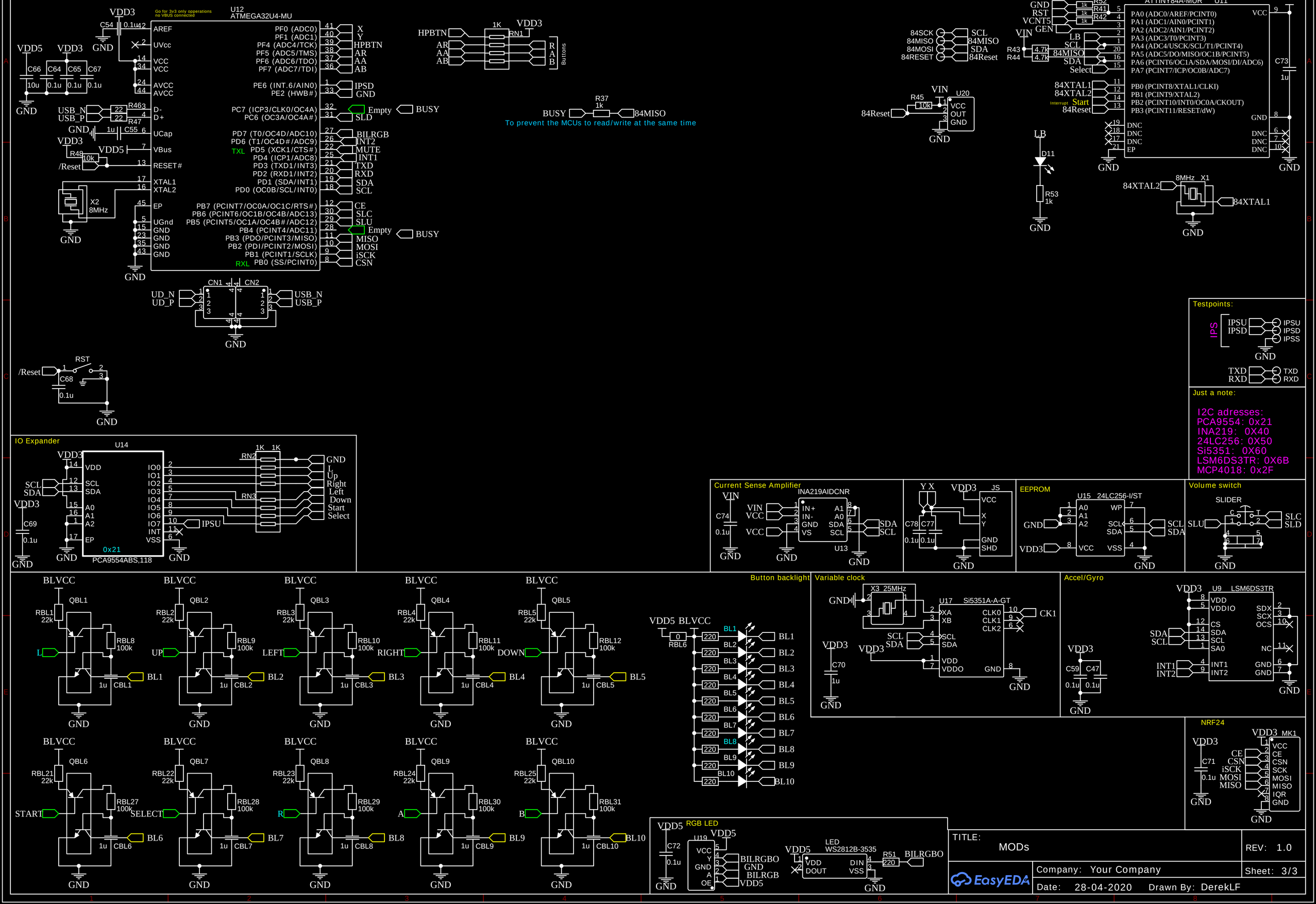
U12
ATMEGA32U4-MU
Go for 3v3 only opperations
no VBUS connected
AREF
UVcc
VCC
VCC
AVCC
AVCC
D-
D+
UCap
VBus
RESET#
XTAL1
XTAL2
EP
UGnd
GND
GND
GND
GND
PF0 (ADC0)
PF1 (ADC1)
PF4 (ADC4/TCK)
PF5 (ADC5/TMS)
PF6 (ADC6/TDO)
PF7 (ADC7/TDI)
PE6 (INT.6/AIN0)
PE2 (HWB#)
PC7 (ICP3/CLK0/OC4A)
PC6 (OC3A/OC4A#)
PD7 (T0/OC4D/ADC10)
PD6 (T1/OC4D#/ADC9)
PD5 (XCK1/CTS#)
PD4 (ICP1/ADC8)
PD3 (TXD1/INT3)
PD2 (RXD1/INT2)
PD1 (SDA/INT1)
PD0 (OC0B/SCL/INT0)
PB7 (PCINT7/OC0A/OC1C/RTS#)
PB6 (PCINT6/OC1B/OC4B/ADC13)
PB5 (PCINT5/OC1A/OC4B#/ADC12)
PB4 (PCINT4/ADC11)
PB3 (PDO/PCINT3/MISO)
PB2 (PDI/PCINT2/MOSI)
PB1 (PCINT1/SCLK)
PB0 (SS/PCINT0)
TXL
RXL
X
Y
HPBTN
AR
AA
AB
IPSD
GND
Empty
SLD
BILRGB
INT2
MUTE
INT1
TXD
RXD
SDA
SCL
CE
SLC
SLU
Empty
MISO
MOSI
iSCK
CSN
BUSY
BUSY
VDD3
VDD5
C54 0.1u
C66 10u
C64 0.1u
C65 0.1u
C67 0.1u
R46 22
R47 22
C55 1u
R48 10k
/Reset
X2 8MHz
USB_N
USB_P
HPBTN
1K
RN1
AR
AA
AB
R
A
B
Buttons
R37 1k
BUSY
84MISO
To prevent the MCUs to read/write at the same time
CN1
CN2
UD_N
UD_P
USB_N
USB_P
RST
/Reset
C68 0.1u
84SCK
84MISO
84MOSI
84RESET
SCL
84MISO
SDA
84Reset
VIN
R45 10k
U20
VCC
OUT
GND
84Reset
LB
D11
R53 1k
GND
R52 1k
R41 1k
R42 1k
RST
VCNT5
GEN
LB
SCL
84MISO
SDA
Select
R43 4.7k
R44 4.7k
ATTINY84A-MUR U11
PA0 (ADC0/AREF/PCINT0)
PA1 (ADC1/AIN0/PCINT1)
PA2 (ADC2/AIN1/PCINT2)
PA3 (ADC3/T0/PCINT3)
PA4 (ADC4/USCK/SCL/T1/PCINT4)
PA5 (ADC5/DO/MISO/OC1B/PCINT5)
PA6 (PCINT6/OC1A/SDA/MOSI/DI/ADC6)
PA7 (PCINT7/ICP/OC0B/ADC7)
