History
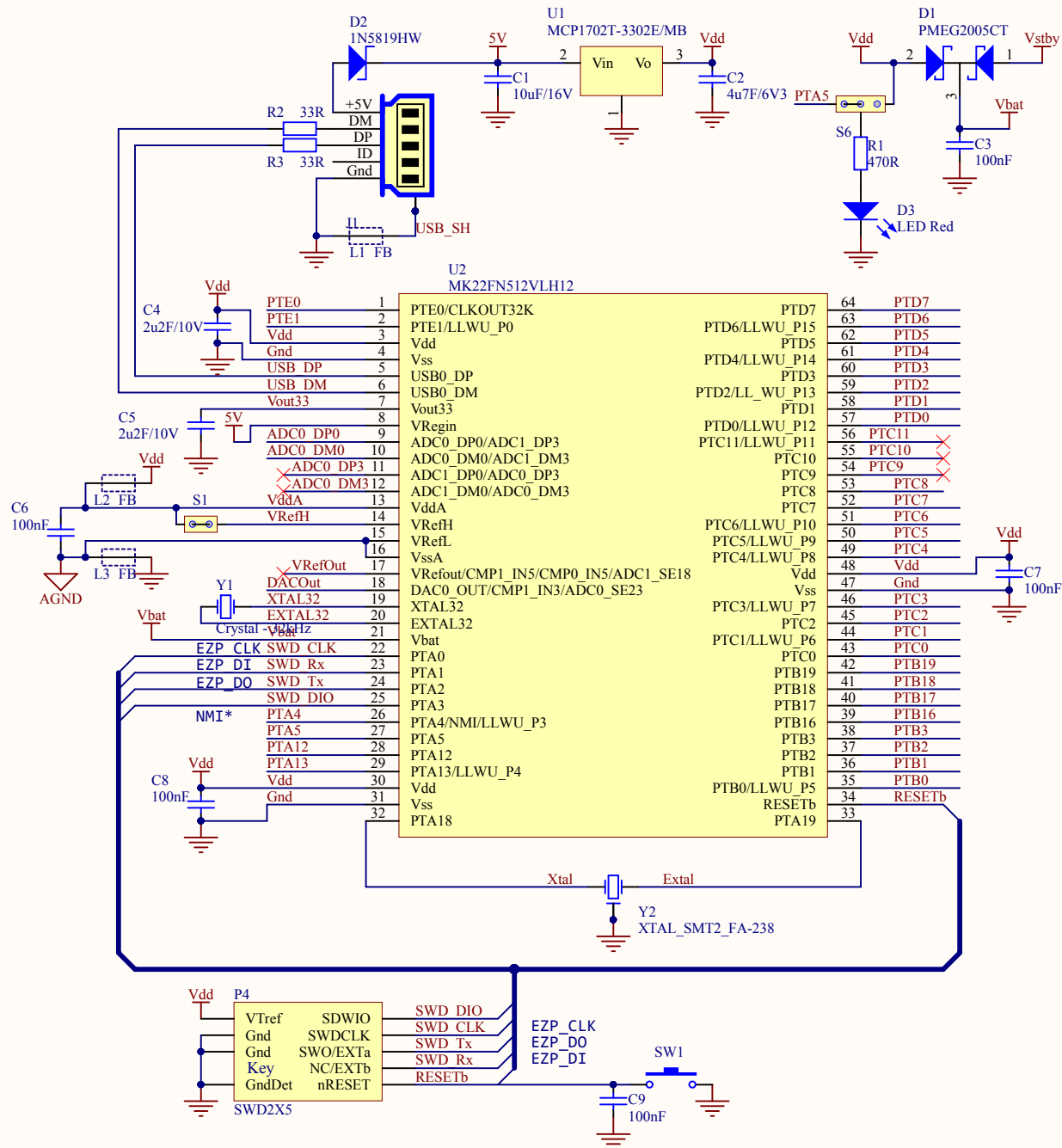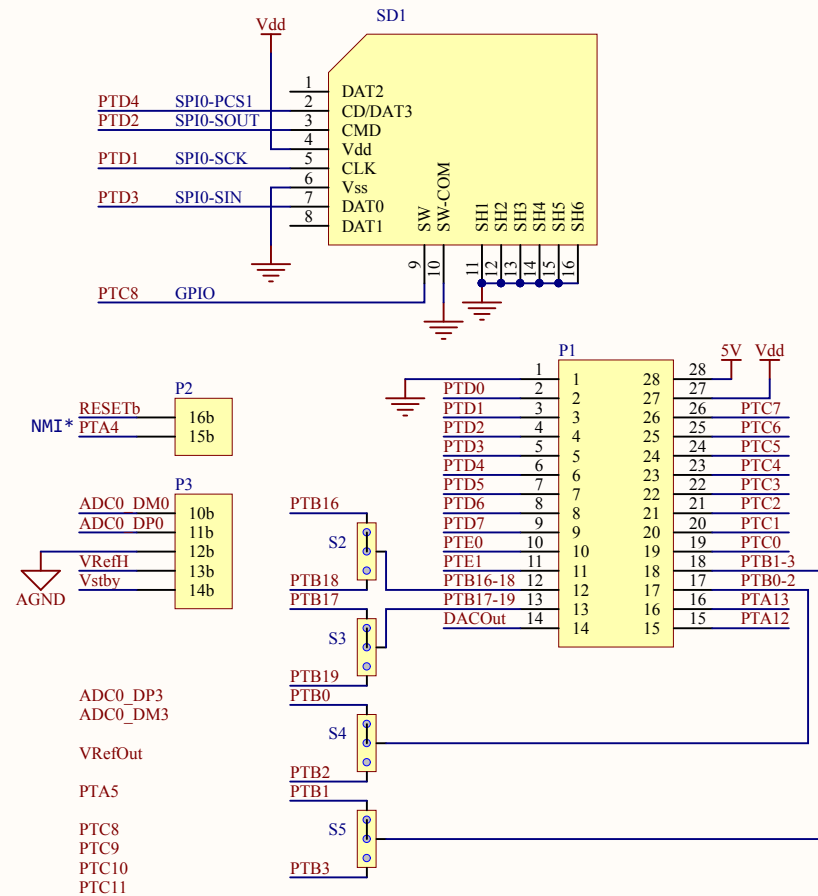1.0 - 1st Release
1.2 - Added S6 (Tie for LED), CAP on reset, moved regulator, minor component moves
1.3 - Footprint changes (solder-links)

