



Intel® StrongARM* SA-1110 Development Board

Schematics

May 2000

Phase 5



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1.0 SA-1110 Development Board Schematics

This document contains the electrical schematics and revision information for the Intel® StrongARM* SA-1110 Development Board (SA-1110 Development Board).

Note: This document and module are for the Phase 5 hardware build of this product. For the latest information and updates, see the hardware release notes that are provided in hardcopy format, and the software readme.txt files that are provided in the software kits.

Intel® StrongARM® SA-1110 CPU Development Board

1. Contents
2. Intel® StrongARM® SA-1110 CPU
3. SDRAM and Intel Flash
4. Control CPLD, Address Buffers, Data Transceivers
5. 16-Bit D-FF, Momentary Switches
6. LCD Interface, PZ3128 CPLD, Touch Screen
7. AUDIO - UCB1300, UDA1341TS, Stereo Jack, Headphone Jack, Microphone
8. DAA chipset, RS232 XCVR, Vibration Motor
9. Radio Hdr, USB Conn, IrDA, LCD Scaling, Compact Flash II hdr.
10. Power Regs, Battery Charger, LCD Power
11. 2- 140 Pin Bus Connectors
12. ADV7171KSU Video Encoder

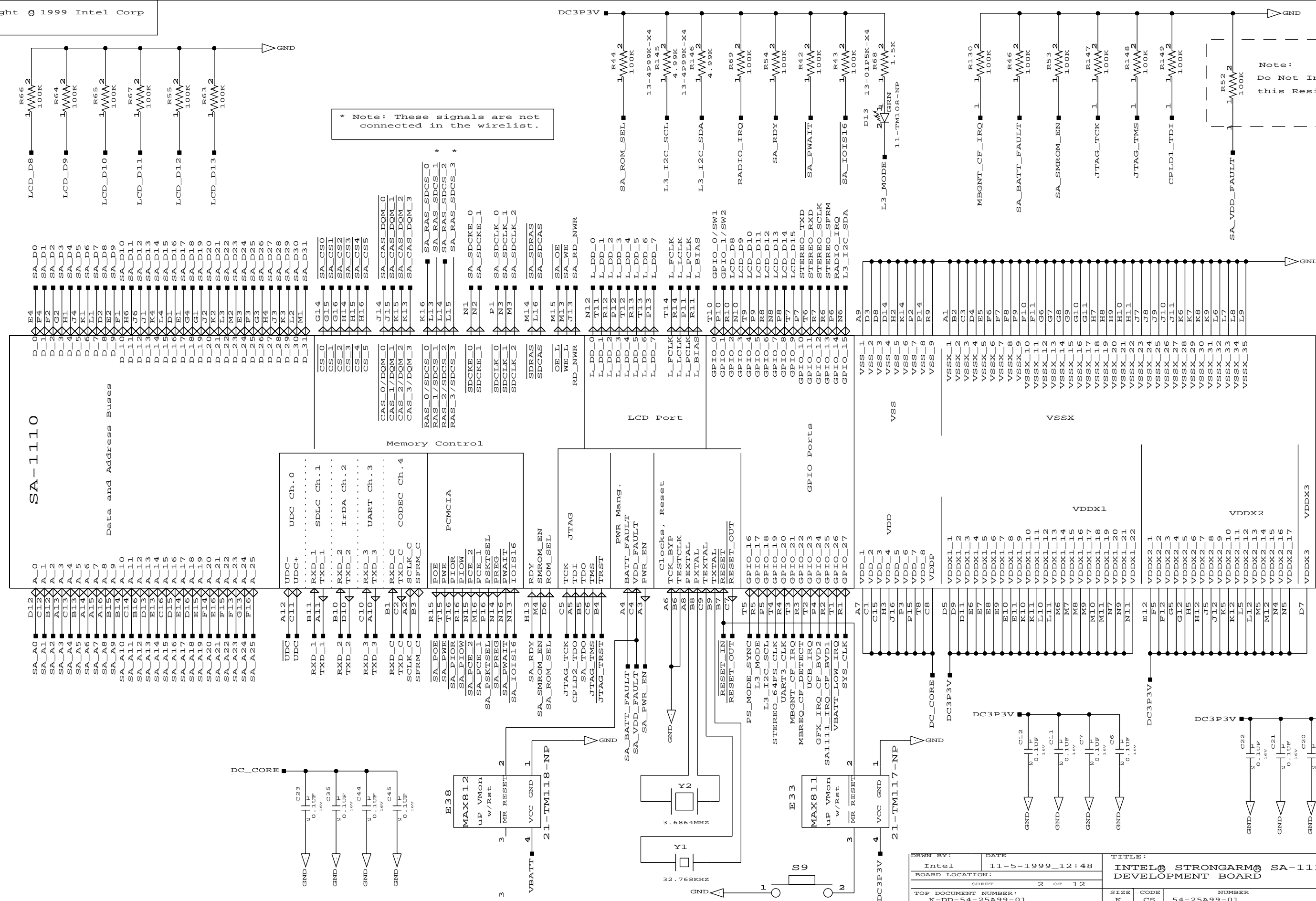
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D

Q

B

A

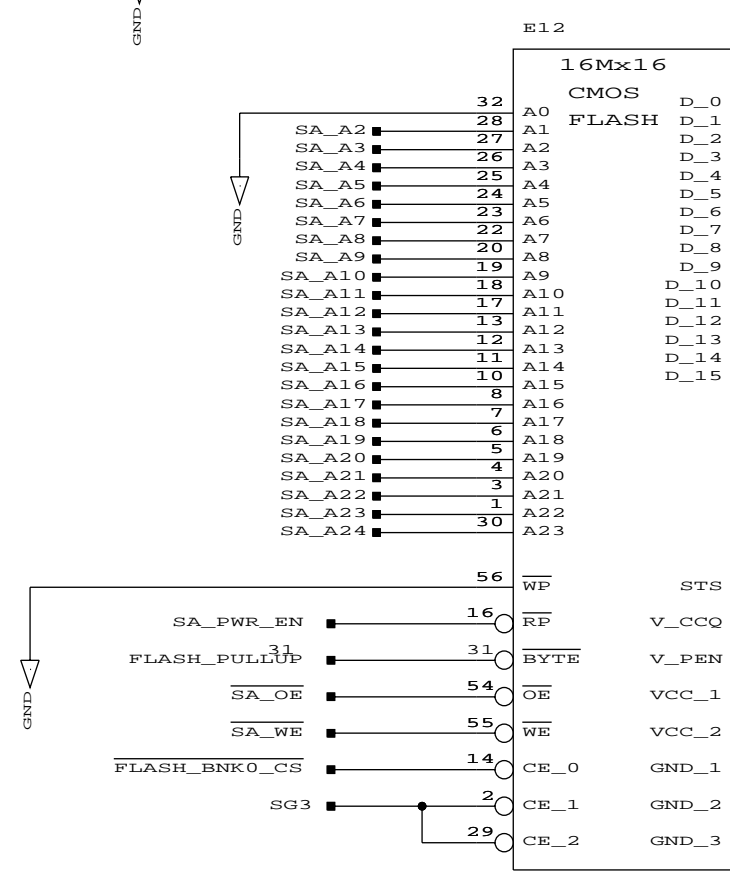
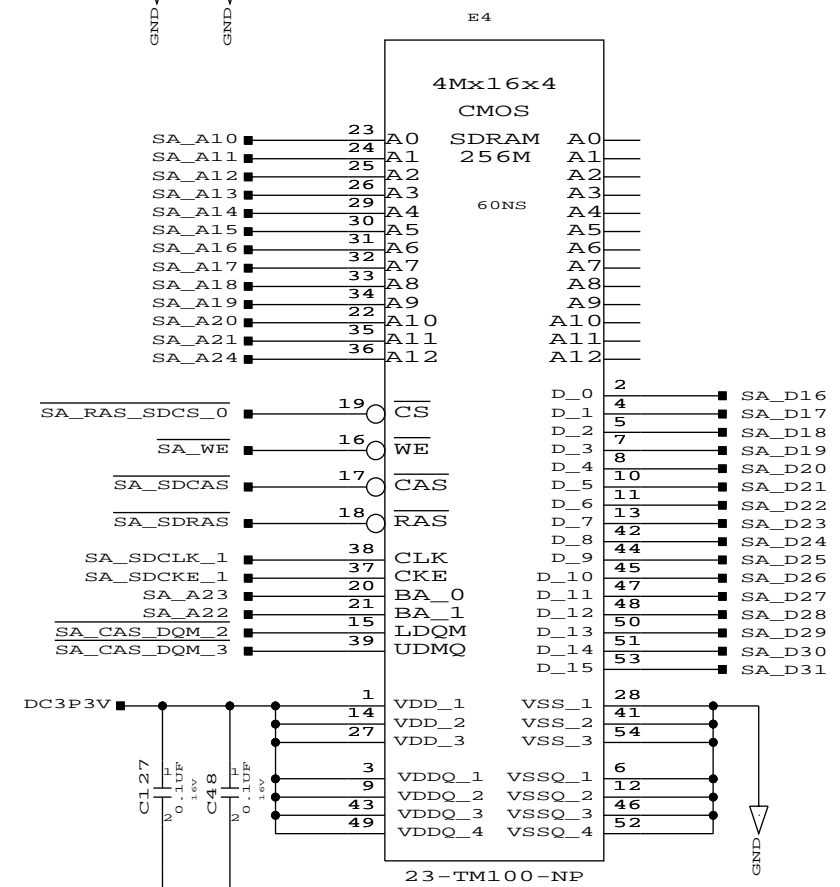
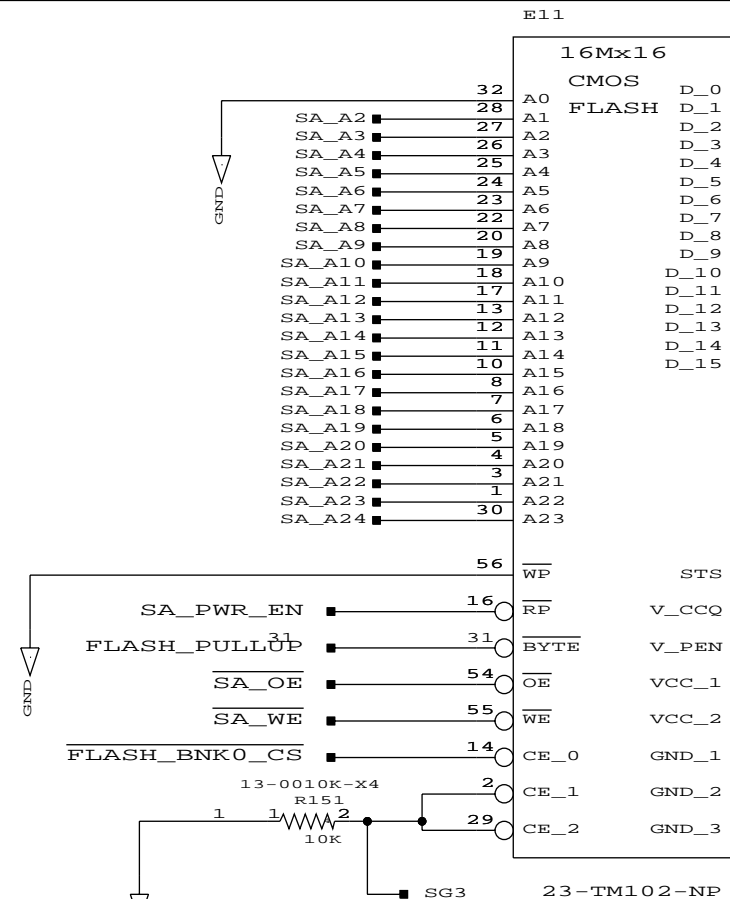
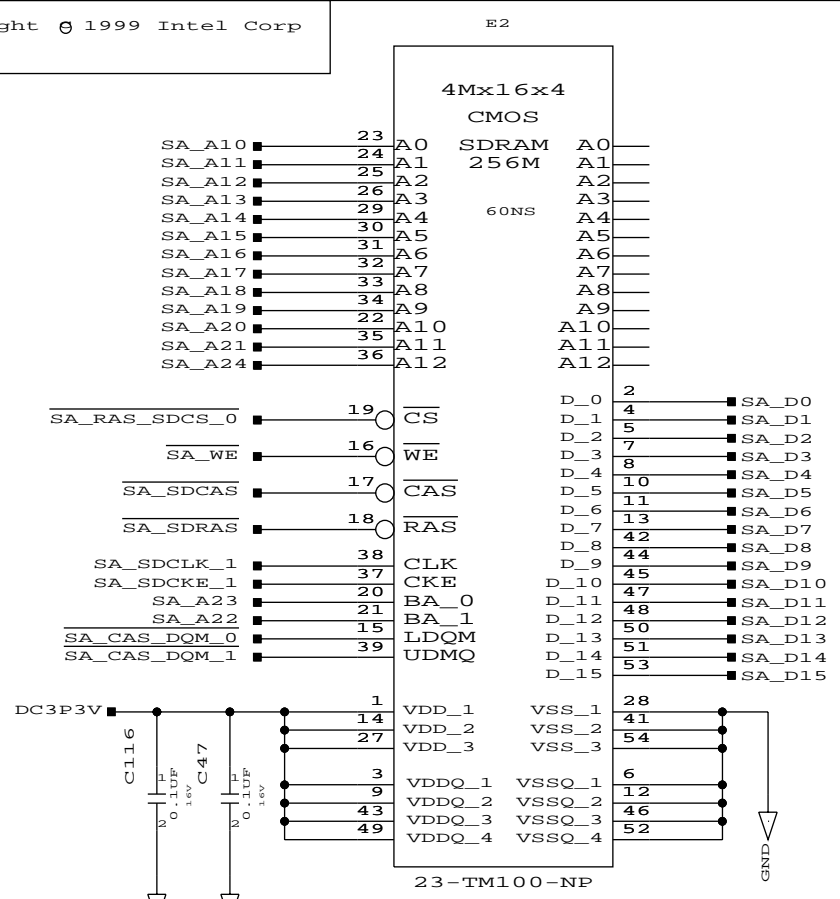