PB0 (PCINT8/XTAL1/CLKI)
PB1 (PCINT9/XTAL2)
PB2 (PCINT10/INT0/OC0A/CKOUT)
PB3 (PCINT11/RESET/dW)
VCC
GND
DNC
DNC
DNC
EP
84XTAL1
84XTAL2
Interrupt
Start
84Reset
C73 1u
8MHz X1
84XTAL2
84XTAL1
Testpoints:
IPS
IPSU
IPSD
IPSS
TXD
RXD
Just a note:
I2C adresses:
PCA9554: 0x21
INA219: 0X40
24LC256: 0X50
Si5351: 0X60
LSM6DS3TR: 0X6B
MCP4018: 0x2F
IO Expander
U14
VDD
SCL
SDA
A0
A1
A2
EP
IO0
IO1
IO2
IO3
IO4
IO5
IO6
IO7
INT
VSS
0x21
PCA9554ABS,118
C69 0.1u
RN2 1K
RN3 1K
GND
L
Up
Right
Left
Down
Start
Select
IPSU
Current Sense Amplifier
INA219AIDCNR
U13
C74 0.1u
Y X
JS
C78 0.1u
C77 0.1u
EEPROM
U15 24LC256-I/ST
WP
SCL
SDA
Volume switch
SLIDER
SLU
SLC
SLD
Button backlight
RBL6 0
BL1
BL2
BL3
BL4
BL5
BL6
BL7
BL8
BL9
BL10
Variable clock
X3 25MHz
U17 Si5351A-A-GT
XA
XB
SCL
SDA
VDD
VDDO
CLK0
CLK1
CLK2
CK1
C70 1u
Accel/Gyro
U9 LSM6DS3TR
VDDIO
SDX
SCX
OCS
CS
SDA
SCL
SA0
NC
INT1
INT2
C59 0.1u
C47 0.1u
NRF24
MK1
CE
CSN
SCK
MOSI
MISO
IQR
GND
C71 0.1u
RGB LED
U19
LED WS2812B-3535
DIN
DOUT
R51 220
BILRGBO
BILRGB
QBL1
QBL2
QBL3
QBL4
QBL5
QBL6
QBL7
QBL8
QBL9
QBL10
RBL1 22k
RBL2 22k
RBL3 22k
RBL4 22k
RBL5 22k
RBL8 100k
RBL9 100k
RBL10 100k
RBL11 100k
RBL12 100k
RBL21 22k
RBL22 22k
RBL23 22k
RBL24 22k
RBL25 22k
RBL27 100k
RBL28 100k
RBL29 100k
RBL30 100k
RBL31 100k
CBL1 1u
CBL2 1u
CBL3 1u
CBL4 1u
CBL5 1u
CBL6 1u
CBL7 1u
CBL8 1u
CBL9 1u
CBL10 1u
L
UP
LEFT
RIGHT
DOWN
START
SELECT
R
A
B
BLVCC
TITLE:
MODs
REV: 1.0
Company: Your Company
Sheet: 3/3
Date: 28-04-2020
Drawn By: DerekLF
EasyEDA