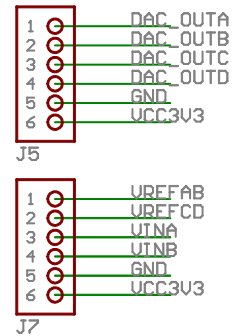
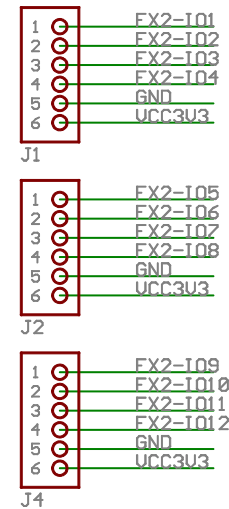


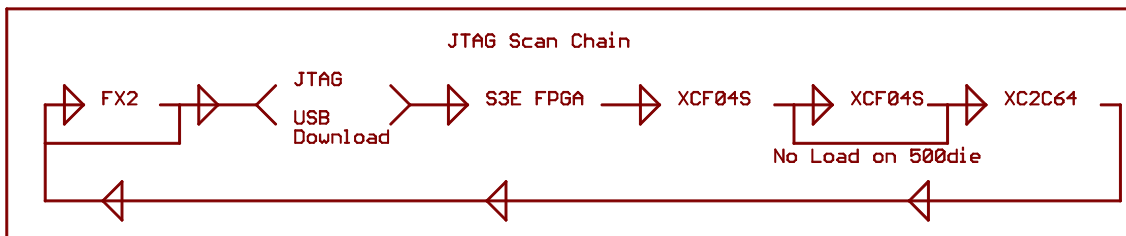
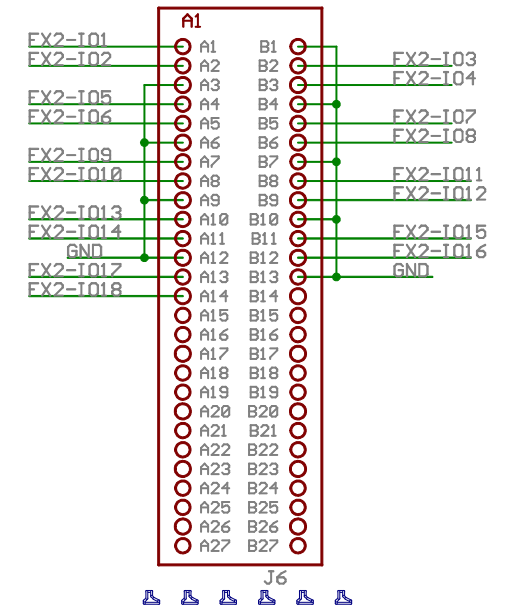
D/A and A/D header



6 Pin Header Accessory

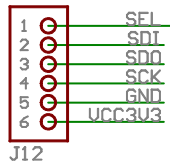


Full Size Soft Touch

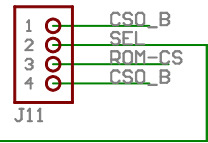


Spartan 3E Starter Board		Engineer: CC
Copyright 2004, 2005		Author: GMA
SHEET: Hirose and Expansion Connectors		Rev: C.1
TITLE: S3E Starter		Sheet:1/14
Doc: 500-087	Date: 11/1/05	

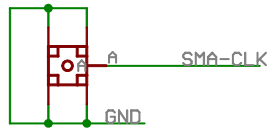
SPI Port



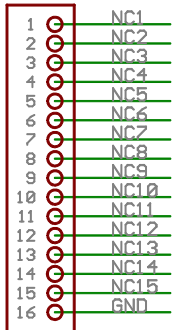
CS Jumper Select



SMA Clock



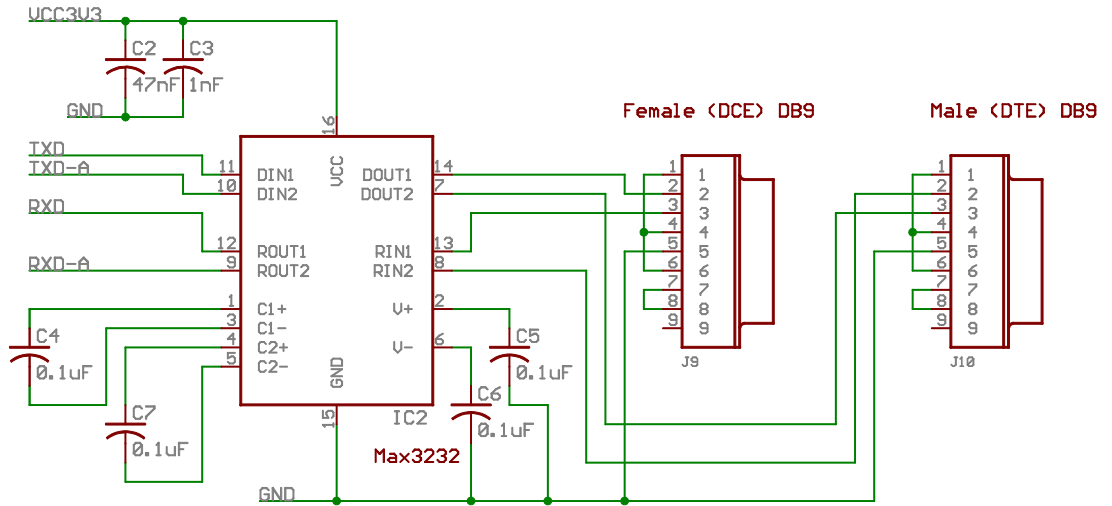
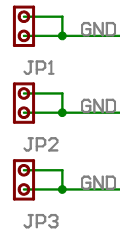
1200E/1600E Expansion Header



