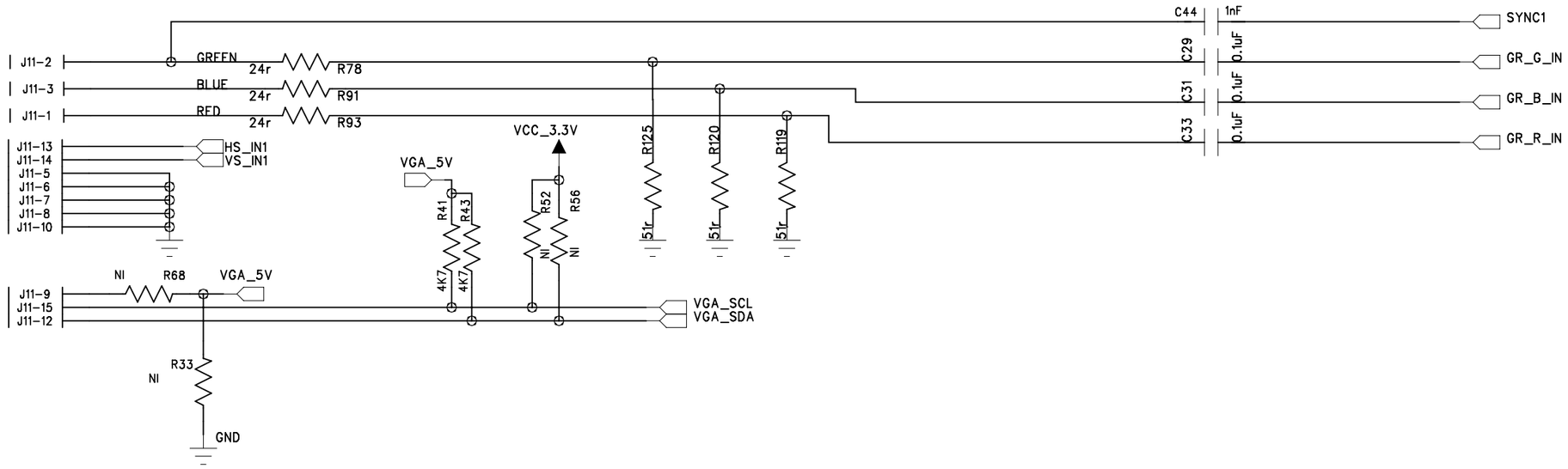
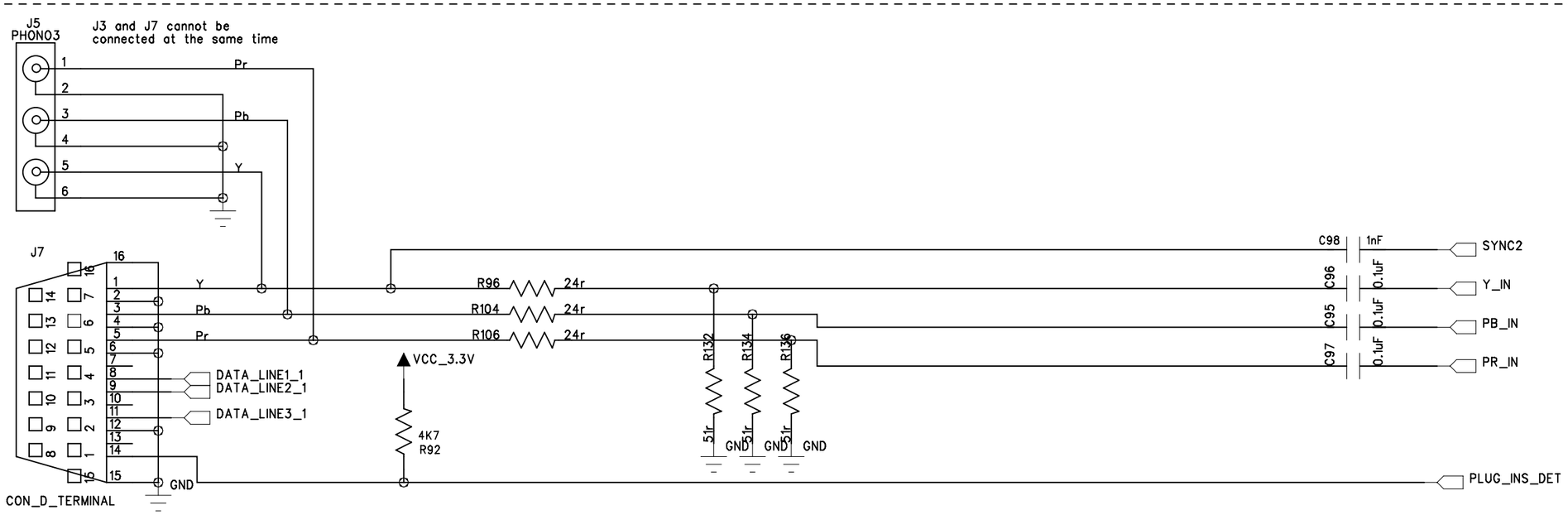
VGA Connector



