




Content:


- 1. Title Page
- 2. Board Power & Visual Indicators
- 3. USB Interface
- 4. Target Connectors, Translators and Power
- 5. PLD & Crystal Calibration

Notes:

1. Assembly Options:
- 1.a) Includes PLD (all bypass options are NoStuff)
  - 1.b) VSupply HW auto select (jumper header is Nostuff)
  - 1.c) HW target and voltage sensing (no USB input or ctrl)
2. Associated Documents
- 

**PCB FAB**  
600-0186 rev2
- 

**BOM**  
700-0186 REV5
- 

**ASY DWG**  
705-0186 REV2
- 

**WI**  
003-0059 REV3

Revision History:

Rev	Description	ECO	Author
01	Initial release Programmer design based on Huron, featuring: - 22/26 pin mote support - SPI and CLI 50mils header for stand-alone castellated mote - Calibration reference timing signal	1110	CN, RMP
02	Bring Up Update - Fixed target power option: USB powered	1132	CN, RMP
03	Automatic Target Power Selection	1136	CN, RMP
04	Respin new PCB to include updates	1139	CN, RMP
05	hardwire VSUPPLY to VTARGET fix for HW-178	1155	CN, RMP




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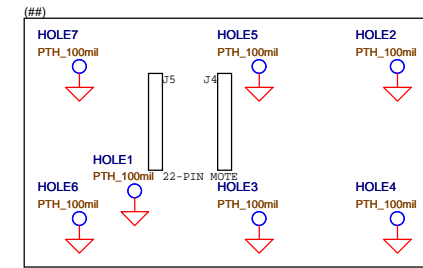
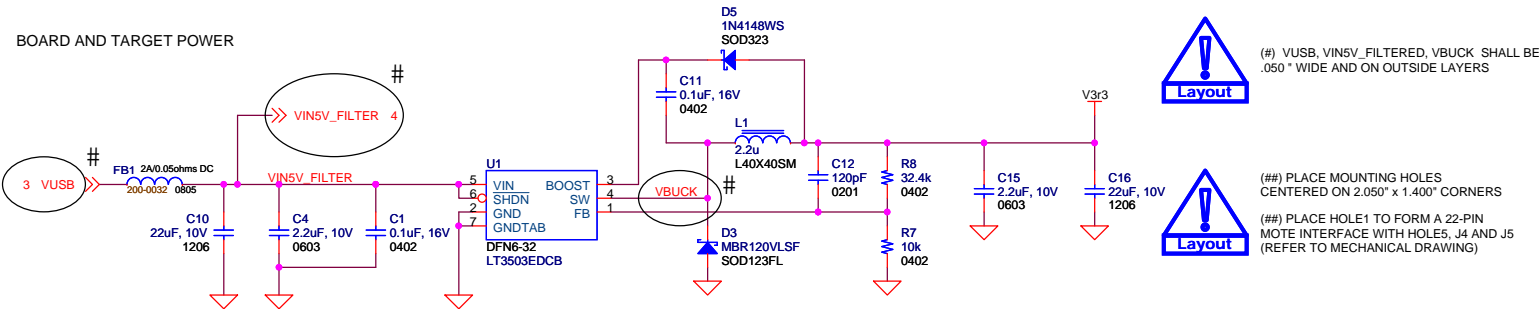
LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.

THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

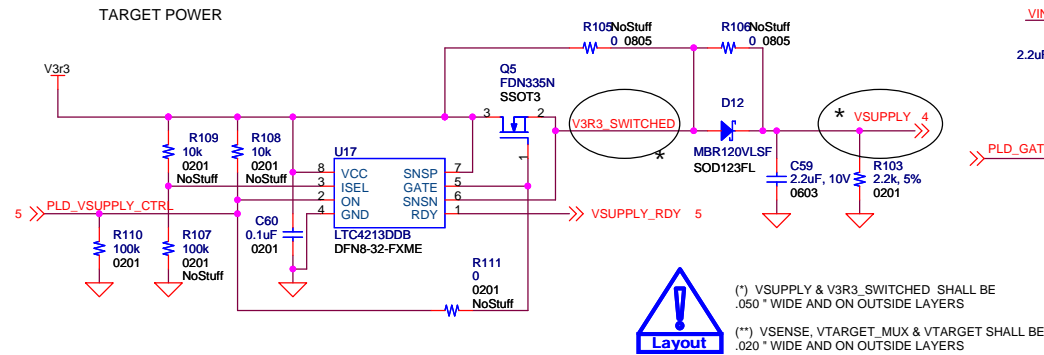
CONTRACT NO.	 <b>A Linear Technology Company</b> 1630 McCarthy Blvd. Milpitas, CA 95035 Phone: (408)432-1900 Fax: (408)434-0507
APPROVALS	
DRAWN:	
CHECKED:	
APPROVED:	
ENGINEER:	TITLE: <b>DC9010A</b> <b>PCA SCH, SERIAL PROGRAMMER BOARD, ETERNA</b>
DESIGNER:	
SIZE <b>A</b> DWG NO. <b>710-0186</b> REV <b>05</b>	
DATE: <b>Monday, September 10, 2012</b> SHEET <b>1</b> OF <b>5</b>	