* Note: These signals are not connected in the 'relist.

Note: Do Not Install this Resistor.

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TOP DOCUMENT NUMBER: K-DD-54-25A99-01				NUMBER 54-25A99-01	
				REV 2.00	

21-TM100-NP



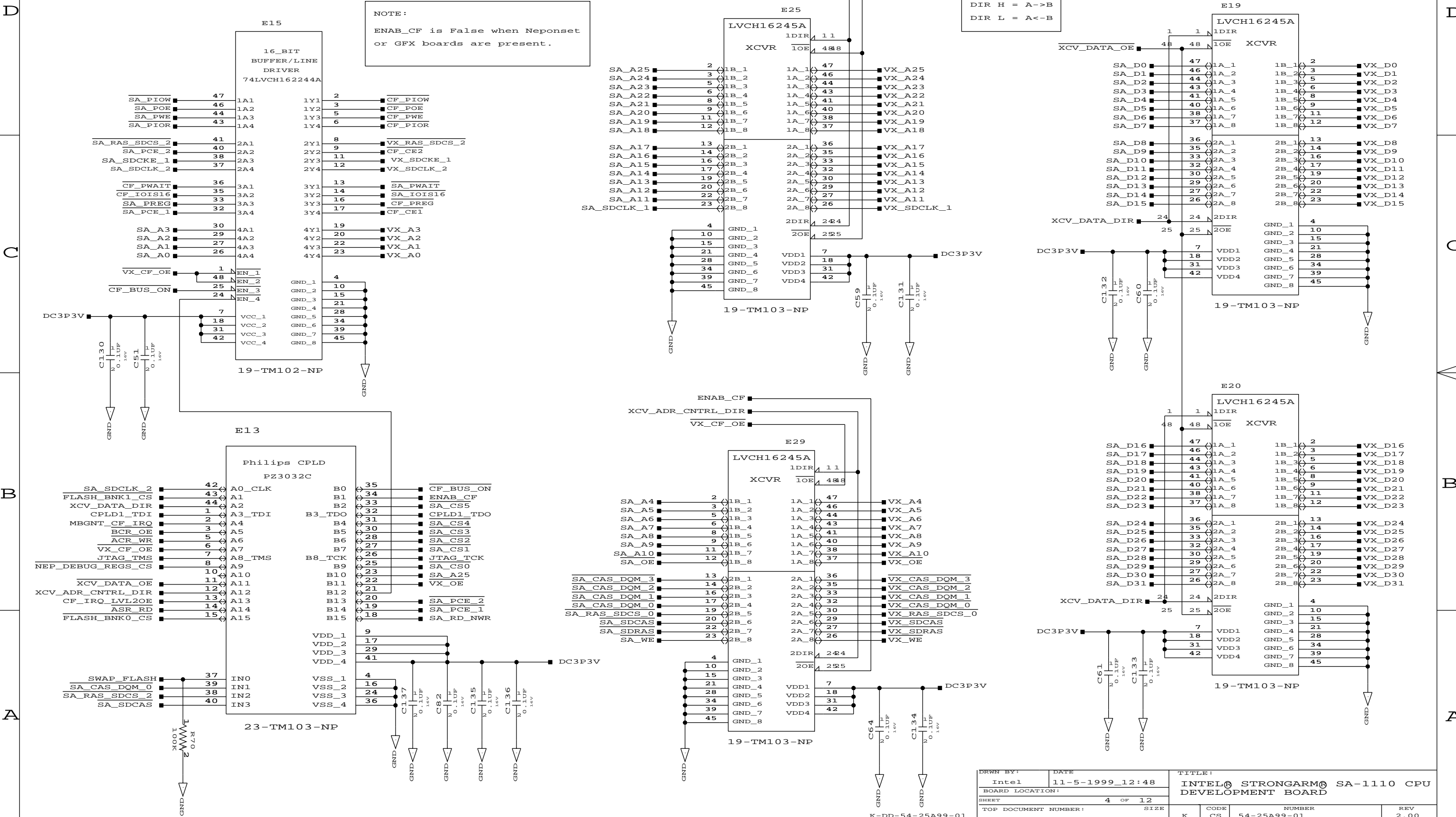
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BOARD LOCATION:		
SHEET	3 OF 12	
TOP DOCUMENT NUMBER:	SIZE	NUMBER
K-DD-54-25A99-01	K	CS 54-25A99-01
		REV 2.00

Tranceivers

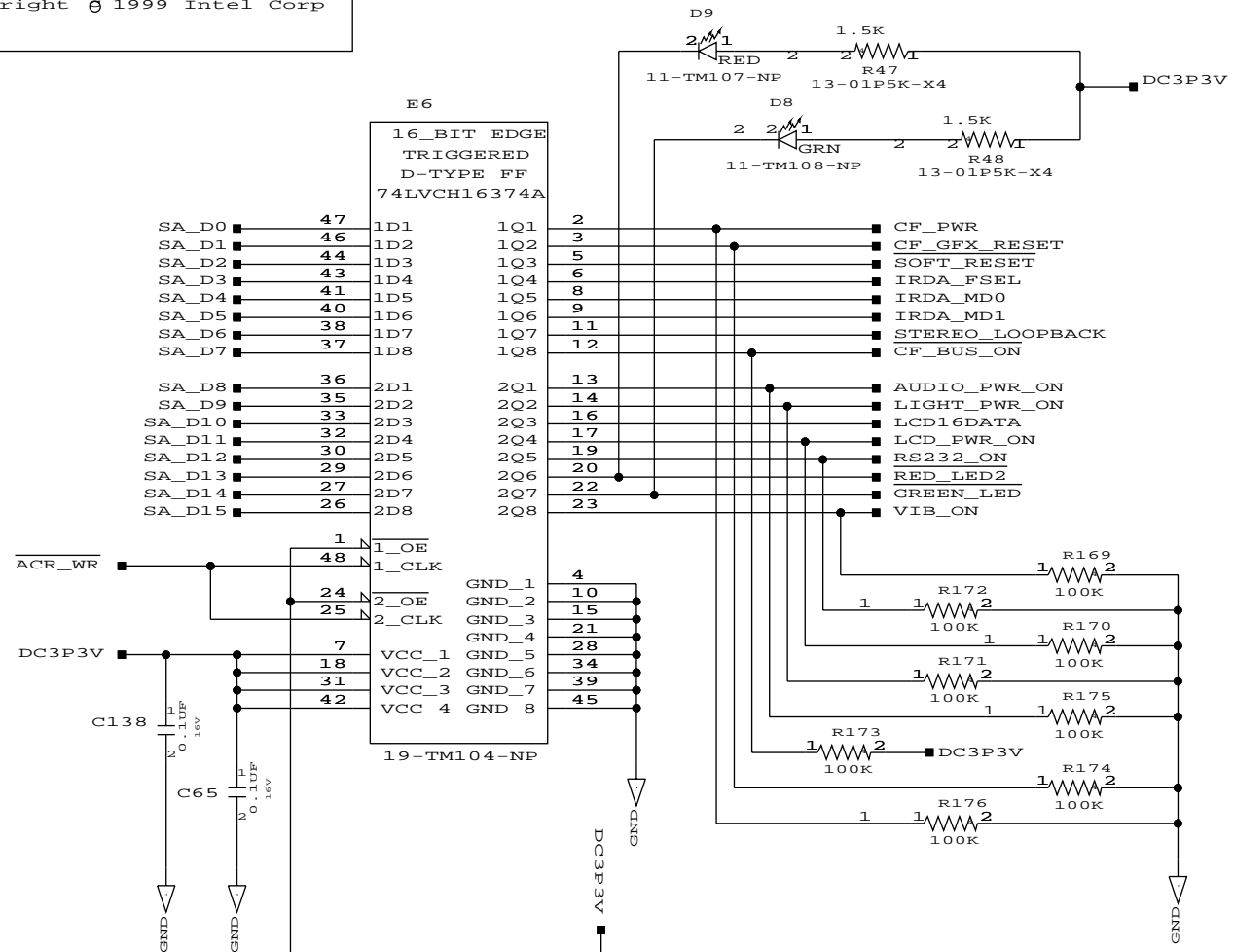
Drivers

NOTE:
ENAB_CF is False when Neponset
or GFX boards are present.

