

mbed NXP LPC1768
 ARM Cortex-M3 MCU in a DIP Package
 USB Drag 'n' Drop Programming
 API-Driven Development
 Online Compiler

NP **Cortex** **ARM**

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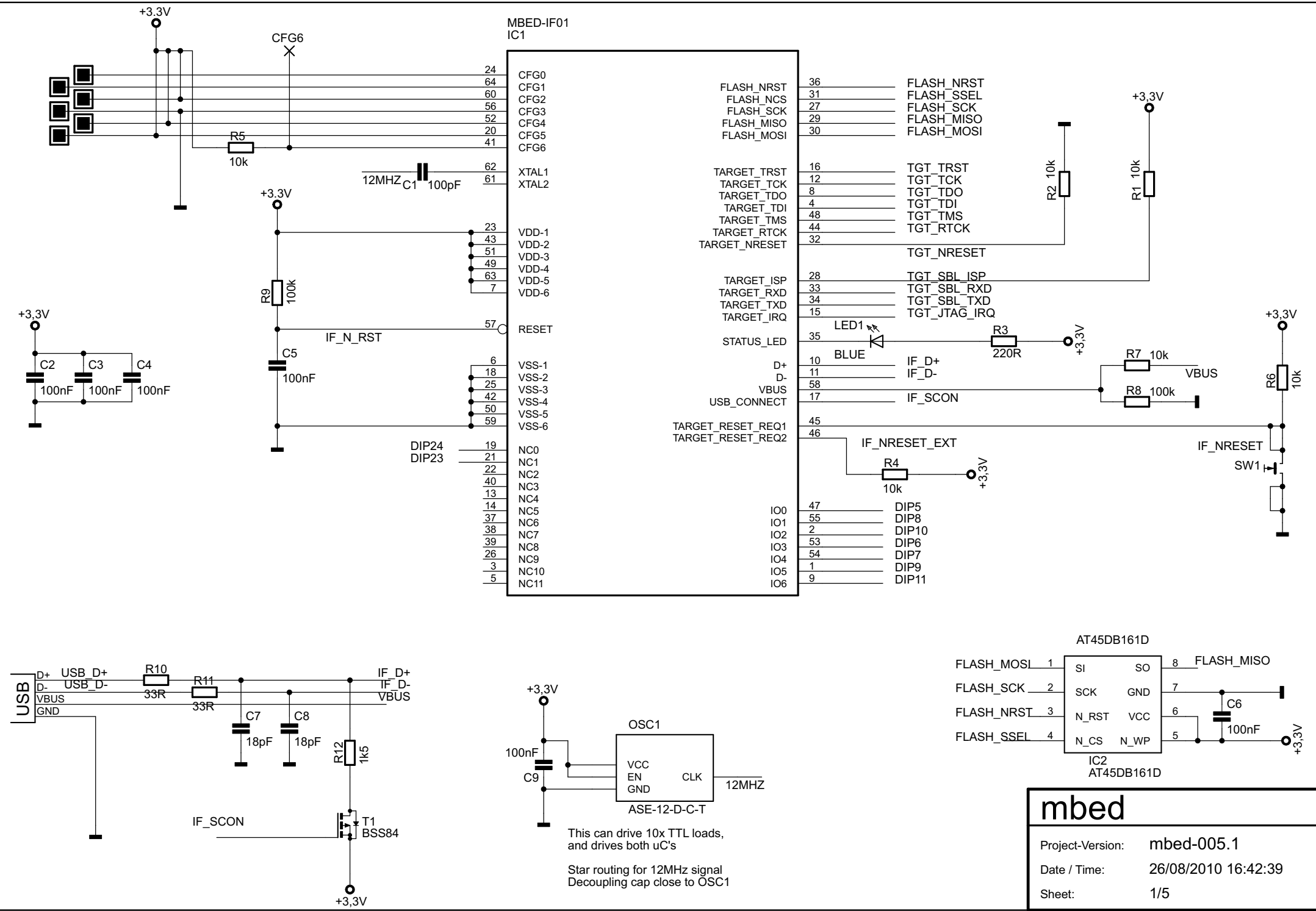
mbed NXP LPC1768
 Setup Guide