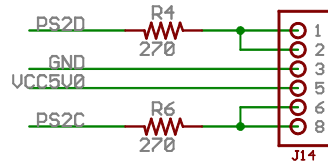
Load on 1600E  
No Load on 500E

- FID1
- FID2
- FID3
- FID4

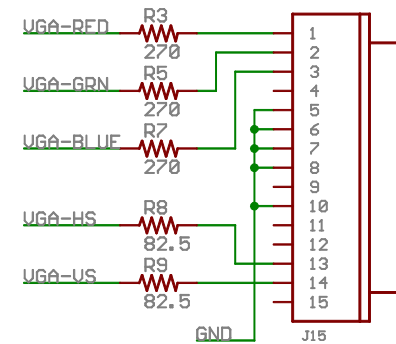
Ground Test/Storage Blocks



Keyboard PS2 connector



UGA Port



Spartan 3E Starter Board

Copyright 2004, 2005

Engineer: CC

SHEET: RS232, UGA, PS2 and Parallel I/O

Author: GMA

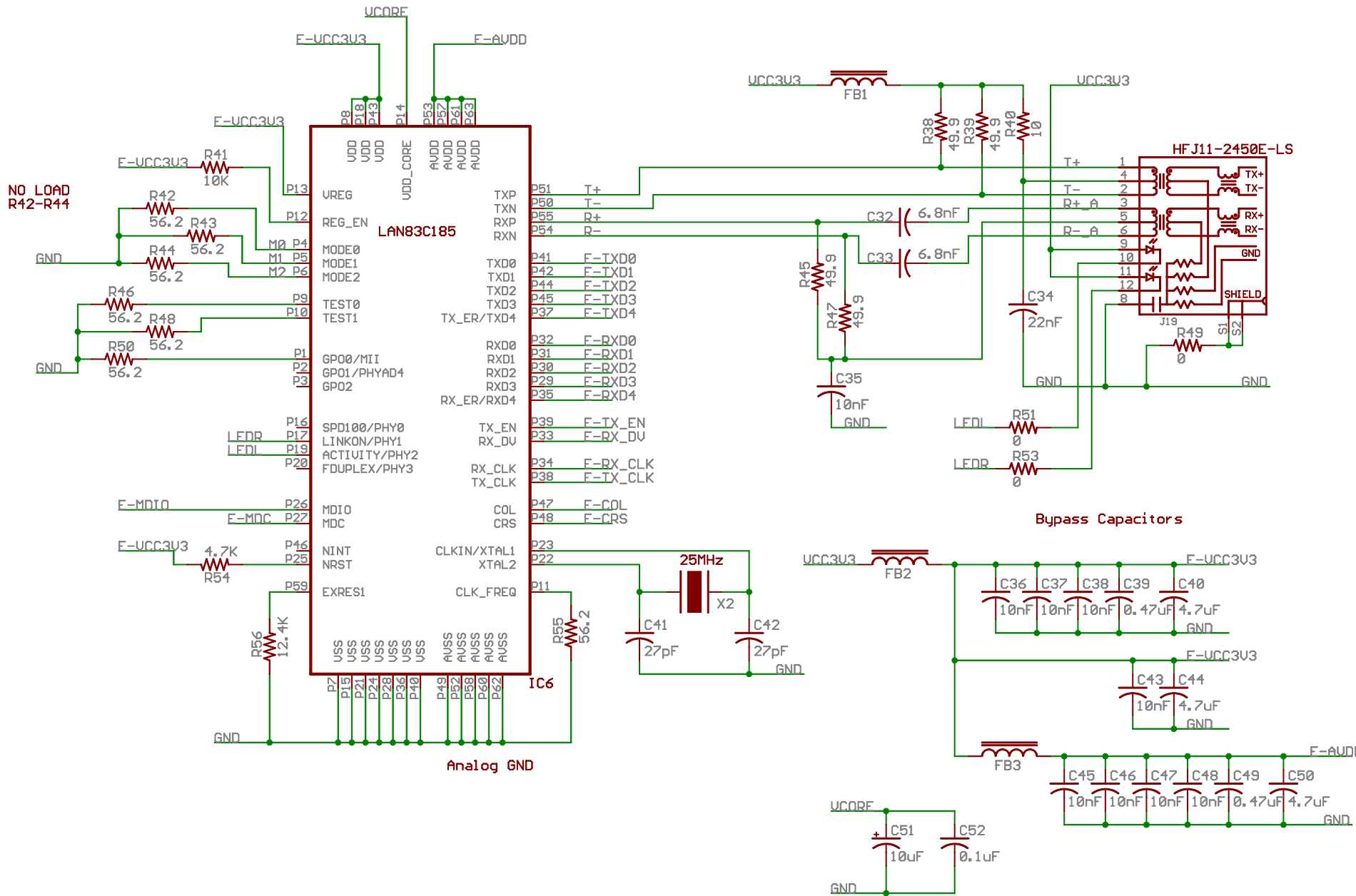