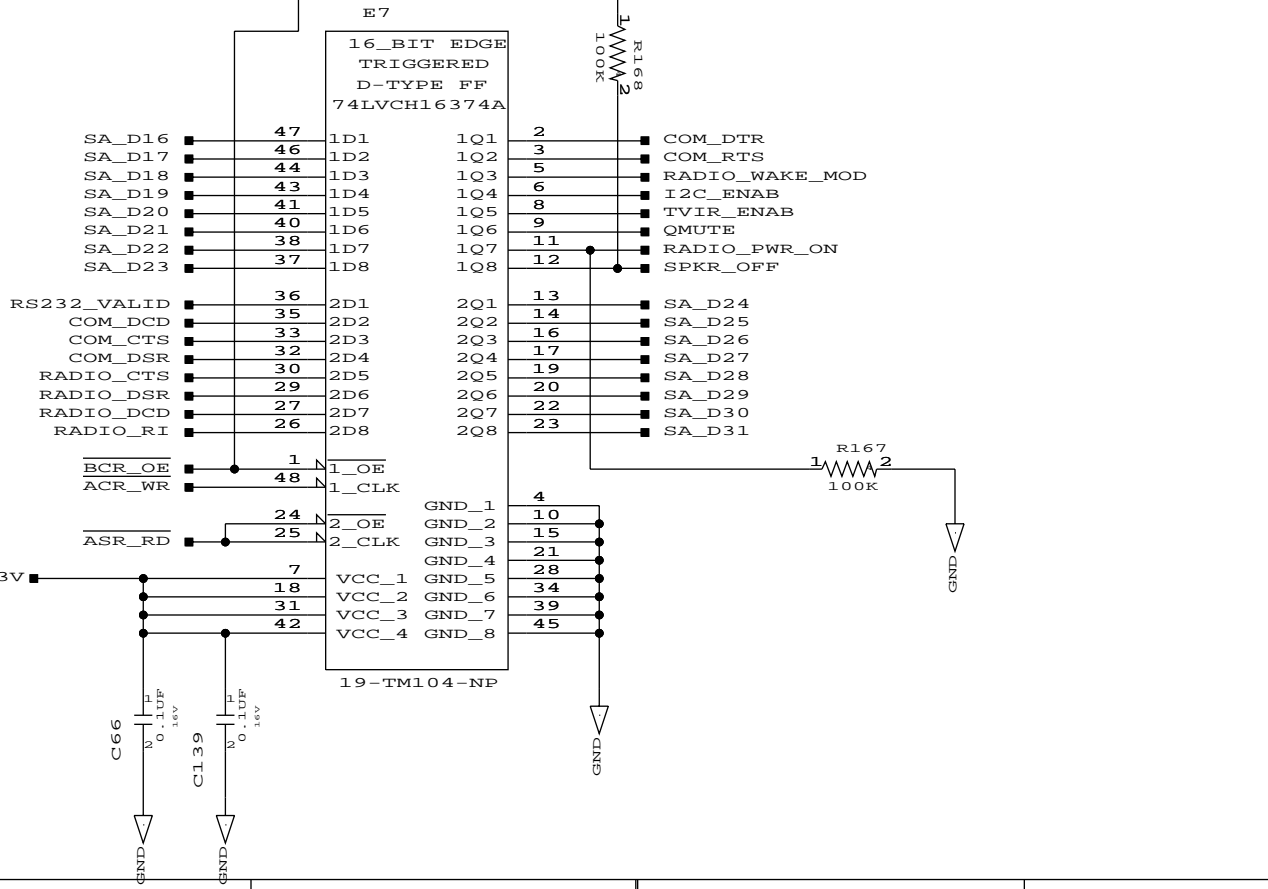
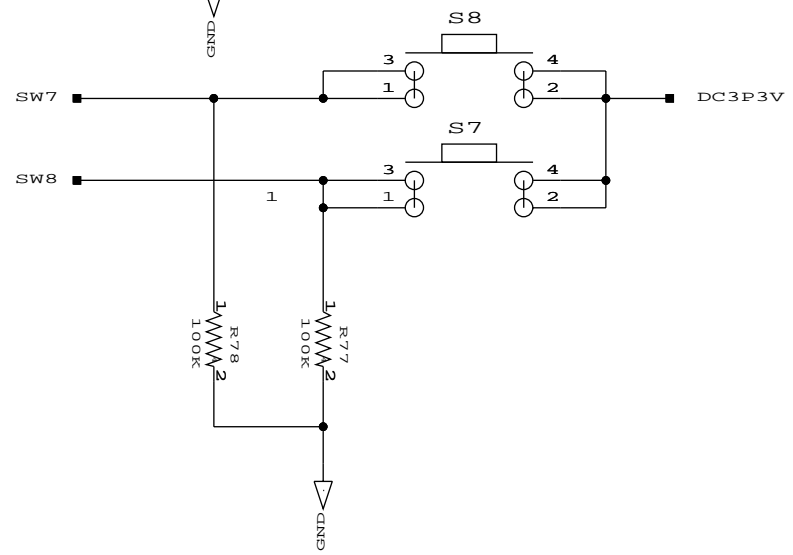
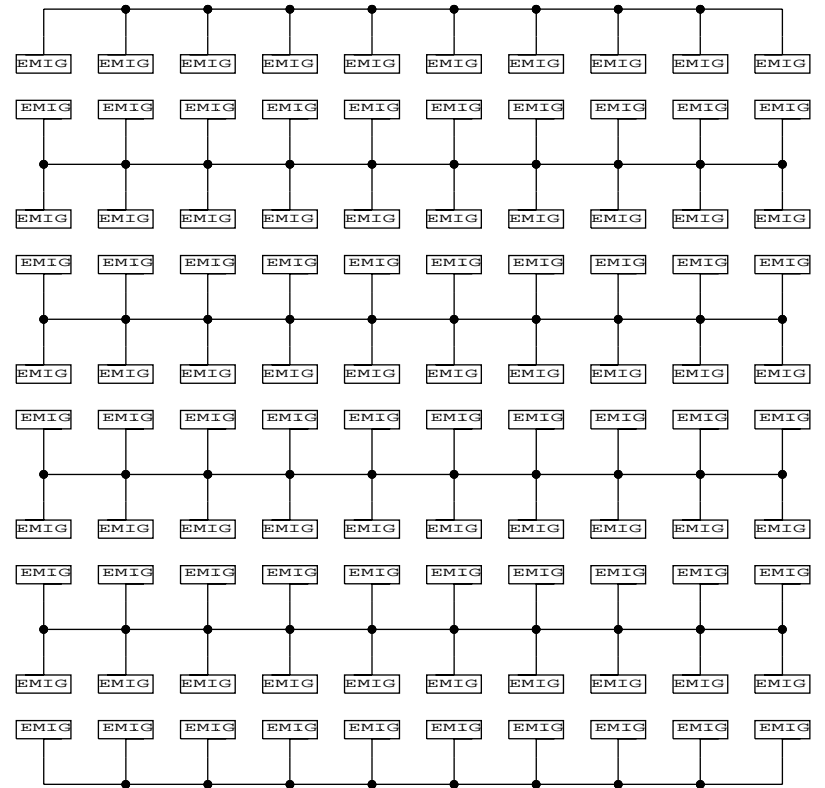
NOTE:
DIR H = A->B
DIR L = A<-B



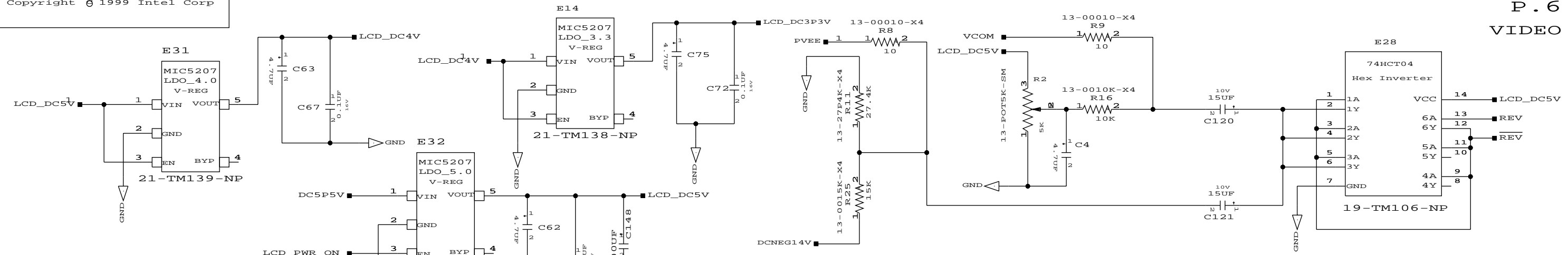
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SHEET	4 OF 12	
TOP DOCUMENT NUMBER:	SIZE	NUMBER
K-DD-54-25A99-01	K	54-25A99-01
	CS	REV
		2.00



