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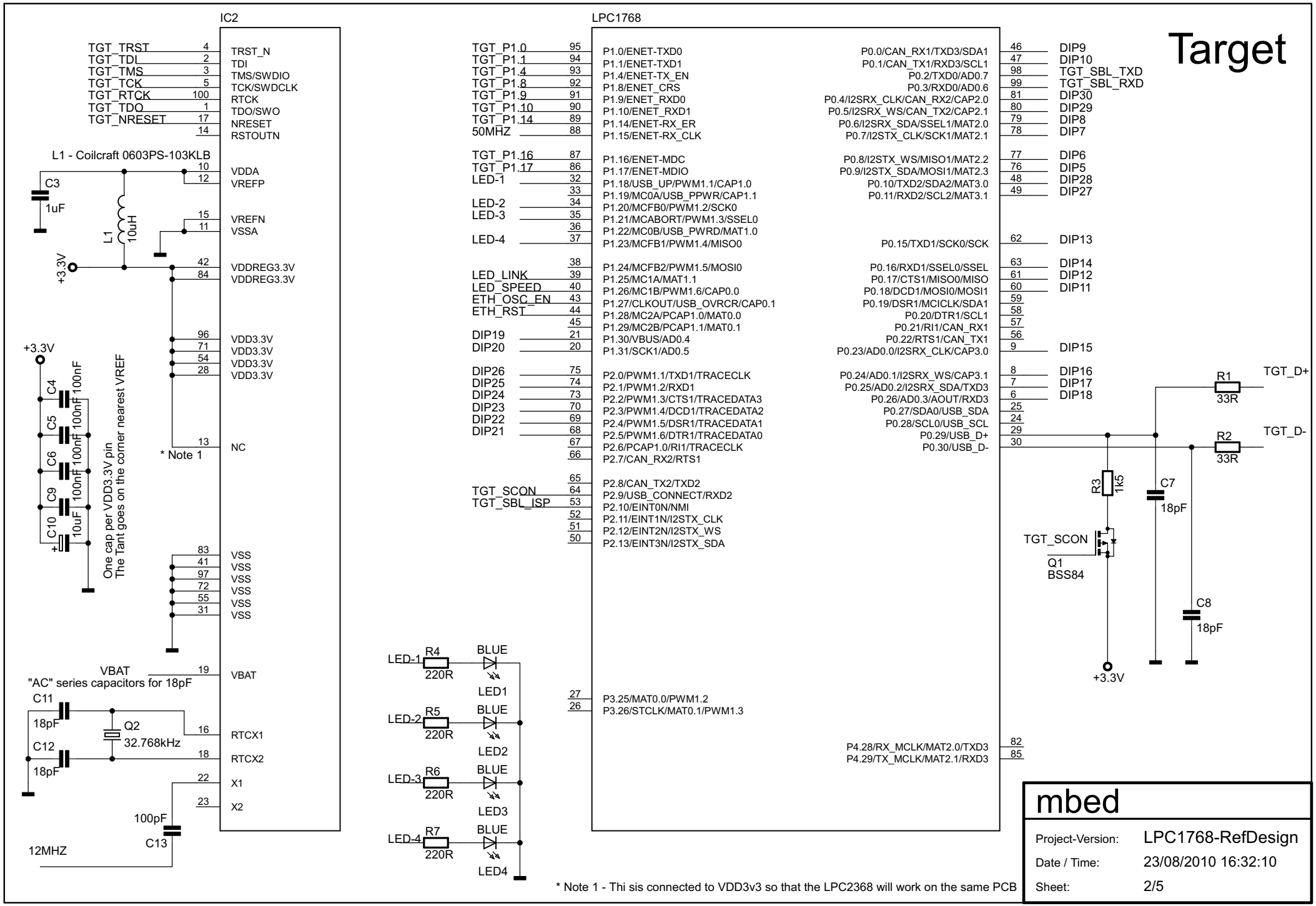
IC2
LPC1768
Target
TGT_TRST
TGT_TDI
TGT_TMS
TGT_TCK
TGT_RTCK
TGT_TDO
TGT_NRESET
TRST_N
TDI
TMS/SWDIO
TCK/SWDCLK
RTCK
TDO/SWO
NRESET
RSTOUTN
L1 - Coilcraft 0603PS-103KLB
C3
1uF
L1
10uH
+3.3V
VDDA
VREFP
VREFN
VSSA
VDDREG3.3V
VDD3.3V
NC
* Note 1
One cap per VDD3.3V pin
The Tant goes on the corner nearest VREF
C4 100nF
C5 100nF
C6 100nF
C9 100nF
C10 10uF
VSS
VBAT
"AC" series capacitors for 18pF
C11 18pF
C12 18pF
Q2
32.768kHz
RTCX1
RTCX2
X1
X2
100pF
C13
12MHZ
TGT_P1.0
TGT_P1.1
TGT_P1.4
TGT_P1.8
TGT_P1.9
TGT_P1.10
TGT_P1.14
50MHZ
TGT_P1.16
TGT_P1.17
LED-1
LED-2
LED-3
LED-4
LED_LINK
LED_SPEED
ETH_OSC_EN
ETH_RST
DIP19
DIP20
DIP26
DIP25
DIP24
DIP23
DIP22
DIP21
TGT_SCON
TGT_SBL_ISP
P1.0/ENET-TXD0
P1.1/ENET-TXD1
P1.4/ENET-TX_EN
P1.8/ENET_CRS
P1.9/ENET_RXD0
P1.10/ENET_RXD1
P1.14/ENET-RX_ER
P1.15/ENET-RX_CLK
P1.16/ENET-MDC
P1.17/ENET-MDIO
