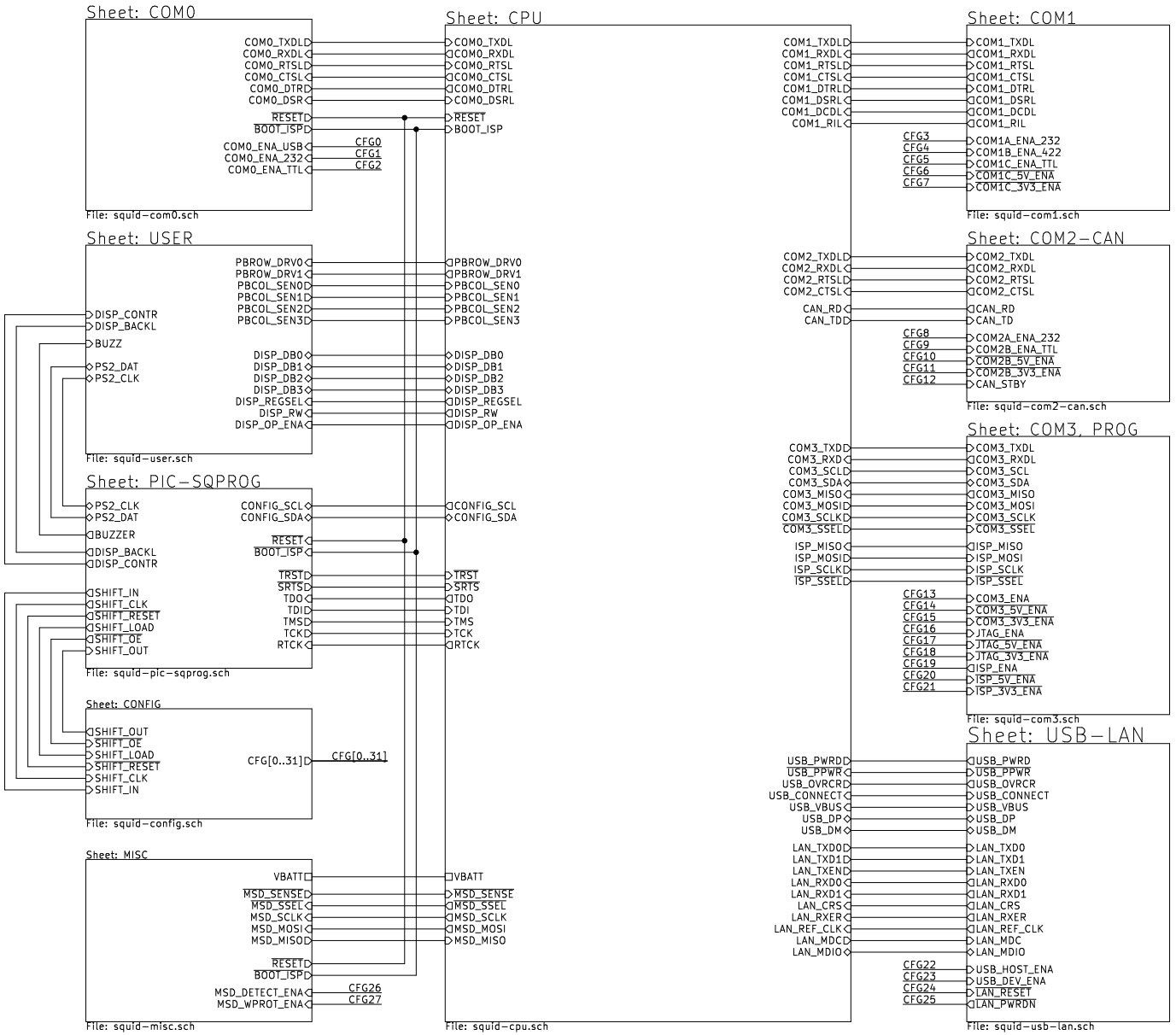
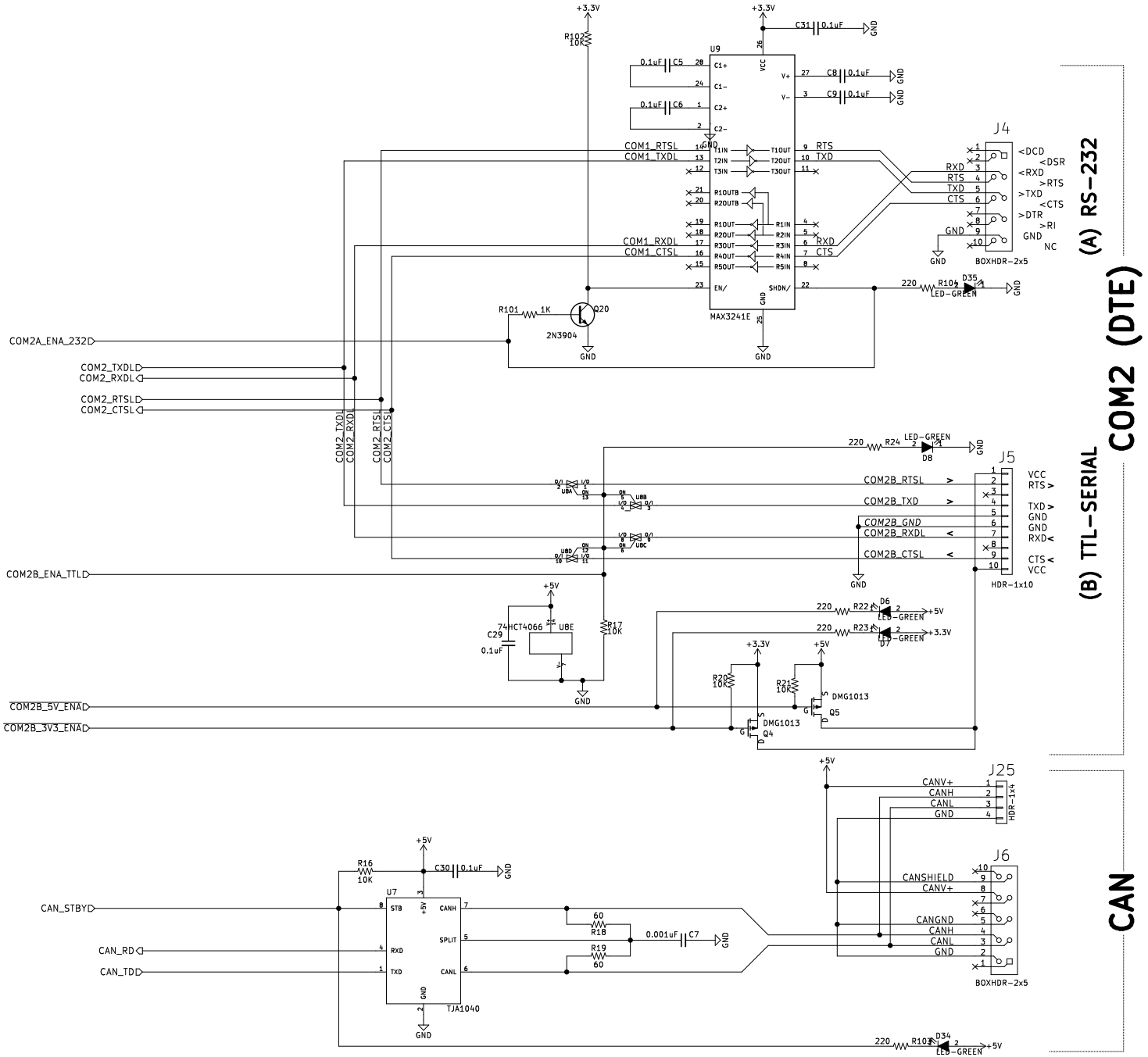
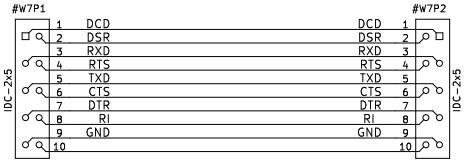
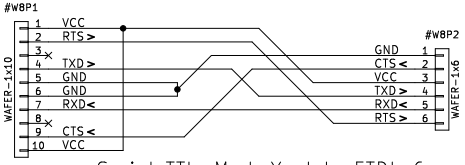