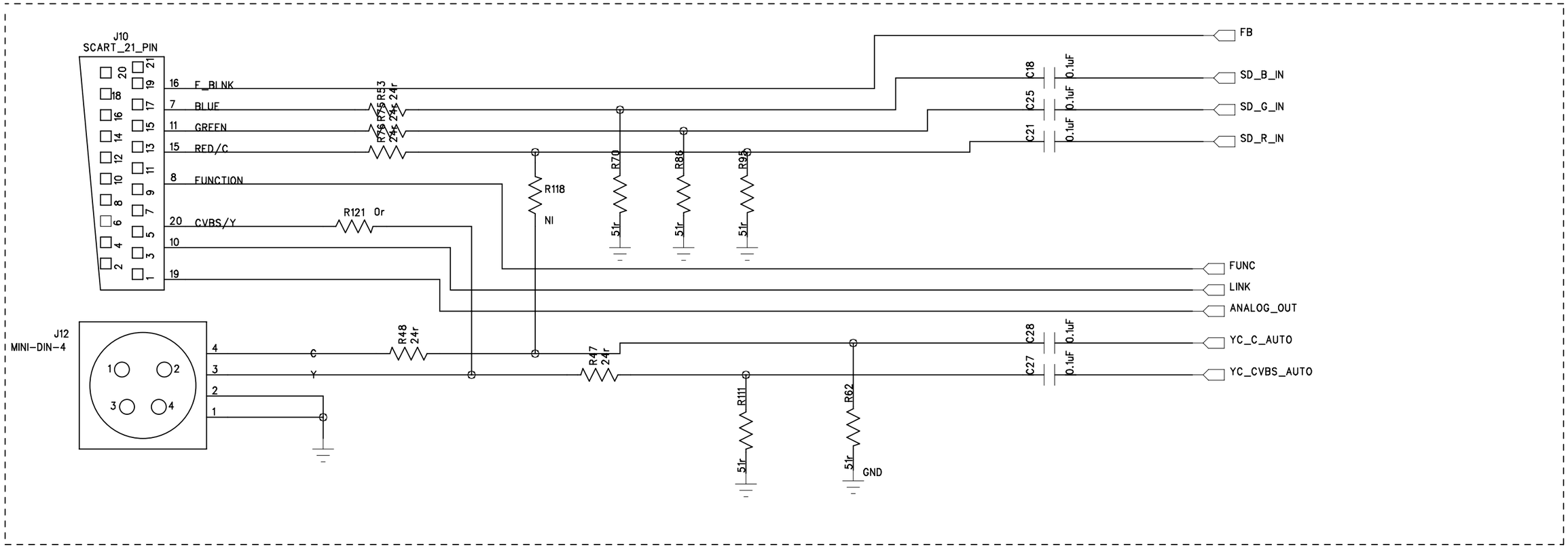
D-Type and Component Connectors



Place analog inputs as far apart as possible while maintaining similar trace lengths
Trace impedance of analog inputs to be 75 ohms
Termination resistors should be placed as close as possible to end of line

ADV7842 Input Module
Sheet: No. 1 – Analog Inputs 1
Video Applications
Date: July 2010 Revision: C