P1.18/USB_UP/PWM1.1/CAP1.0
P1.19/MC0A/USB_PPWR/CAP1.1
P1.20/MCFB0/PWM1.2/SCK0
P1.21/MCABORT/PWM1.3/SSEL0
P1.22/MC0B/USB_PWRD/MAT1.0
P1.23/MCFB1/PWM1.4/MISO0
P1.24/MCFB2/PWM1.5/MOSI0
P1.25/MC1A/MAT1.1
P1.26/MC1B/PWM1.6/CAP0.0
P1.27/CLKOUT/USB_OVRCR/CAP0.1
P1.28/MC2A/PCAP1.0/MAT0.0
P1.29/MC2B/PCAP1.1/MAT0.1
P1.30/VBUS/AD0.4
P1.31/SCK1/AD0.5
P2.0/PWM1.1/TXD1/TRACECLK
P2.1/PWM1.2/RXD1
P2.2/PWM1.3/CTS1/TRACEDATA3
P2.3/PWM1.4/DCD1/TRACEDATA2
P2.4/PWM1.5/DSR1/TRACEDATA1
P2.5/PWM1.6/DTR1/TRACEDATA0
P2.6/PCAP1.0/RI1/TRACECLK
P2.7/CAN_RX2/RTS1
P2.8/CAN_TX2/TXD2
P2.9/USB_CONNECT/RXD2
P2.10/EINT0N/NMI
P2.11/EINT1N/I2STX_CLK
P2.12/EINT2N/I2STX_WS
P2.13/EINT3N/I2STX_SDA
P3.25/MAT0.0/PWM1.2
P3.26/STCLK/MAT0.1/PWM1.3
P0.0/CAN_RX1/TXD3/SDA1
P0.1/CAN_TX1/RXD3/SCL1
P0.2/TXD0/AD0.7
P0.3/RXD0/AD0.6
P0.4/I2SRX_CLK/CAN_RX2/CAP2.0
P0.5/I2SRX_WS/CAN_TX2/CAP2.1
P0.6/I2SRX_SDA/SSEL1/MAT2.0
P0.7/I2STX_CLK/SCK1/MAT2.1
P0.8/I2STX_WS/MISO1/MAT2.2