TITLE: S3E Starter

Rev: C.1

Doc: 500-087

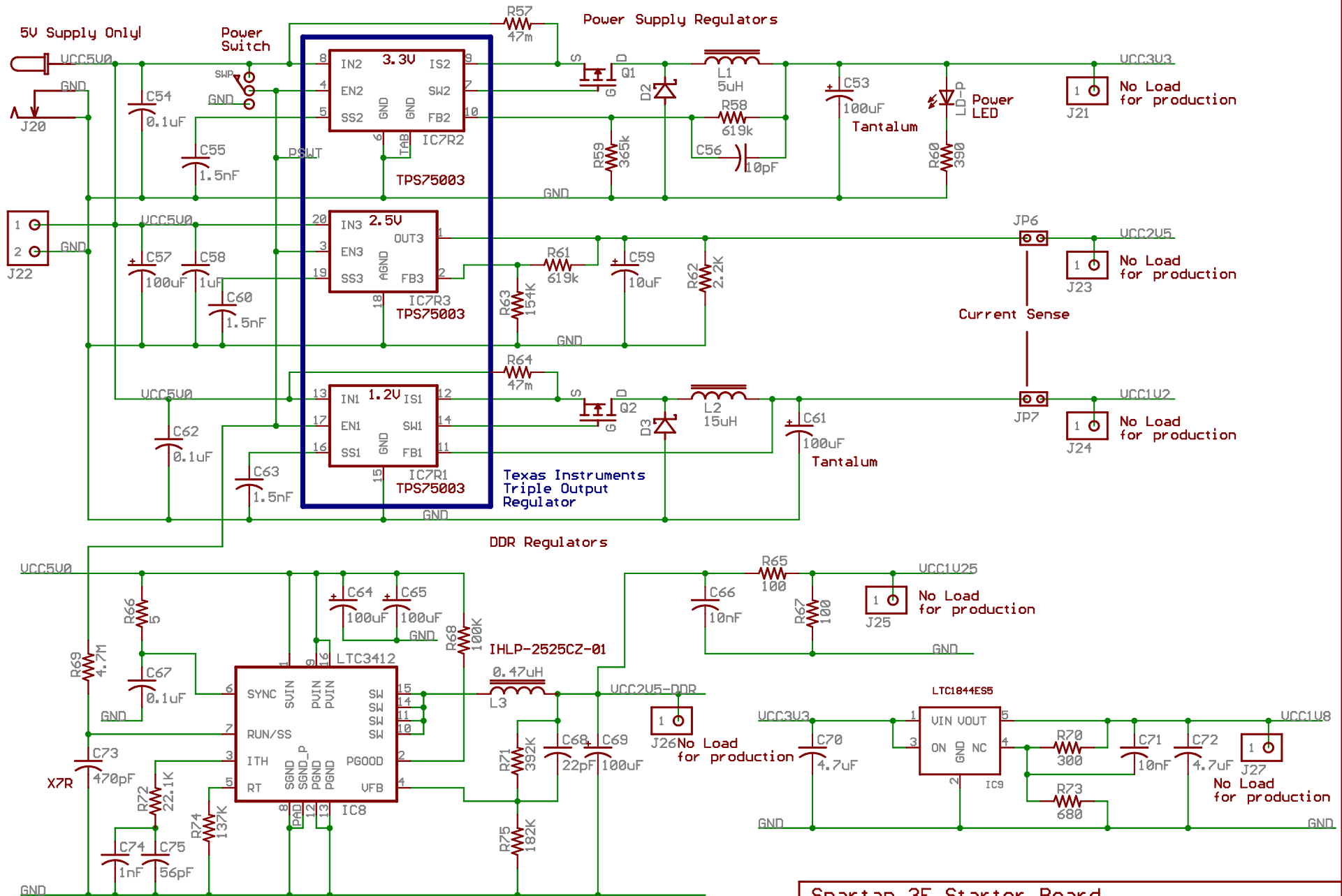
Date: 11/1/05

Sheet: 2/14

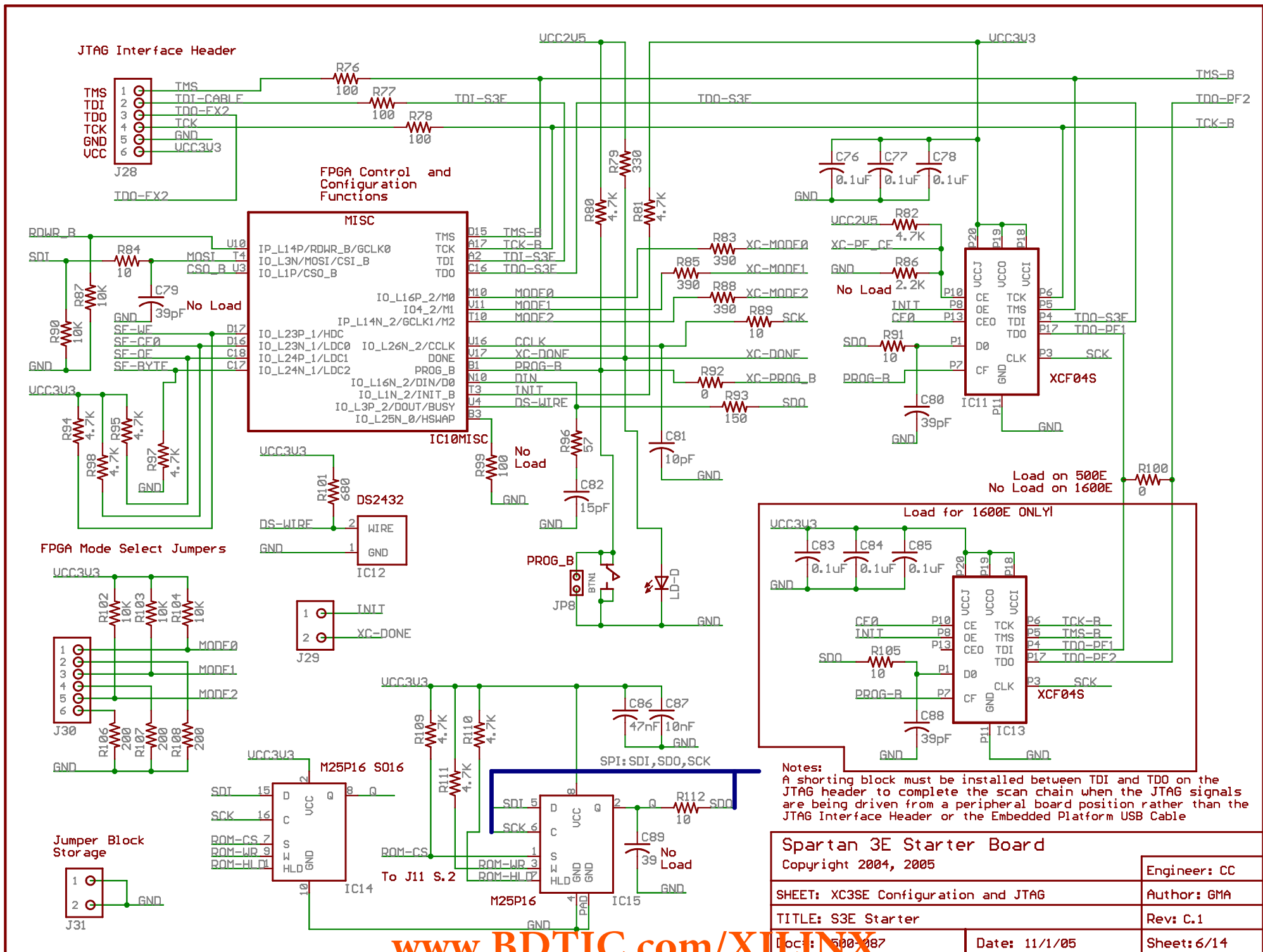


Bypass Capacitors

Spartan 3E Starter Board		Engineers: CC
Copyright 2004, 2005		Author: GMA
SHEET: Ethernet Interface		Rev: C.1
TITLE: S3E Starter		Sheet: 4/14
Doc: 500-087	Date: 11/1/05	