Sheet: COM0
COM0_TXDL
COM0_RXDL
COM0_RTSL
COM0_CTSL
COM0_DTRL
COM0_DSRL
RESET
BOOT_ISP
COM0_ENA_USB
COM0_ENA_232
COM0_ENA_TTL
CFG0
CFG1
CFG2
File: squid-com0.sch
Sheet: CPU
COM0_TXDL
COM0_RXDL
COM0_RTSL
COM0_CTSL
COM0_DTRL
COM0_DSRL
RESET
BOOT_ISP
File: squid-cpu.sch
Sheet: COM1
COM1_TXDL
COM1_RXDL
COM1_RTSL
COM1_CTSL
COM1_DTRL
COM1_DSRL
COM1_DCDL
COM1_RIL
CFG3
CFG4
CFG5
CFG6
CFG7
COM1A_ENA_232
COM1B_ENA_422
COM1C_ENA_TTL
COM1C_5V_ENA
COM1C_3V3_ENA
File: squid-com1.sch
Sheet: USER
PBROW_DRV0
PBROW_DRV1
PBCOL_SEN0
PBCOL_SEN1
PBCOL_SEN2
PBCOL_SEN3
DISP_CONTR
DISP_BACKL
BUZZ
PS2_DAT
PS2_CLK
DISP_DB0
DISP_DB1
DISP_DB2
DISP_DB3
DISP_REGSEL
DISP_RW
DISP_OP_ENA
File: squid-user.sch
Sheet: COM2-CAN
COM2_TXDL
COM2_RXDL
COM2_RTSL
COM2_CTSL
CAN_RD
CAN_TD
CFG8
CFG9
CFG10
CFG11
CFG12
COM2A_ENA_232
COM2B_ENA_TTL
COM2B_5V_ENA
COM2B_3V3_ENA
CAN_STBY
File: squid-com2-can.sch
Sheet: PIC-SQPROG
PS2_CLK
PS2_DAT
BUZZER
DISP_BACKL
DISP_CONTR
SHIFT_IN
SHIFT_CLK
SHIFT_RESET
SHIFT_LOAD
SHIFT_OE
SHIFT_OUT
CONFIG_SCL
CONFIG_SDA
RESET
BOOT_ISP
TRST
SRTS
TDO
TDI
TMS
TCK
RTCK
File: squid-pic-sqprog.sch
Sheet: COM3, PROG
COM3_TXDD
COM3_RXD
COM3_SCLD
COM3_SDA
COM3_MISO
COM3_MOSI
COM3_SCLK
COM3_SSEL
ISP_MISO
ISP_MOSI
ISP_SCLK
ISP_SSEL
CFG13
CFG14
CFG15
CFG16
CFG17
CFG18
CFG19
CFG20
CFG21
COM3_ENA
COM3_5V_ENA
COM3_3V3_ENA
JTAG_ENA
JTAG_5V_ENA
JTAG_3V3_ENA
ISP_ENA
ISP_5V_ENA
ISP_3V3_ENA
File: squid-com3.sch
Sheet: CONFIG
SHIFT_OUT
SHIFT_OE
SHIFT_LOAD
SHIFT_RESET
SHIFT_CLK
SHIFT_IN
CFG[0..31]
File: squid-config.sch
Sheet: USB-LAN
USB_PWRD
USB_PPWR
USB_OVRCR
USB_CONNECT
USB_VBUS
USB_DP
USB_DM
LAN_TXD0
LAN_TXD1
LAN_TXEN
LAN_RXD0
LAN_RXD1
LAN_CRS
LAN_RXER
LAN_REF_CLK
LAN_MDC
LAN_MDIO
CFG22
CFG23
CFG24
CFG25
USB_HOST_ENA
USB_DEV_ENA
LAN_RESET
LAN_PWRDN
File: squid-usb-lan.sch
Sheet: MISC
VBATT
MSD_SENSE
MSD_SSEL
MSD_SCLK
MSD_MOSI
MSD_MISO
RESET
BOOT_ISP
MSD_DETECT_ENA
MSD_WPROT_ENA
CFG26
CFG27
File: squid-misc.sch