Links
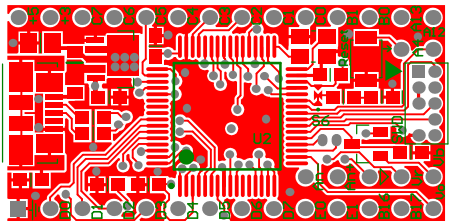S1-Ext Vref, S2 (PTB16/PTB18), S3(PTB17/PTB19), S4(PTB0/PTB2), S5(PTB1/PTB3), S6(LED-PTA5/PWR)
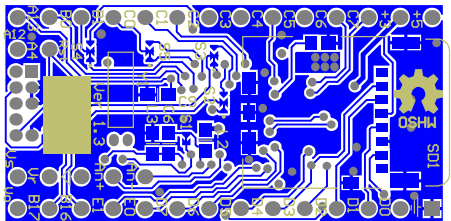
D2
1N5819HW

5V

U1
MCP1702T-3302E/MB
Vin   Vo
2   3

Vdd

C1
10uF/16V

C2
4u7F/6V3

D1
PMEG2005CT

Vstby

Vdd

PTA5

Vbat

S6

R1
470R

C3
100nF

D3
LED Red

+5V
DM
DP
ID
Gnd

R2   33R
R3   33R

L1 FB   USB_SH

U2
MK22FN512VLH12

Pin	Signal		Signal	Pin
1	PTE0/CLKOUT32K	PTD7	PTD7	64
2	PTE1/LLWU_P0	PTD6/LLWU_P15	PTD6	63
3	Vdd	PTD5	PTD5	62
4	Vss	PTD4/LLWU_P14	PTD4	61
5	USB0_DP	PTD3	PTD3	60
6	USB0_DM	PTD2/LL_WU_P13	PTD2	59
7	Vout33	PTD1	PTD1	58
8	VRegin	PTD0/LLWU_P12	PTD0	57
9	ADC0_DP0/ADC1_DP3	PTC11/LLWU_P11	PTC11	56
10	ADC0_DM0/ADC1_DM3	PTC10	PTC10	55
11	ADC1_DP0/ADC0_DP3	PTC9	PTC9	54
12	ADC1_DM0/ADC0_DM3	PTC8	PTC8	53
13	VddA	PTC7	PTC7	52
14	VRefH	PTC6/LLWU_P10	PTC6	51
15	VRefL	PTC5/LLWU_P9	PTC5	50
16	VssA	PTC4/LLWU_P8	PTC4	49
17	VRefout/CMP1_IN5/CMP0_IN5/ADC1_SE18	Vdd	Vdd	48
18	DAC0_OUT/CMP1_IN3/ADC0_SE23	Vss	Gnd	47
19	XTAL32	PTC3/LLWU_P7	PTC3	46
20	EXTAL32	PTC2	PTC2	45
21	Vbat	PTC1/LLWU_P6	PTC1	44
22	PTA0	PTC0	PTC0	43
23	PTA1	PTB19	PTB19	42
24	PTA2	PTB18	PTB18	41
25	PTA3	PTB17	PTB17	40
26	PTA4/NMI/LLWU_P3	PTB16	PTB16	39
27	PTA5	PTB3	PTB3	38
28	PTA12	PTB2	PTB2	37
29	PTA13/LLWU_P4	PTB1	PTB1	36
30	Vdd	PTB0/LLWU_P5	PTB0	35
31	Vss	RESETb	RESETb	34
32	PTA18	PTA19	PTA19	33

