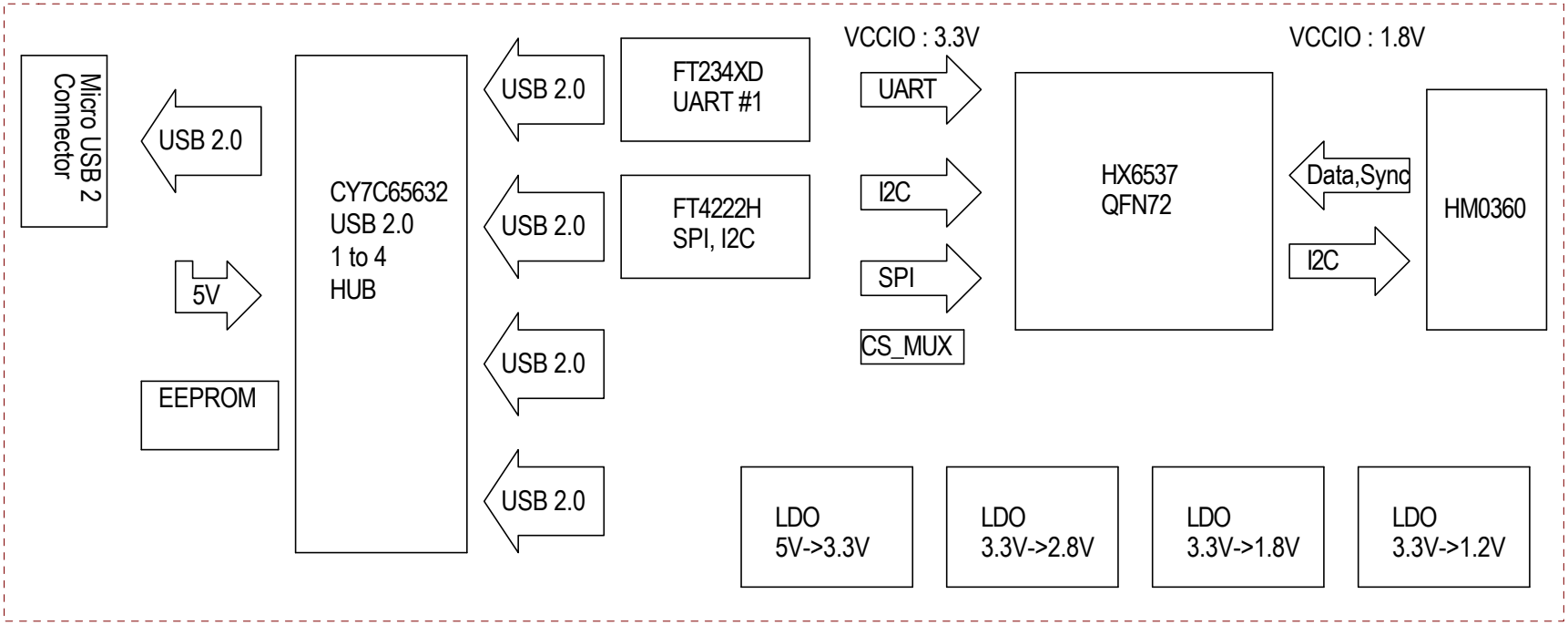


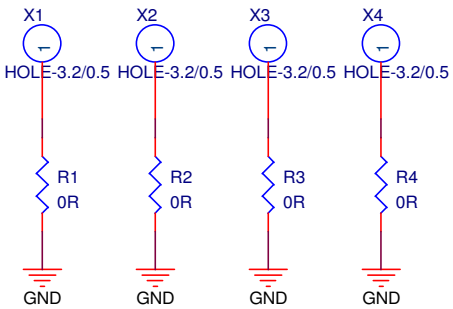


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