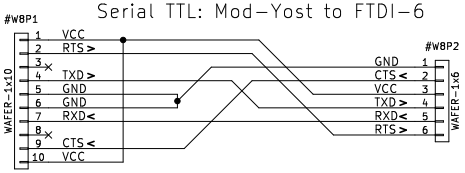
W7

Serial RS232, IDC-10 to IDC-10



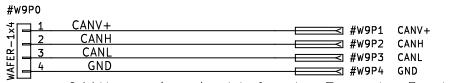
W8

Serial TTL: Mod-Yost to FTDI-6



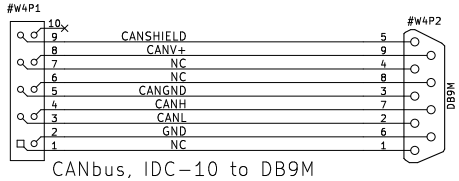
W17

Serial TTL: Mod-Yost to SparkFun-6



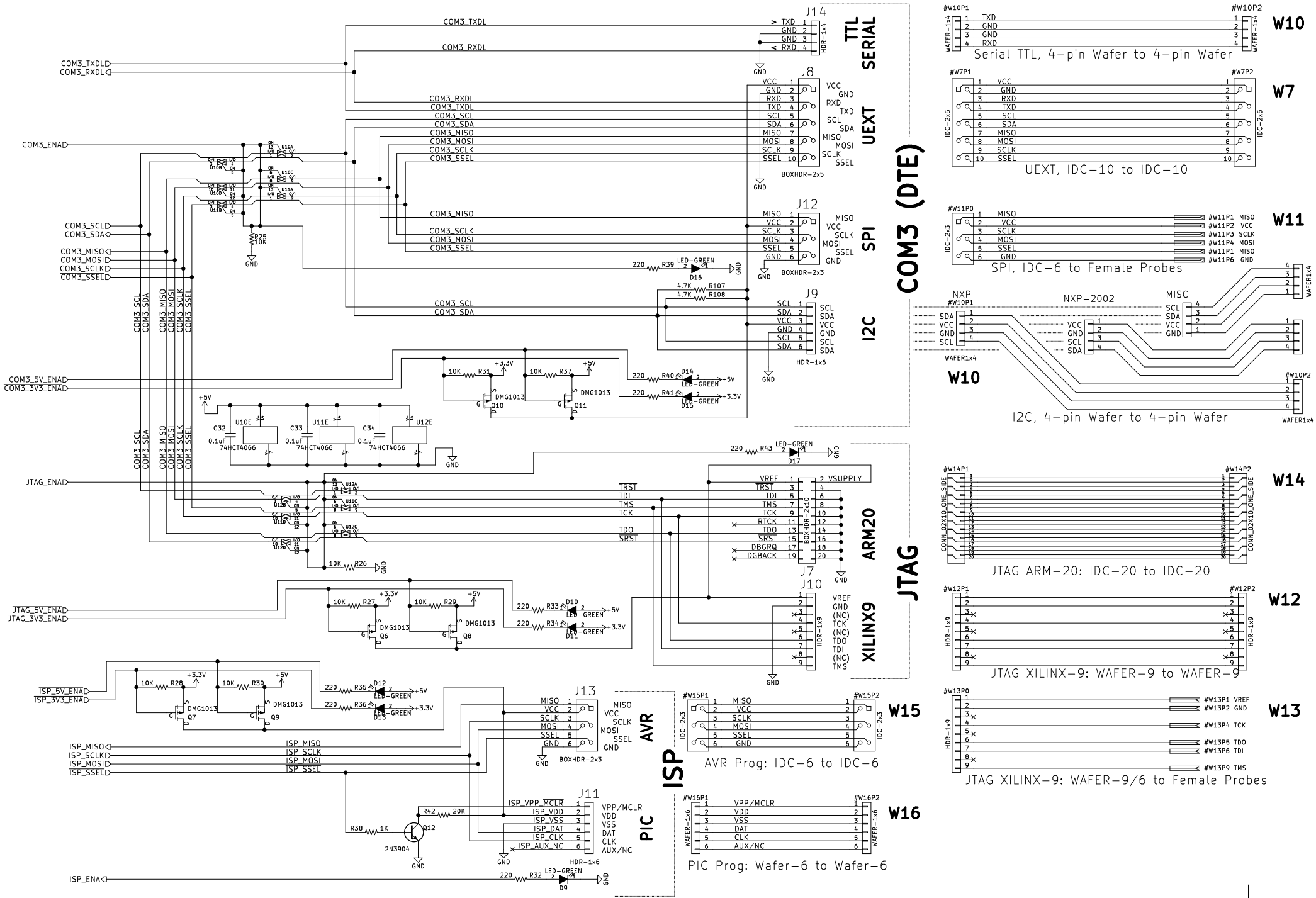
W9

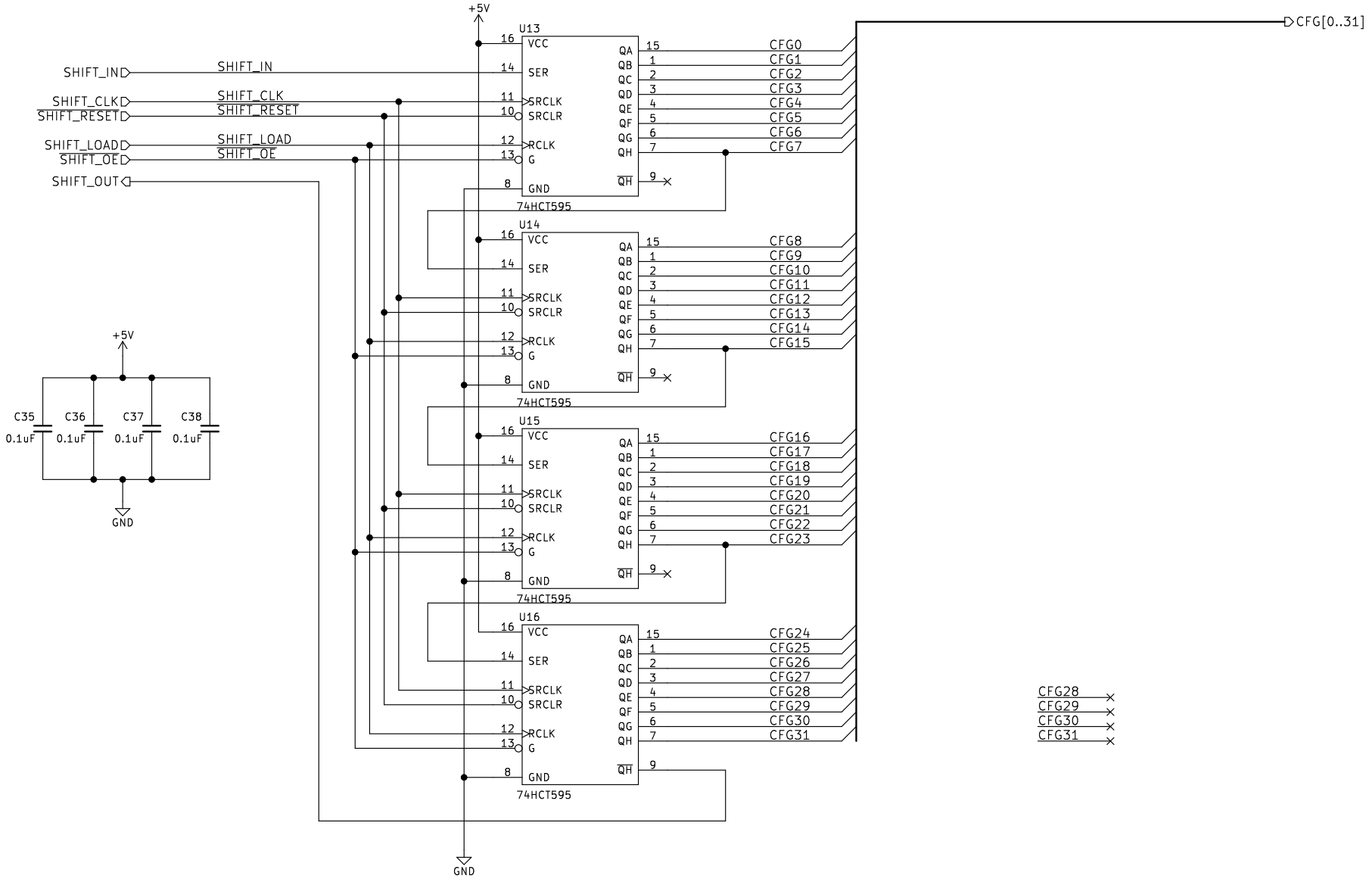
CANbus, 4-pin Wafer to Female Probes

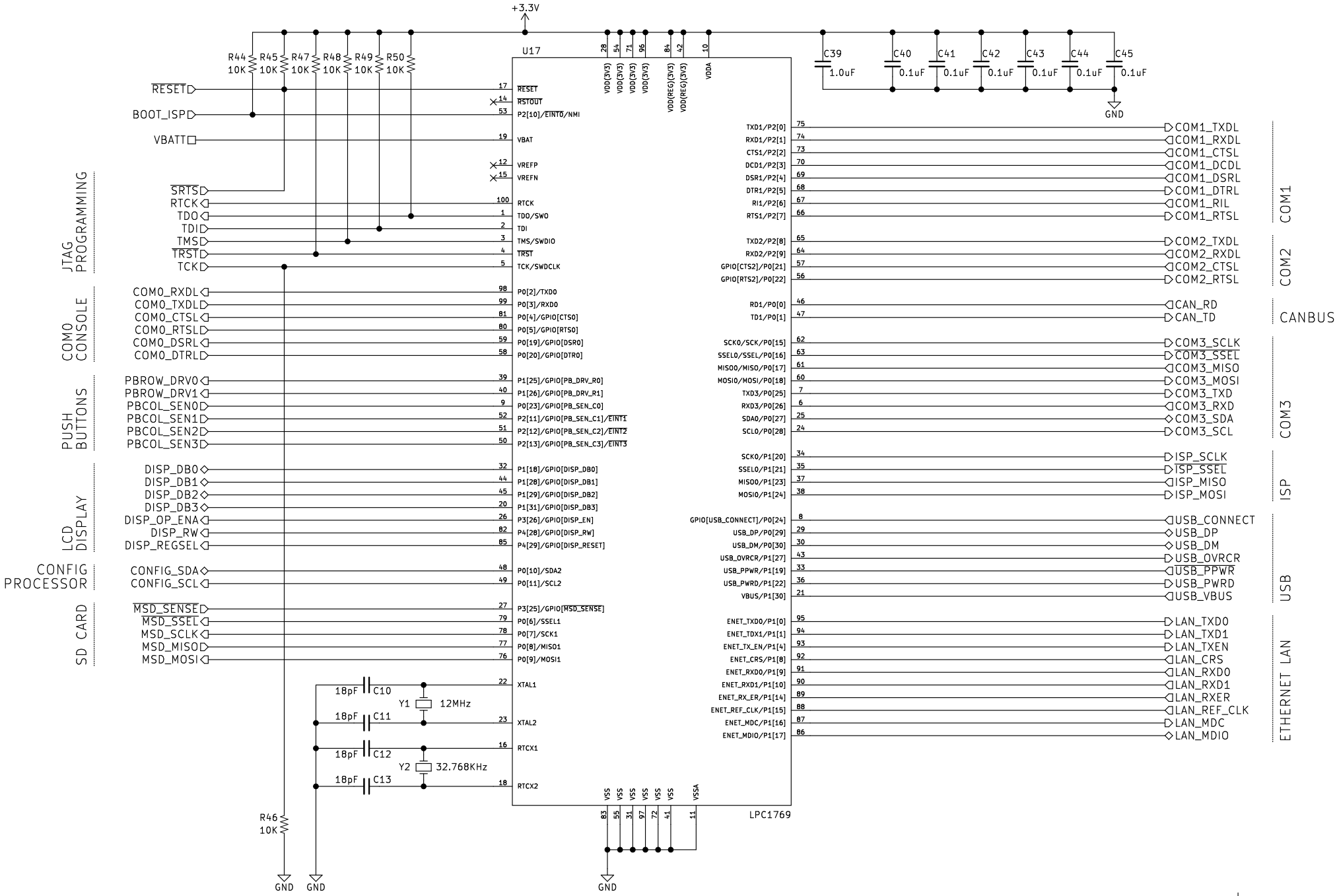


W4

CANbus, IDC-10 to DB9M

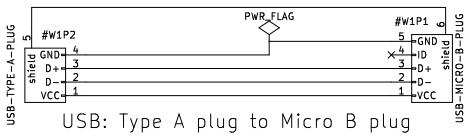

COM3 (DTE)
TTL SERIAL
J14
COM3_TXDL
COM3_RXDL
TXD
GND
RXD
HDR-1x4
UEXT
J8
VCC
RXD
TXD
SCL
SDA
MISO
MOSI
SCLK
SSEL
BOXHDR-2x5
SPI
J12
BOXHDR-2x3
I2C
J9
HDR-1x6
COM3_ENA
COM3_SCL
COM3_SDA
COM3_MISO
COM3_MOSI
COM3_SCLK
COM3_SSEL
R25 10K
R39 220
LED-GREEN
D16
R107 4.7K
R108 4.7K
COM3_5V_ENA
COM3_3V3_ENA
R31 10K
R37 10K
+3.3V
+5V
DMG1013
Q10
Q11
R40 220
R41 220
D14
D15
U10E
U11E
U12E
C32 0.1uF
C33 0.1uF
C34 0.1uF
74HCT4066
JTAG
ARM20
BOXHDR-2x10
VREF
VSUPPLY
TRST
TDI
TMS
TCK
RTCK
TDO
SRST
DBGRQ
DGBACK
JTAG_ENA
R26 10K
R43 220
D17
XILINX9
J7
J10
HDR-1x9
VREF
GND
(NC)
TCK
TDO
TDI
TMS
JTAG_5V_ENA
JTAG_3V3_ENA
R27 10K
R29 10K
R33 220
R34 220
D10
D11
Q6
Q8
ISP
AVR
J13
ISP_5V_ENA
ISP_3V3_ENA
R28 10K
R30 10K
R35 220
R36 220
D12
D13
Q7
Q9
ISP_MISO
ISP_SCLK
ISP_MOSI
ISP_SSEL
PIC
J11
ISP_VPP_MCLR
ISP_VDD
ISP_VSS
ISP_DAT
ISP_CLK
ISP_AUX_NC
VPP/MCLR
VDD
VSS
DAT
CLK
AUX/NC
R42 20K
R38 1K
Q12
2N3904
ISP_ENA
R32 220
D9
W10
#W10P1
#W10P2
WAFER-1x4
Serial TTL, 4-pin Wafer to 4-pin Wafer
W7
#W7P1
#W7P2
IDC-2x5
UEXT, IDC-10 to IDC-10
W11
#W11P0
#W11P1 MISO
#W11P2 VCC
#W11P3 SCLK
#W11P4 MOSI
#W11P1 MISO
#W11P6 GND
IDC-2x3
SPI, IDC-6 to Female Probes
NXP
NXP-2002
MISC
WAFER1x4
I2C, 4-pin Wafer to 4-pin Wafer
W14
#W14P1
#W14P2
CONN_02X10_ONE_SIDE