Ingredients

- An mbed Microcontroller and USB lead
- A PC running Windows XP, Windows Vista, Mac OS X
- A Web Browser (Internet Explorer, Firefox, Chrome)

1 Connect your mbed Microcontroller

Use the USB lead to connect your mbed Microcontroller to your PC. A green light will come on when it has power. After a few seconds the PC will recognize the mbed Microcontroller as a new device.



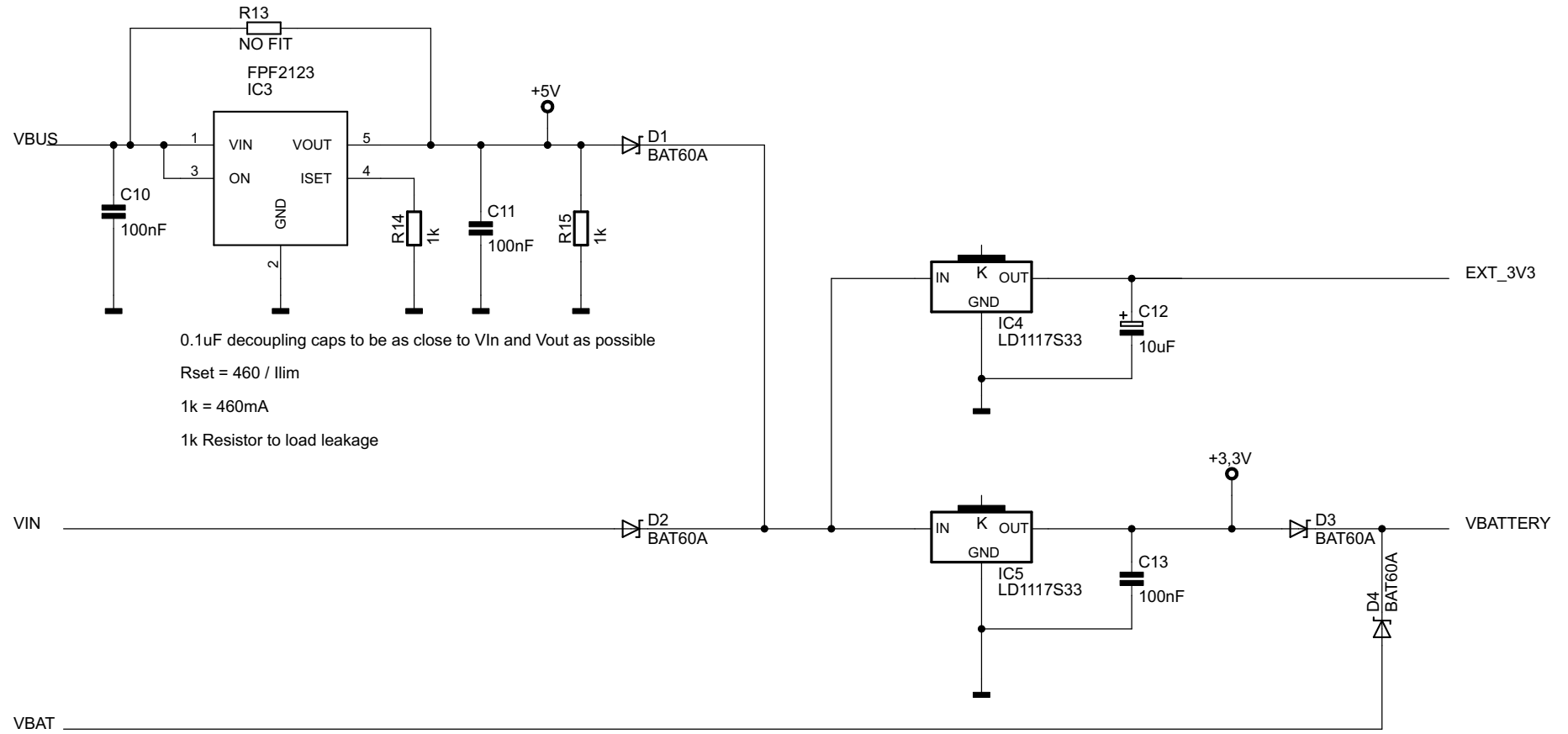
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Project-Version: **mbed-005.1**