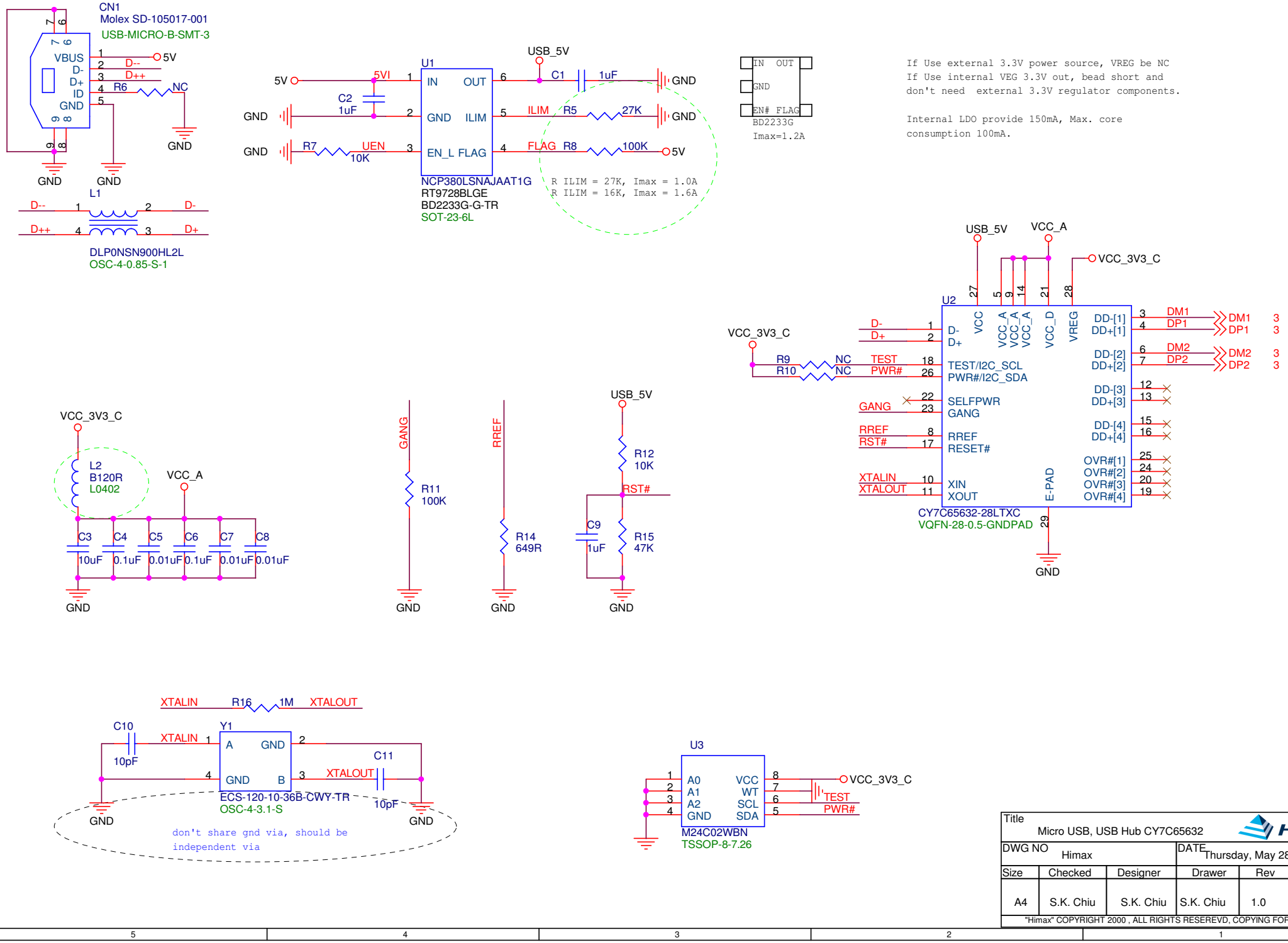
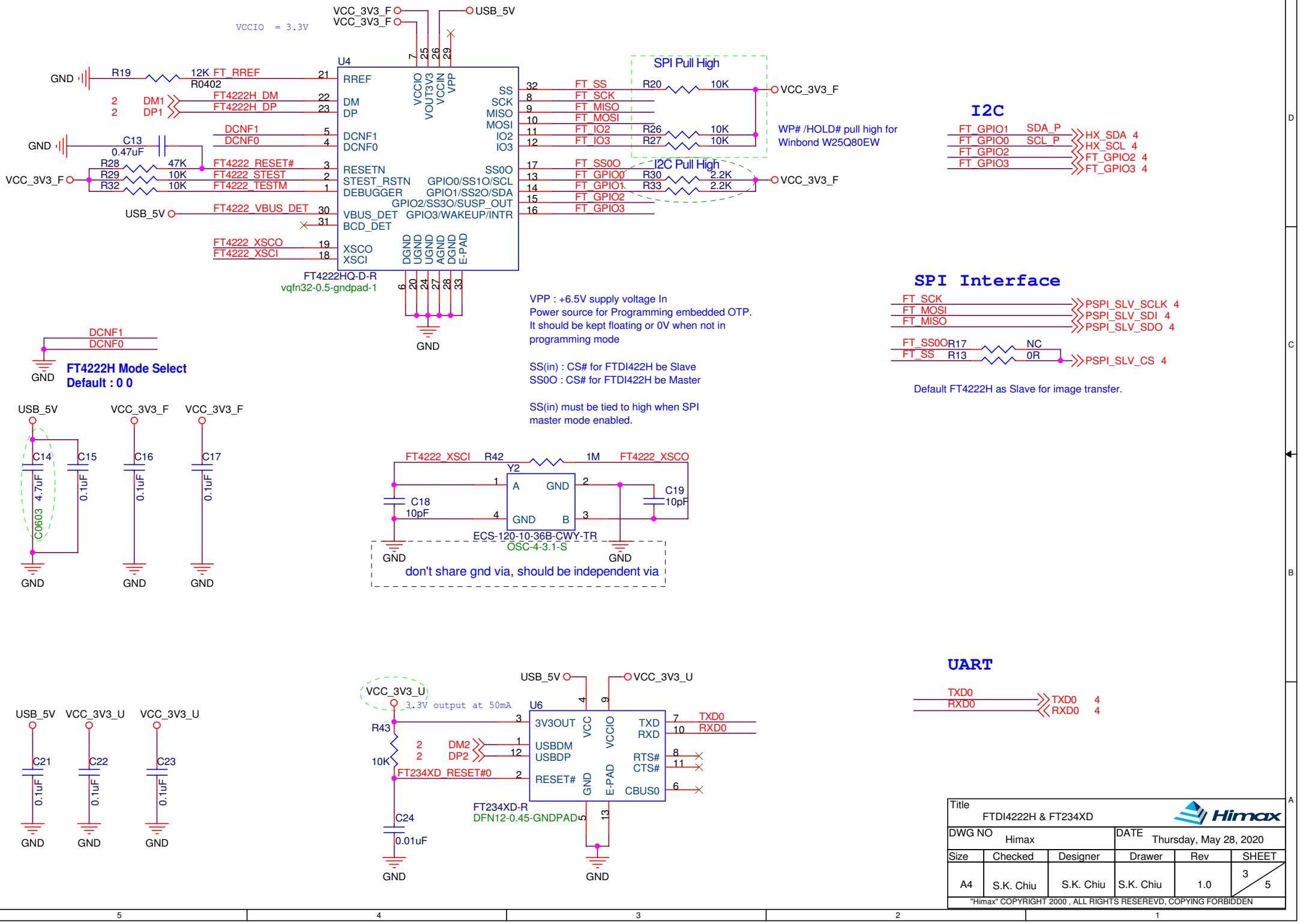
|---|---|---|---|---|---|
| Title: Block Diagram | | | | | Himax |
| DWG NO: Himax | | | DATE: Thursday, May 28, 2020 | | |
| Size | Checked | Designer | Drawer | Rev | SHEET |
| A4 | S.K. Chiu | S.K. Chiu | S.K. Chiu | 1.0 | 1 / 5 |