EMI Ground Perimeter Ring

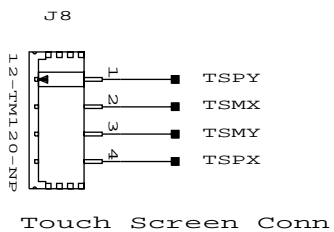
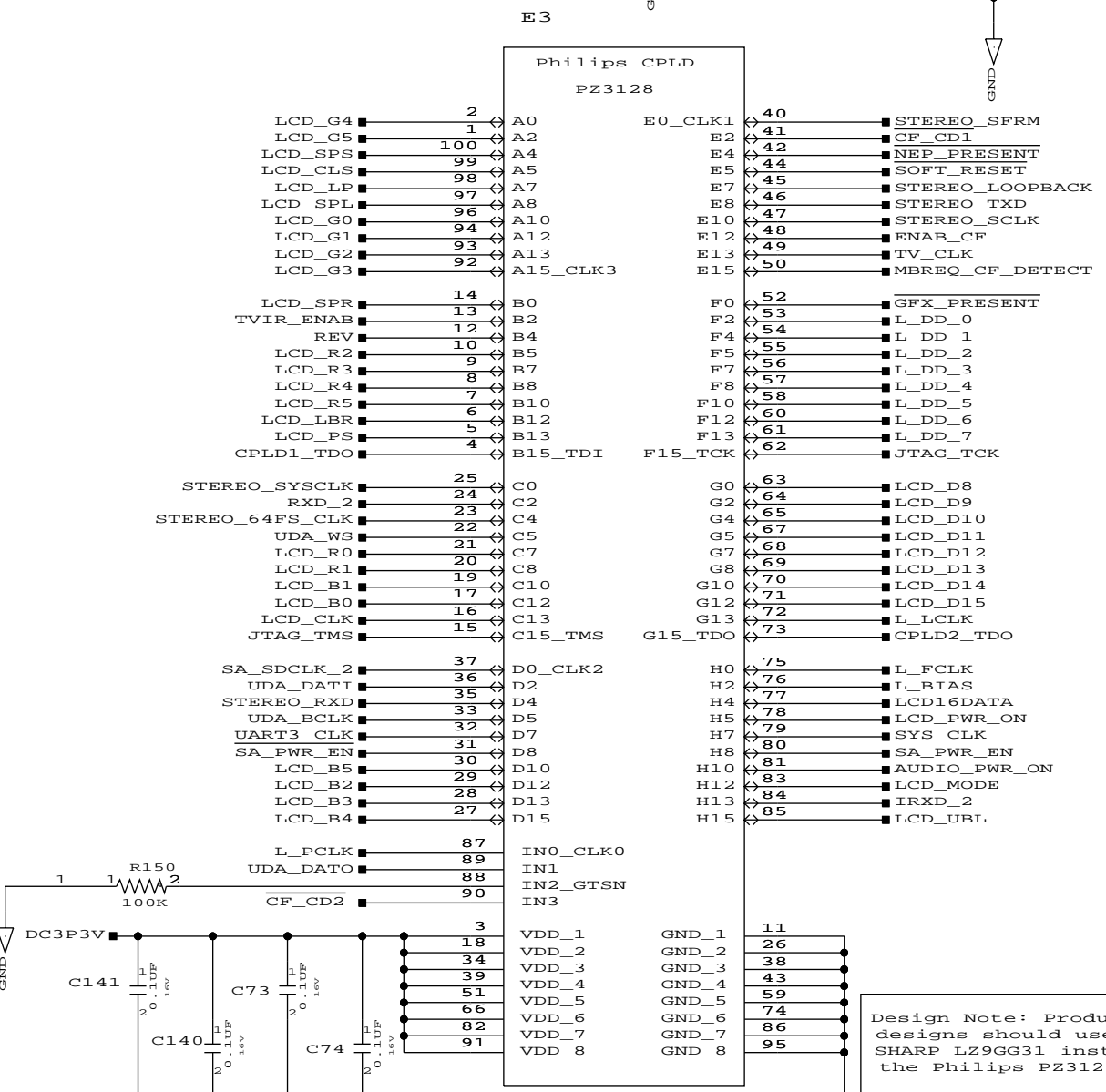


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	K	REV
		2.00

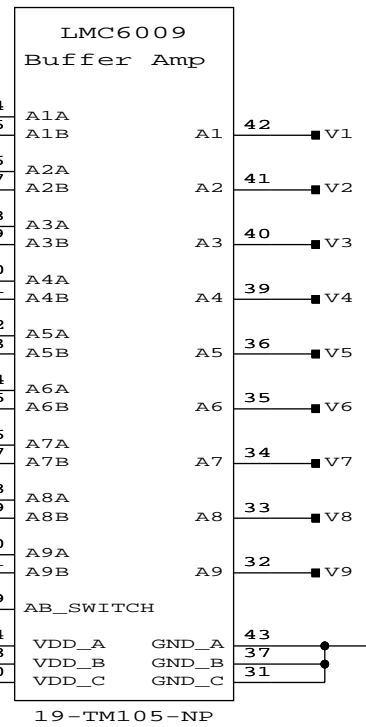
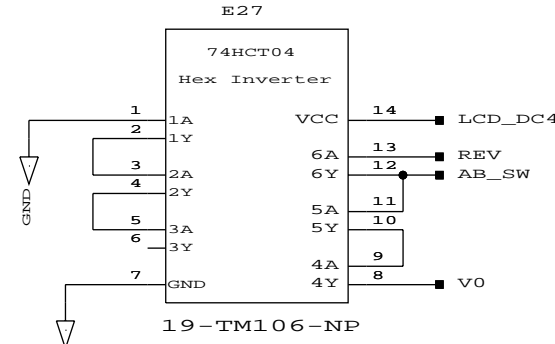


LCD GRAY SCALE SIGNALS

LCD CABLE Connector
 NOTE: The LCD connector is pinned inverse to the SHARP 3.9" HR-TFT Specification.
 NOTE: The pin numbers in the parenthesis reflect the proper spec pinning.

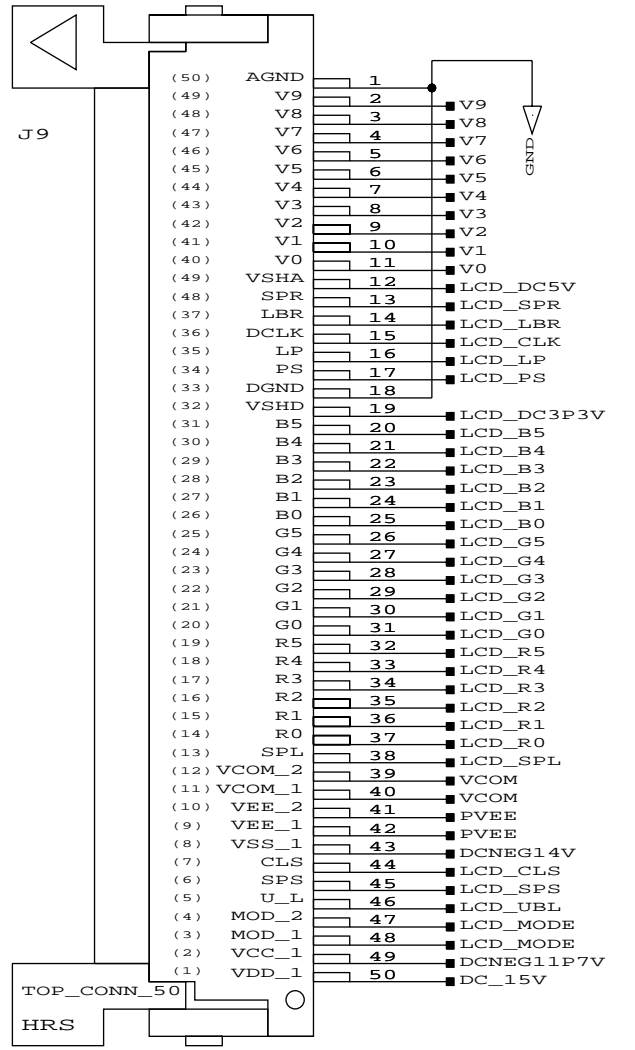


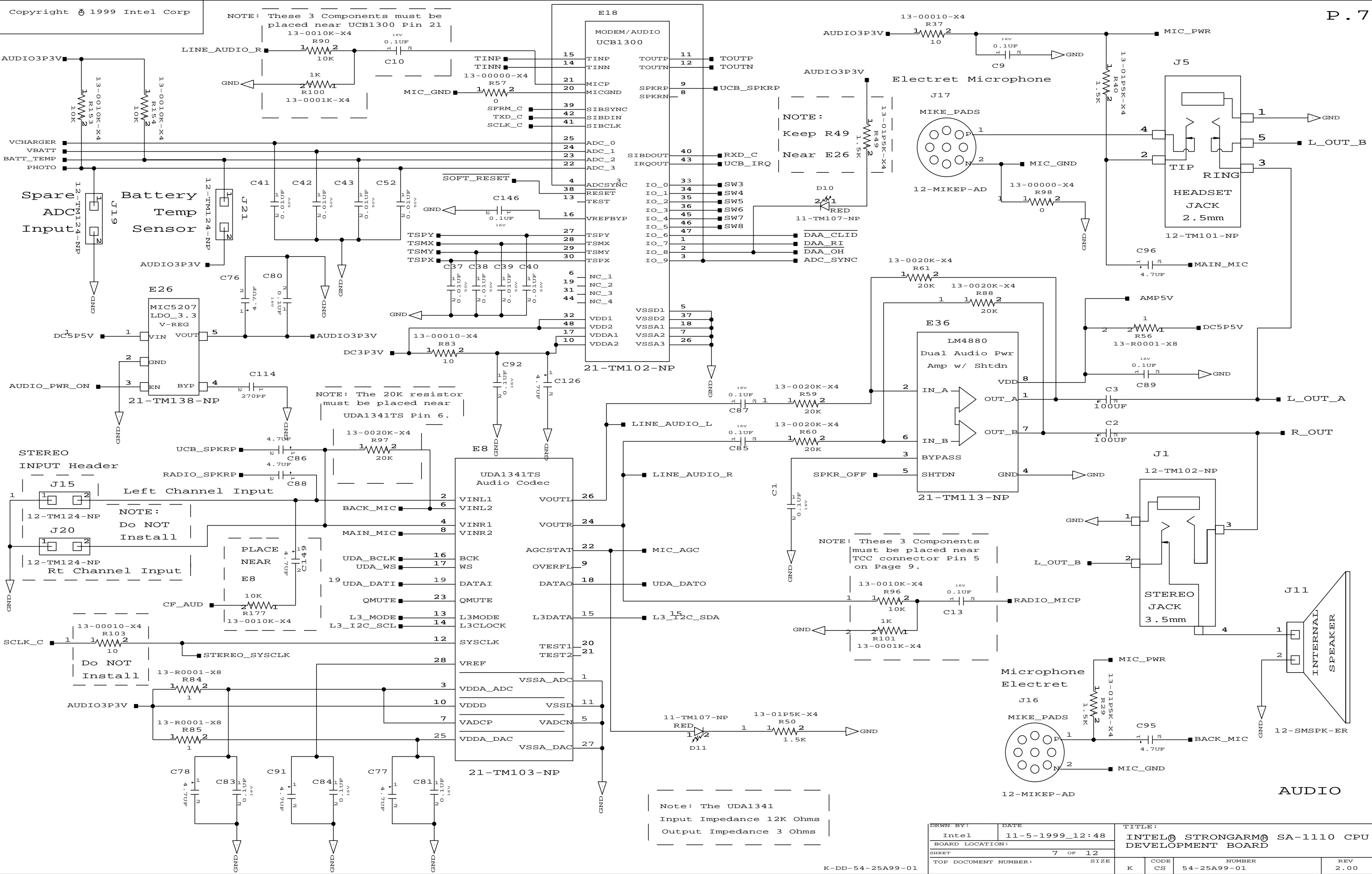
Touch Screen Conn



Design Note: Production designs should use the SHARP LZ9GG31 instead of the Philips PZ3128 CPLD

DRWN BY:	DATE	TITLE:
Intel	11-5-1999_12:48	INTEL® STRONGARM® SA-1110 CPU DEVELOPMENT BOARD
BOARD LOCATION:		
SHEET	6 OF 12	
TOP DOCUMENT NUMBER:	SIZE	NUMBER
		REV
K-DD-54-25A99-01	K	CS 54-25A99-01
		2.00





NOTE: These 3 Components must be placed near UCB1300 Pin 21

NOTE: Keep R49 Near E26

NOTE: The 20K resistor must be placed near UDA1341TS Pin 6.