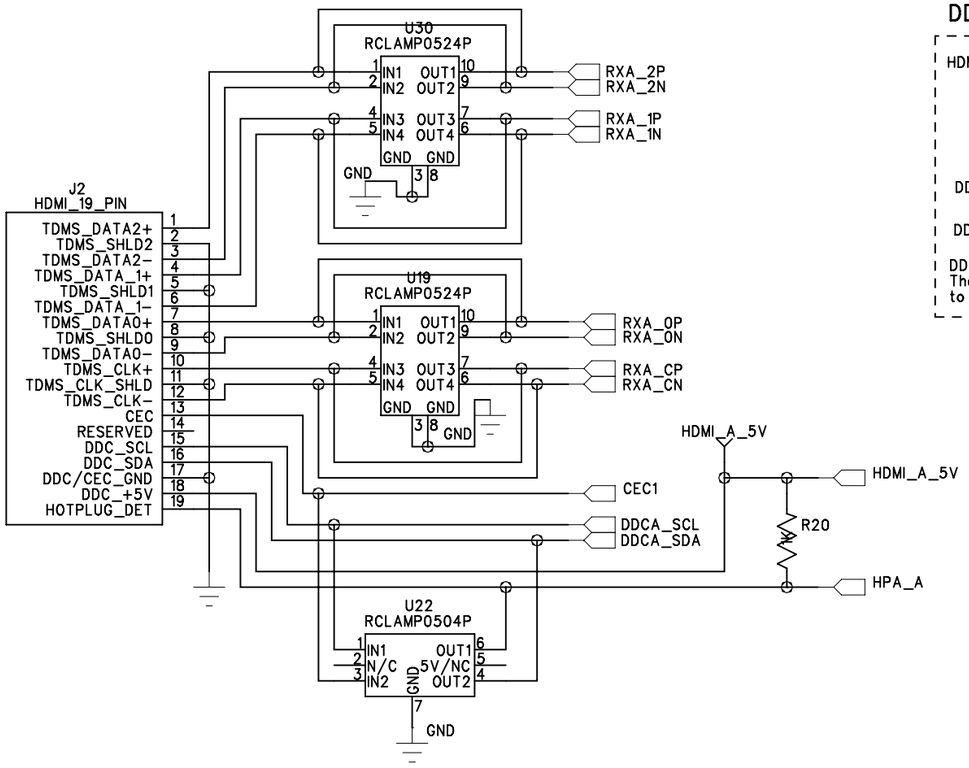
SCART and S-VIDEO Connectors



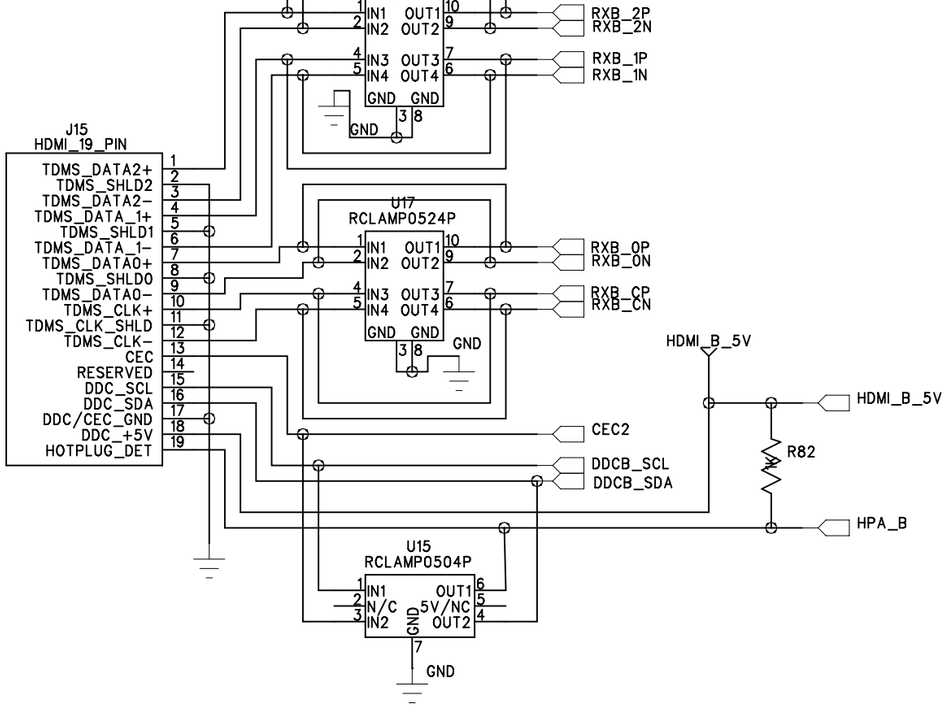
CVBS Connector

Place analog inputs as far apart as possible while maintaining similar trace lengths
Trace impedance of analog inputs to be 75 ohms
Termination resistors should be placed as close as possible to end of line

ADV7842 Input Module
Sheet: No. 2 – Analog Inputs 2
Video Applications
Date: July 2010 Revision: C

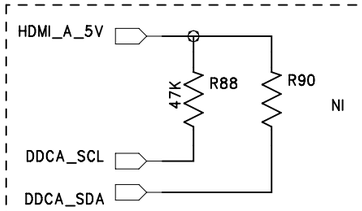


PCB Tracks for each differential pair must be tracked side by side
Each Diff pair should have 105R impedance between each other
PCB track lenghts to connector should be minimum distance