JTAG ARM-20: IDC-20 to IDC-20
W12
#W12P1
#W12P2
HDR-1x9
JTAG XILINX-9: WAFER-9 to WAFER-9
W13
#W13P0
#W13P1 VREF
#W13P2 GND
#W13P4 TCK
#W13P5 TDO
#W13P6 TDI
#W13P9 TMS
JTAG XILINX-9: WAFER-9/6 to Female Probes
W15
#W15P1
#W15P2
AVR Prog: IDC-6 to IDC-6
W16
#W16P1
#W16P2
WAFER-1x6
PIC Prog: Wafer-6 to Wafer-6


+5V
U13
U14
U15
U16
74HCT595
VCC
SER
SRCLK
SRCLR
RCLK
G
GND
QA
QB
QC
QD
QE
QF
QG
QH
SHIFT_IN
SHIFT_CLK
SHIFT_RESET
SHIFT_LOAD
SHIFT_OE
SHIFT_OUT
CFG[0..31]
CFG0
CFG1
CFG2
CFG3
CFG4
CFG5
CFG6
CFG7
CFG8
CFG9
CFG10
CFG11
CFG12
CFG13
CFG14
CFG15
CFG16
CFG17
CFG18
CFG19
CFG20
CFG21
CFG22
CFG23
CFG24
CFG25
CFG26
CFG27
CFG28
CFG29
CFG30
CFG31
C35
C36
C37
C38
0.1uF


+3.3V
U17
LPC1769
R44 10K
R45 10K
R47 10K
R48 10K
R49 10K
R50 10K
R46 10K
C39 1.0uF
C40 0.1uF
C41 0.1uF
C42 0.1uF
C43 0.1uF
C44 0.1uF
C45 0.1uF
C10 18pF
C11 18pF
C12 18pF
C13 18pF
Y1 12MHz
Y2 32.768KHz
GND
JTAG PROGRAMMING
RESET
BOOT_ISP
VBATT
SRTS
RTCK
TDO
TDI
TMS
TRST
TCK
COM0 CONSOLE
COM0_RXDL
COM0_TXDL
COM0_CTSL
COM0_RTSL
COM0_DSRL
COM0_DTRL
PUSH BUTTONS
PBROW_DRV0
PBROW_DRV1
PBCOL_SEN0
PBCOL_SEN1
PBCOL_SEN2
PBCOL_SEN3
LCD DISPLAY
DISP_DB0
DISP_DB1
DISP_DB2
DISP_DB3
DISP_OP_ENA
DISP_RW
DISP_REGSEL
CONFIG PROCESSOR
CONFIG_SDA
CONFIG_SCL
SD CARD
MSD_SENSE
MSD_SSEL
MSD_SCLK
MSD_MISO
MSD_MOSI
COM1
COM1_TXDL
COM1_RXDL
COM1_CTSL
COM1_DCDL
COM1_DSRL
COM1_DTRL
COM1_RIL
COM1_RTSL
COM2
COM2_TXDL
COM2_RXDL
COM2_CTSL
COM2_RTSL
CANBUS
CAN_RD
CAN_TD
COM3
COM3_SCLK
COM3_SSEL
COM3_MISO
COM3_MOSI
COM3_TXD
COM3_RXD
COM3_SDA
COM3_SCL
ISP
ISP_SCLK
ISP_SSEL
ISP_MISO
ISP_MOSI
USB
USB_CONNECT
USB_DP
USB_DM
USB_OVRCR
USB_PPWR
USB_PWRD
USB_VBUS
ETHERNET LAN
LAN_TXD0
LAN_TXD1
LAN_TXEN
LAN_CRS
LAN_RXD0
LAN_RXD1
LAN_RXER
LAN_REF_CLK
LAN_MDC
LAN_MDIO