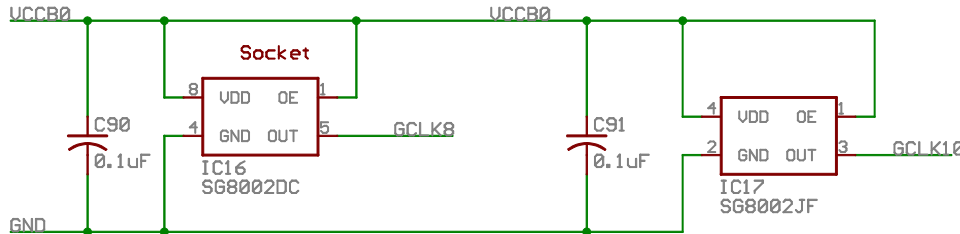
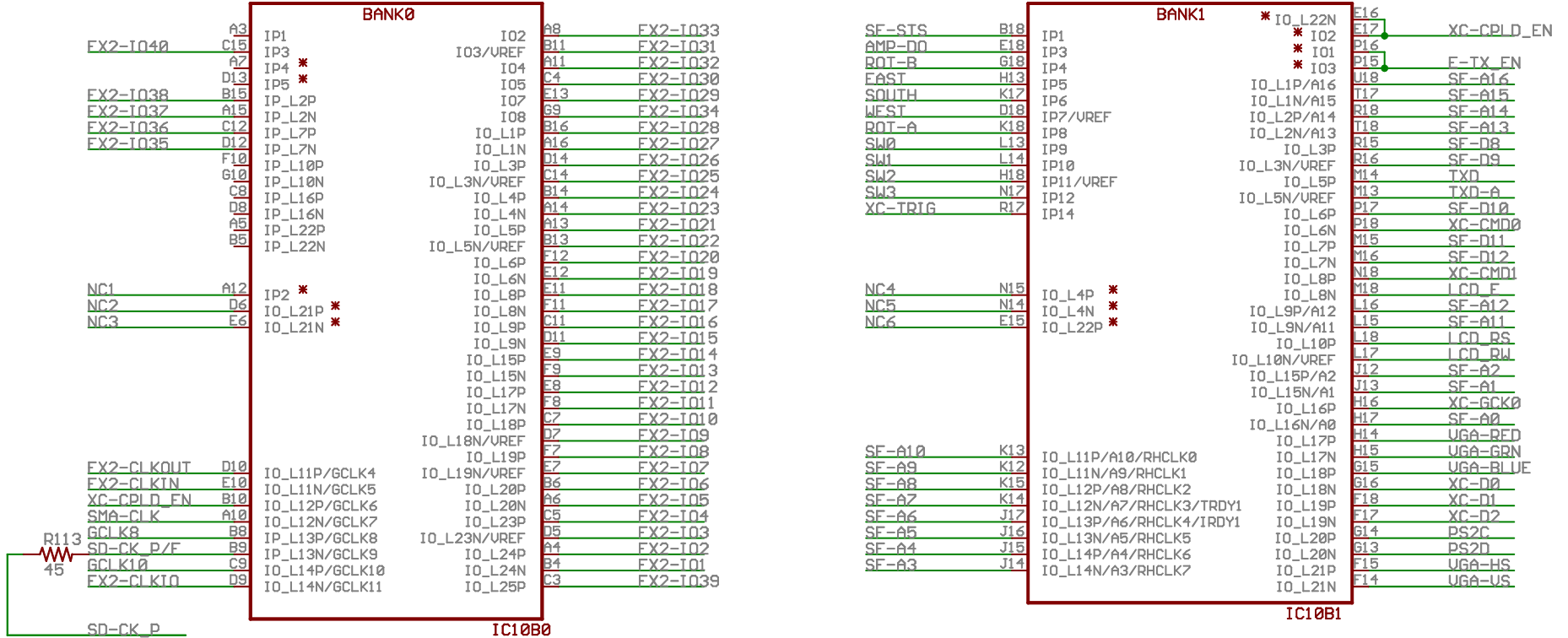
<b>Spartan 3E Starter Board</b>		Engineer: CC
Copyright 2004, 2005		Author: GMA
SHEET: Power Supply and Regulators		Rev: C.1
TITLE: S3E Starter		Sheet: 5/14
Loc: 500-087	Date: 11/1/05	



<b>Spartan 3E Starter Board</b>		Engineers: CC
Copyright 2004, 2005		Author: GMA
SHEET: XC3SE Configuration and JTAG		Rev: C.1
TITLE: S3E Starter		Sheet: 6/14
Loc: 500-087	Date: 11/1/05	

UCC for Bank 0 is set By JP9 on Sheet 9

UCC for Bank 1 = 3.3V



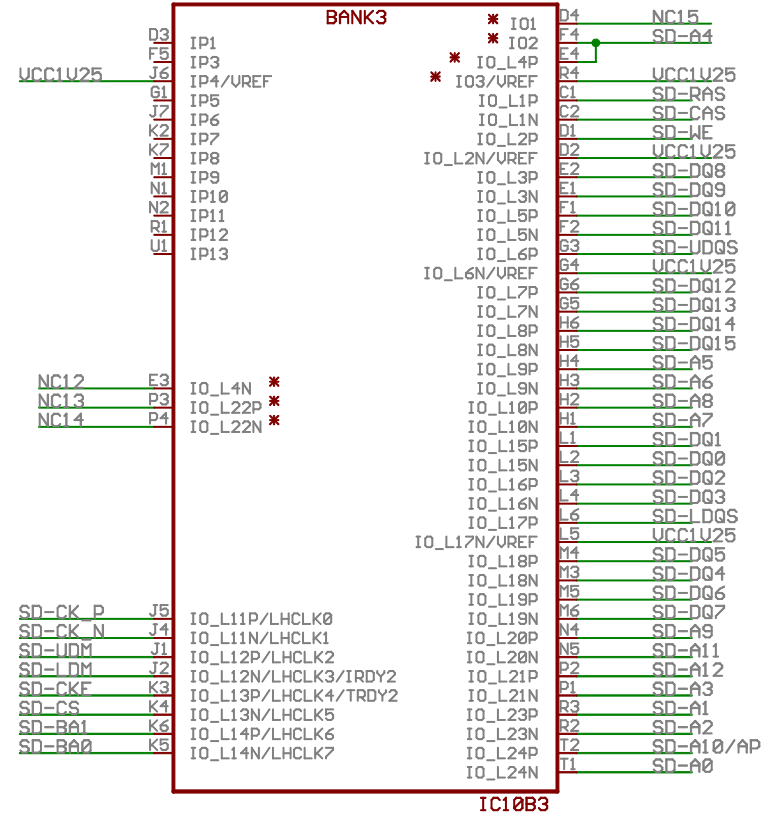
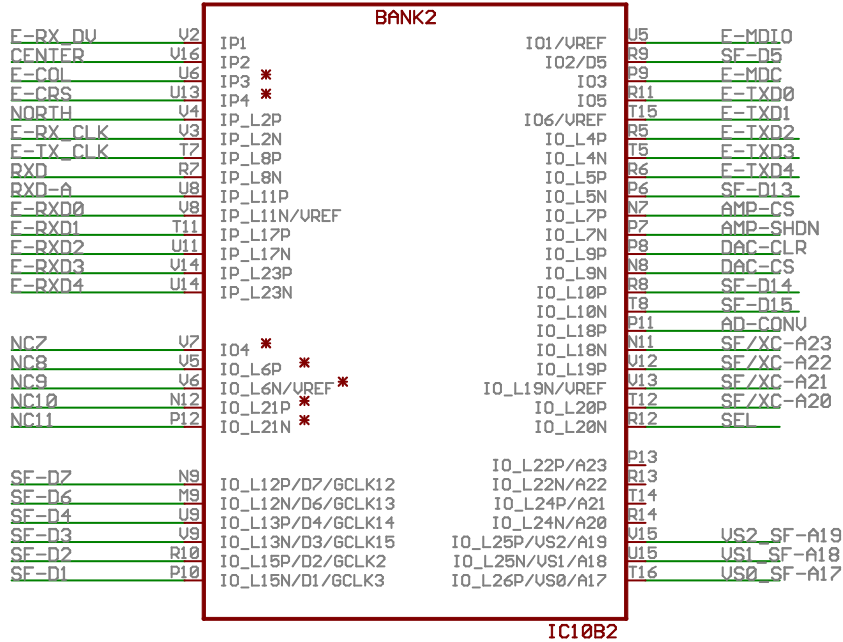
\* Notes are for pins that vary between 500/1200/1600 dies