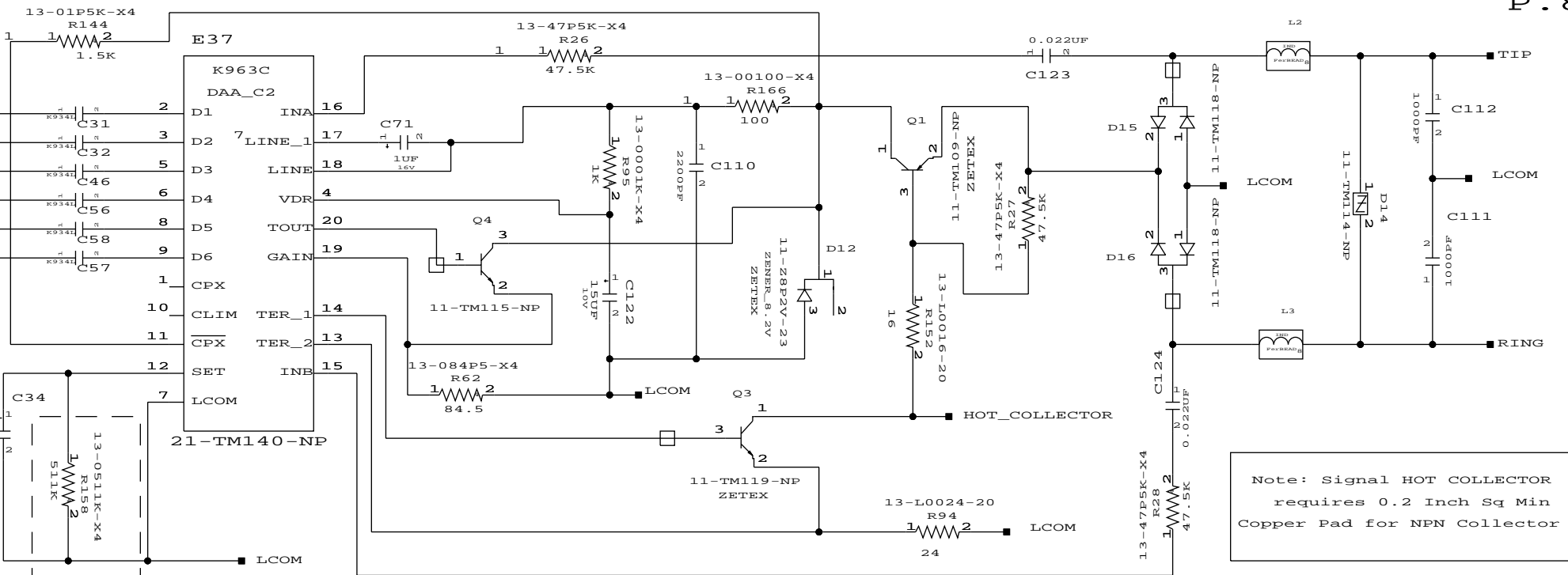
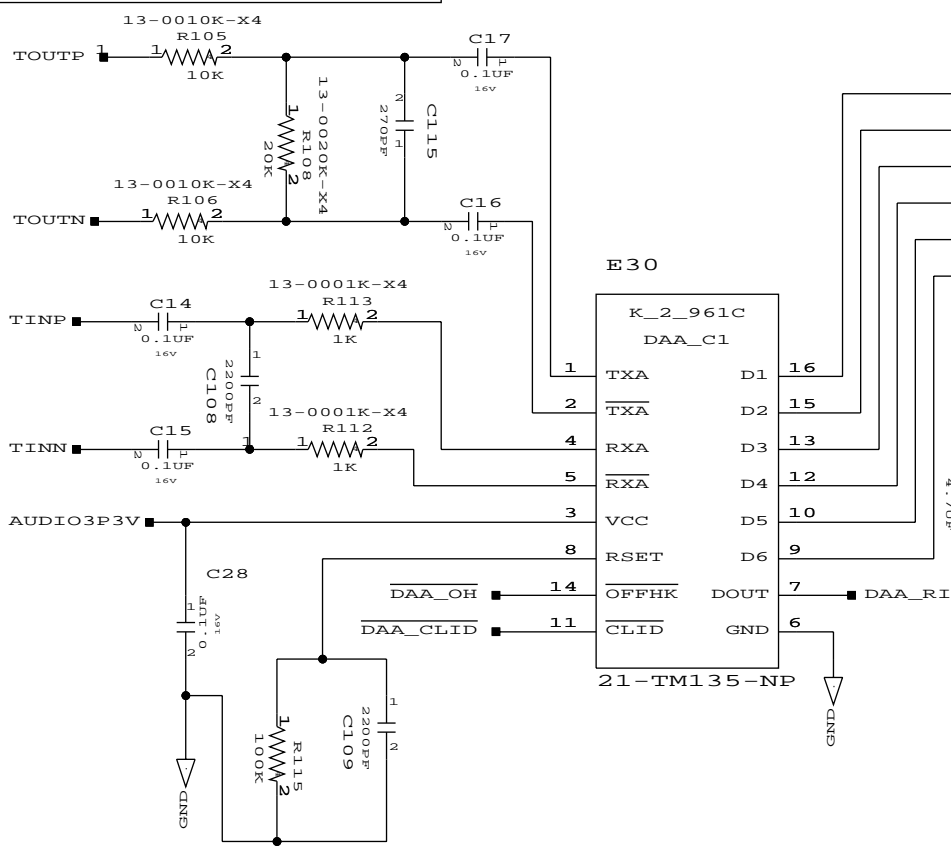
NOTE: These 3 Components must be placed near TCC connector Pin 5 on Page 9.

Note: The UDA1341 Input Impedance 12K Ohms Output Impedance 3 Ohms

DRWN BY:	DATE	TITLE:
Intel	11-5-1999 12:48	INTEL® STRONGARM® SA-1110 CPU DEVELOPMENT BOARD
BOARD LOCATION:		
SHEET	7 OF 12	
TOP DOCUMENT NUMBER:	SIZE	NUMBER
		54-25A99-01
	K	REV
	CS	2.00

K-DD-54-25A99-01

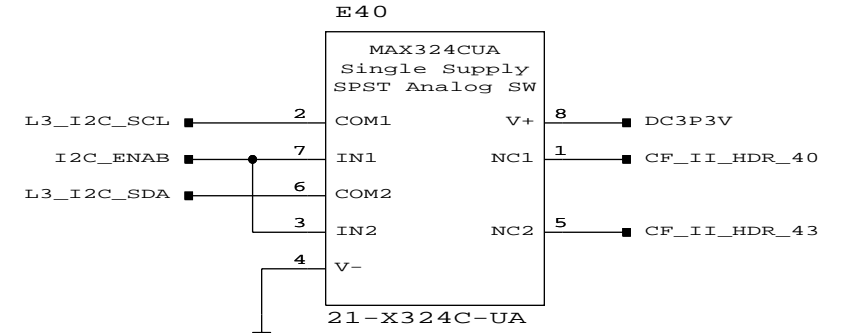
DAA



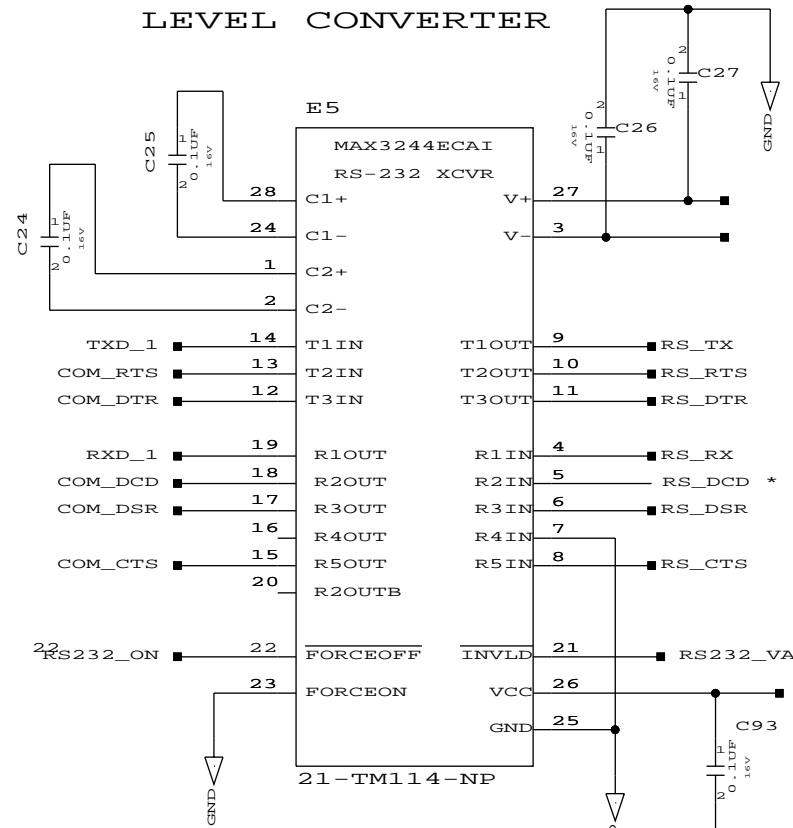
Note: Signal HOT COLLECTOR requires 0.2 Inch Sq Min Copper Pad for NPN Collector

