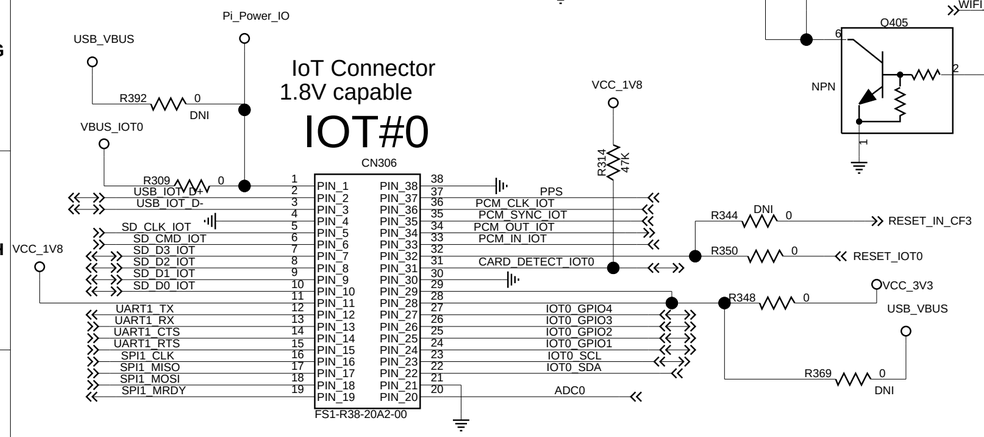
FTDI to Serial

FTDI has ESD protecton

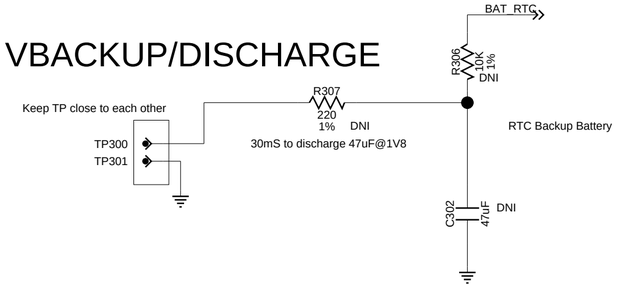
MTK_TO_WP_UART_EN	CONS_DIR	STATUS
L	L	UART <---> WP CONS
L	H	UART <---> MTK CONS
H	X	WP CONS <---> MTK CONS

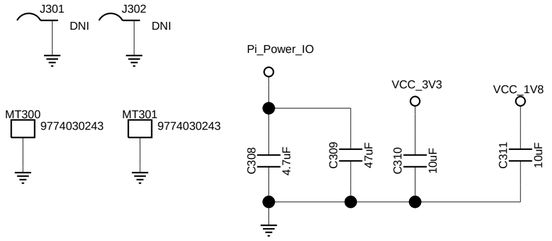
IoT Connector
1.8V capable

IOT#0



VBACKUP/DISCHARGE





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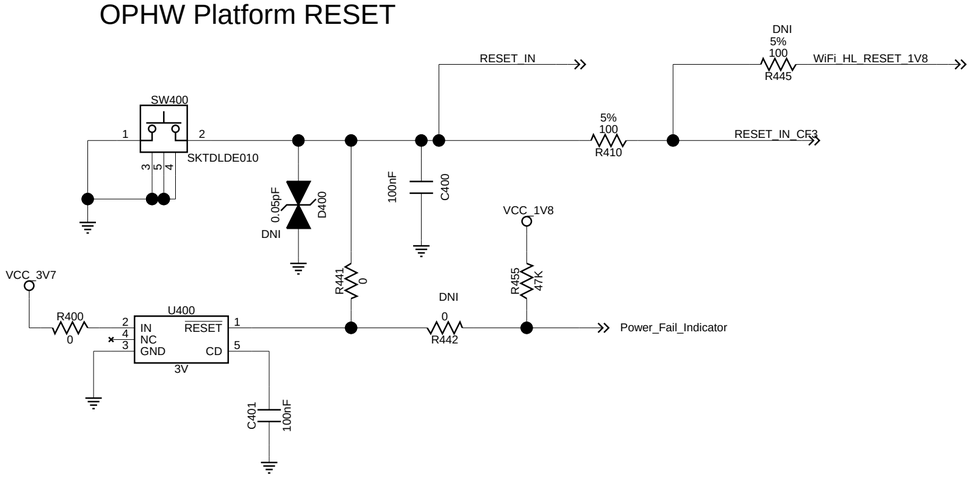
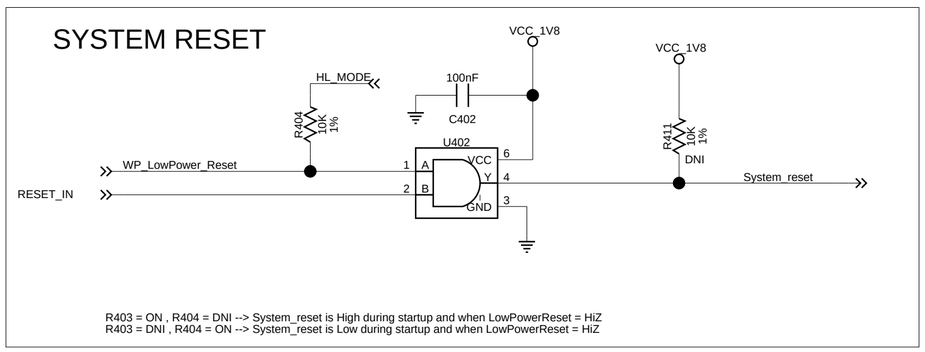
LEAD ENGINEER	Ashish Syal
REV SCH	See P1
REV PCB	See P1
PROJECT	MANGO RED
DATE/TIME	14-09-2017_13:30
SCHEMATIC	2500927
PAGE	3 OF 10