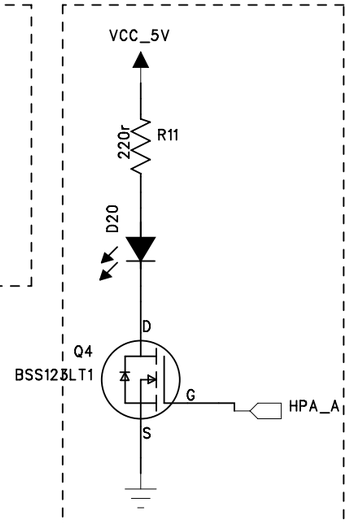
PCB Tracks for each differential pair must be tracked side by side
Each Diff pair should have 105R impedance between each other
PCB track lenghts to connector should be minimum distance

DDC A Circuitry

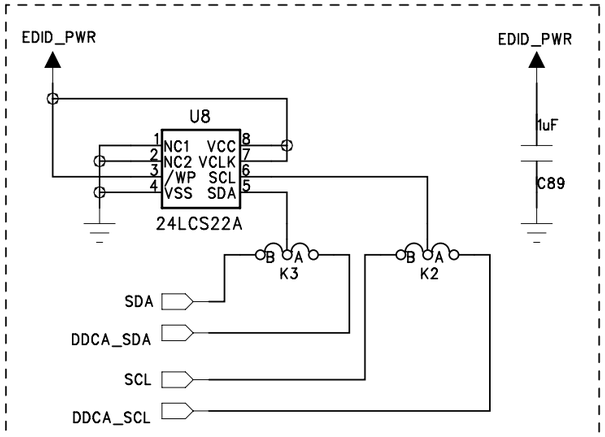


DDC lines should be as short as possible to DUT
The 0 ohm resistors on these lines should be placed to minimise track length also.

HPD A LED



EDID1



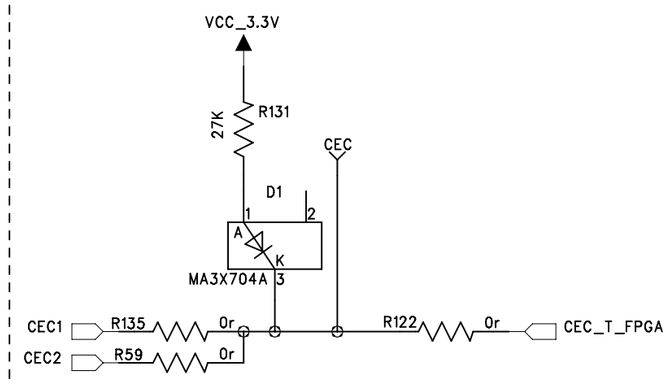
DDC B Circuitry

DDC lines should be as short as possible to DUT
The 0 ohm resistors on these lines should be placed to minimise track length also.