NOTE:
DO NOT
INSTALL

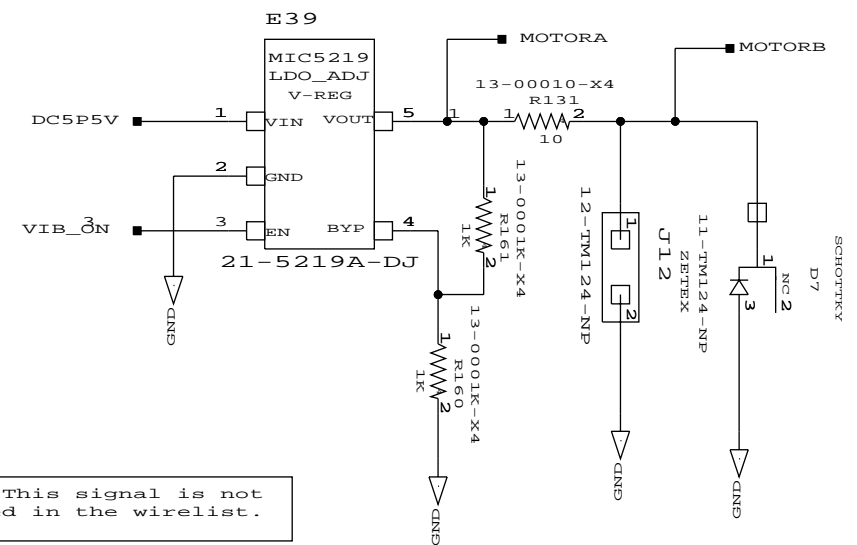
I2C CFII SWITCH



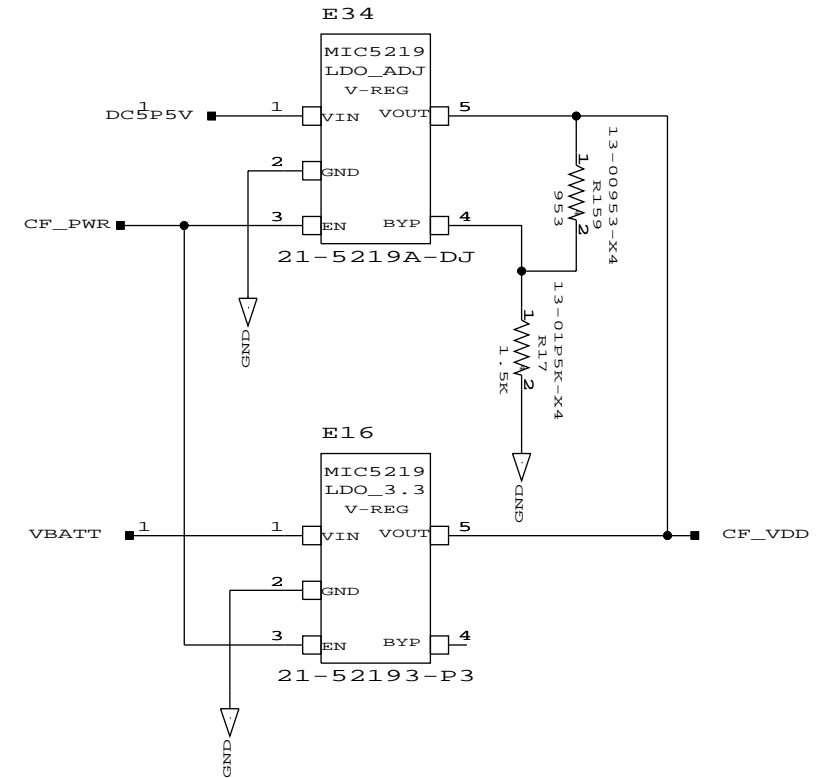
LEVEL CONVERTER



SILENT ALERT

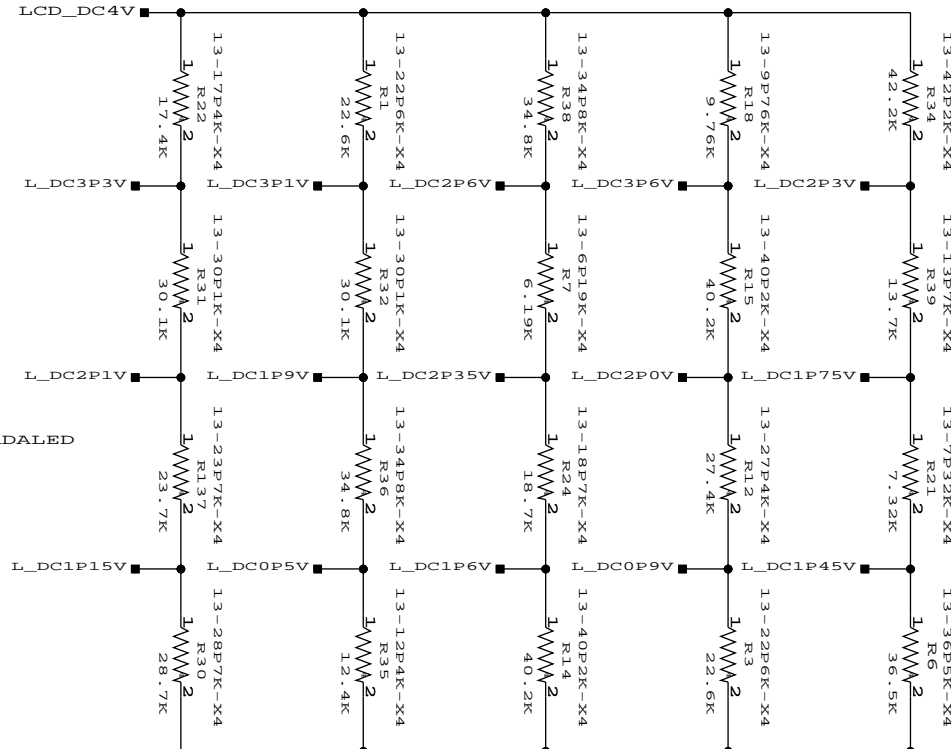
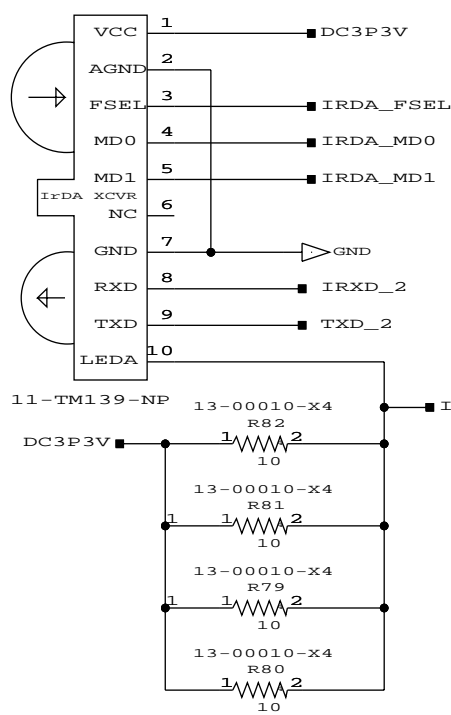


* Note: This signal is not connected in the wirelist.



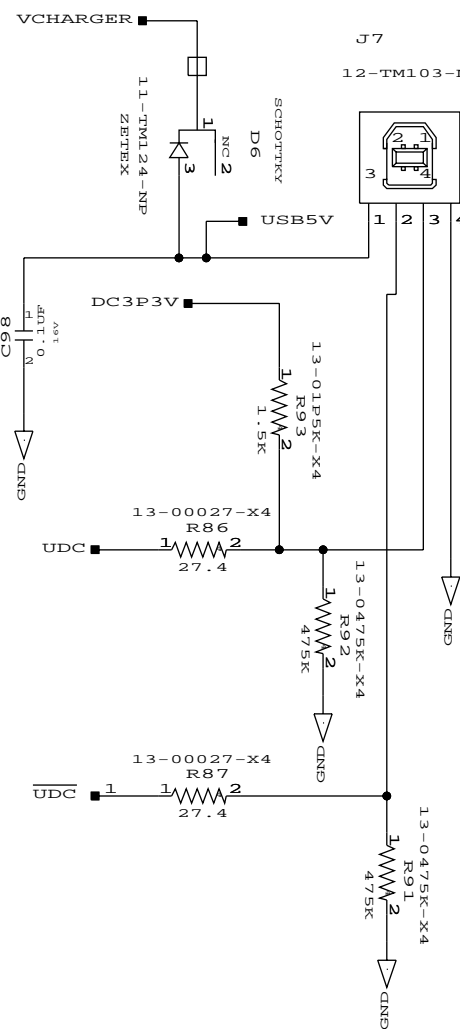
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BOARD LOCATION:		
SHEET	8 OF 12	
TOP DOCUMENT NUMBER:	SIZE	NUMBER
K-DD-54-25A99-01	K	54-25A99-01
	CS	REV
		2.00