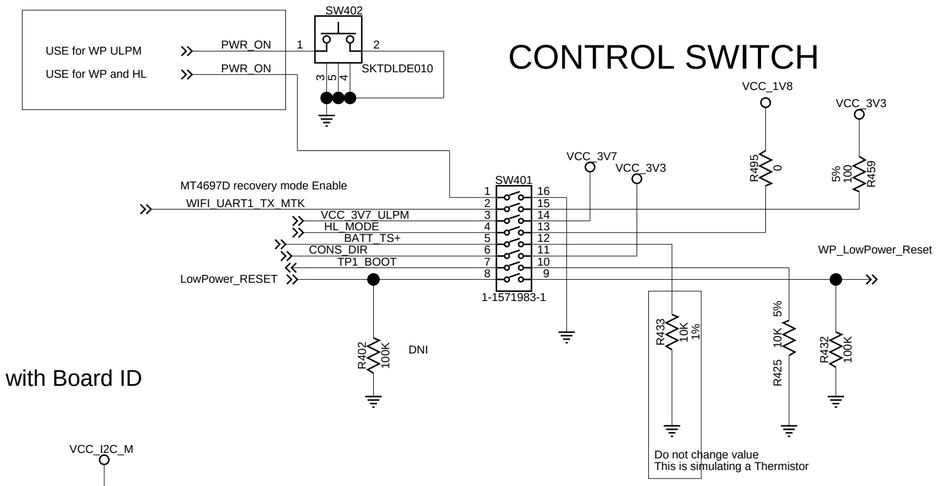
OPHW Platform RESET



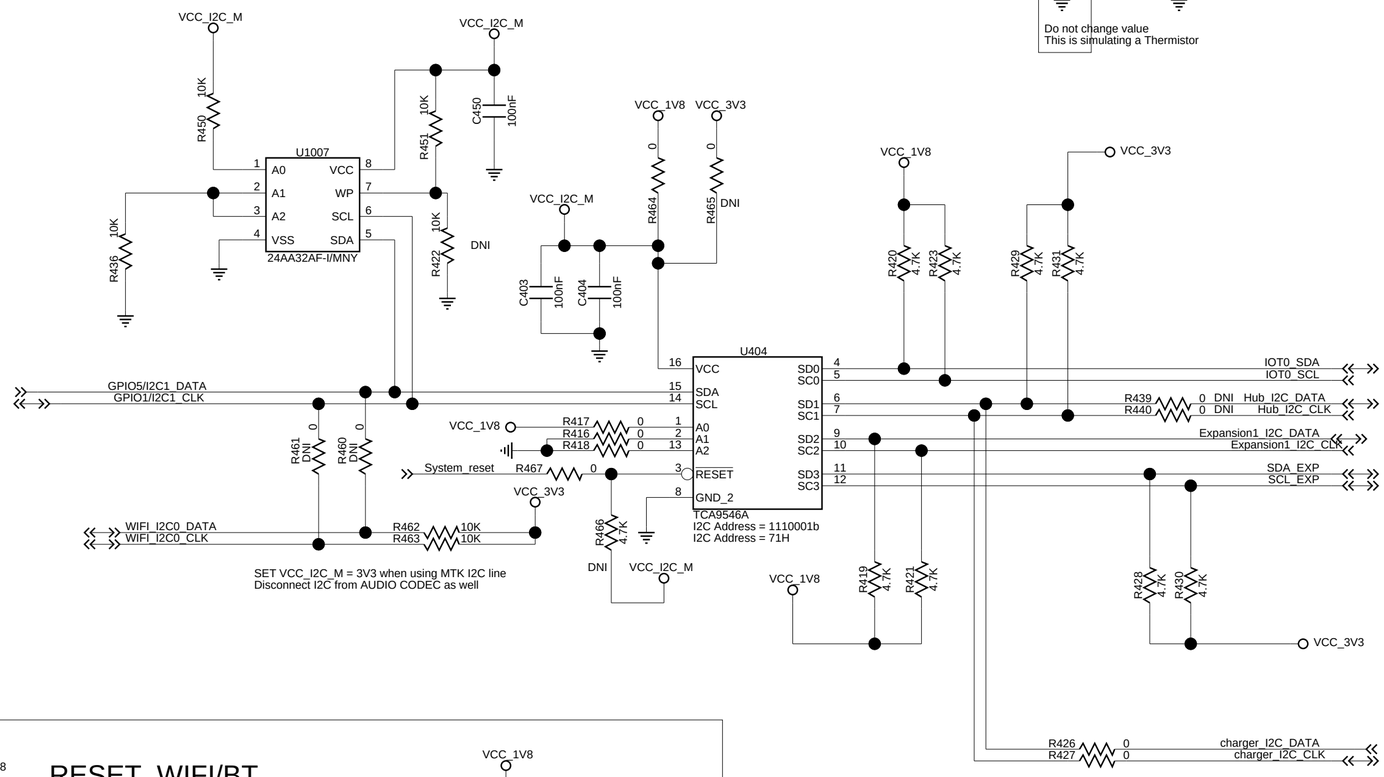
SYSTEM RESET



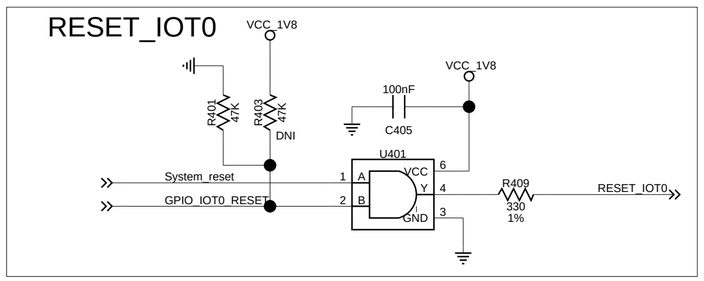
CONTROL SWITCH



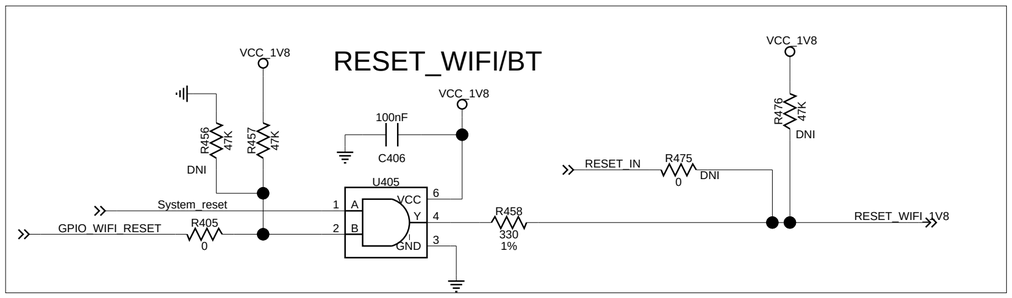
Addr 51h = EEPROM with Board ID



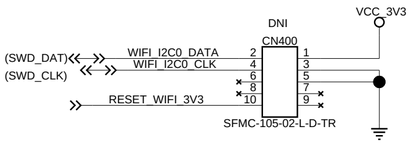
RESET_IOT0



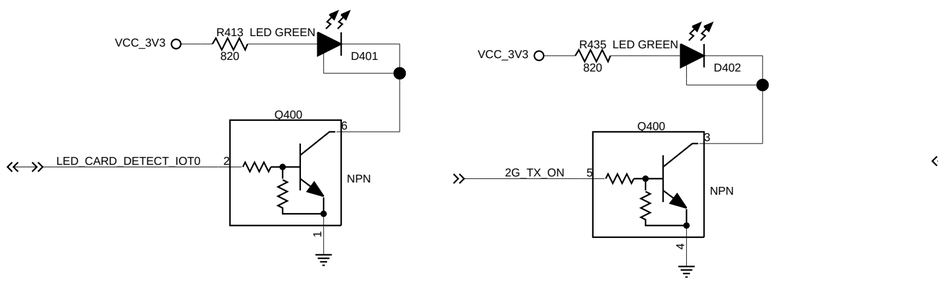