- AD - A/D Converter (11)
- AMP - Gain Amplifier (11)
- DAC - D/A converter (11)
- E- Ethernet (4)
- FX2 - Hirose FX2 Connector (1)
- ROM - M25P16 (6)
- SD- SD RAM (12)
- SF - StrataFlash (12)
- ST - Soft Touch Connector (1)
- U - USB (3)
- XC - XC9572 (10)

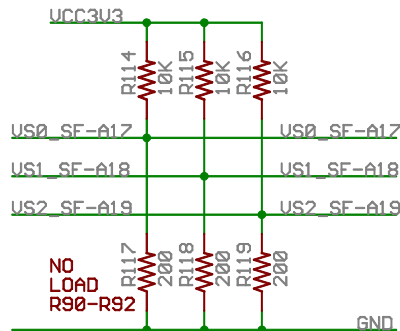
Spartan 3E Starter Board		Engineers: CC
Copyright 2004, 2005		Author: GMA
SHEET: XC3SE Banks 0 and 1, Clock ICs		Rev: C.1
TITLE: S3E Starter		Sheet: 7/14
Doc: 500-087	Date: 11/1/05	

Ucc for Bank 2 = 3.3V

UCC vor Bank 3 = 2.5V DDR

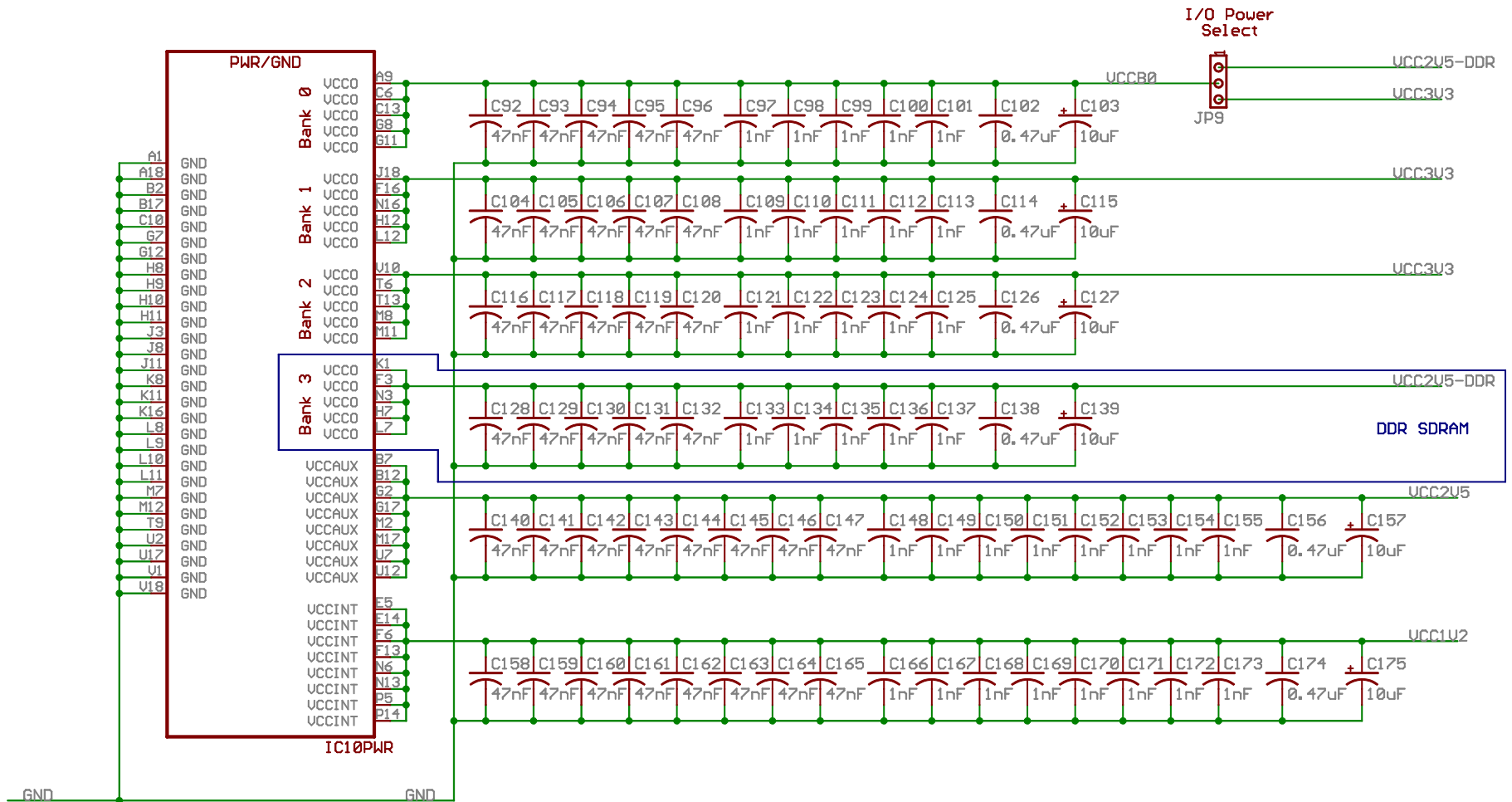


- AD - A/D Converter (11)
- AMP - Gain Amplifier (11)
- DAC - D/A converter (11)
- E- Ethernet (4)
- FX2 - Hirose FX2 Connector (1)
- ROM - M25P16 (6)
- SD- SD RAM (12)
- SF - StrataFlash (12)
- ST - Soft Touch Connector (1)
- U - USB (3)
- XC - XC9572 (10)