IrDA Xcvr

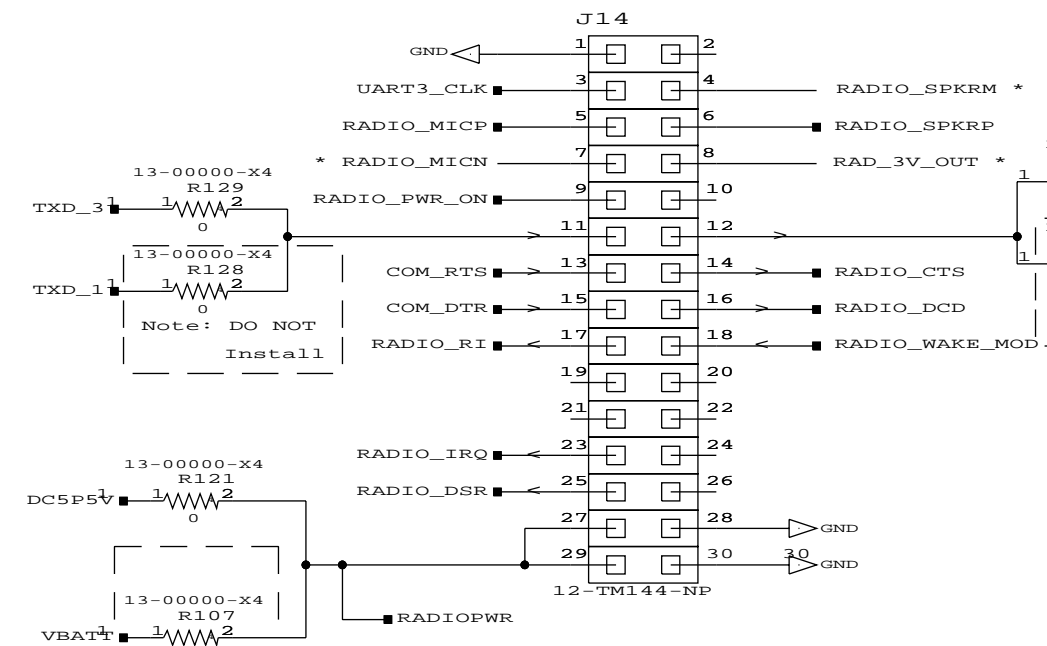


LCD Grey Scale Levels
Each Stack adds to 100K

USB TYPE B Connector

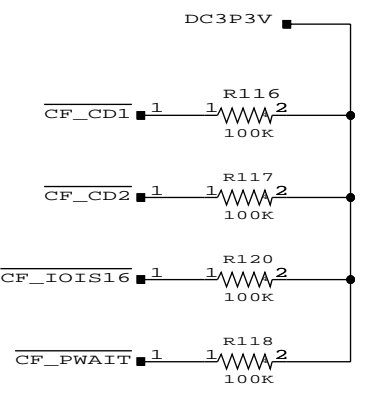


Radio Connector

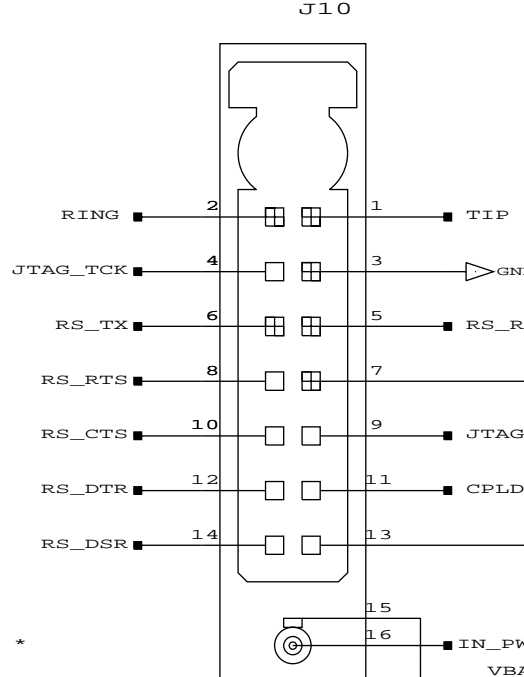


WARNING: DO NOT Intstall the VBATT Resistor

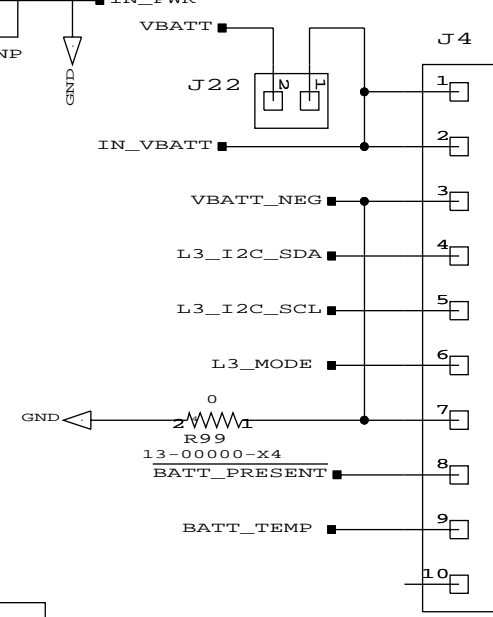
* Note: These signals are not connected in the wirelist.



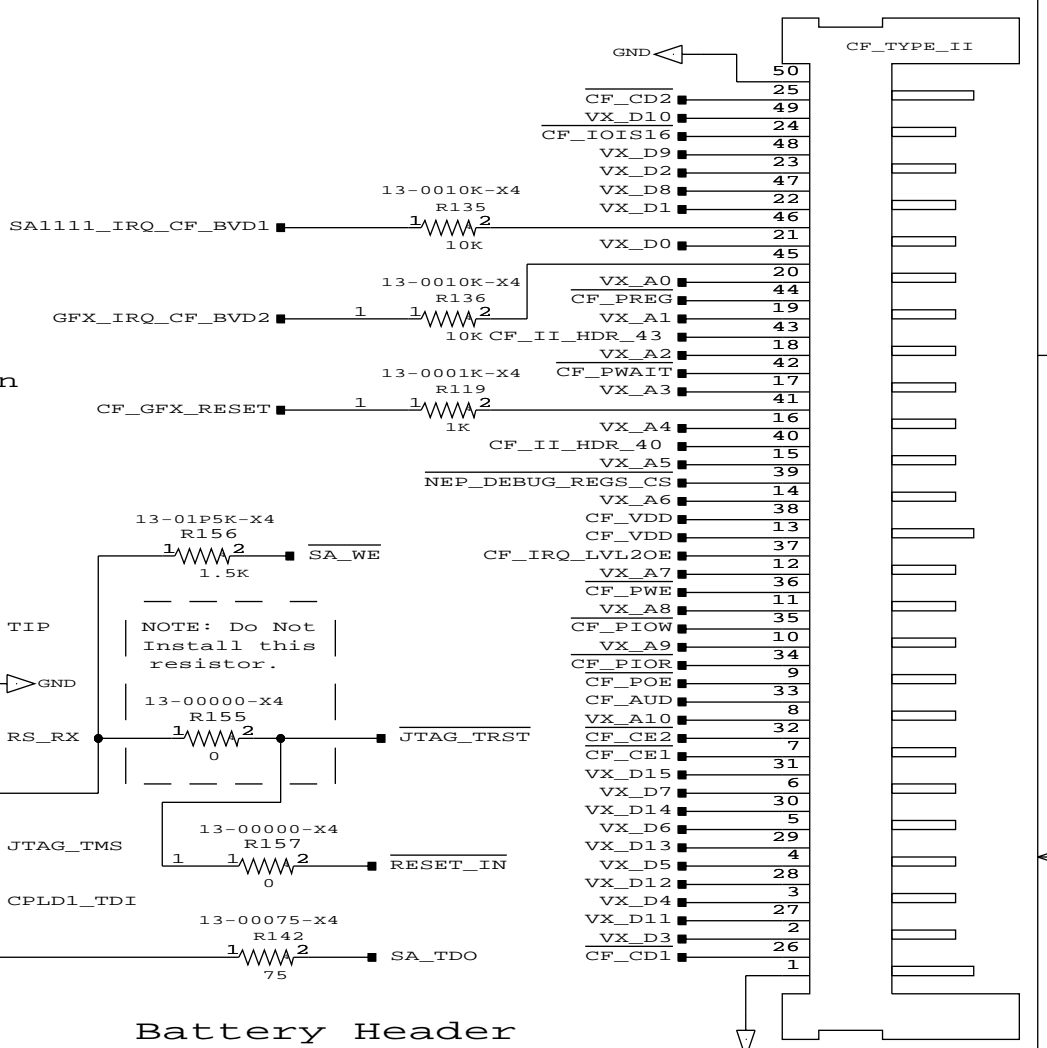
BASE STATION Conn



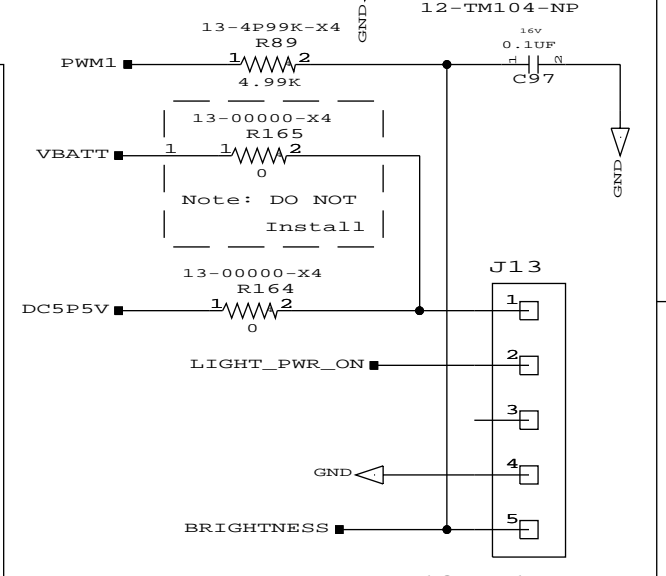
Battery Header



Compact Flash II Header



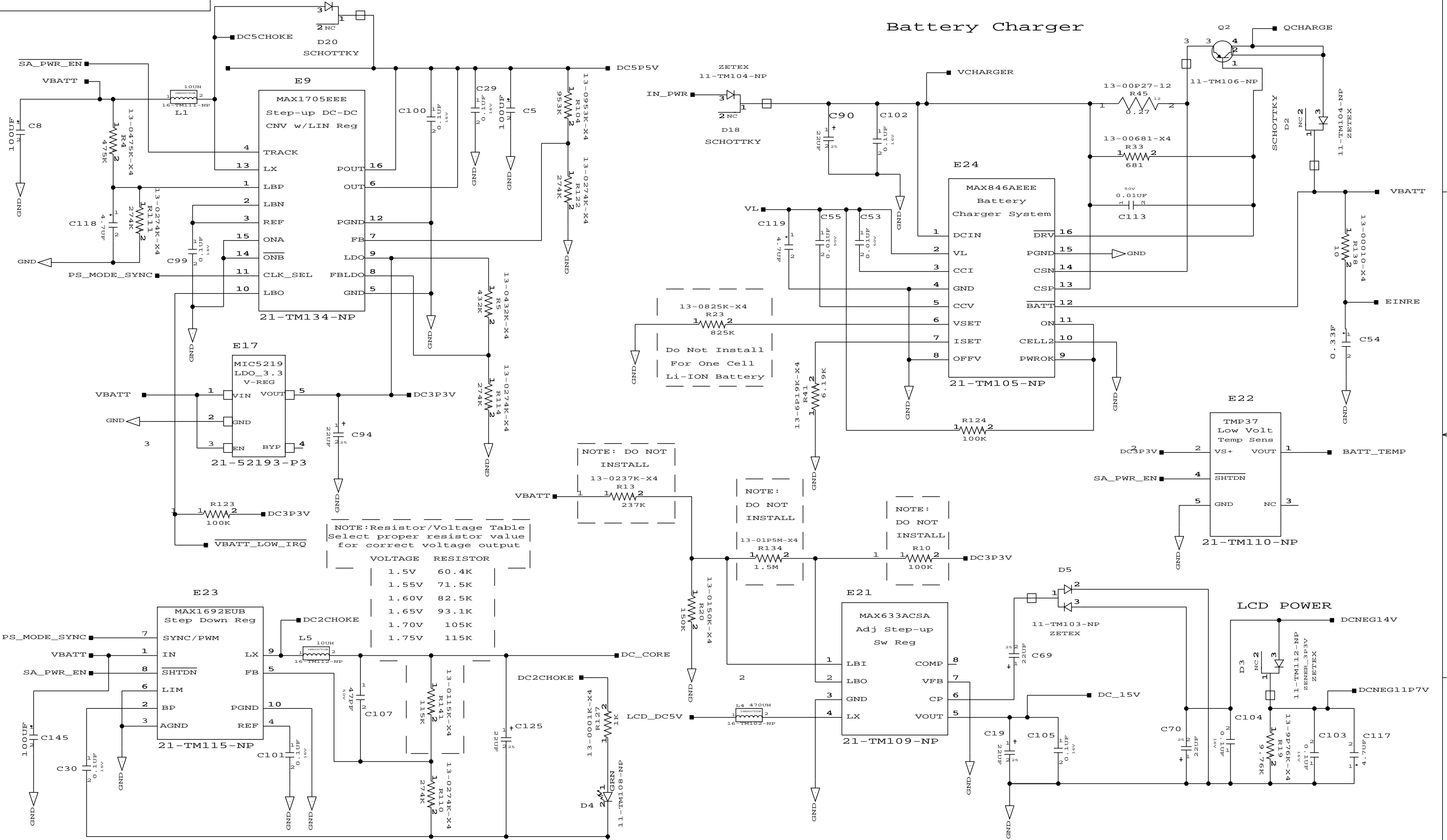
Backlight Header



NOTE: Use wide Etch on Signals, "VBATT", IN_VBATT & VBATT_NEG

DRWN BY:	DATE	TITLE:
Intel	11-5-1999_12:47	INTEL® STRONGARM® SA-1110 CPU DEVELOPMENT BOARD
BOARD LOCATION:		
SHEET	9 OF 12	
TOP DOCUMENT NUMBER:	SIZE	NUMBER
		54-25A99-01
		REV
		2.00