RESET_WIFI/BT

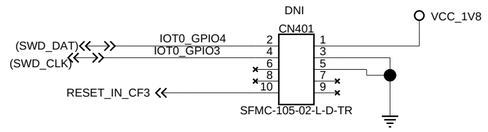


uC DEBUG



LEDs





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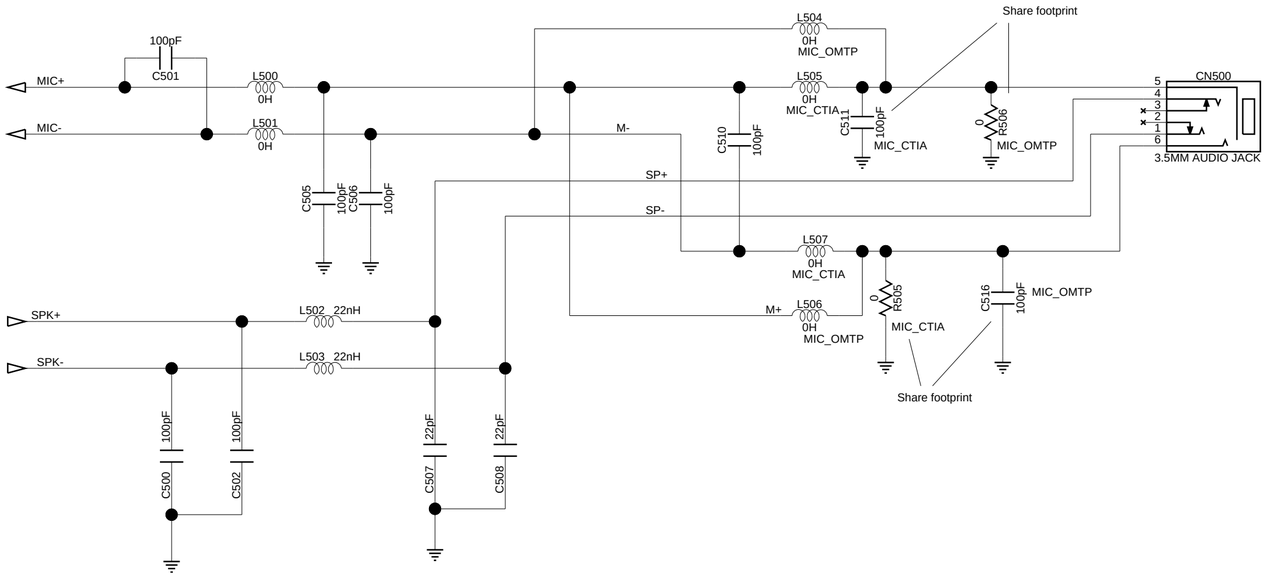
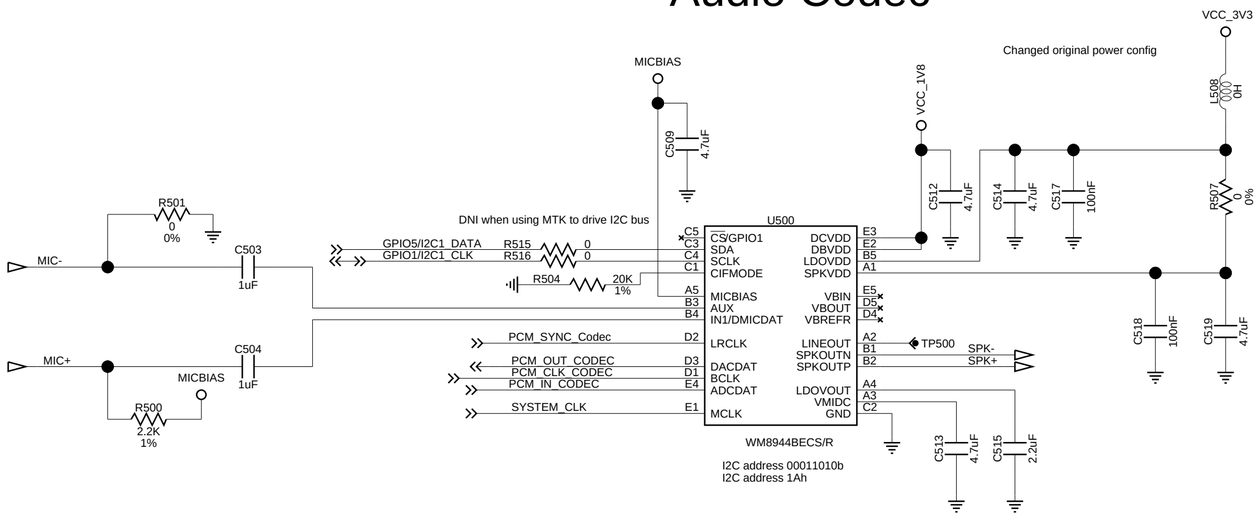
SITE	CTO Office
LEAD ENGINEER	Ashish Syal
REV SCH	See P1
REV PCB	See P1
PROJECT	MANGO RED
DATE/TIME	30-06-2017_14:16
SCHEMATIC	2500927
PAGE	4 OF 10