| | | | | | |
|---|---|---|---|---|---|
| Title: Micro USB, USB Hub CY7C65632 | | | | | Himax |
| DWG NO: Himax | | | DATE: Thursday, May 28, 2020 | | |
| Size | Checked | Designer | Drawer | Rev | SHEET |
| A4 | S.K. Chiu | S.K. Chiu | S.K. Chiu | 1.0 | 2 / 5 |


VCC_3V3_F
VCC_3V3_F
USB_5V
VCCIO = 3.3V
U4
RREF
DM
DP
DCNF1
DCNF0
RESETN
STEST_RSTN
DEBUGGER
VBUS_DET
BCD_DET
XSCO
XSCI
VCCIO
VOUT3V3
VCCIN
VPP
SS
SCK
MISO
MOSI
IO2
IO3
SS0O
GPIO0/SS1O/SCL
GPIO1/SS2O/SDA
GPIO2/SS3O/SUSP_OUT
GPIO3/WAKEUP/INTR
DGND
UGND
UGND
AGND
DGND
E-PAD
FT4222HQ-D-R
vqfn32-0.5-gndpad-1
R19
12K
R0402
FT_RREF
FT4222H_DM
FT4222H_DP
C13
0.47uF
R28
47K
R29
10K
R32
10K
FT4222_RESET#
FT4222_STESTM
FT4222_VBUS_DET
FT4222_XSCO
FT4222_XSCI
SPI Pull High
R20
10K
R26
10K
R27
10K
FT_SS
FT_SCK
FT_MISO
FT_MOSI
FT_IO2
FT_IO3
WP# /HOLD# pull high for
Winbond W25Q80EW
I2C Pull High
R30
2.2K
R33
2.2K
FT_SS0O
FT_GPIO0
FT_GPIO1
FT_GPIO2
FT_GPIO3
I2C
FT_GPIO1
FT_GPIO0
FT_GPIO2
FT_GPIO3
SDA_P
SCL_P
HX_SDA 4
HX_SCL 4
FT_GPIO2 4
FT_GPIO3 4
VPP : +6.5V supply voltage In
Power source for Programming embedded OTP.
It should be kept floating or 0V when not in
programming mode
SS(in) : CS# for FTDI422H be Slave
SS0O : CS# for FTDI422H be Master
SS(in) must be tied to high when SPI
master mode enabled.
SPI Interface
FT_SCK
FT_MOSI
FT_MISO
PSPI_SLV_SCLK 4
PSPI_SLV_SDI 4
PSPI_SLV_SDO 4
FT_SS0O
FT_SS
R17
R13
NC
0R
PSPI_SLV_CS 4
Default FT4222H as Slave for image transfer.
DCNF1
DCNF0
FT4222H Mode Select
Default : 0 0
USB_5V
VCC_3V3_F
VCC_3V3_F
C14
C15
C16
C17
C0603 4.7uF
0.1uF
FT4222_XSCI
R42
1M
FT4222_XSCO
Y2
C18
10pF
C19
10pF
ECS-120-10-36B-CWY-TR
OSC-4-3.1-S
don't share gnd via, should be independent via
UART
TXD0
RXD0
TXD0 4
RXD0 4
USB_5V
VCC_3V3_U
VCC_3V3_U
C21
C22
C23
VCC_3V3_U
3.3V output at 50mA
U6
3V3OUT
USBDM
USBDP
RESET#
VCC
VCCIO
GND
E-PAD
TXD
RXD
RTS#
CTS#
CBUS0
R43
10K
DM2
DP2
FT234XD_RESET#0
C24
0.01uF
FT234XD-R
DFN12-0.45-GNDPAD
Title
FTDI4222H & FT234XD
Himax
DWG NO
Himax
DATE
Thursday, May 28, 2020
Size
Checked
Designer
Drawer
Rev
SHEET
A4
S.K. Chiu
S.K. Chiu
S.K. Chiu
1.0
3
5
"Himax" COPYRIGHT 2000 , ALL RIGHTS RESEREVD, COPYING FORBIDDEN

