

SYSTRONIX TINI LEARNING TOOL (TILT) – REVISIONS

1

SCH REV	PCB REV	DATE	BY	DESCRIPTION	SCH REV	DATE	BY
0.0		00 Feb 18	wsk	Schematic capture.			
1.0	1	00 Feb 18	wsk	Schematic capture & layout complete.			

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TO DO:

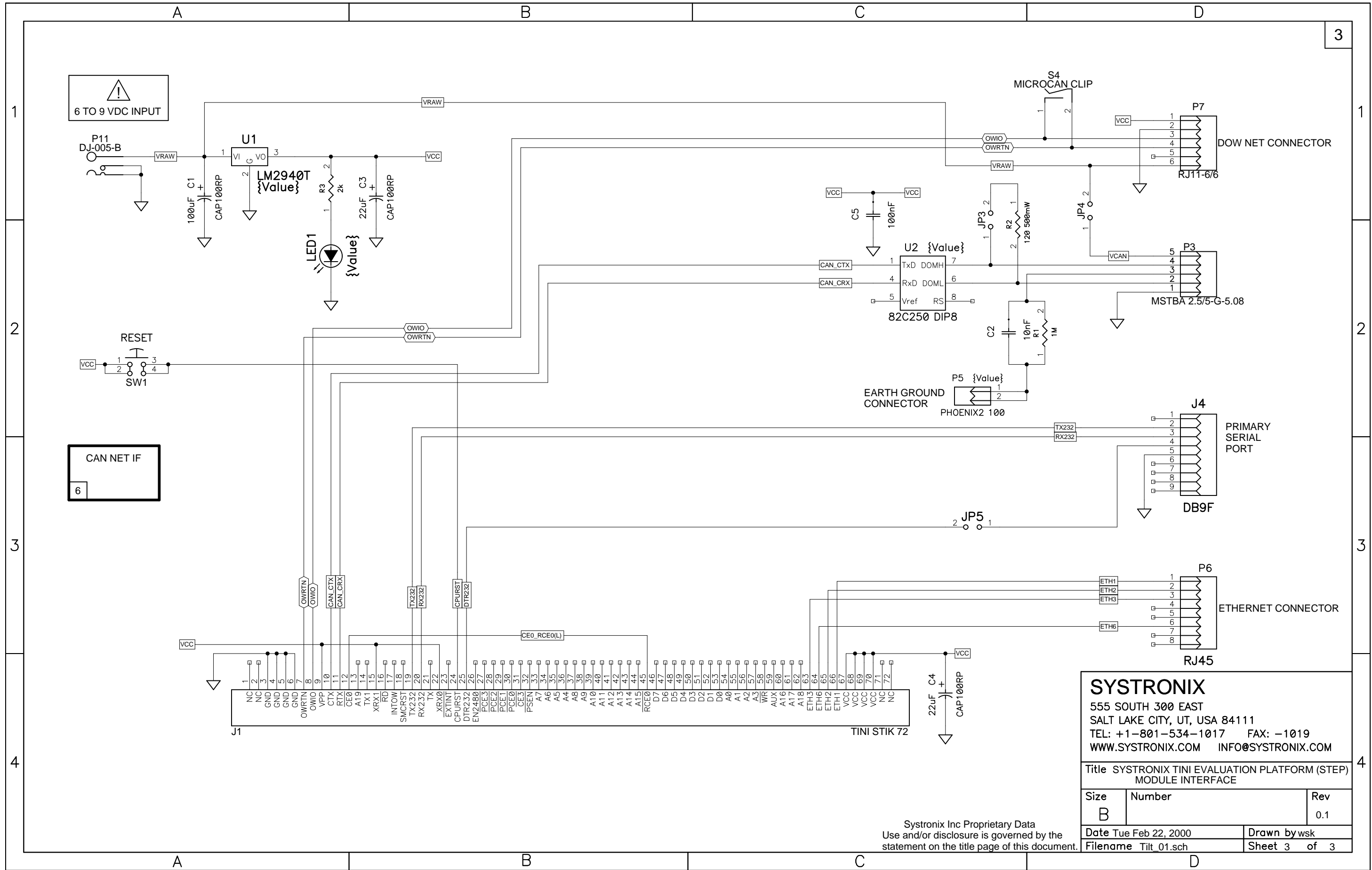
Add larger power supply input capacitor (470µF)
 Move SIMMs farther away from SBX card
 Move SBX card 0.100 away from edge of step card.
 Fix pattern of DS2450.
 Use plated through holes on DB9s
 Silkscreen for fifth foot
 Jumper to select between external and internal one wire bus for our components