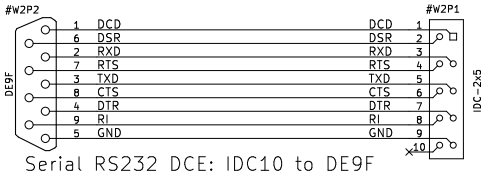
COM0-DCE

W1



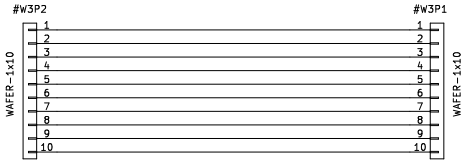
USB: Type A plug to Micro B plug

W2



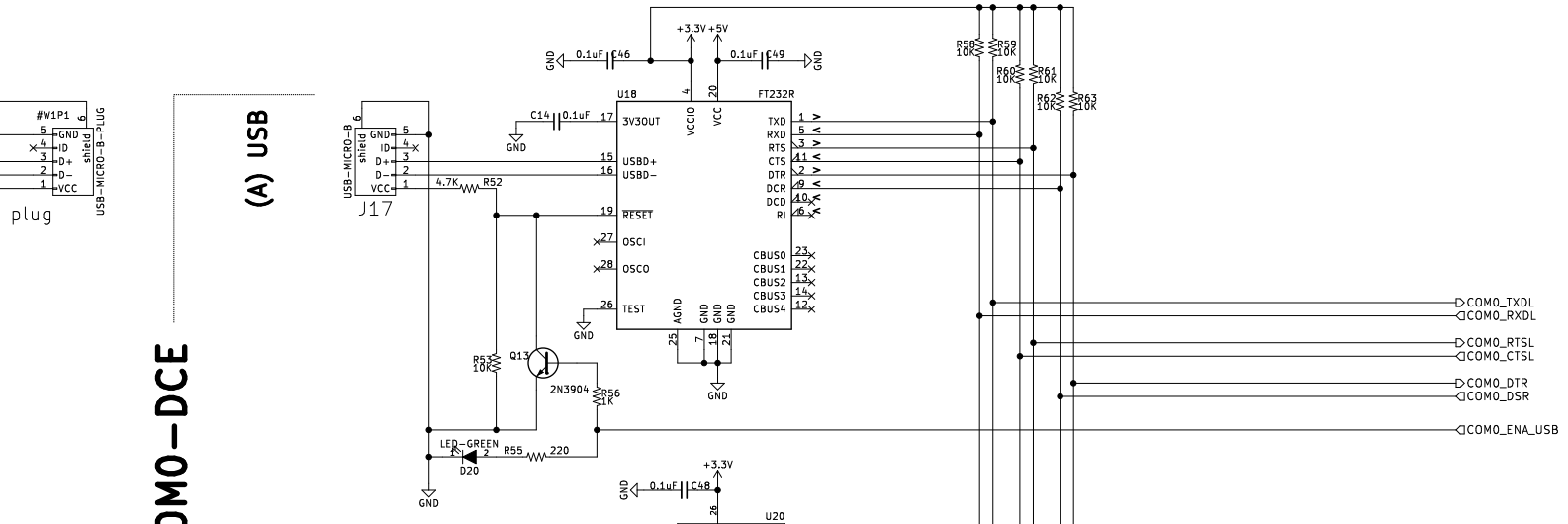
Serial RS232 DCE: IDC10 to DE9F

W3

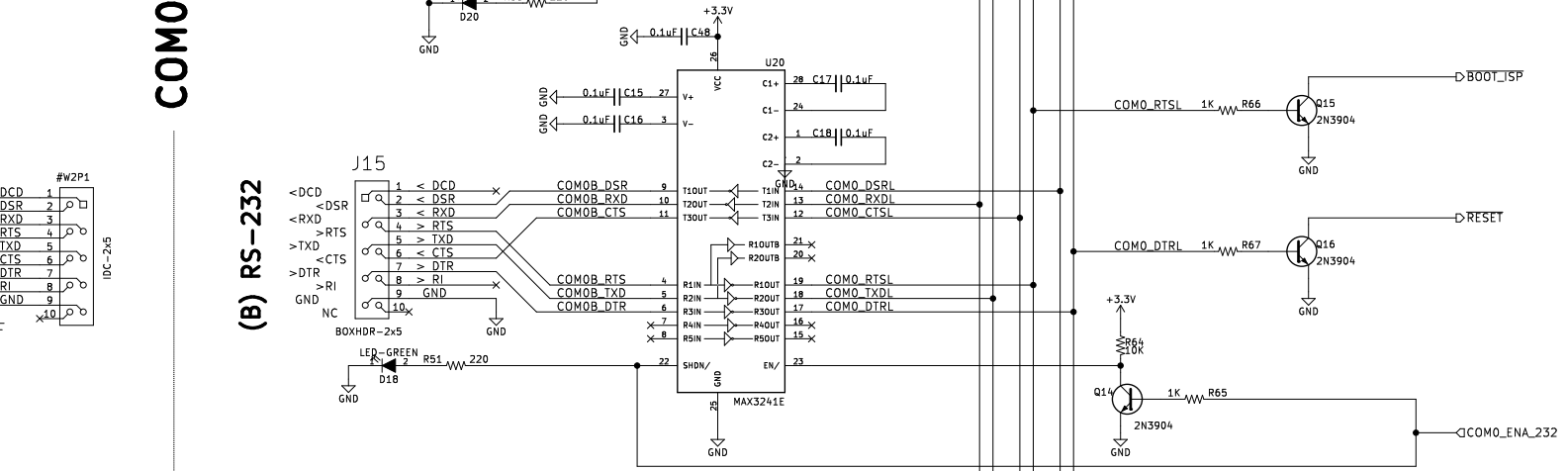


Serial TTL: Mod-Yost to Mod-Yost

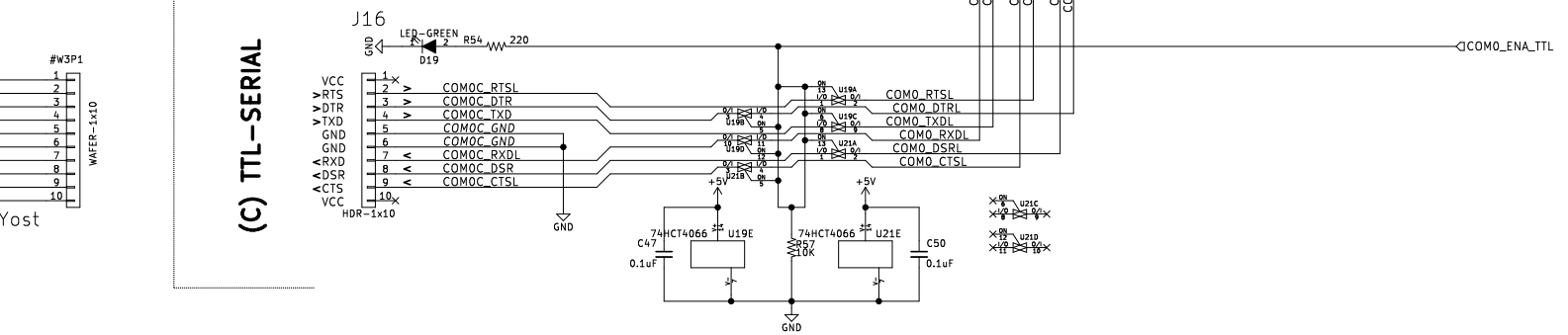
(A) USB



(B) RS-232

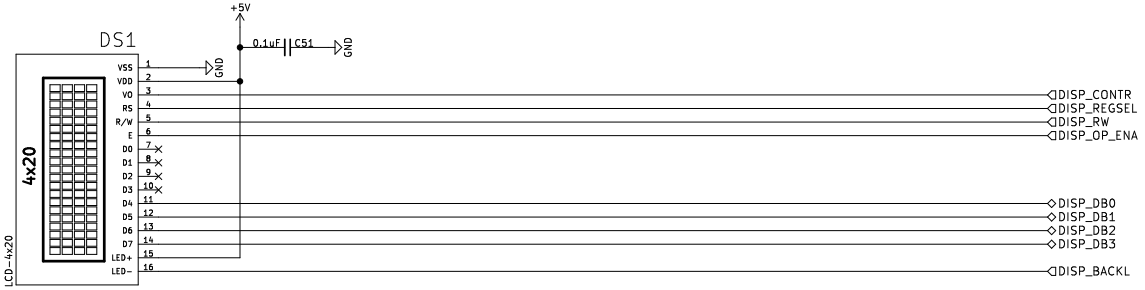


(C) TTL-SERIAL

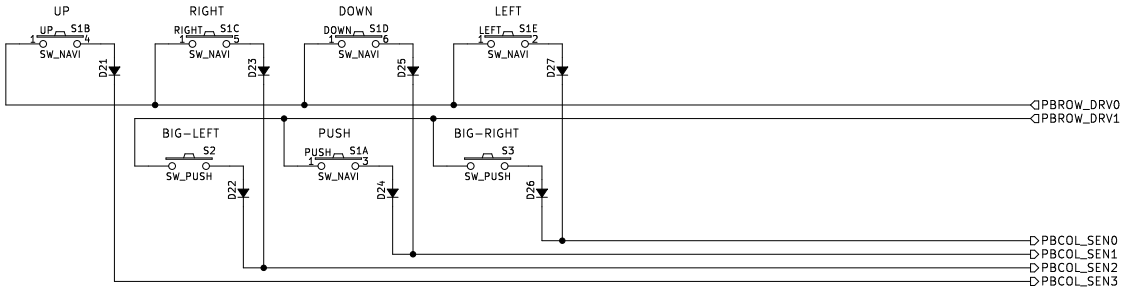


BUZZER

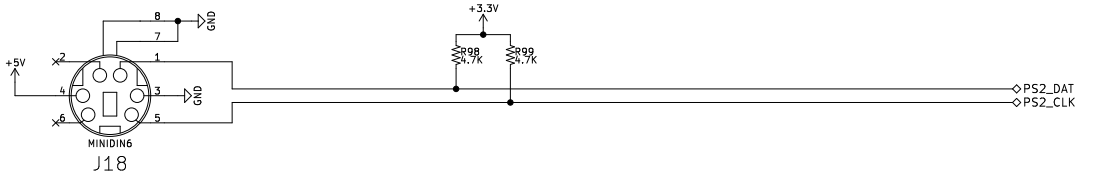
LCD 4x20 CHAR

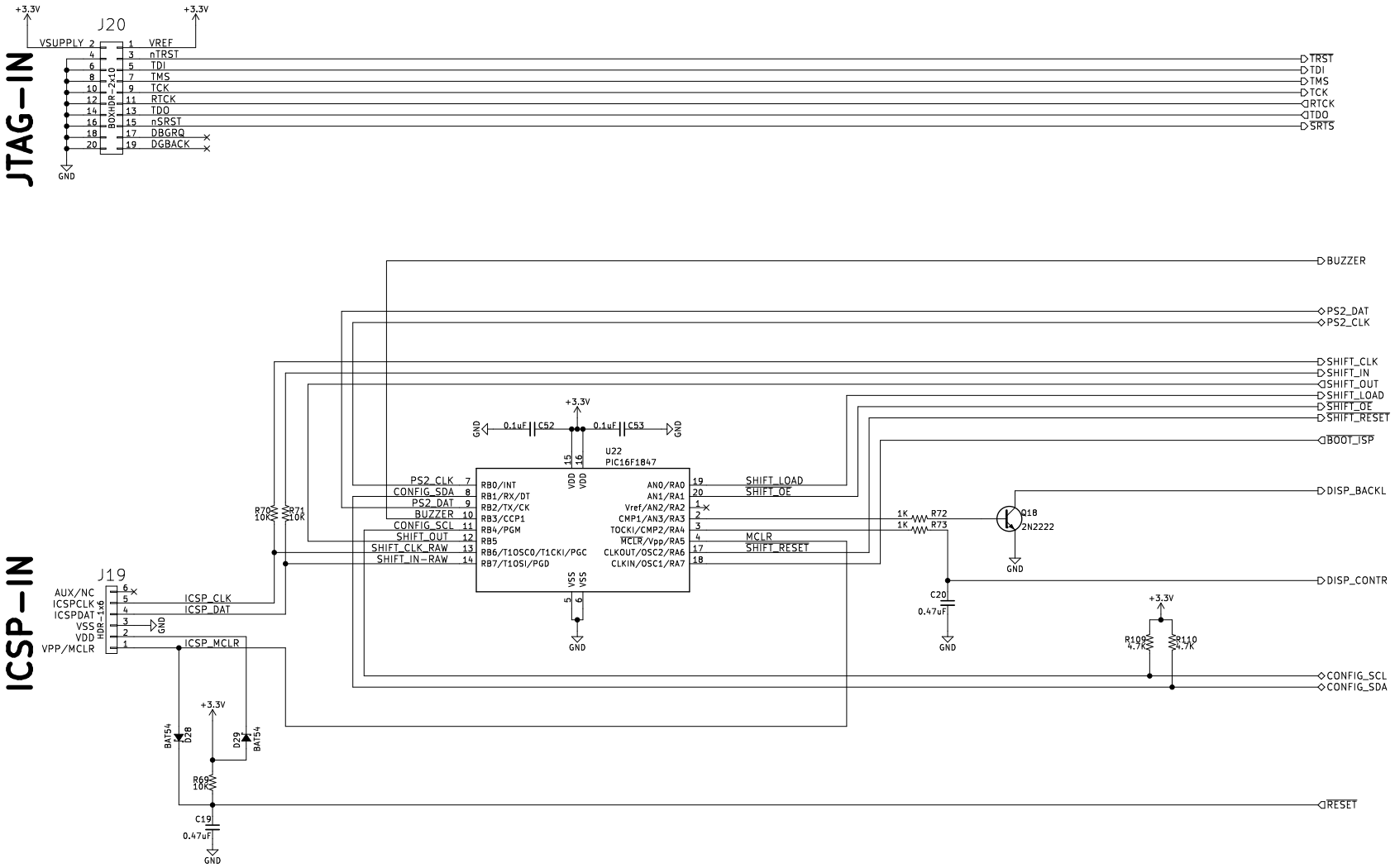