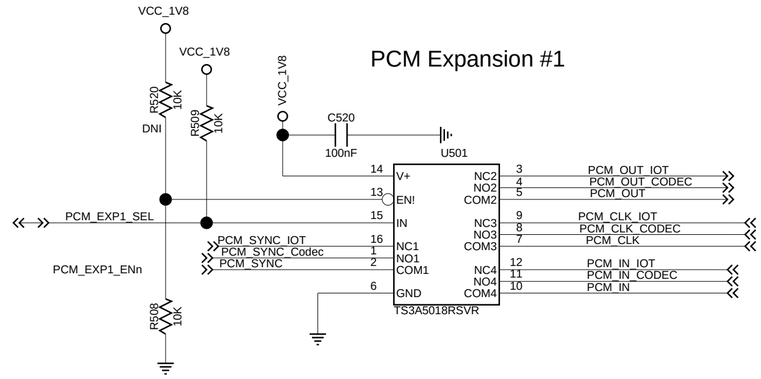
Audio Source Selection



Audio Codec



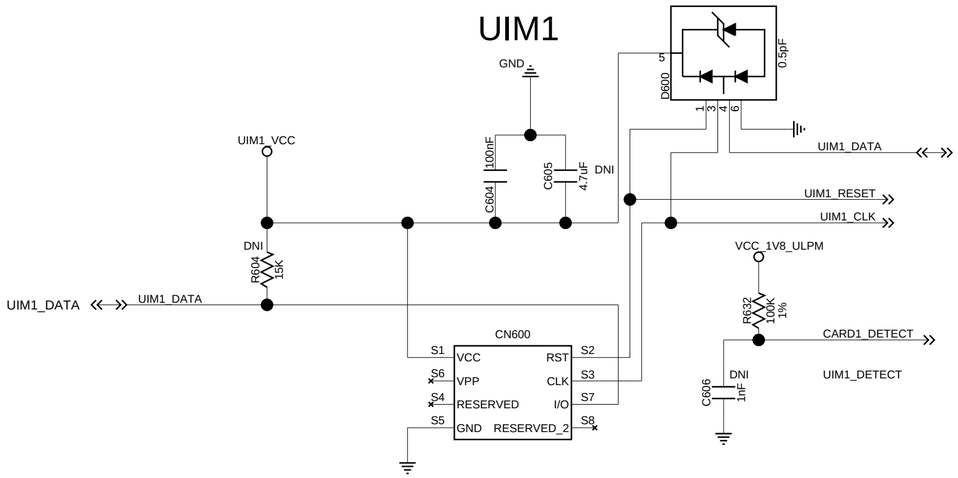
PCM Expansion #1

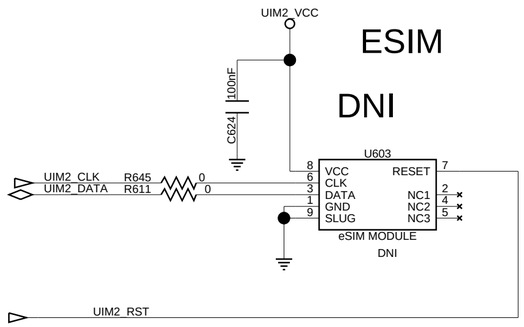


Default config = PCM to mangoh Red Codec

SIERRA WIRELESS™

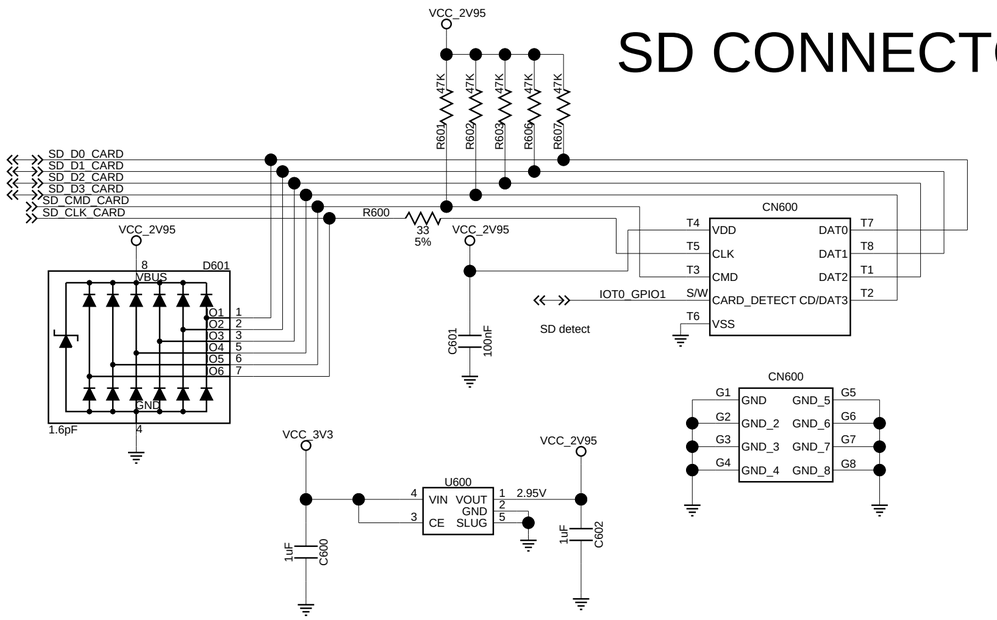
SITE	CTO Office
LEAD ENGINEER	Ashish Syal
REV SCH	See P1
REV PCB	See P1
PROJECT	MANGO RED
DATE/TIME	16-12-2016_15:31
SCHEMATIC	2500927
PAGE	5 OF 10