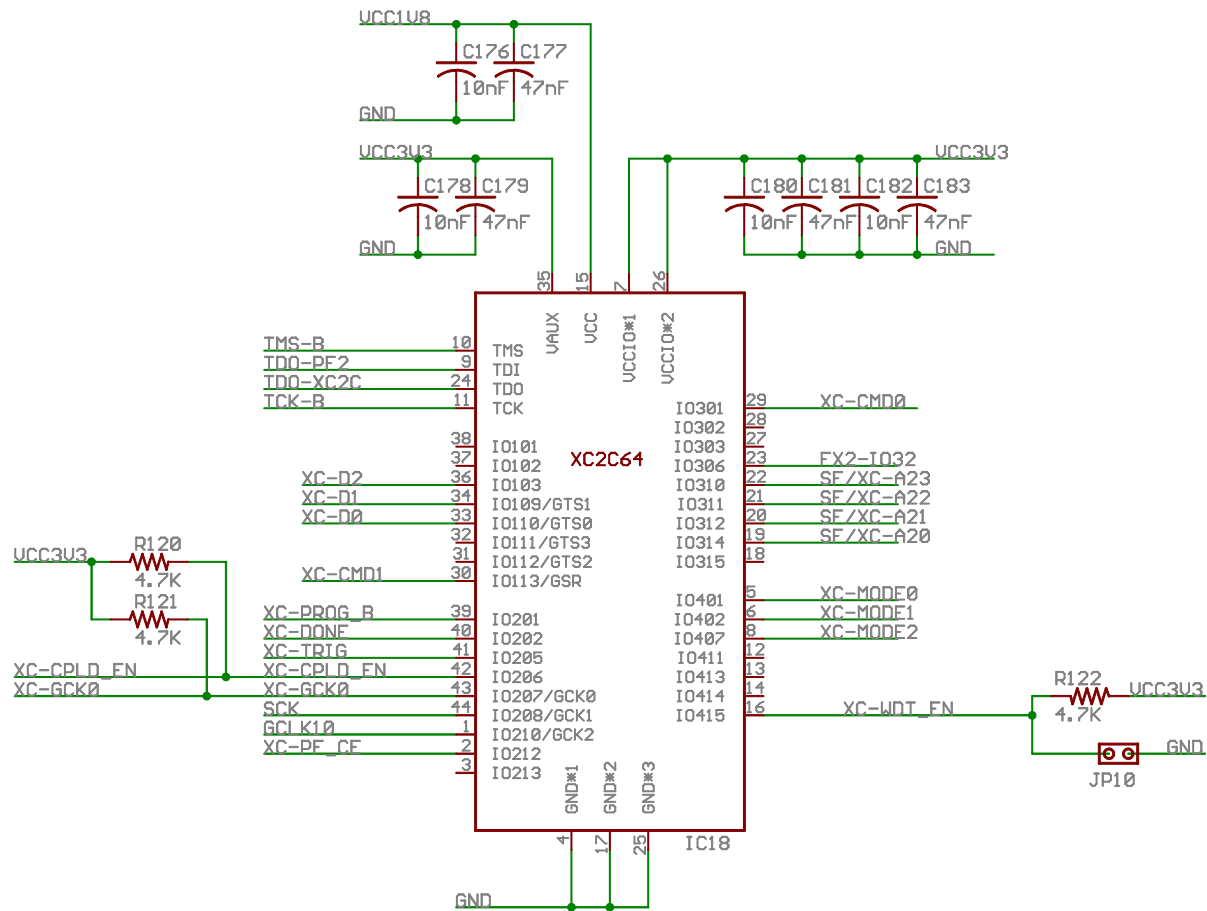
\* Notes are for pins that vary between 500/1200/1600 dies

Spartan 3E Starter Board		Engineer: CC
Copyright 2004, 2005		Author: GMA
SHEET: XC3SE Banks 2 and 3		Rev: C.1
TITLE: S3E Starter		Sheet: 8/14
Doc: 500-087	Date: 11/1/05	



<b>Spartan 3E Starter Board</b>		Engineer: CC
Copyright 2004, 2005		Author: GMA
SHEET: XC3SE Power Decoupling		Rev: C.1
TITLE: S3E Starter		Sheet: 9/14
Doc: 500-087	Date: 11/1/05	