PUSH BUTTONS

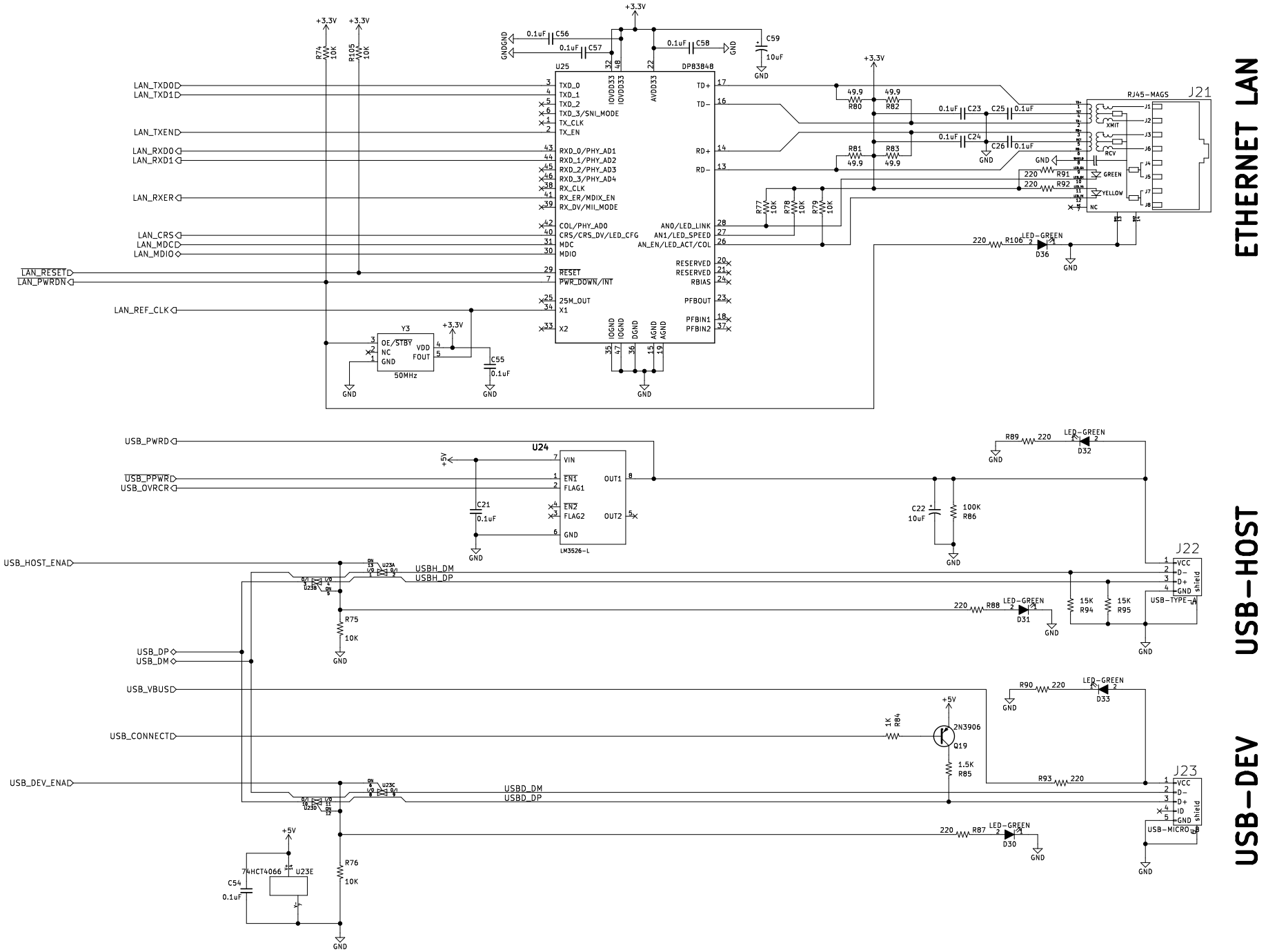


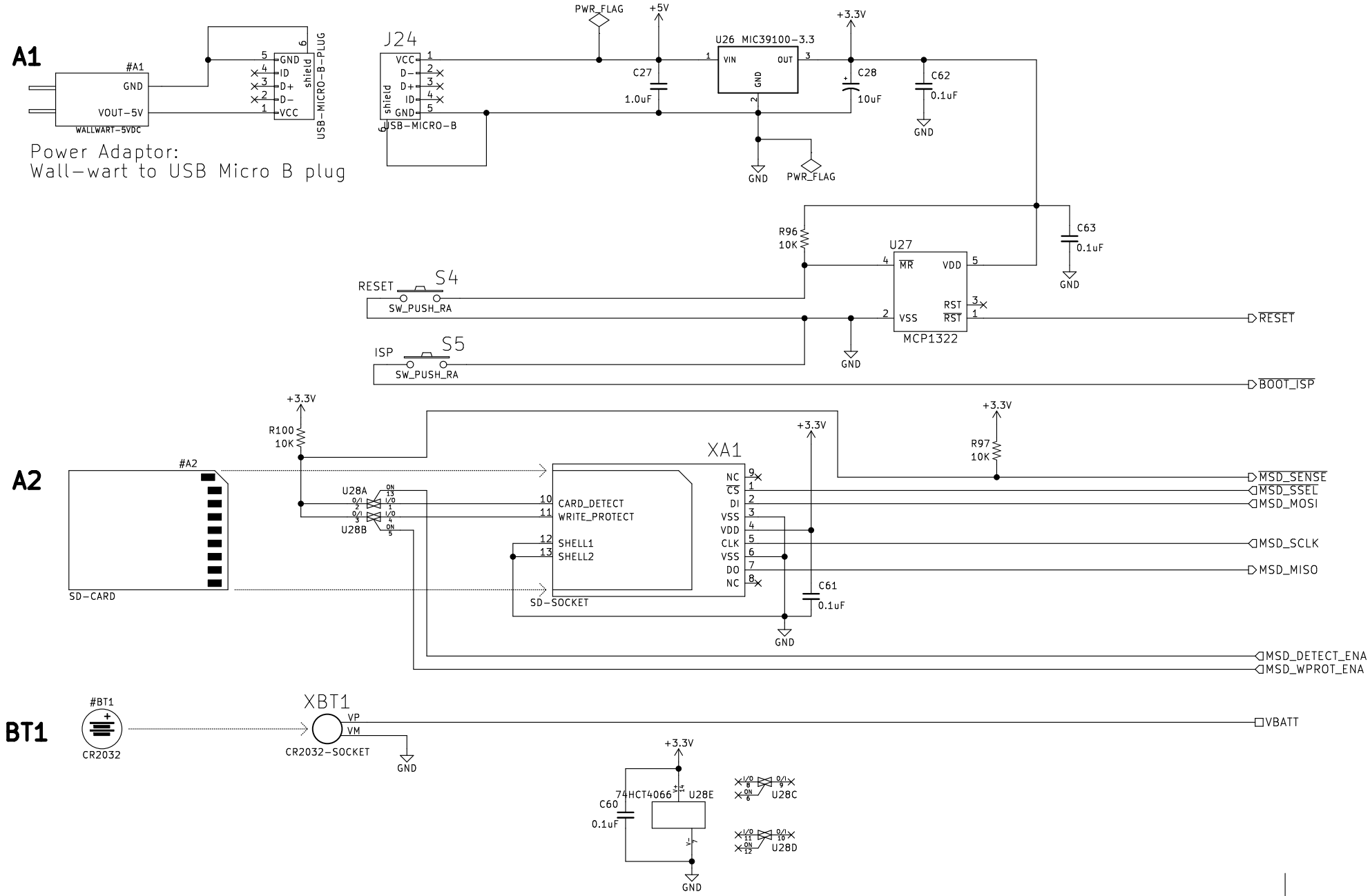
PS/2

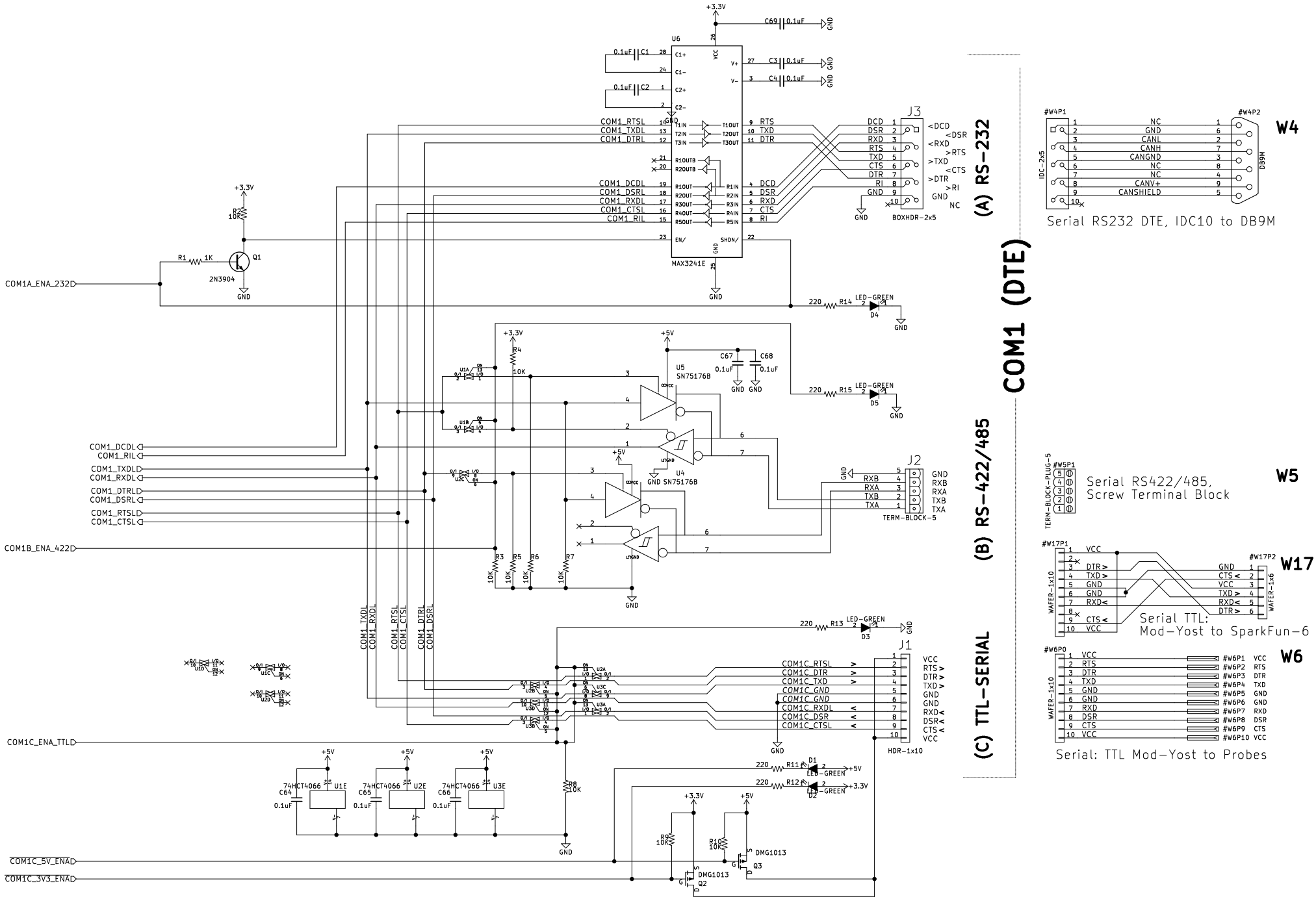




CONFIGURATION CONTROLLER


ETHERNET LAN
USB-HOST
USB-DEV
U25
DP83848
LAN_TXD0
LAN_TXD1
LAN_TXEN
LAN_RXD0
LAN_RXD1
LAN_RXER
LAN_CRS
LAN_MDC
LAN_MDIO
LAN_RESET
LAN_PWRDN
LAN_REF_CLK
RJ45-MAGS
J21
XMIT
RCV
GREEN
YELLOW
LED-GREEN
D36
D32
D33
D31
D30
U24
LM3526-L
USB_PWRD
USB_PPWRD
USB_OVRCR
USB_HOST_ENAD
USB_DP
USB_DM
USB_VBUS
USB_CONNECT
USB_DEV_ENAD
USBH_DM
USBH_DP
USBD_DM
USBD_DP
J22
USB-TYPE-A
J23
USB-MICRO-B
2N3906