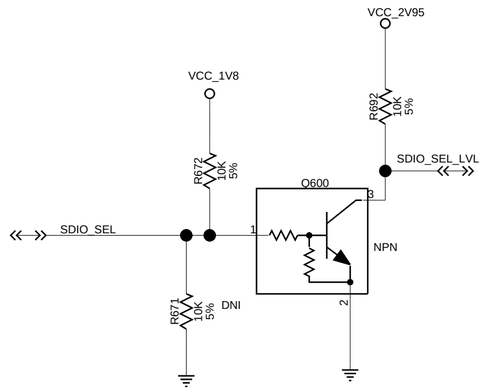




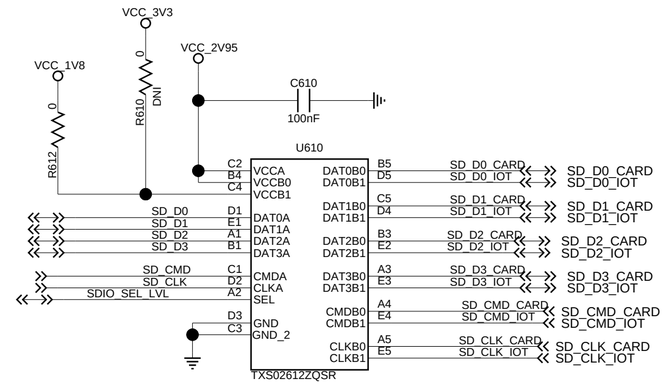
SIM card detected only if present at startup

SD CONNECTOR





SDIO Expansion



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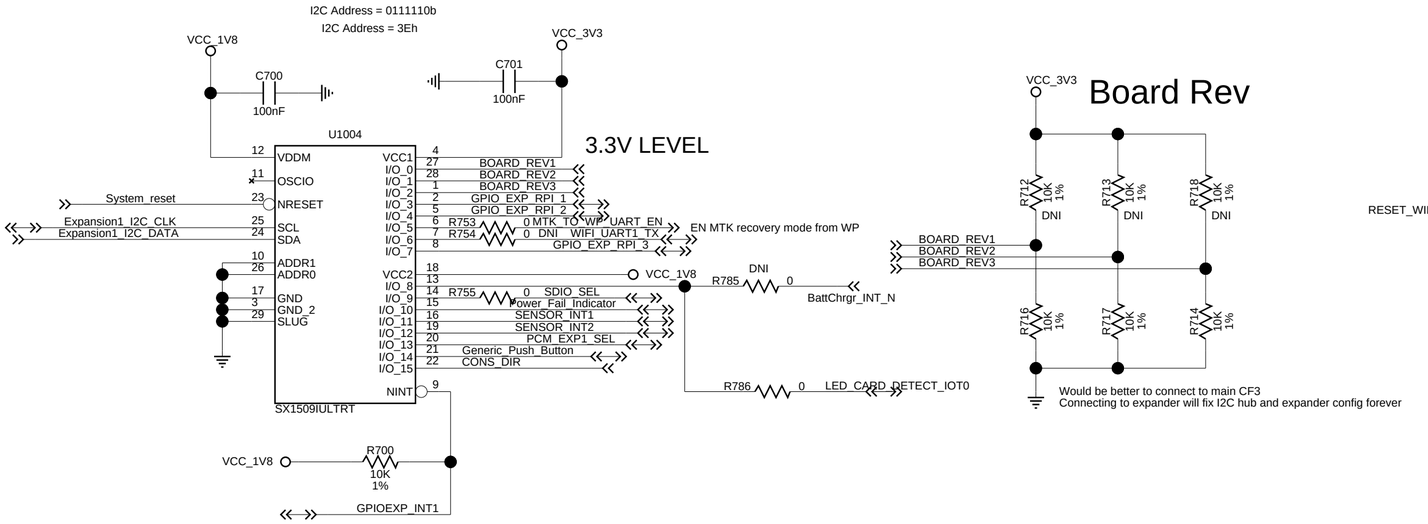
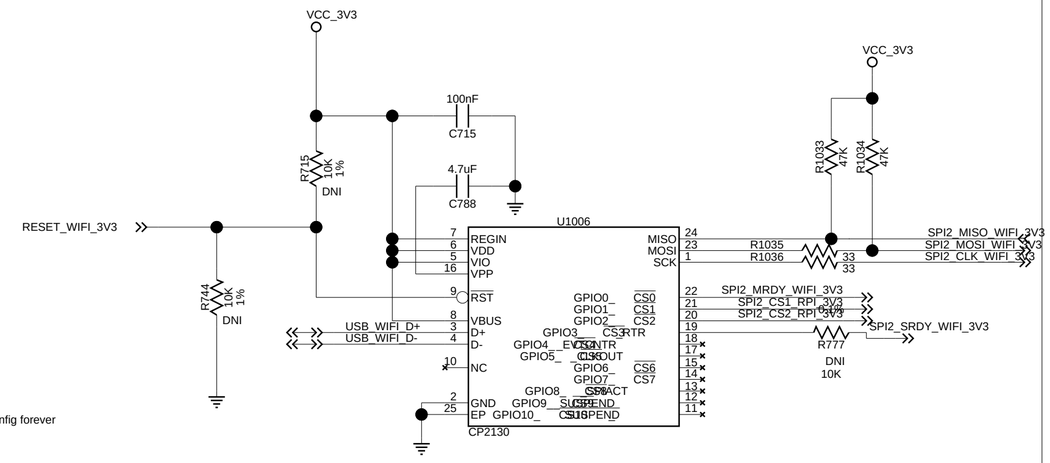
LEAD ENGINEER	Ashish Syal
REV SCH	See P1
REV PCB	See P1
PROJECT	MANGO RED
DATE/TIME	14-09-2017_13:33
SCHEMATIC	2500927
PAGE	6 OF 10