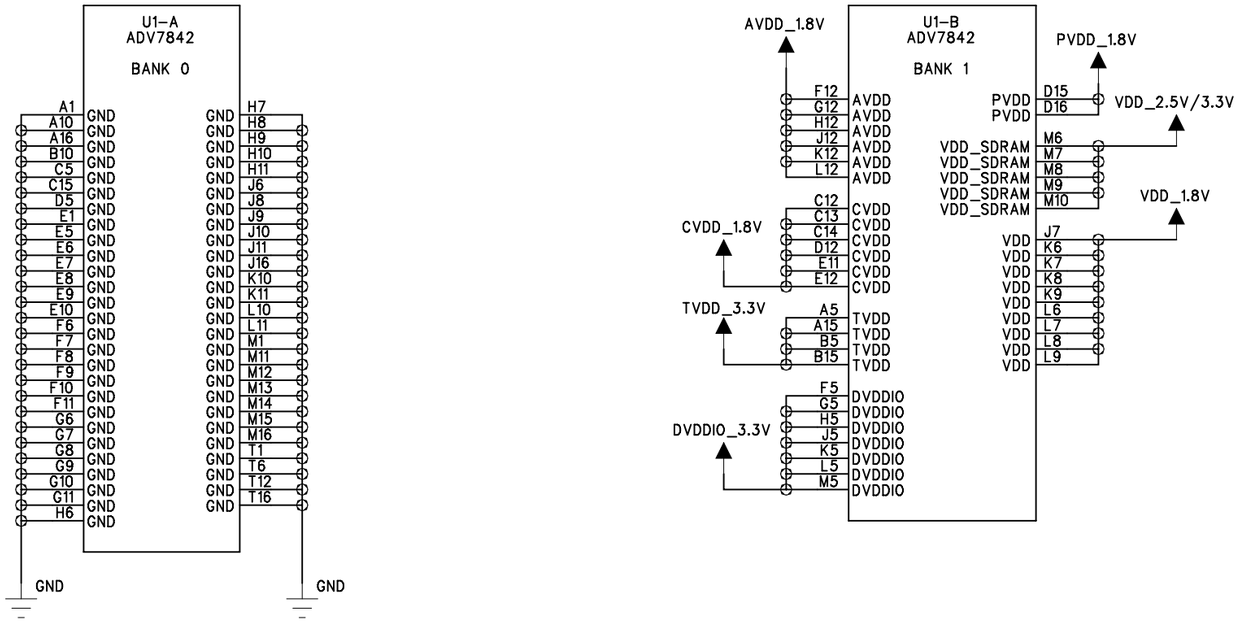
HPD B LED

EDID2

CEC To 168-Pin Connector



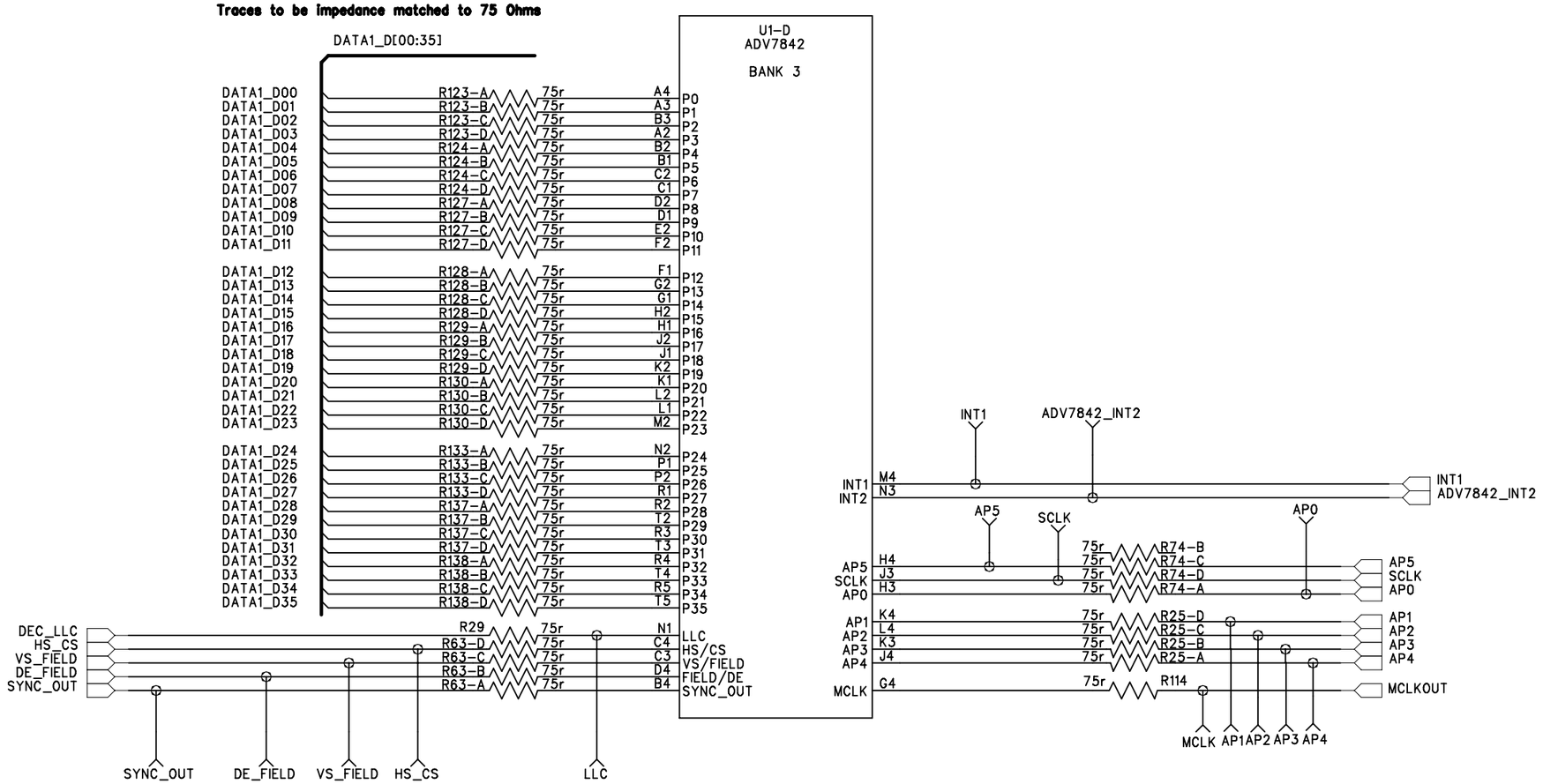
ADV7842 Input Module	
Sheet: No. 3 – HDMI Inputs	
Video Applications	
Date: July 2010	Revision: C