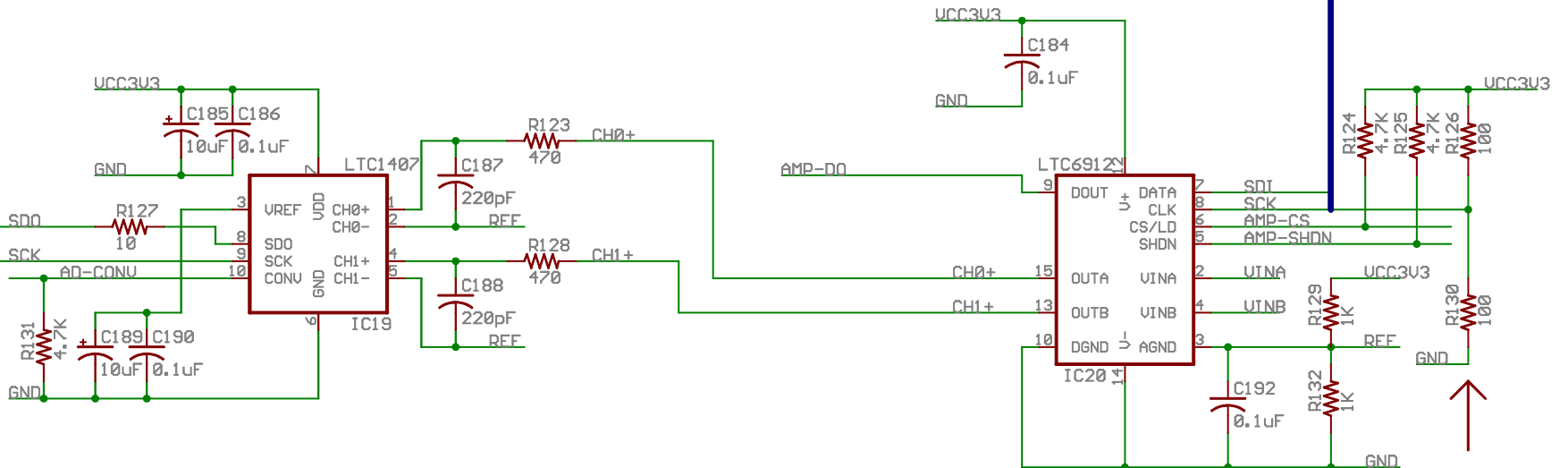




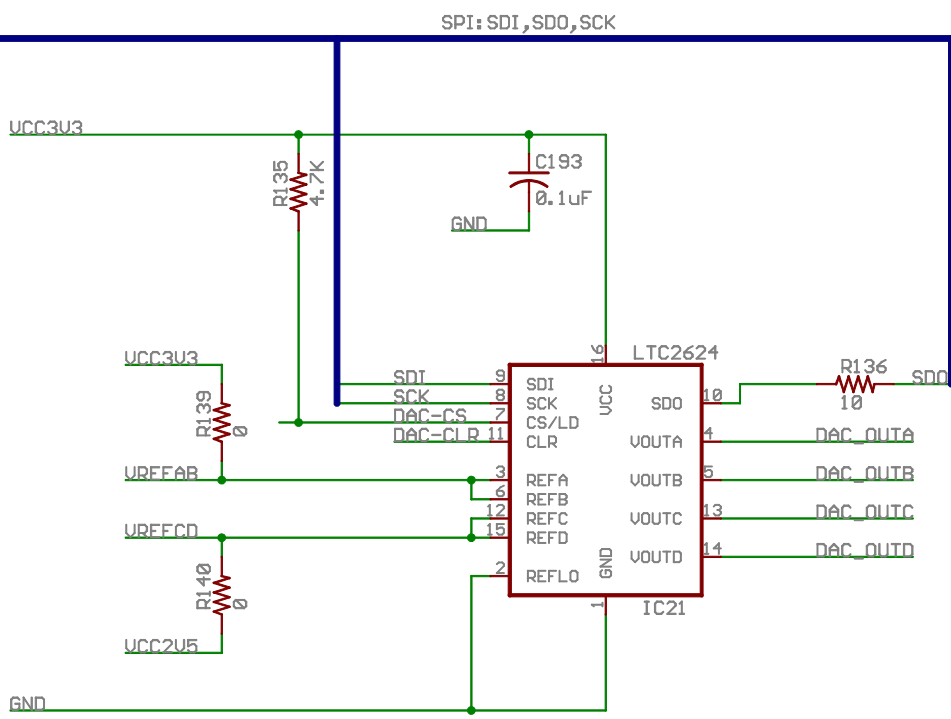
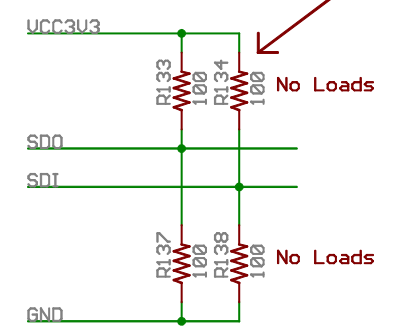
Spartan 3E Starter Board		Engineer: CC
Copyright 2004, 2005		Author: GMA
SHEET: XC2C64 CPLD		Rev: C.1
TITLE: S3E Starter		Sheet:10/14
Doc: 500-087	Date: 11/1/05	

SPI: SDI, SDO, SCK

SPI: SDI, SDO, SCK



Thevenin Termination (place at end of chain)