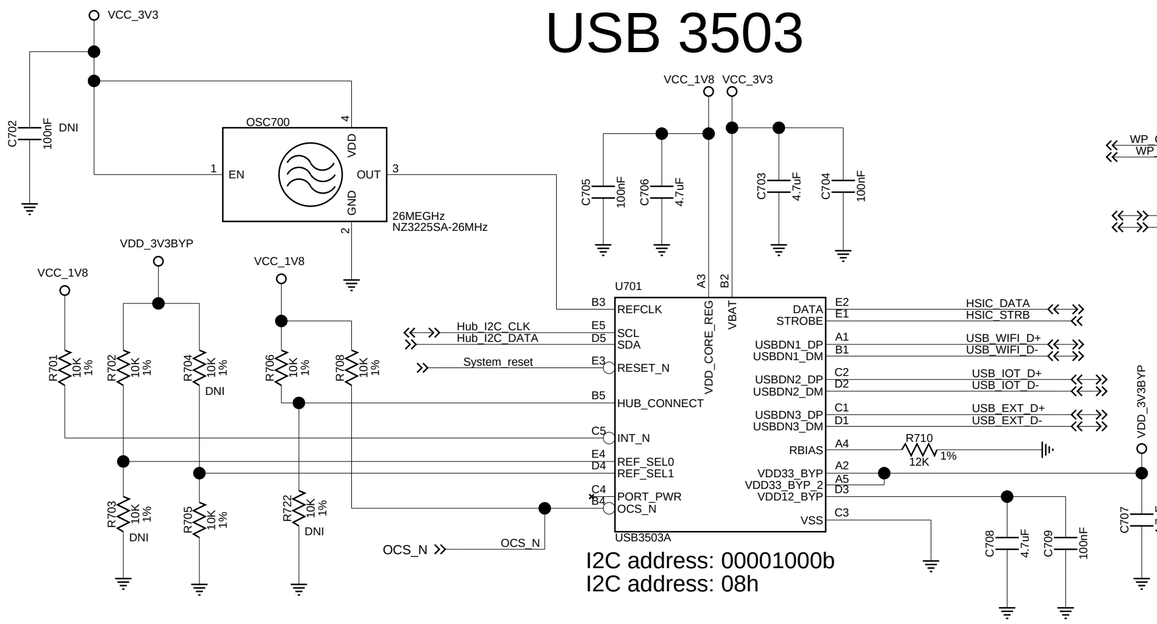
GPIO Expander#1

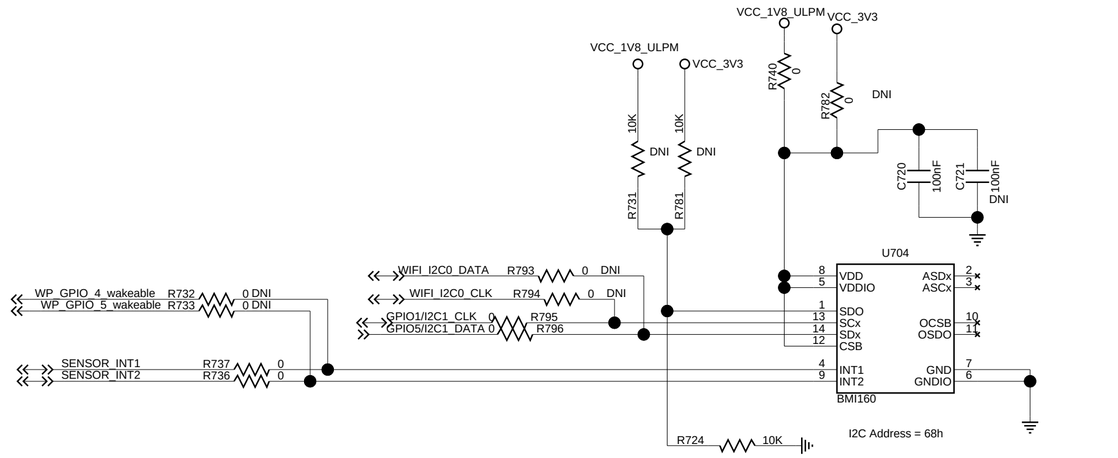


Board Rev



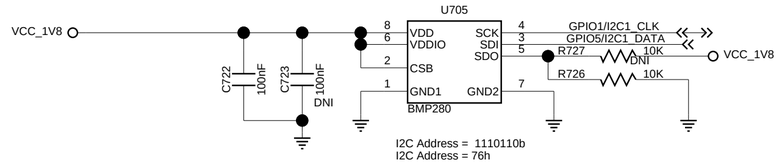
USB 3503



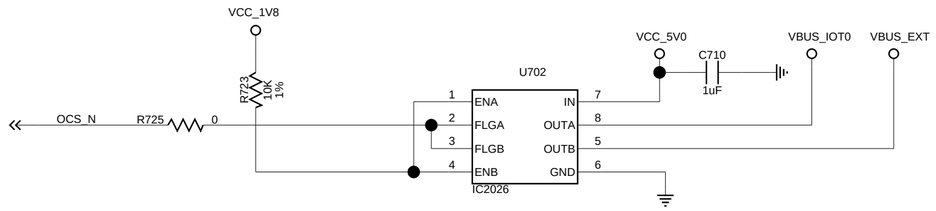


ACCELEROMETER AND GYROSCOPE

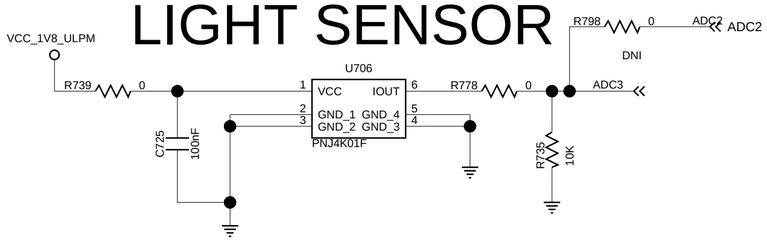
PRESSURE SENSOR



USB Downstream Power



LIGHT SENSOR