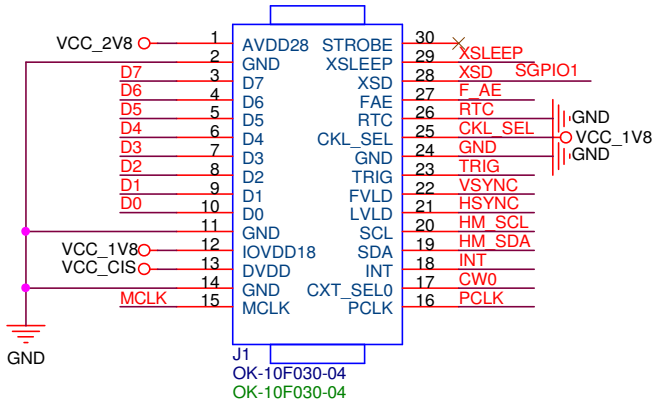
## HII's CCM

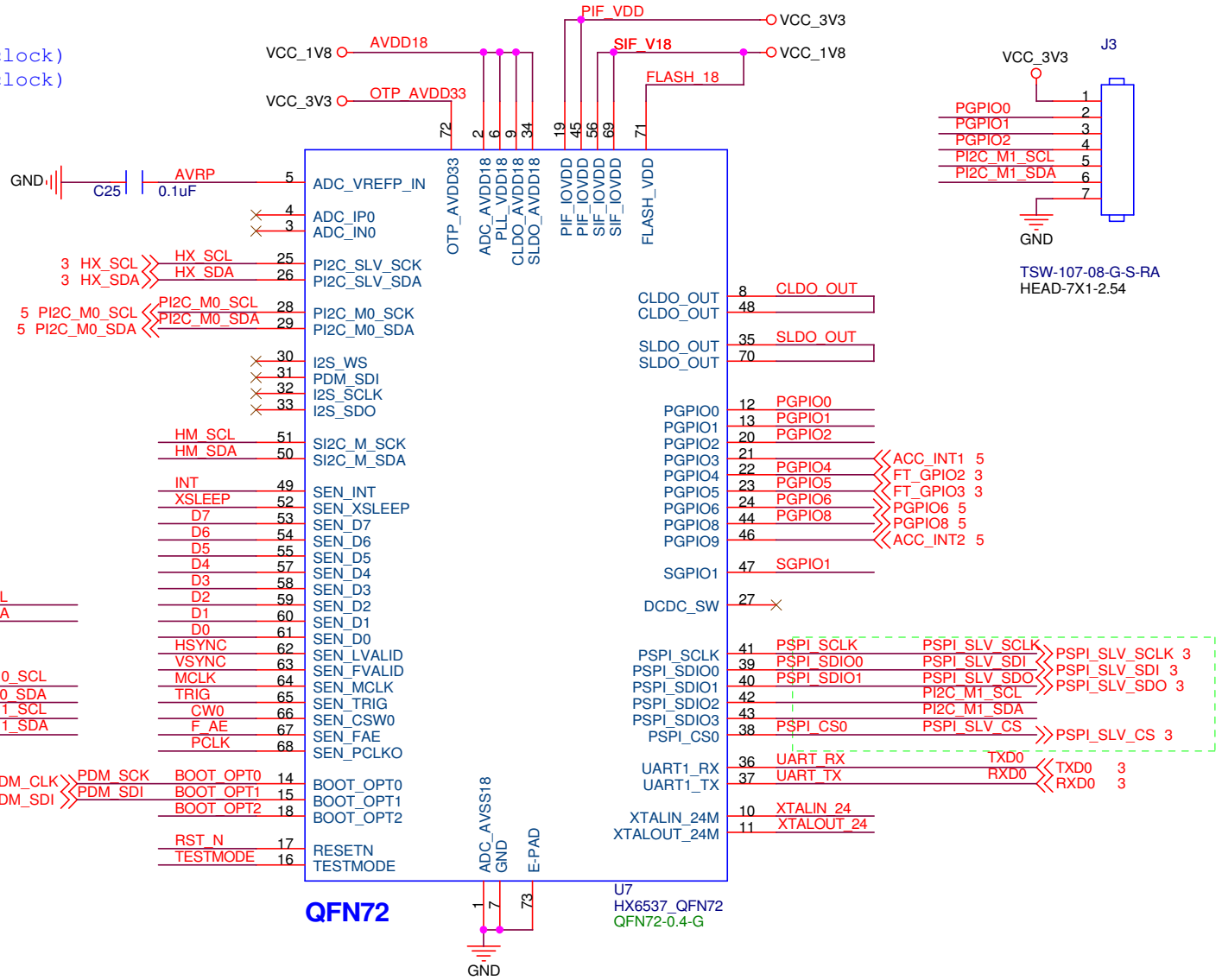
HM0360 DVDD=1.2V
HM01B0 DVDD=1.5V

IOVDD = 1.8V

OK-10GM030-04

CLK_SEL
= High (external clock)
= Low (internal clock)