### Spartan 3E Starter Board

Copyright 2004, 2005

Engineer: CC

SHEET: A/D and D/A Converters

Author: GMA

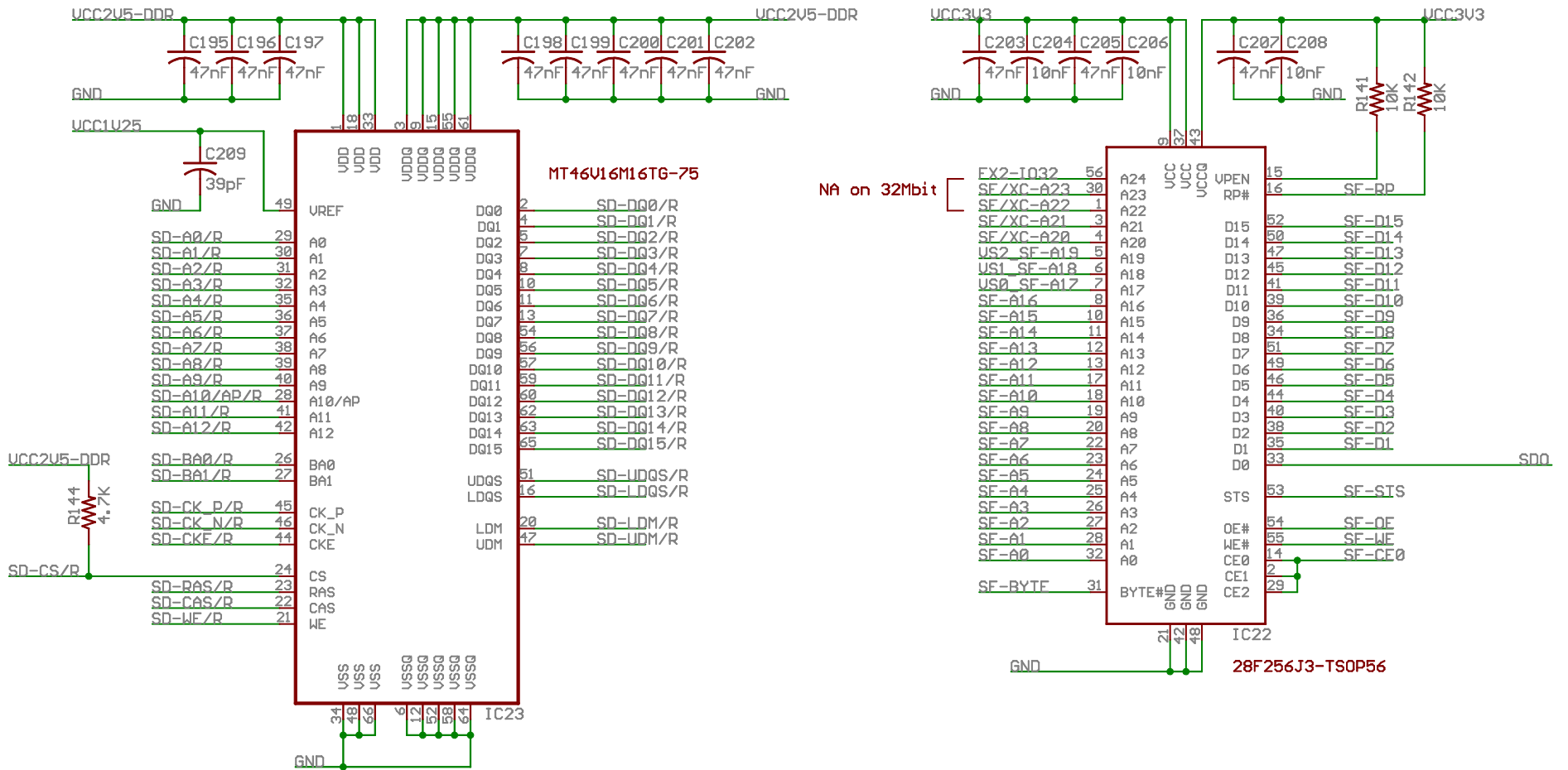
TITLE: S3E Starter

Rev: C.1

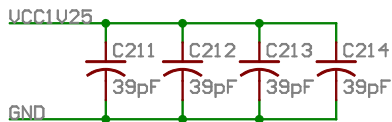
Doc: 500-087

Date: 11/1/05

Sheet: 11/14



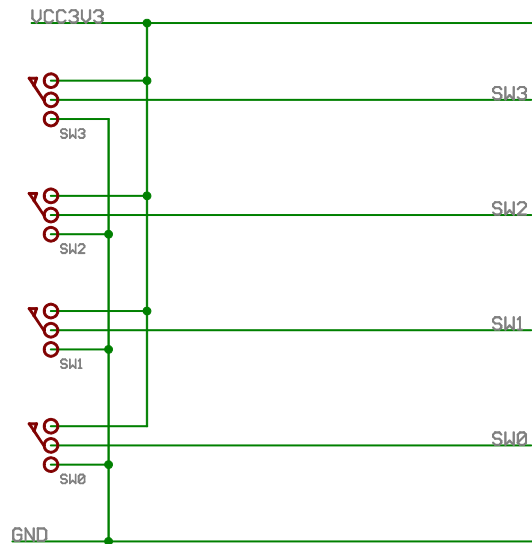
**UREF Decoupling**



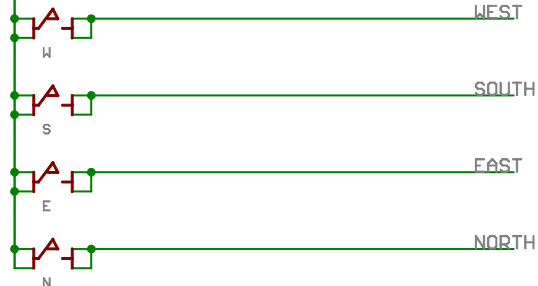
NOTE: Termination network for IC20, the MT46U16M16TG-75 on sheet 14

Spartan 3E Starter Board		Engineer: CC
Copyright 2004, 2005		Author: GMA
SHEET: DDR SDRAM and StrataFlash		Rev: C.1
TITLE: S3E Starter		Sheet:12/14
Doc: 500-087	Date: 11/1/05	

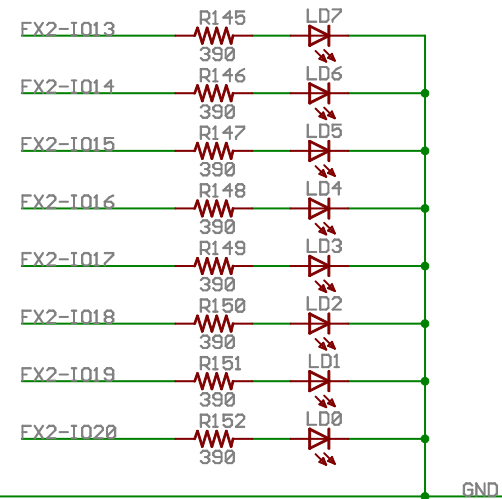
Switches



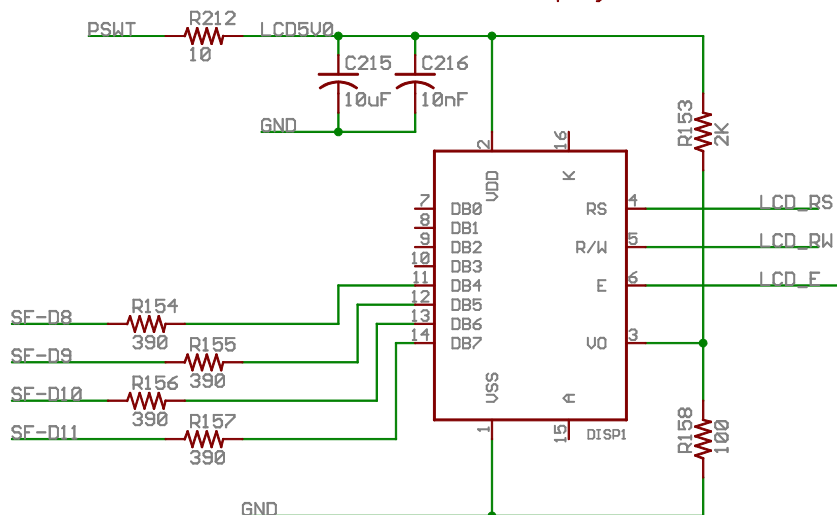
Buttons



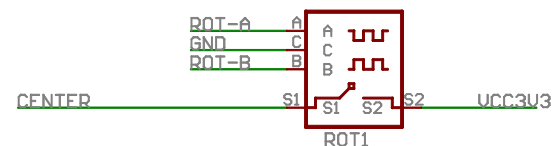
LEDs



LCD Display



Pushbutton/Rotary Encoder



Spartan 3E Starter Board

Copyright 2004, 2005

Engineer: CC

SHEET: LCD and General IOs

Author: GMA

TITLE: S3E Starter

Rev: C.1

Loc: 500-087

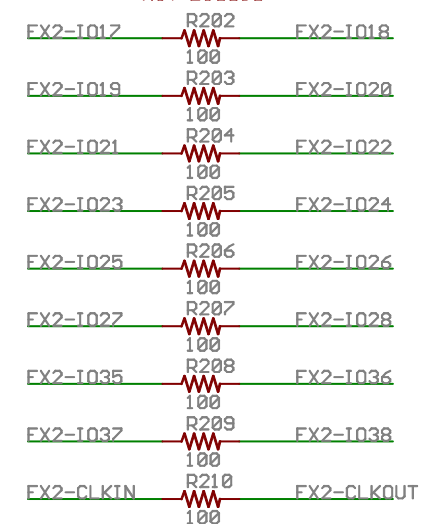
Date: 11/1/05

Sheet:13/14

DDR Series Termination



FX2 Differential Termination  
Not Loaded



Spartan 3E Starter Board		Engineer: CC
Copyright 2004, 2005		Author: GMA
SHEET: DDR Memory Signals		Rev: C.1
TITLE: S3E Starter		Sheet:14/14
Doc: 500-087	Date: 11/1/05	