P0.9/I2STX_SDA/MOSI1/MAT2.3
P0.10/TXD2/SDA2/MAT3.0
P0.11/RXD2/SCL2/MAT3.1
P0.15/TXD1/SCK0/SCK
P0.16/RXD1/SSEL0/SSEL
P0.17/CTS1/MISO0/MISO
P0.18/DCD1/MOSI0/MOSI1
P0.19/DSR1/MCICLK/SDA1
P0.20/DTR1/SCL1
P0.21/RI1/CAN_RX1
P0.22/RTS1/CAN_TX1
P0.23/AD0.0/I2SRX_CLK/CAP3.0
P0.24/AD0.1/I2SRX_WS/CAP3.1
P0.25/AD0.2/I2SRX_SDA/TXD3
P0.26/AD0.3/AOUT/RXD3
P0.27/SDA0/USB_SDA
P0.28/SCL0/USB_SCL
P0.29/USB_D+
P0.30/USB_D-
P4.28/RX_MCLK/MAT2.0/TXD3
P4.29/TX_MCLK/MAT2.1/RXD3
DIP9
DIP10
TGT_SBL_TXD
TGT_SBL_RXD
DIP30
DIP29
DIP8
DIP7
DIP6
DIP5
DIP28
DIP27
DIP13
DIP14
DIP12
DIP11
DIP15
DIP16
DIP17
DIP18
R1 33R
R2 33R
TGT_D+
TGT_D-
R3 1k5
C7 18pF
C8 18pF
TGT_SCON
Q1
BSS84
+3.3V
LED-1 R4 220R BLUE LED1
LED-2 R5 220R BLUE LED2
LED-3 R6 220R BLUE LED3
LED-4 R7 220R BLUE LED4
* Note 1 - Thi sis connected to VDD3v3 so that the LPC2368 will work on the same PCB
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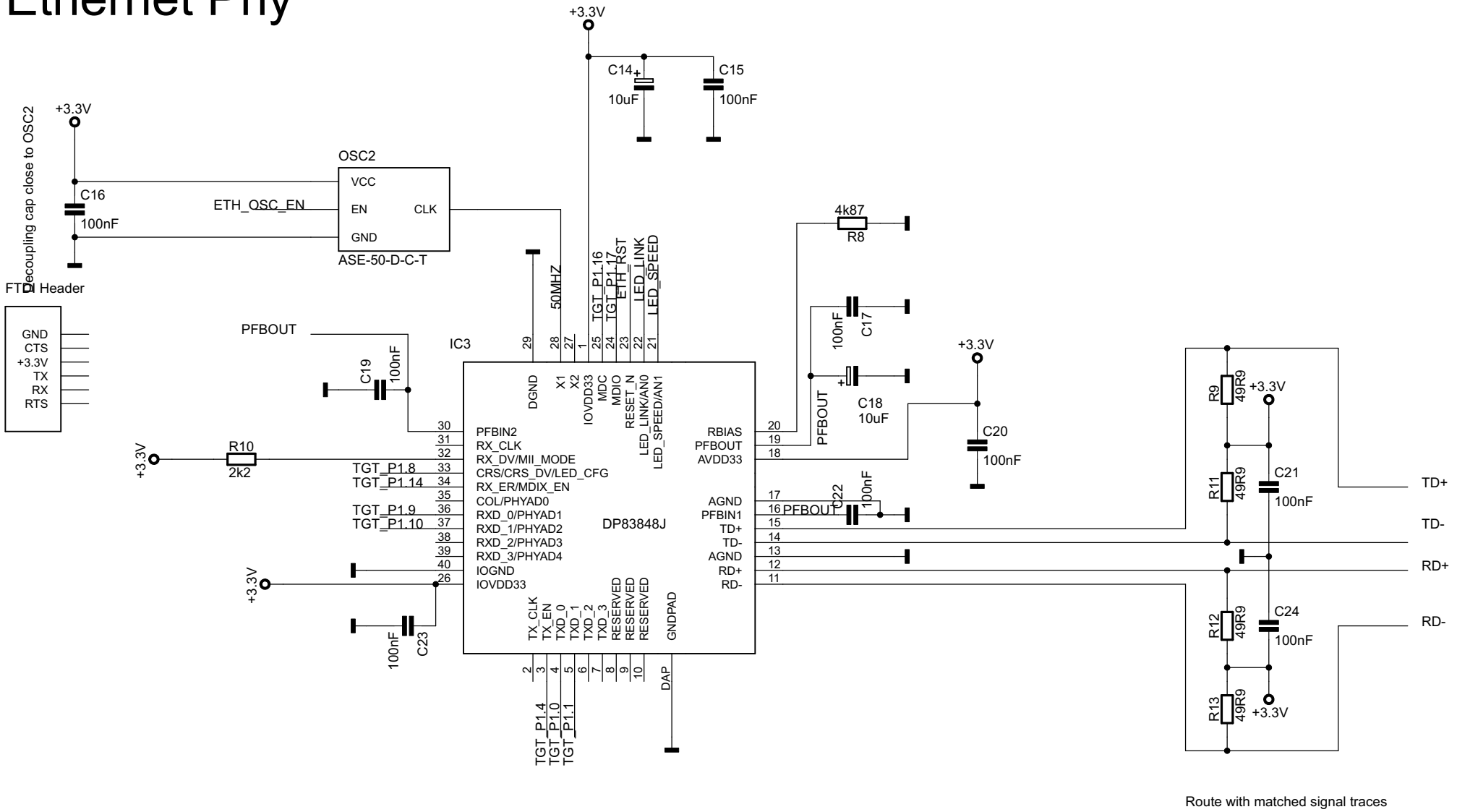
Ethernet Phy