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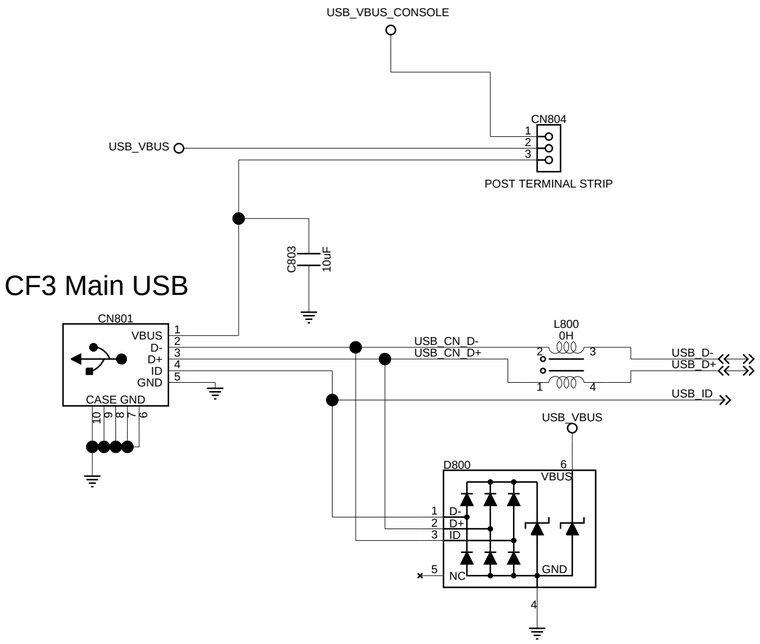
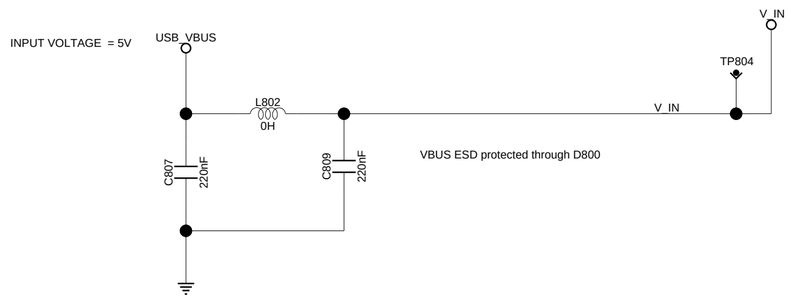
LEAD ENGINEER	Ashish Syal
REV SCH	See P1
REV PCB	See P1
PROJECT	MANGO RED
DATE/TIME	14-09-2017_13:33
SCHEMATIC	2500927
PAGE	7 OF 10

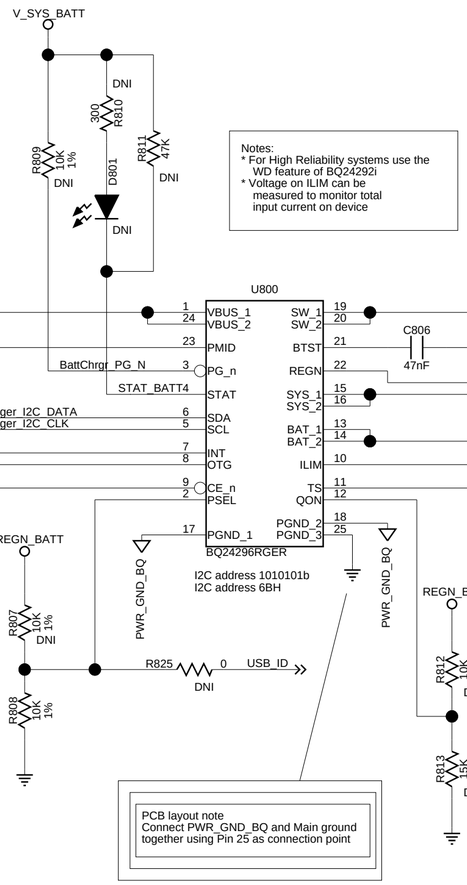
Power can come from either
Main or uUSB-Power connectors