Q19
74HCT4066
U23E
Y3
50MHz
+3.3V
+5V
GND


A1
#A1
GND
VOUT-5V
WALLWART-5VDC
GND
ID
D+
D-
VCC
shield
USB-MICRO-B-PLUG
Power Adaptor:
Wall-wart to USB Micro B plug
J24
VCC
D-
D+
ID
GND
shield
USB-MICRO-B
PWR_FLAG
+5V
C27
1.0uF
U26 MIC39100-3.3
VIN
OUT
GND
+3.3V
C28
10uF
C62
0.1uF
GND
PWR_FLAG
R96
10K
U27
MR
VDD
RST
VSS
MCP1322
C63
0.1uF
GND
RESET
S4
SW_PUSH_RA
ISP
S5
SW_PUSH_RA
GND
RESET
BOOT_ISP
A2
#A2
SD-CARD
R100
10K
+3.3V
U28A
U28B
XA1
CARD_DETECT
WRITE_PROTECT
SHELL1
SHELL2
SD-SOCKET
NC
CS
DI
VSS
VDD
CLK
VSS
DO
NC
C61
0.1uF
GND
R97
10K
MSD_SENSE
MSD_SSEL
MSD_MOSI
MSD_SCLK
MSD_MISO
MSD_DETECT_ENA
MSD_WPROT_ENA
BT1
#BT1
CR2032
XBT1
VP
VM
CR2032-SOCKET
GND
VBATT
74HCT4066
U28E
C60
0.1uF
U28C
U28D
GND


COM1 (DTE)
(A) RS-232
(B) RS-422/485
(C) TTL-SERIAL
MAX3241E
SN75176B
BOXHDR-2x5
TERM-BLOCK-5
HDR-1x10
74HCT4066
DMG1013
2N3904
COM1A_ENA_232
COM1B_ENA_422
COM1C_ENA_TTL
COM1C_5V_ENA
COM1C_3V3_ENA
COM1_DCDL
COM1_RIL
COM1_TXDL
COM1_RXDL
COM1_DTRL
COM1_DSRL
COM1_RTSL
COM1_CTSL
W4
Serial RS232 DTE, IDC10 to DB9M
W5
Serial RS422/485,
Screw Terminal Block
W17
Serial TTL:
Mod-Yost to SparkFun-6
W6
Serial: TTL Mod-Yost to Probes