Date / Time: **26/08/2010 16:42:39**

Sheet: **1/5**

Power Supply Circuits



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Project-Version: mbed-005.1
 Date / Time: 26/08/2010 16:42:39
 Sheet: 2/5

IC6

LPC1768

TGT_TRST	4	TRST_N
TGT_TDL	2	TDI
TGT_TMS	3	TMS/SWDIO
TGT_TCK	5	TCK/SWDCLK
TGT_RTCK	100	RTCK
TGT_TDO	1	TDO/SWO
TGT_NRESET	17	NRESET
	14	RSTOUTN

TGT_P1.0	95	P1.0/ENET-TXD0
TGT_P1.1	94	P1.1/ENET-TXD1
TGT_P1.4	93	P1.4/ENET-TX_EN
TGT_P1.8	92	P1.8/ENET_CR_S
TGT_P1.9	91	P1.9/ENET_RXD0
TGT_P1.10	90	P1.10/ENET_RXD1
TGT_P1.14	89	P1.14/ENET-RX_ER
50MHZ	88	P1.15/ENET-RX_CLK

P0.0/CAN_RX1/TXD3/SDA1	46	DIP9
P0.1/CAN_TX1/RXD3/SCL1	47	DIP10
P0.2/TXD0/AD0.7	98	TGT_SBL_TXD
P0.3/RXD0/AD0.6	99	TGT_SBL_RXD
P0.4/I2SRX_CLK/CAN_RX2/CAP2.0	81	DIP30
P0.5/I2SRX_WS/CAN_TX2/CAP2.1	80	DIP29
P0.6/I2SRX_SDA/SSEL1/MAT2.0	79	DIP8
P0.7/I2STX_CLK/SCK1/MAT2.1	78	DIP7

TGT_P1.16	87	P1.16/ENET-MDC
TGT_P1.17	86	P1.17/ENET-MDIO
LED-1	32	P1.18/USB_UP/PWM1.1/CAP1.0
	33	P1.19/MC0A/USB_PPWR/CAP1.1
LED-2	34	P1.20/MCFB0/PWM1.2/SCK0
LED-3	35	P1.21/MCABORT/PWM1.3/SSEL0
	36	P1.22/MC0B/USB_PPWR/MAT1.0
LED-4	37	P1.23/MCFB1/PWM1.4/MISO0

P0.8/I2STX_WS/MISO1/MAT2.2	77	DIP6
P0.9/I2STX_SDA/MOSI1/MAT2.3	76	DIP5
P0.10/TXD2/SDA2/MAT3.0	48	DIP28
P0.11/RXD2/SCL2/MAT3.1	49	DIP27

LED_LINK	38	P1.24/MCFB2/PWM1.5/MOSI0
LED_SPEED	39	P1.25/MC1A/MAT1.1
ETH_OSC_EN	40	P1.26/MC1B/PWM1.6/CAP0.0
ETH_RST	43	P1.27/CLKOUT/USB_OVRCR/CAP0.1
	44	P1.28/MC2A/PCAP1.0/MAT0.0
	45	P1.29/MC2B/PCAP1.1/MAT0.1
DIP19	21	P1.30/VBUS/AD0.4
DIP20	20	P1.31/SCK1/AD0.5