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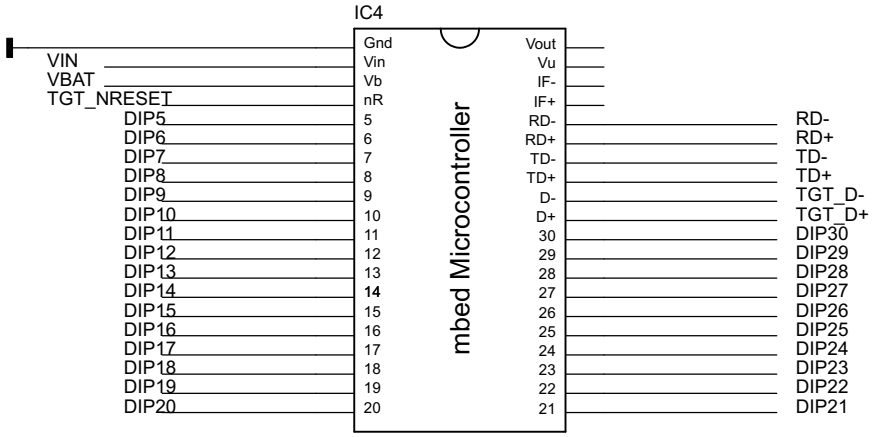
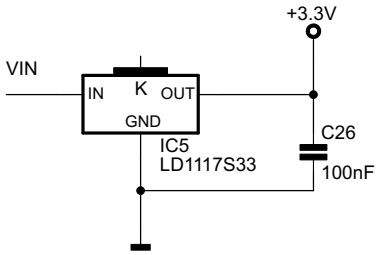
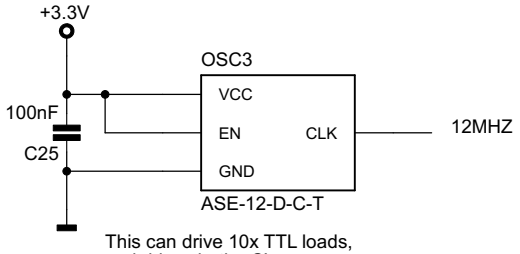
DIP Pinout