Battery Charger



NOTE: Resistor/Voltage Table
Select proper resistor value
for correct voltage output

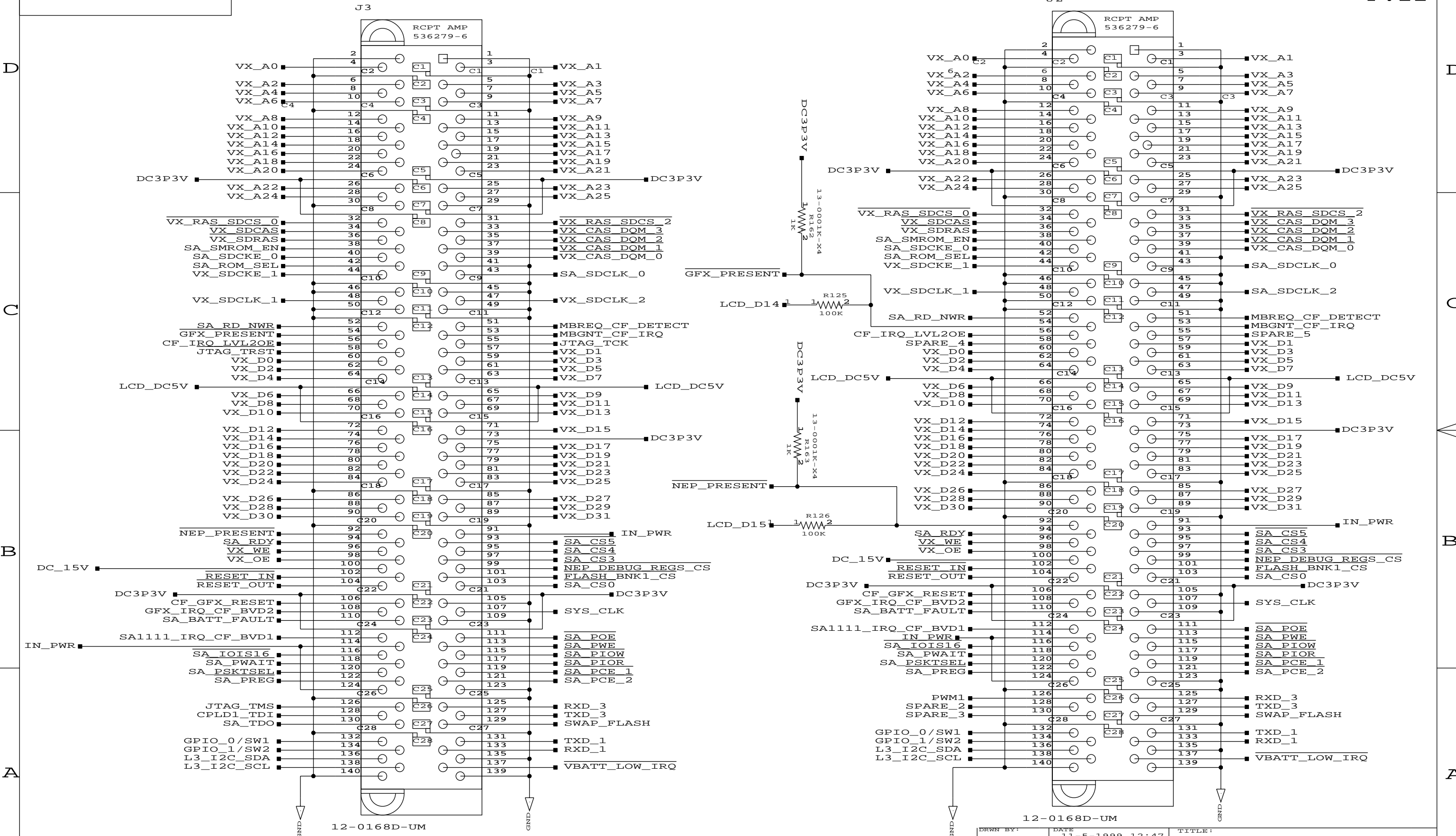
VOLTAGE	RESISTOR
1.5V	60.4K
1.55V	71.5K
1.60V	82.5K
1.65V	93.1K
1.70V	105K
1.75V	115K

NOTE: DO NOT
INSTALL
13-0237K-X4
R13
237K

NOTE:
DO NOT
INSTALL
13-01P5M-X4
R134
1.5M

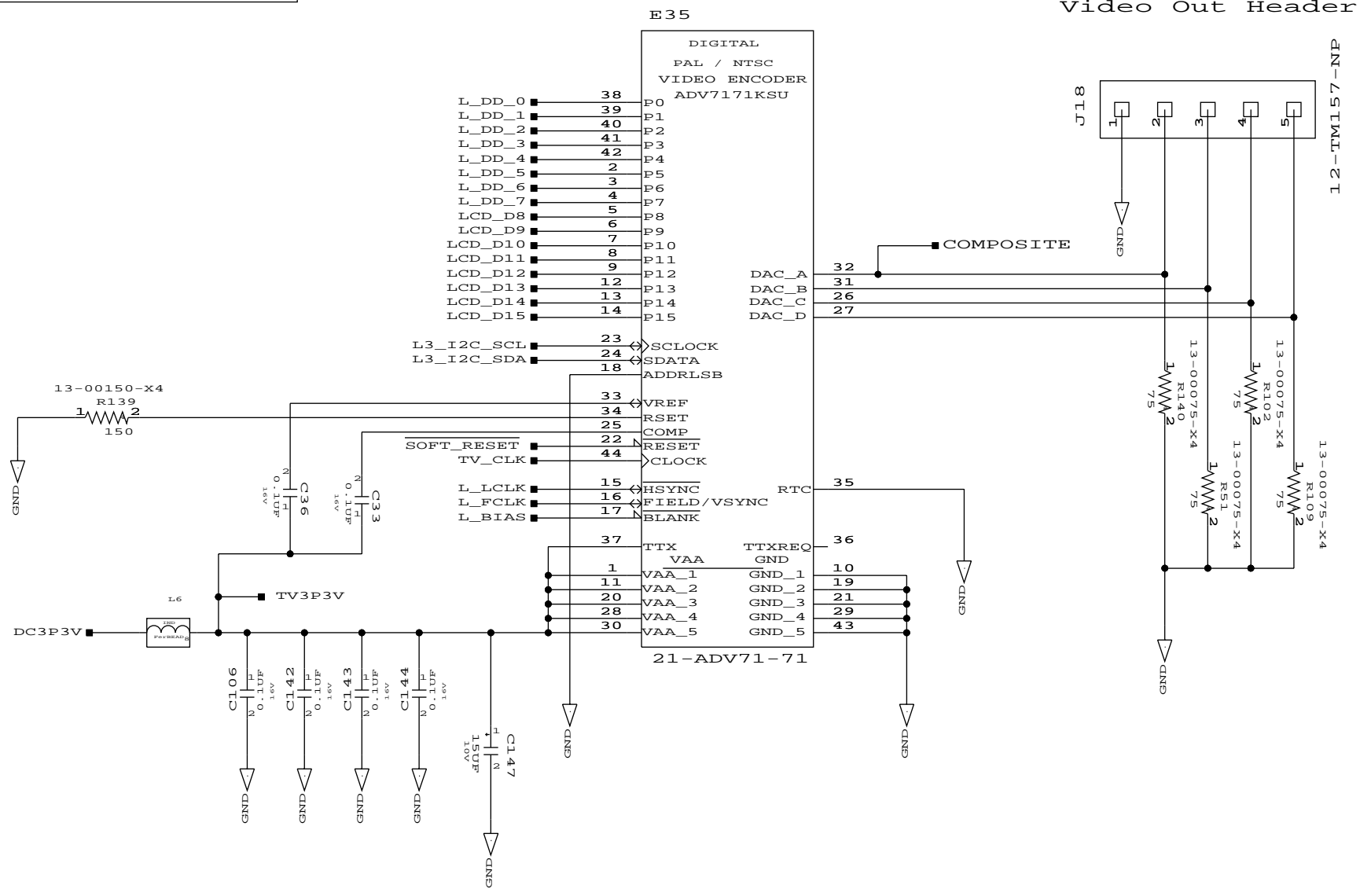
NOTE:
DO NOT
INSTALL
13-01S0K-X4
R20
150K

Switchers for 5.5V, 3V and 2V



12-0168D-UM		TITLE:	
DRWN BY:	DATE:	INTEL® STRONGARM® SA-1110 CPU DEVELOPMENT BOARD	
Intel	11-5-1999_12:47		
BOARD LOCATION:			
SHEET:	11 of 12		
TOP DOCUMENT NUMBER:	SIZE:	CODE:	NUMBER:
K-DD-54-25A99-01		CS	54-25A99-01
		REV:	2.00

Video Out Header



DRWN BY: Intel	DATE 11-5-1999 12:46	TITLE: INTEL® STRONGARM® SA-1110 CPU DEVELOPMENT BOARD		
BOARD LOCATION:		SHEET 12 of 12		
TOP DOCUMENT NUMBER: K-DD-54-25A99-01	SIZE K	CODE CS	NUMBER 54-25A99-01	REV 2.00

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