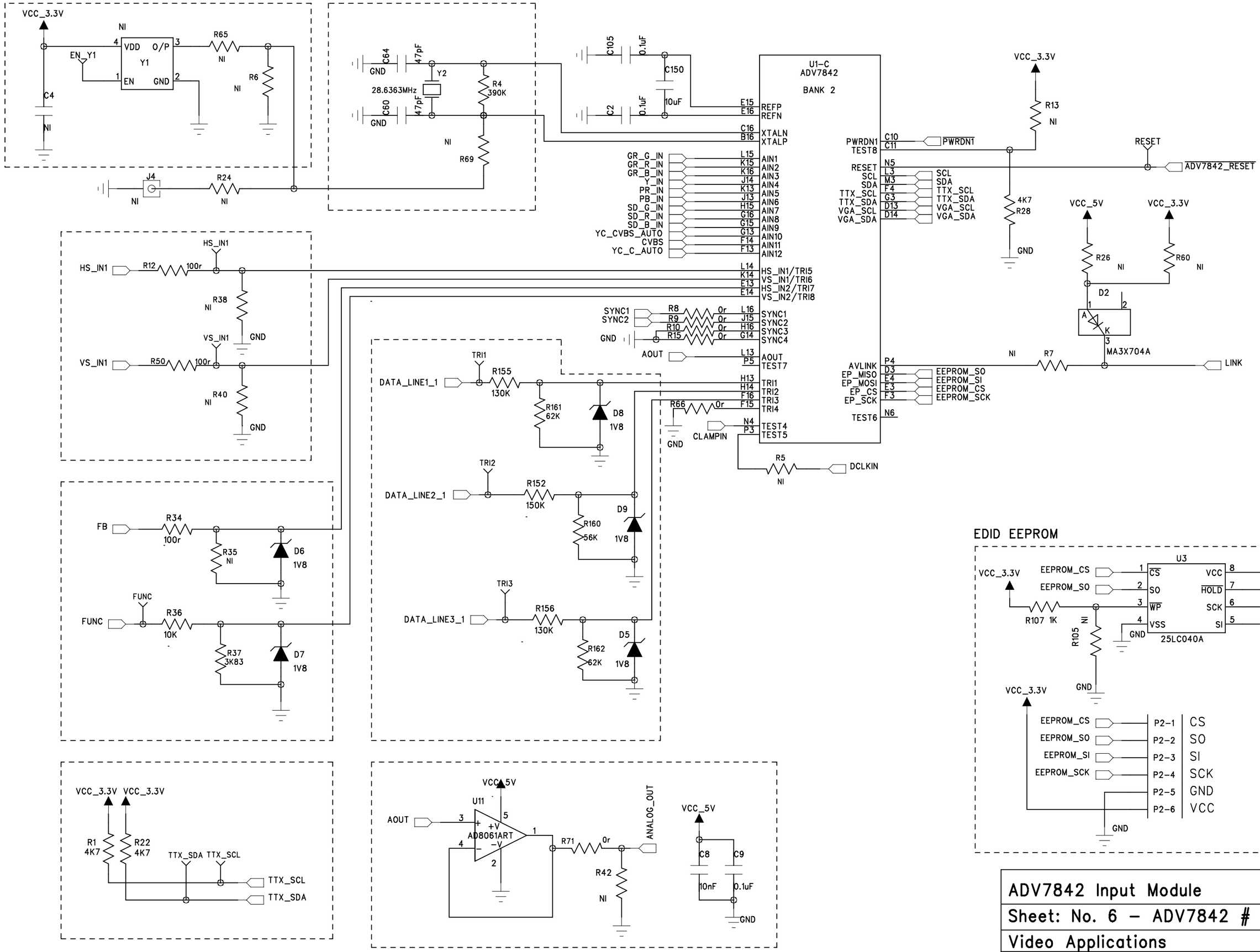
ADV7842 Input Module
Sheet: No. 4 – ADV7842 # 1
Video Applications
Date: July 2010 Revision: C

Series Resistors to be placed as close to the Dut as possible

Traces to be impedance matched to 75 Ohms

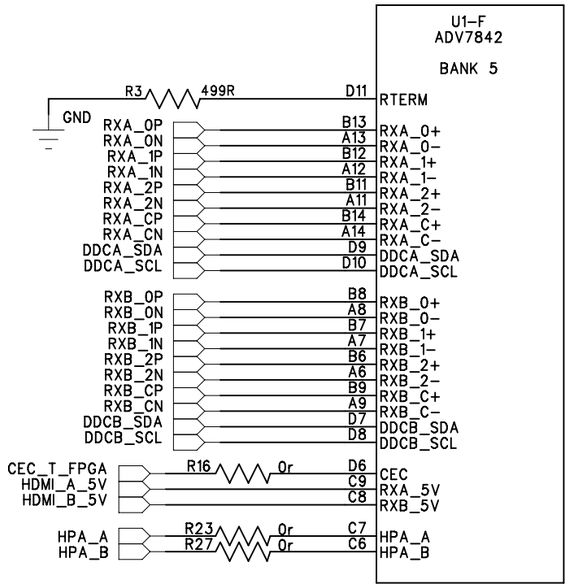


ADV7842 Input Module
Sheet: No. 5 – ADV7842 # 2
Video Applications
Date: July 2010 Revision: C