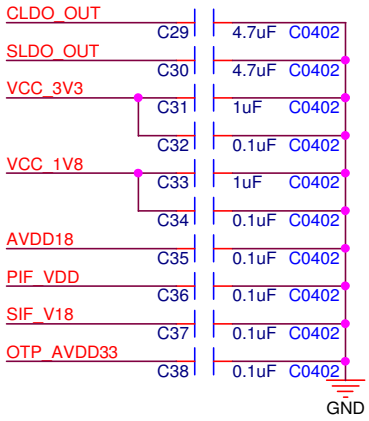


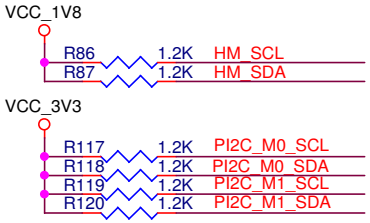





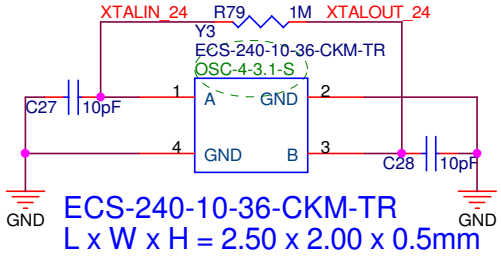


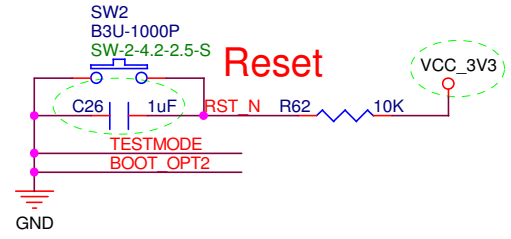
## Bypass Capacitor



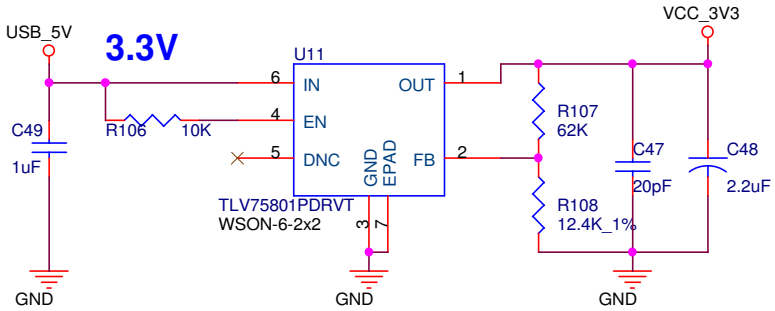



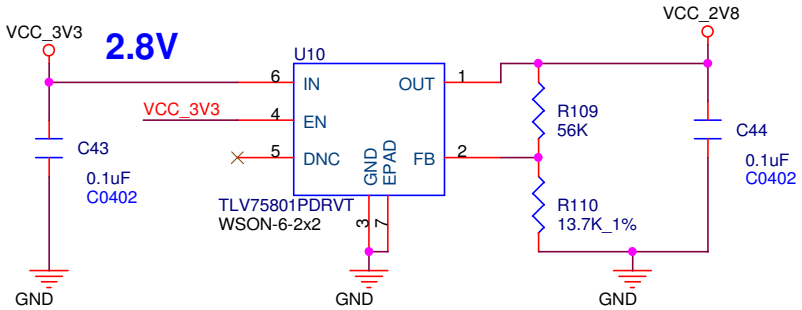

## Crystal 24MHz

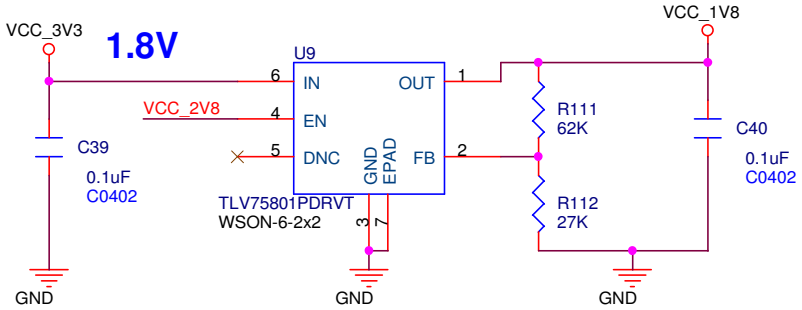


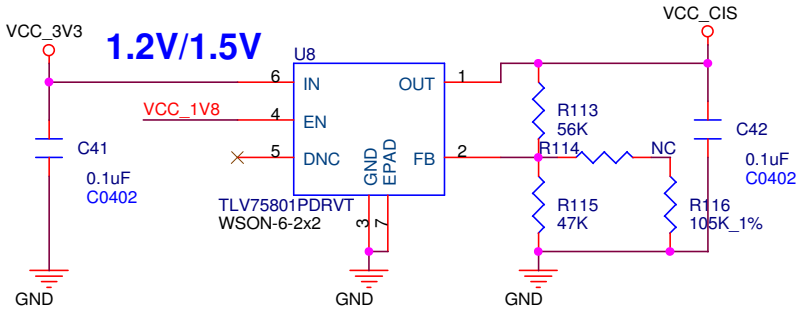




| | | | | | |
|---|---|---|---|---|---|
| Title: HX6537 WE-I + SENSOR | | | | | Himax |
| DWG NO: Himax | | | DATE: Thursday, May 28, 2020 | | |
| Size | Checked | Designer | Drawer | Rev | SHEET |
| A4 | S.K. Chiu | S.K. Chiu | S.K. Chiu | 1.0 | 4 / 5 |



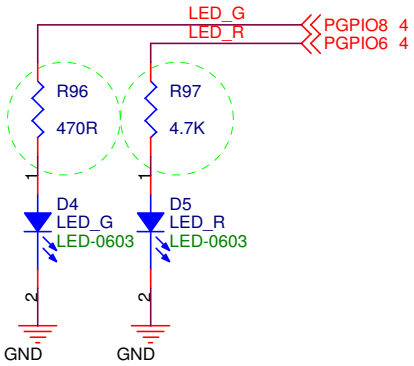

TLV75801PDRVT
Vin = 1.5V to 6V
Vout = 0.55 * (1+R1/R2)
VEN(hi) > 1.0V
VEN(lo) > 0.3V