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Title SYSTRONIX TINI EVALUATION PLATFORM (STEP) REVISIONS		
Size B	Number	Rev 0.1
Date Tue Feb 22, 2000	Drawn by wsk	
Filename Tilt_01.sch	Sheet 1 of 3	

A		B		C		D													
JUMPERS JP1 - JP10				CONNECTORS J3 - J6				CONNECTORS J1 - J2				CONNECTORS J1 - J2				2			
JP1		JUMPER INSTALLED USE EXTERNAL FLASH AS BOOT DEVICE.		SHEET 5		J1		SPARE 68/72 PIN SIMM		SHEET 3		J1		J2					
JP2		AUX LED HEADER		SHEET 5		J2		TINI STIK CONNECTOR		SHEET 3		1		NC		37 35 A8			
JP3		WHEN INSTALLED, TERMINATES THE CAN DATA SIGNALS		SHEET 6		J3		AUXILIARY RS232 (DCE) - 1- DCD (MARK) 2- RxD 3- TxD 4- NC 5- SIGNAL GROUND 6- DSR (MARK) 7- NC 8- CTS (MARK) 9- NC		SHEET 7		2		NC		38 36 A9			
JP4		1-2 SIGNAL PCE3(L) (P5.7 CONFIGURED AS AN I/O PIN) DETERMINES WHETHER SERIAL PORT 1 USES THE EXTERNAL ONE WIRE BUS (P7) OR THE AUXILIARY RS232 PORT (J3). WHEN PCS3(L) IS HIGH, COMMUNICATION IS THROUGH THE EXTERNAL ONE WIRE BUS.		SHEET 7		J4		PRIMARY RS232 (DCE) - 1- NC 2- TX232 (DCE Rx/D) 3- RX232 (DCE Tx/D) 4- DTR232 5- SIGNAL GROUND 6- NC 7- NC 8- NC 9- NC		SHEET 7		3		1		GROUND		39 37 A10	
JP5		WHEN INSTALLED, A SPACE STATE ON THE DTR SIGNAL AT J? WILL CAUSE THE ASSERTION OF CPURST.				SHEET 7		J5		SBX CONNECTOR 1- SBX +12 2- SBX -12 3- GROUND 4- VCC 5- SMCRST(H) 6- NC 7- A2 8- NC 9- A1 10- NC 11- A0 12- SBX INTERRUPT 1 13- WR(L) 14- SBX INTERRUPT0 15- RD(L) 16- NC 17- GROUND 18- VCC 19- D7 20- MCS1(L) 21- D6 22- MCS0(L) 23- D5 24- NC 25- D4 26- NC 27- D3 28- NC 29- D2 30- OWIO 31- D1 32- NC 33- D0 34- NC 35- GND 36- VCC		SHEET 8		4		2		GROUND	
JP6		FIRST BIRTHDAY JUMPER. NOT NORMALLY INSTALLED.		SHEET 7		J6		ANALOG INPUT - 1- AIN1 2- GROUND 3- AIN2 4- GROUND 5- AIN3 6- GROUND 7- AIN4 8- GROUND		SHEET 7		5		3		GROUND		41 39 A12	
JP7		THIS JUMPER IS 'NORMALLY CLOSED' AND CONNECTS MODULE SIGNAL PCE2(L) TO THE OPTION 1 PIN OF THE SBX HEADER. THIS JUMPER CAN BE OPENED BY CUTTING THE TRACE BETWEEN THE PINS ON THE BOTTOM OF THE PCB. TO RECLOSE INSTALL A JUMPER.		SHEET 8		P7		ONE-WIRE NET - 1- VCC 2- GROUND 3- OWIO 4- OWRTN 5- NC 6- VRAW		SHEET 7		6		4		GROUND		42 40 A13	
JP8		EXTERNAL VPP INPUT		SHEET 9		P8		DIAGNOSTIC PORT - 1- NC 2- Tx/D 3- NC 4- GROUND 5- Rx/D 6- NC		SHEET 7		7		5		GROUND		43 41 A14	
JP9		1-2 SELECTS EXTERNAL SOURCE FOR VPP.		SHEET 9		P9		GROUND TEST POINTS		SHEET 9		8		6		OWIO		44 42 A15	