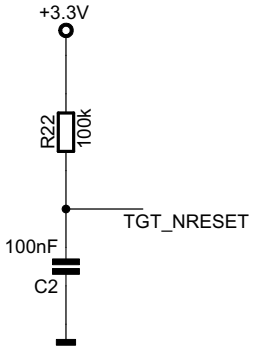






This can drive 10x TTL loads, and drives both uC's

Star routing for 12MHz signal
Decoupling cap close to OSC1



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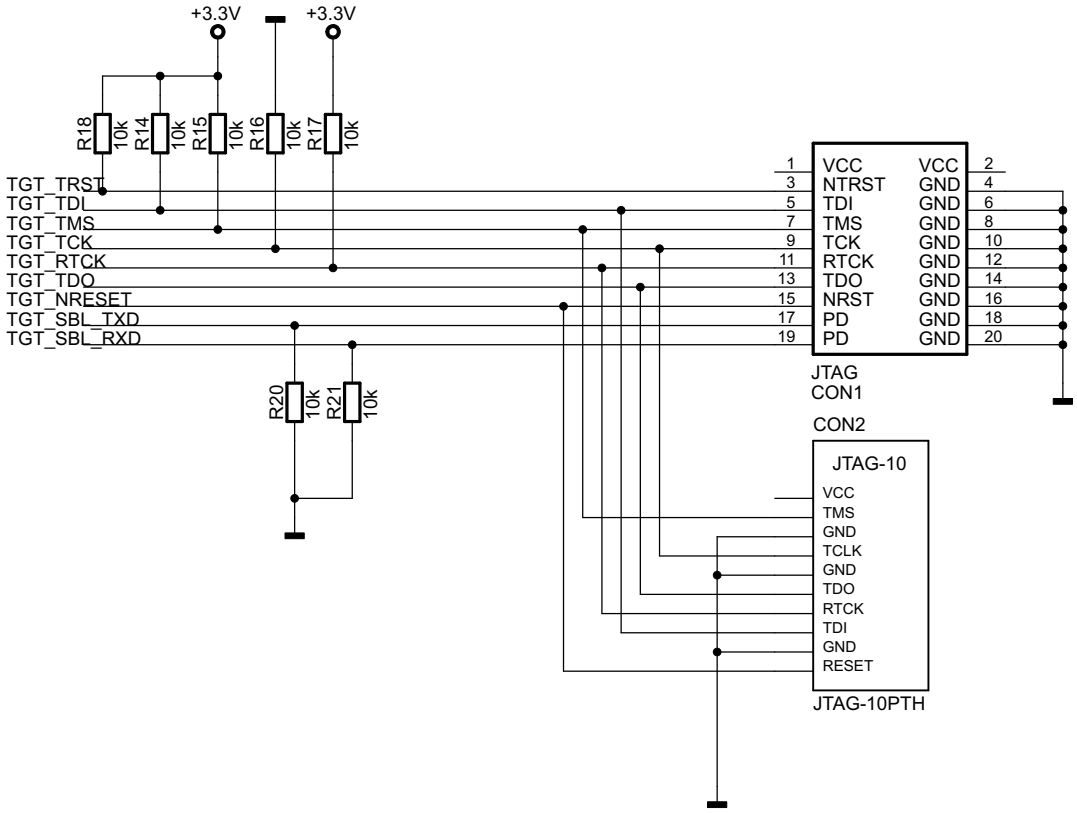
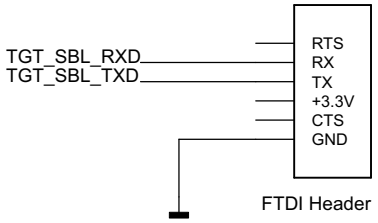
Programming



20 Pin JTAG with serial

10 pin JTAG/SWD only

Ground ISP pin to enter ISP mode



FTDI header for USB serial

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