P0.15/TXD1/SCK0/SCK	62	DIP13
P0.16/RXD1/SSEL0/SSEL	63	DIP14
P0.17/CTS1/MISO0/MISO	61	DIP12
P0.18/DCD1/MOSI0/MOSI1	60	DIP11
P0.19/DSR1/MCICLK/SDA1	59	
P0.20/DTR1/SCL1	58	
P0.21/R11/CAN_RX1	57	
P0.22/RTS1/CAN_TX1	56	
P0.23/AD0.0/I2SRX_CLK/CAP3.0	9	DIP15

DIP26	75	P2.0/PWM1.1/TXD1/TRACECLK
DIP25	74	P2.1/PWM1.2/RXD1
DIP24	73	P2.2/PWM1.3/CTS1/TRACEDATA3
DIP23	70	P2.3/PWM1.4/DCD1/TRACEDATA2
DIP22	69	P2.4/PWM1.5/DSR1/TRACEDATA1
DIP21	68	P2.5/PWM1.6/DTR1/TRACEDATA0
	67	P2.6/PCAP1.0/R11/TRACECLK
	66	P2.7/CAN_RX2/RTS1

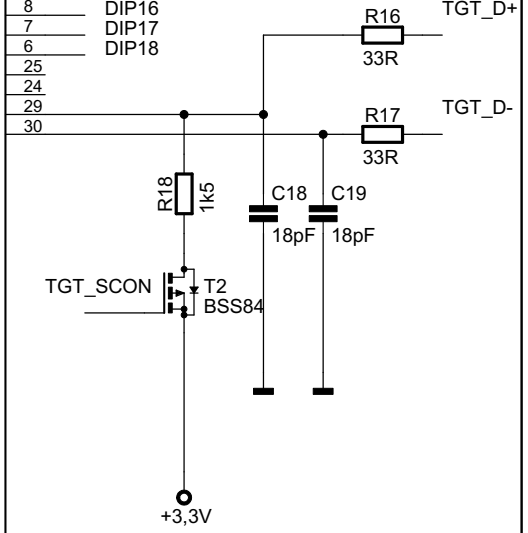
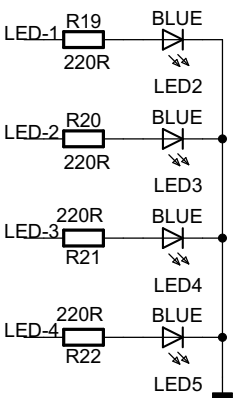
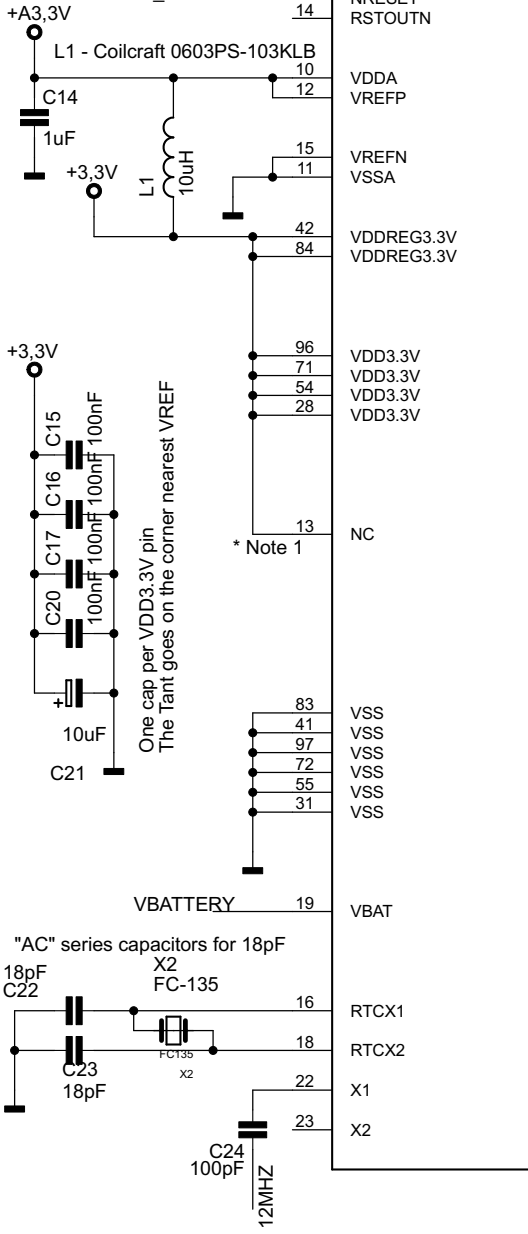
P0.24/AD0.1/I2SRX_WS/CAP3.1	8	DIP16
P0.25/AD0.2/I2SRX_SDA/TXD3	7	DIP17
P0.26/AD0.3/AOUT/RXD3	6	DIP18
P0.27/SDA0/USB_SDA	25	
P0.28/SCL0/USB_SCL	24	
P0.29/USB_D+	29	
P0.30/USB_D-	30	