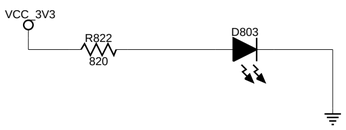
PSU Front End and 3.7V DC/DC converter

CF3 Main USB









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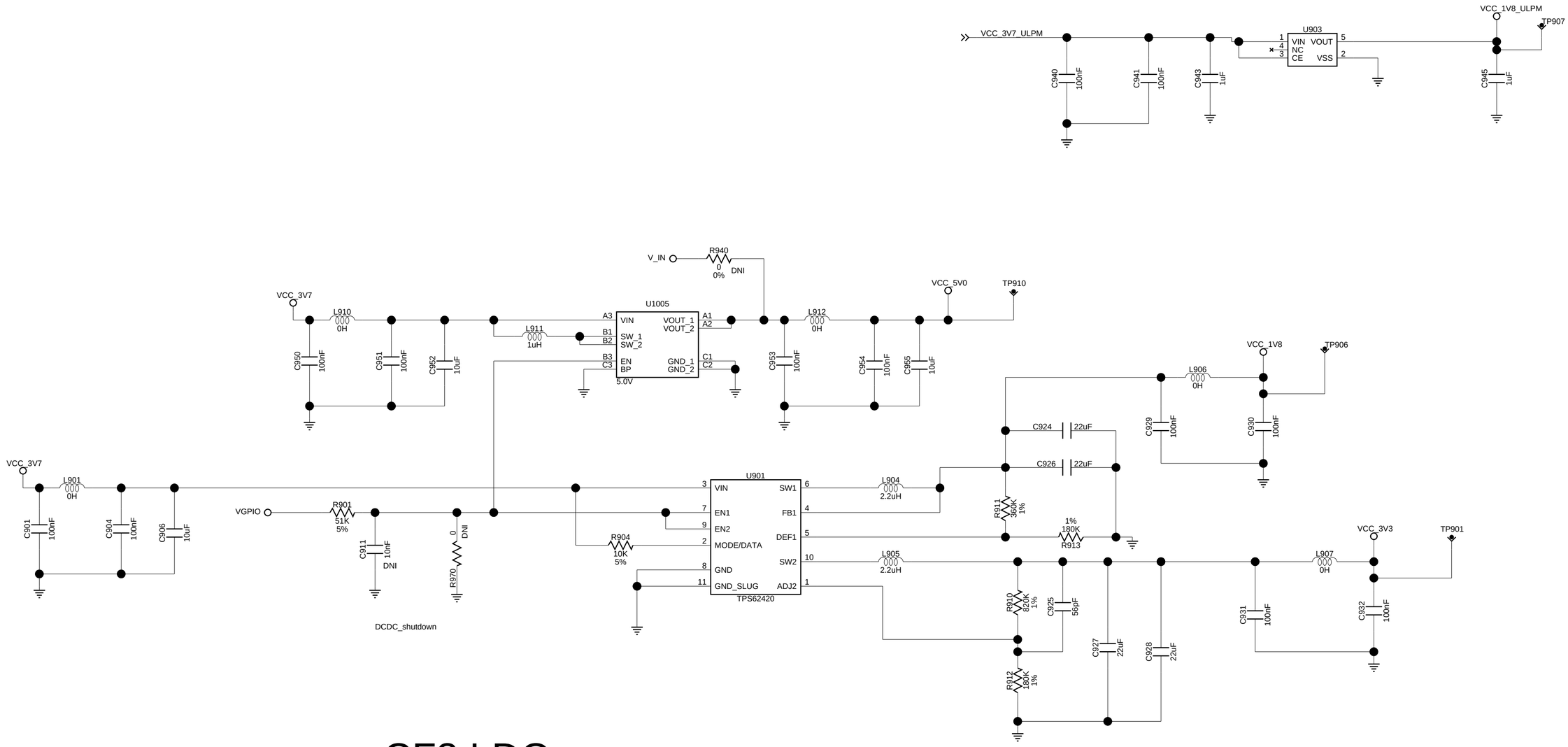
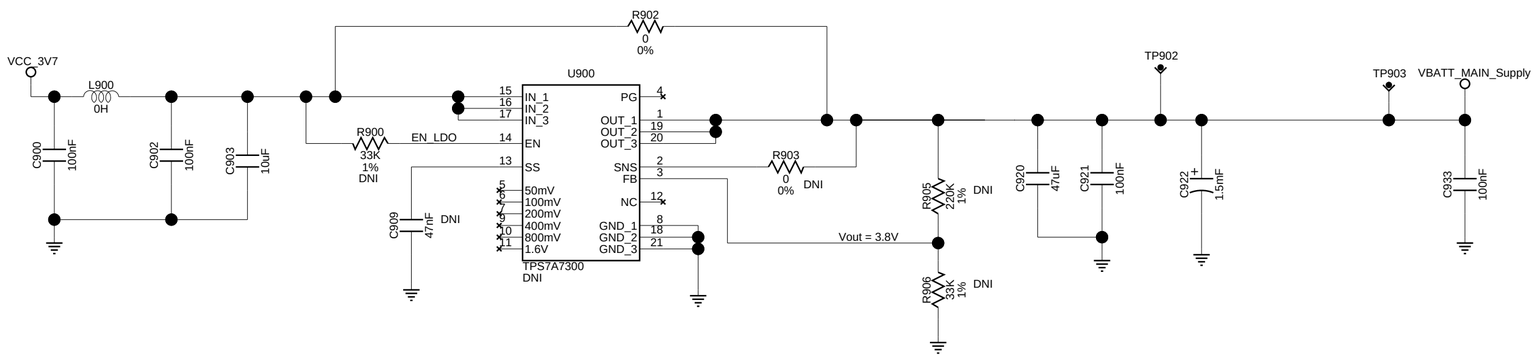
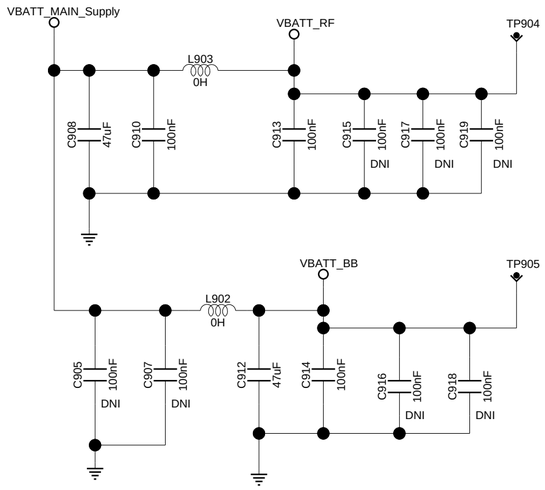
REV SCH	See P1
REV PCB	See P1
PROJECT	MANGO RED
DATE/TIME	14-09-2017_13:32
SCHEMATIC	2500927
PAGE	8 OF 10

3V3 and 1V8 Buck * 5V0 Boost



CF3 LDO





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SITE	CTO Office
LEAD ENGINEER	Ashish Syal
REV SCH	See P1
REV PCB	See P1
PROJECT	MANGO RED
DATE/TIME	12-01-2017_08:31
SCHEMATIC	2500927
PAGE	9 OF 10

RF SECTION

MT7697

Buffer HL Mode

26MHz XTAL

26MHz XTAL config

32KHz Clock derived from XTAL

Flash Normal Mode

SIERRA WIRELESS™

SITE	CTO Office
LEAD ENGINEER	Ashish Syal
REV SCH	See P1
REV PCB	See P1
PROJECT	MANGO RED
DATE/TIME	14-09-2017_13:25
SCHEMATIC	2500927
PAGE	10 OF 10