# POWER CONVERSION, VSUPPLY SWITCH & VISUAL INDICATORS

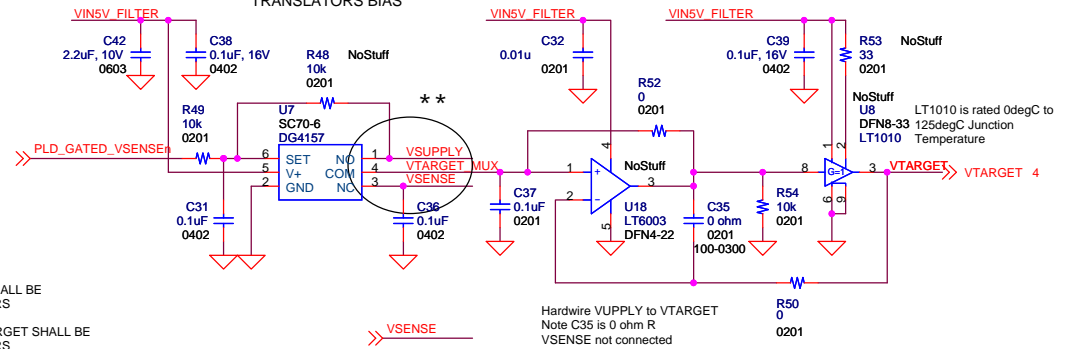
## BOARD AND TARGET POWER



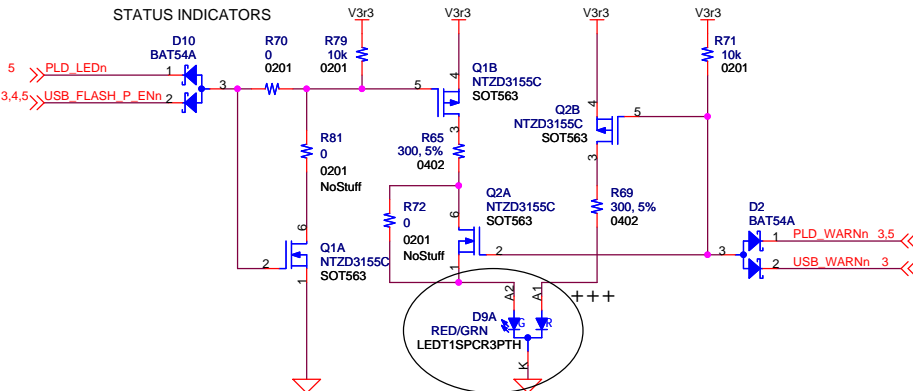
## TARGET POWER



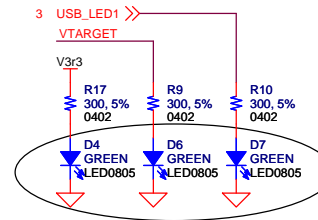
## TRANSLATORS BIAS



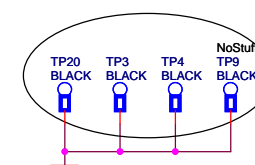
## STATUS INDICATORS



## BOARD INDICATORS (DEBUG)



## GROUND TEST POINTS



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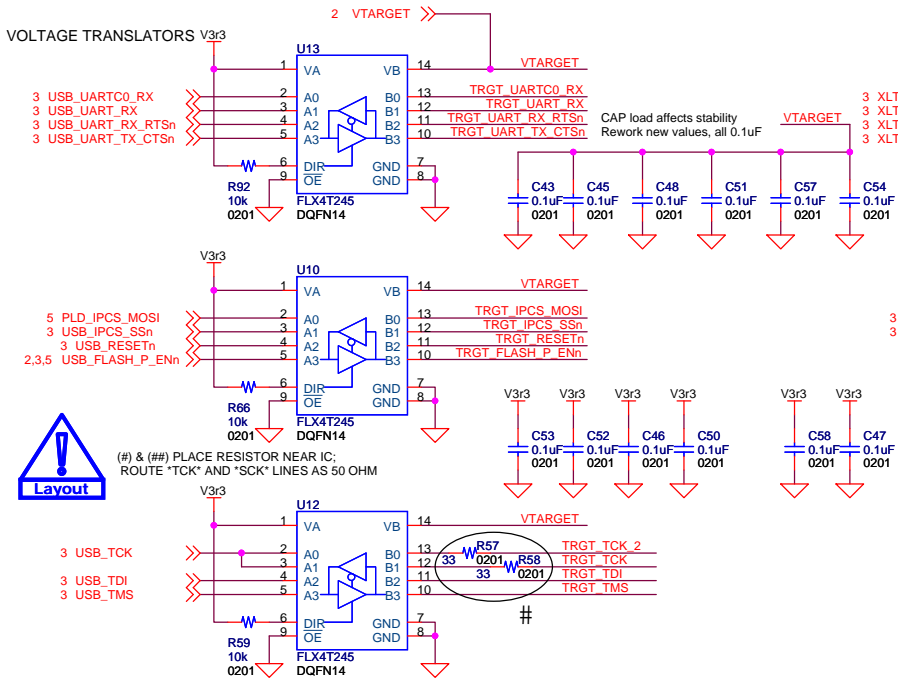
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CONTRACT NO.	dust networks™ A Linear Technology Company		
APPROVALS	1630 McCarthy Blvd. Milpitas, CA 95035 Phone: (408)432-1900 Fax: (408)434-0507		
DRAWN:	TITLE: DC9010A		
CHECKED:	PCA SCH, SERIAL PROGRAMMER BOARD, ETERNA		
APPROVED:	SIZE A DWG NO. 710-0186 REV 05		
ENGINEER:	DATE: Thursday, September 13, 2012 SHEET 2 OF 5		
DESIGNER:			