PTE0
PTE1
Vdd
Gnd
USB_DP
USB_DM
Vout33
5V
ADC0_DP0
ADC0_DM0
ADC0_DP3
ADC0_DM3
VddA
VRefH
VRefOut
Y1
XTAL32
EXTAL32
Vbat
Crystal - 32kHz
EZP_CLK   SWD_CLK
EZP_DI   SWD_Rx
EZP_DO   SWD_Tx
          SWD_DIO
NMI*
Vbat

C4 2u2F/10V
C5 2u2F/10V
C6 100nF
C7 100nF
C8 100nF

S1
L2 FB
L3 FB
AGND

Y2
XTAL_SMT2_FA-238
Xtal   Extal

SD1

Pin	Signal		Signal
PTD4	SPI0-PCS1	1	DAT2
PTD2	SPI0-SOUT	2	CD/DAT3
		3	CMD
		4	Vdd
PTD1	SPI0-SCK	5	CLK
		6	Vss
PTD3	SPI0-SIN	7	DAT0
		8	DAT1

Vdd

SW   SW-COM
SH1 SH2 SH3 SH4 SH5 SH6
9 10 11 12 13 14 15 16

PTC8   GPIO

P2
RESETb   16b
NMI* PTA4 15b

P3
ADC0_DM0   10b
ADC0_DP0   11b
VRefH   12b
Vstby   13b
           14b
AGND

ADC0_DP3
ADC0_DM3
VRefOut
PTA5
PTC8
PTC9
PTC10
PTC11

P1

	1	28	5V	Vdd
PTD0	2	27		
PTD1	3	26	PTC7	
PTD2	4	25	PTC6	
PTD3	5	24	PTC5	
PTD4	6	23	PTC4	
PTD5	7	22	PTC3	
PTD6	8	21	PTC2	
PTD7	9	20	PTC1	
PTE0	10	19	PTC0	
PTE1	11	18	PTB1-3	
PTB16-18	12	17	PTB0-2	
PTB17-19	13	16	PTA13	
DACOut	14	15	PTA12	

PTB16
S2
PTB18
PTB17
S3
PTB19
PTB0
S4
PTB2
PTB1
S5
PTB3

P4
SWD2X5
VTref   SDWIO   SWD_DIO
Gnd   SWDCLK   SWD_CLK
Gnd   SWO/EXTa   SWD_Tx
Key   NC/EXTb   SWD_Rx
GndDet   nRESET   RESETb

EZP_CLK
EZP_DO
EZP_DI

SW1

C9
100nF

open source hardware

Title Kinetis-DIP

Size A4

Number

Revision 1.3

Date: 22/01/2017
File: C:\Users\..\KinetisDIP.SchDoc
Sheet of
Drawn By:

OSHW

SD1

Bill of Materials

Kinetis-DIP

Source Data From:		**KinetisDIP.PrjPCB**		
Project:		**KinetisDIP.PrjPCB**		
Variant:		**None**		
Creation Date:	22/01/2017	1:08:23 PM		
Print Date:	22-Jan-17	1:08:30 PM		

Footprint	Comment	Farnell PN	Digikey	Designator	Description	Quantity
CCNP2012-0805	10uF/16V	2346934		C1	Capacitor SMT 0805	1
CCNP1608-0603	4u7F/6V3	1907504		C2	Capacitor SMT 0603	1
CCNP1608-0603	100nF			C3, C6, C7, C8, C9	Capacitor SMT 0603	5
CCNP1608-0603	2u2F/10V	2496850		C4, C5	Capacitor	2
SOT23	PMEG2005CT	2459194		D1	Dual Schottky Diode (SMT)	1
SOD-123	1N5819HW	2306459		D2	SCHOTTKY, 1A, 40V, SOD-123	1
LED1608-0603-RED	LED Red	5790852		D3	LED 0603 Red	1
MOLEX - 47346-0001	USB_MICRO_B_CONNECTOR	1568026		J1	USB Micro-B Connector	1
CR1608-0603	FB	1515717		L1, L2, L3	Ferrite Bead (0603)	3
SWD-2x5	SWD2X5			P4	SWD Connector 2x5-Pin	1
CR1608-0603	470R	1632490		R1	Resistor SMT	1
CR1608-0603	33R			R2, R3	Resistor	2
SDCARD_MICRO - MOLEX 504077-1891	SD_Socket2	2214964		SD1	MOLEX 5040771891 CONNECTOR, MICRO SD, 1.1MM, 8 POSITION	1
SW_SMT_PB2-B3U	SW-PB-SMT-B3U	2500851		SW1	Switch OMRON B3U series	1
SOT-89	MCP1702T-3302E/MB	1605558		U1	3V3 LDO regulator	1
TSQFP50P1200X1200-64N	MK22FN512VLH12	2434224		U2	Arm Cortex M4F	1
crystal_can	Crystal - 32kHz	1457084		Y1	CITIZEN CFS2016	1
Crystal_SMT - EPSON-FA-238	XTAL_SMT2_FA-238	1712815		Y2	Crystal (EPSON Q22FA23800065 FA-238 24 MHZ 12.0PF)	1
						26
Approved		**Notes**				