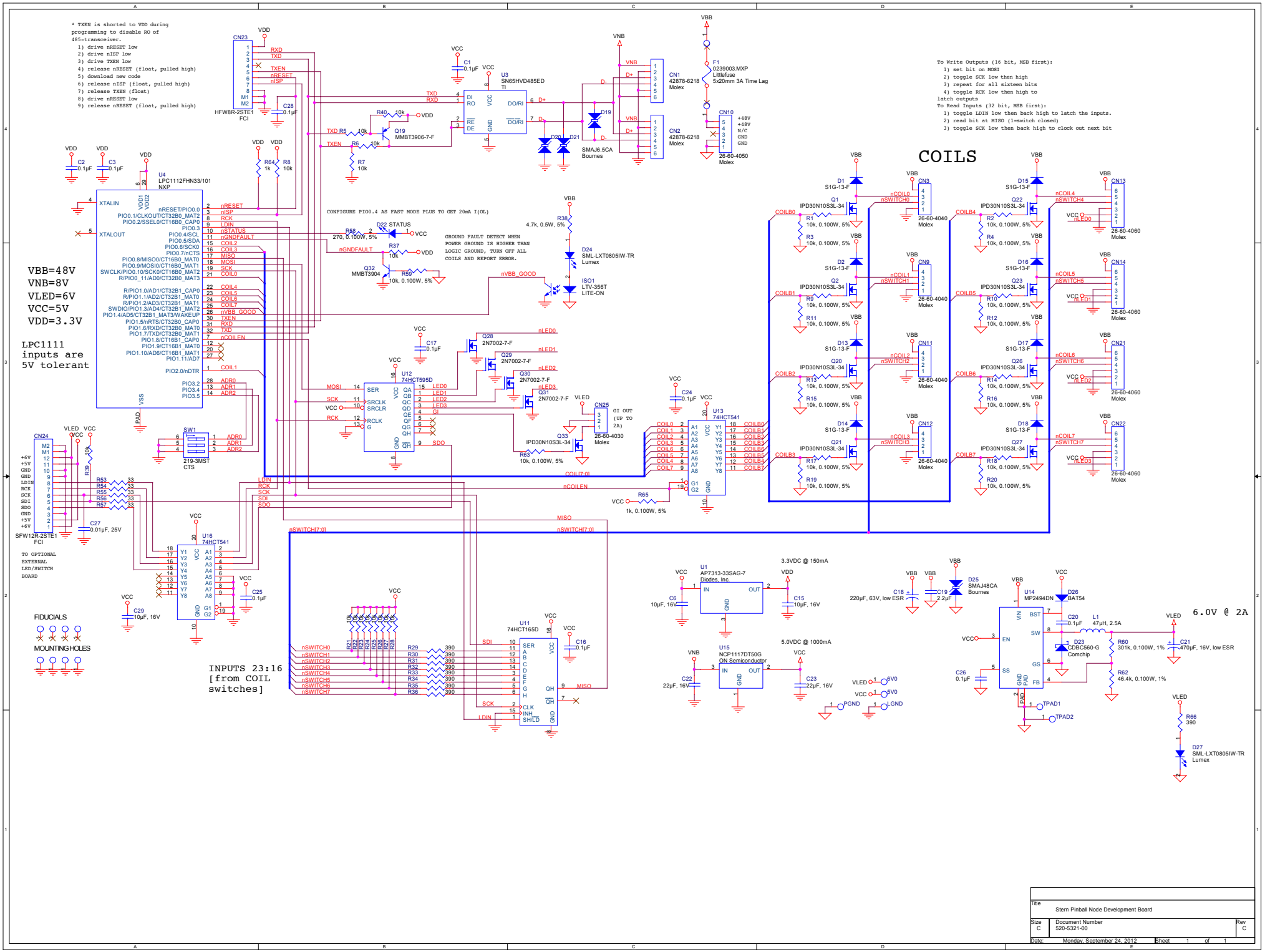
* TXEN is shorted to VDD during programming to disable RO of 485-transceiver.
1) drive nRESET low
2) drive nISP low
3) drive TXEN low
4) release nRESET (float, pulled high)
5) download new code
6) release nISP (float, pulled high)
7) release TXEN (float)
8) drive nRESET low
9) release nRESET (float, pulled high)
To Write Outputs (16 bit, MSB first):
1) set bit on MOSI
2) toggle SCK low then high
3) repeat for all sixteen bits
4) toggle RCK low then high to latch outputs
To Read Inputs (32 bit, MSB first):
1) toggle LDIN low then back high to latch the inputs.
2) read bit at MISO (1=switch closed)
3) toggle SCK low then back high to clock out next bit
COILS
VBB=48V
VNB=8V
VLED=6V
VCC=5V
VDD=3.3V
LPC1111 inputs are 5V tolerant
CONFIGURE PIO0.4 AS FAST MODE PLUS TO GET 20mA I(OL)
GROUND FAULT DETECT WHEN POWER GROUND IS HIGHER THAN LOGIC GROUND, TURN OFF ALL COILS AND REPORT ERROR.
TO OPTIONAL EXTERNAL LED/SWITCH BOARD
FIDUCIALS
MOUNTING HOLES
INPUTS 23:16 [from COIL switches]
3.3VDC @ 150mA
5.0VDC @ 1000mA
6.0V @ 2A
Title
Stern Pinball Node Development Board
Size C
Document Number 520-5321-00
Rev C
Date: Monday, September 24, 2012
Sheet 1 of 1