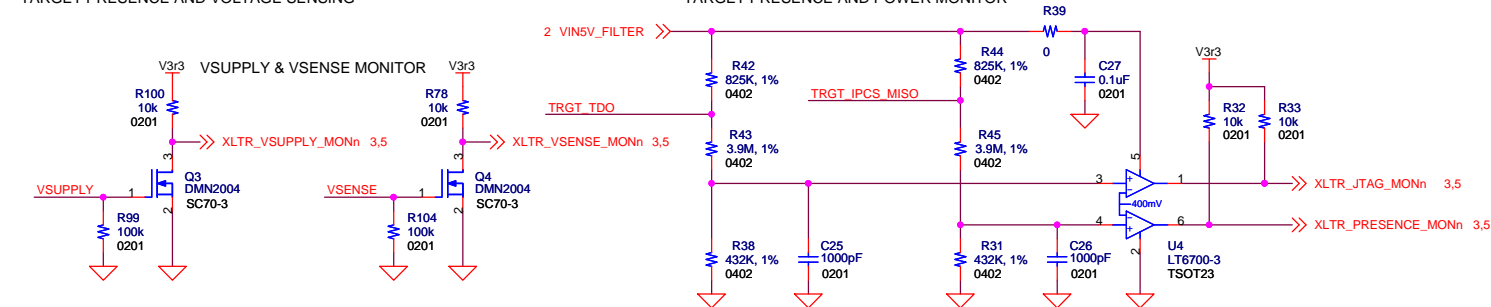


## TARGET HEADERS, POWER MONITORING & VOLTAGE TRANSLATORS

## VOLTAGE TRANSLATORS V3r3

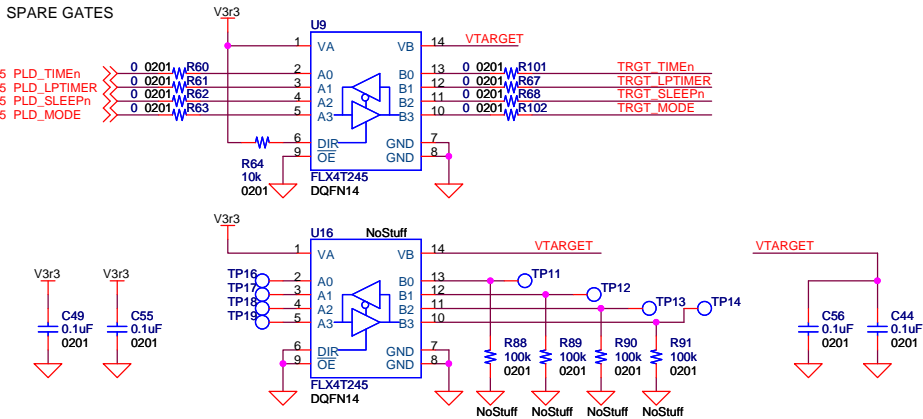


## TARGET PRESENCE AND VOLTAGE SENSING

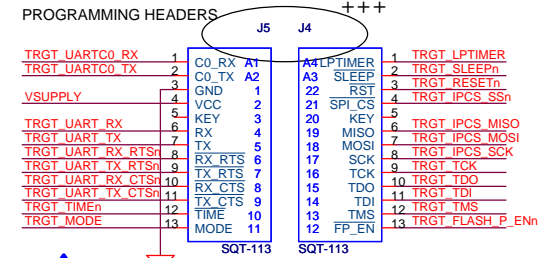


## TARGET PRESENCE AND POWER MONITOR

## SPARE GATES

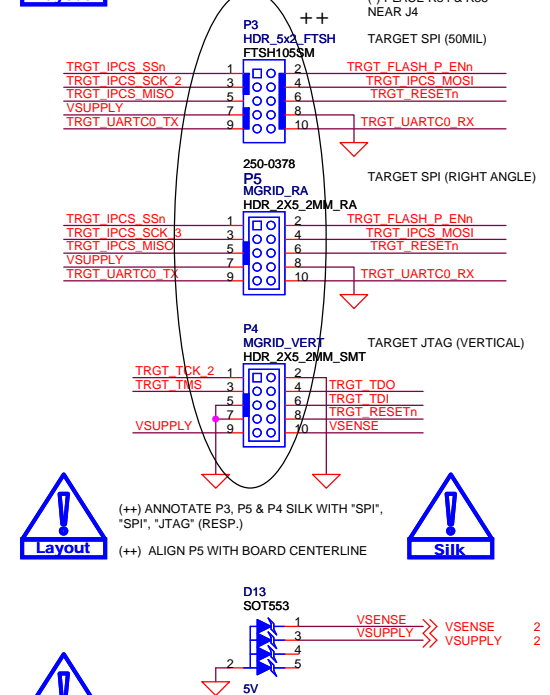


## PROGRAMMING HEADERS



(+++)  
 (++) PLACE J5 & J4 PARALLEL & 882 MILS APPART.  
 ANNOTATE SILK WITH "22/26 PIN MOTE"

(\*) PLACE R84 & R85



(++) ANNOTATE P3, P5 & P4 SILK WITH "SPI", "SPI", "JTAG" (RESP.)

(++) ALIGN P5 WITH BOARD CENTERLINE

(+) DAISY CHAIN VSUPPLY & VSENSE THROUGH HEADERS & PLACE D10 NEAR HEADER CLOSER TO Q4 AND Q3



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A	APPROVALS

DRAWN:

**CHECKED:**

**APPROVED:**

ENGINEER:

E. **DESIGNER:**

**dust**   
networks™

**A Linear Technology Company**

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TITLE:	DC9010A
	PCA SCH, SERIAL PROGRAMMER BOARD, ETERNA

SIZE <b>A</b>	DWG NO. <b>710-0186</b>	REV <b>05</b>
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DATE:	Thursday, September 13, 2012	SHEET 4 OF 5
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