VCC_CIS
R114 short = 1.5V
R114 NC = 1.2V

## RGB LED

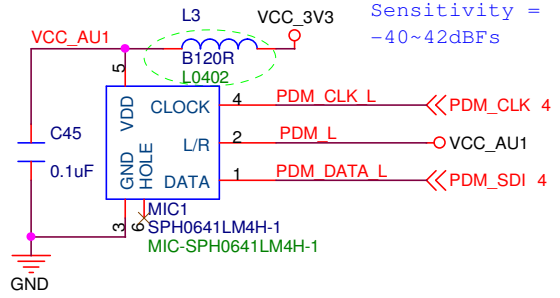
GPIO6->Red
GPIO8->Green

General LED
LED Red VF : 1.8V
LED Green VF : 1.95V
LED Blue VF : 2.95V



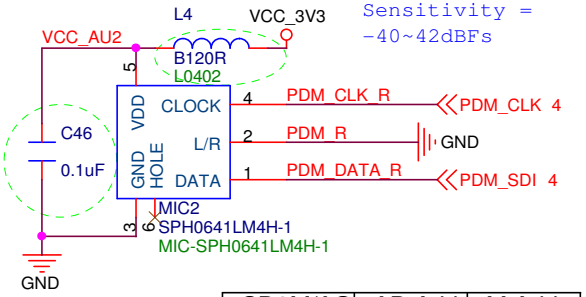

## PDM Microphone L

VDD = 1.65V~3.6V
Sensitivity = -40~42dBFs



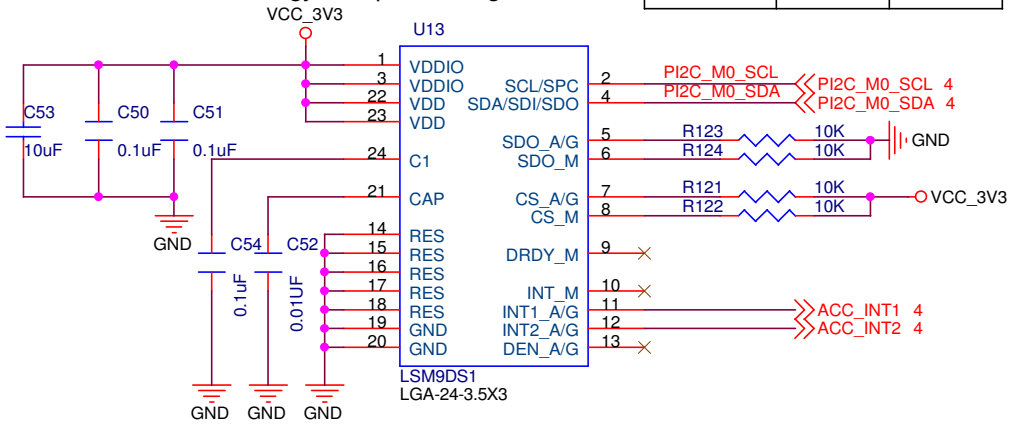

## PDM Microphone R

VDD = 1.65V~3.6V
Sensitivity = -40~42dBFs




LSM9DS1
iNEMO inertial module:
3D accelerometer, 3D gyroscope, 3D magnetometer

| SD0M/AG | AD Addr | M Addr |
|---|---|---|
| 0 | 0x6A | 0x1C |
| 1 | 0x6B | 0x1E |




https://learn.sparkfun.com/tutorials/lsm9ds1-breakout-hookup-guide

| | | | | | |
|---|---|---|---|---|---|
| Title: Indicate LED/PDM MIC/Power LDO/Sensor | | | | | Himax |
| DWG NO: Himax | | | DATE: Thursday, May 28, 2020 | | |
| Size | Checked | Designer | Drawer | Rev | SHEET |
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