TGT_SCON	65	P2.8/CAN_TX2/TXD2
TGT_SBL_ISP	64	P2.9/USB_CONNECT/RXD2
	53	P2.10/EINT0N/NMI
	52	P2.11/EINT1N/I2STX_CLK
	51	P2.12/EINT2N/I2STX_WS
TGT_JTAG_IRQ	50	P2.13/EINT3N/I2STX_SDA

P2.8/CAN_TX2/TXD2	27	P3.25/MAT0.0/PWM1.2
P2.9/USB_CONNECT/RXD2	26	P3.26/STCLK/MAT0.1/PWM1.3

P4.28/RX_MCLK/MAT2.0/TXD3	82	
P4.29/TX_MCLK/MAT2.1/RXD3	85	

Target



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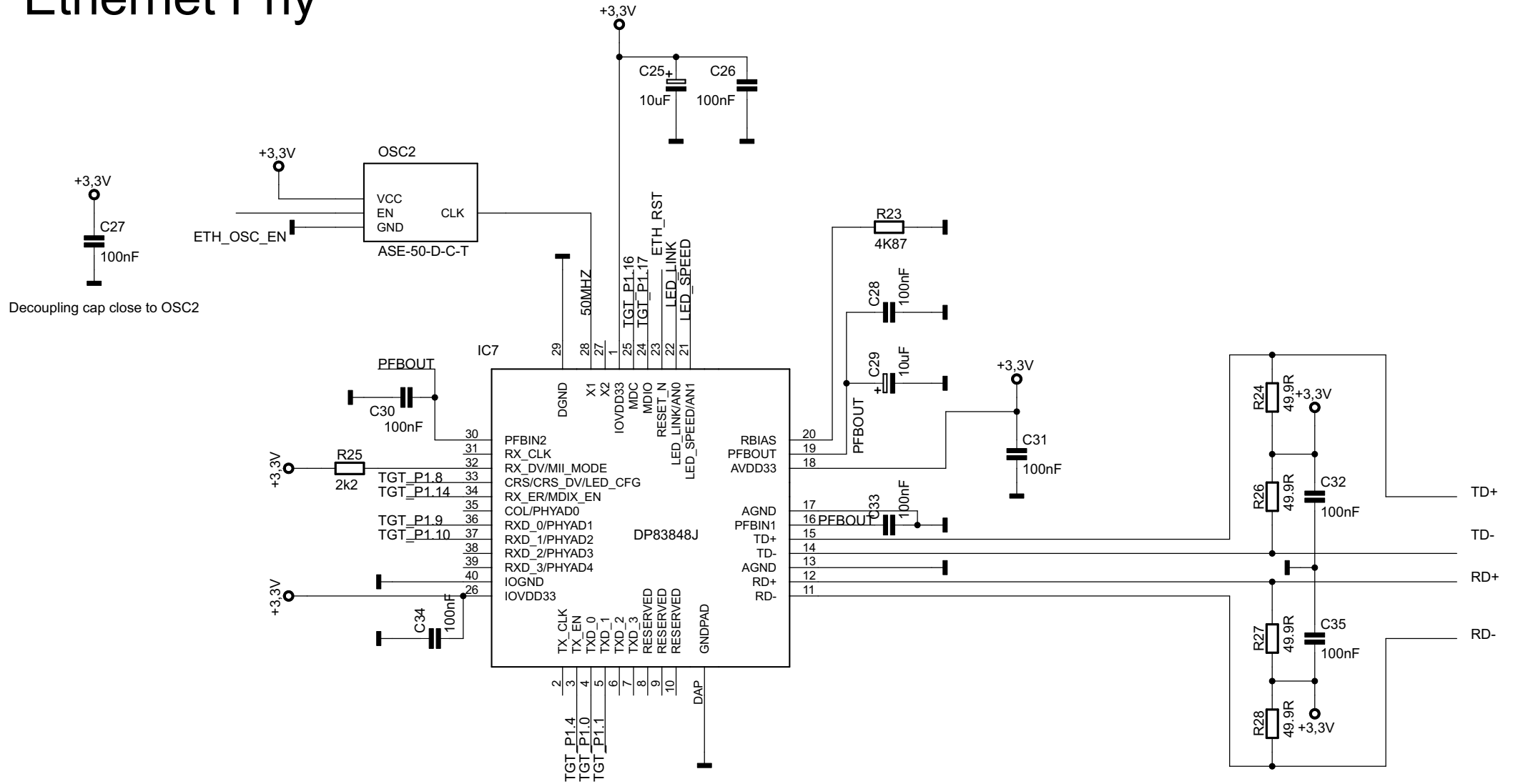
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Sheet: 3/5