JP10		2-3 SELECTS SYSTEM POWER FOR VPP.				SHEET 9		P10		VCC TEST POINTS		SHEET 9		9		7		VPP	
JP10		WHEN INSTALLED CONNECTS THE CAN BUS POWER TO THE STEP POWER SUPPLY. THE STEP MAY EITHER POWER THE CAN NET (NOT RECOMMENDED) OR RECEIVE ITS POWER FROM THE NETWORK THROUGH THIS CONNECTION.		SHEET 9		P11		POWER IN - 8 TO 24 V DC/AC		SHEET 9		10		8		CTX		46 44 D7	
CONNECTORS P1 - P13				CONNECTORS J1 - J2				CONNECTORS J1 - J2				CONNECTORS J1 - J2				2			
P1		PUSHBUTTON HIGH		SHEET 5		P12		GROUND TEST POINTS		SHEET 9		11		9		CRX		47 45 D6	
P2		PUSHBUTTON LOW		SHEET 5		P13		GROUND TEST POINTS		SHEET 9		12		10		CE0(L)		48 46 D5	
P3		CAN DEVICE NET - 1- SIGNAL GROUND 2- DOMINANT LOW 3- SHIELD 4- DOMINANT HIGH 5- V+		SHEET 6		P9		GROUND TEST POINTS		SHEET 9		13		11		A19		49 47 D4	
P4		CAN OPEN - 1- NC 2- SIGNAL GROUND 3- DOMINANT LOW 4- DOMINANT HIGH 5- SIGNAL GROUND 6- NC 7- NC 8- V+ 9- SHIELD 10- VCC		SHEET 6		P10		VCC TEST POINTS		SHEET 9		14		12		TX		50 48 D3	
P5		CAN EARTH GROUND		SHEET 6		P11		POWER IN - 8 TO 24 V DC/AC		SHEET 9		15		13		XRX1		51 49 D2	
P6		10-base-T ETHERNET - 1- ETH1 (TX) 2- ETH2 (TX) 3- RTH3 (RX) 4- NC 5- NC 6- ETH6 (RX) 7- NC 8- NC		SHEET 7		P12		GROUND TEST POINTS		SHEET 9		16		14		RD(L)		52 50 D1	
						P13		GROUND TEST POINTS		SHEET 9		17		15		INTOW		53 51 D0	
												18		16		SMCRST		54 52 A0	
												19		17		TX232		55 53 A1	
												20		18		RX232		56 54 A2	
												21		19		TX		57 55 A3	
												22		20		XRX0		58 56 WR(L)	
												23		21		EXTINT(L)		59 57 NC	
												24		22		CPURST		60 58 A16	
												25		23		DTR232		61 59 A17	
												26		24		EN2480		62 60 A18	
												27		25		PCE3(L)		63 61 ETH3 *	
												28		26		PCE2(L)		64 62 ETH6 *	
												29		27		PCE1(L)		65 63 ETH2 *	
												30		28		PCE0(L)		66 64 ETH1 *	
												31		29		CE3(L)		67 65 VCC	
												32		30		PSEN(L)		68 66 VCC	
												33		31		A7		69 67 VCC	
												34		32		A6		70 68 VCC	
												35		33		A5		71 NC	
												36		34		A4		72 NC	
								* THESE SIGNALS NOT PRESENT ON J1.											
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6 TO 9 VDC INPUT

RESET

CAN NET IF

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Title SYSTRONIX TINI EVALUATION PLATFORM (STEP) MODULE INTERFACE

Size	Number	Rev
B		0.1

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