* Note 1 - This is connected to VDD3v3 so that the LPC2368 will work on the same PCB

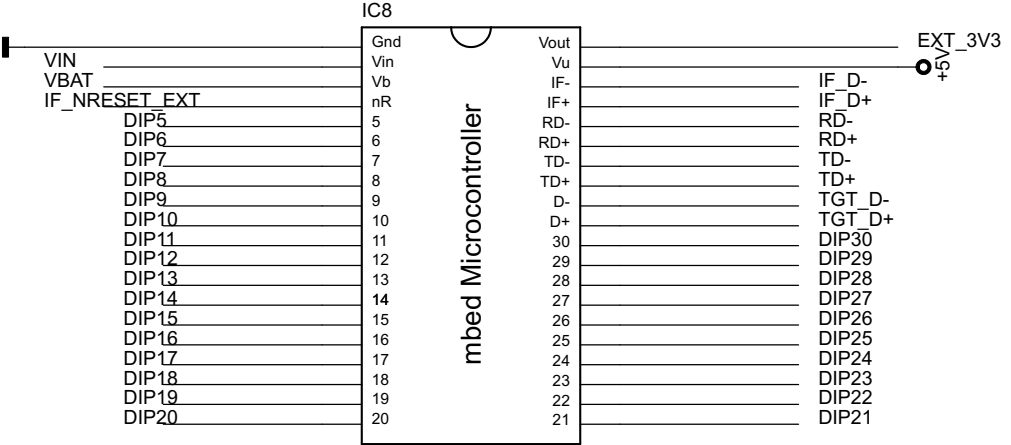
Ethernet Phy



Route with matched signal traces

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Project-Version:	mbed-005.1
Date / Time:	26/08/2010 16:42:39
Sheet:	4/5

DIP Pinout



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Project-Version:	mbed-005.1
Date / Time:	26/08/2010 16:42:39
Sheet:	5/5