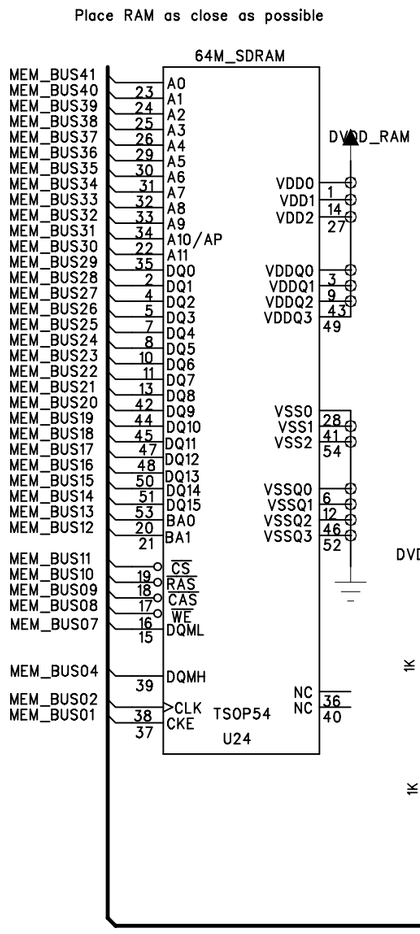


EDID EEPROM

ADV7842 Input Module
Sheet: No. 6 – ADV7842 # 3
Video Applications
Date: July 2010 Revision: C

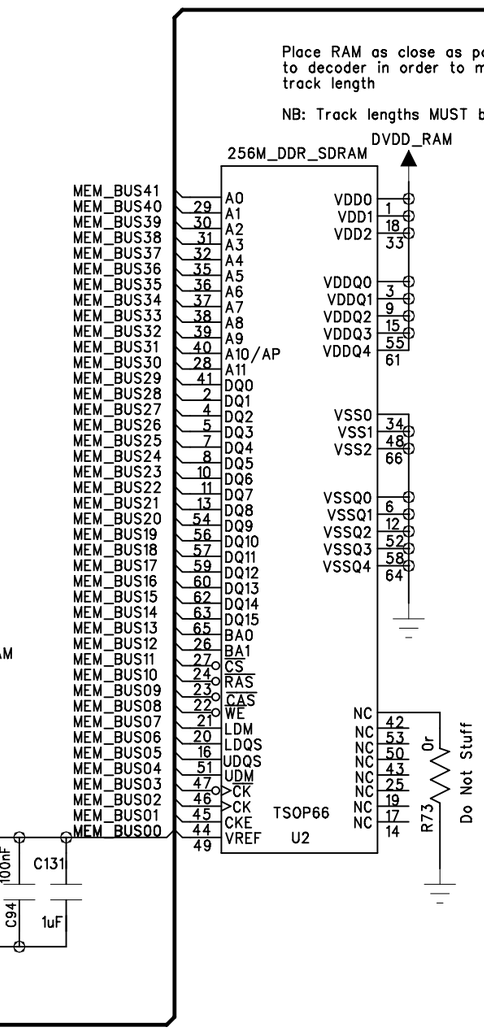


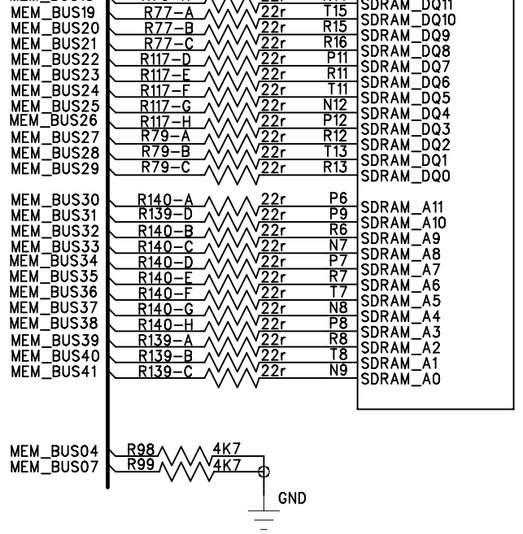
Place RAM as close as possible

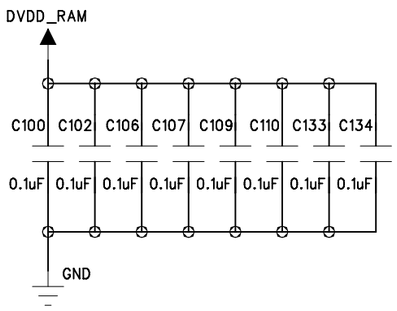


Place RAM as close as possible to decoder in order to minimise track length

NB: Track lengths MUST be equal







ADV7842 Input Module

Sheet: No. 7 – ADV7842 # 4

Video Applications

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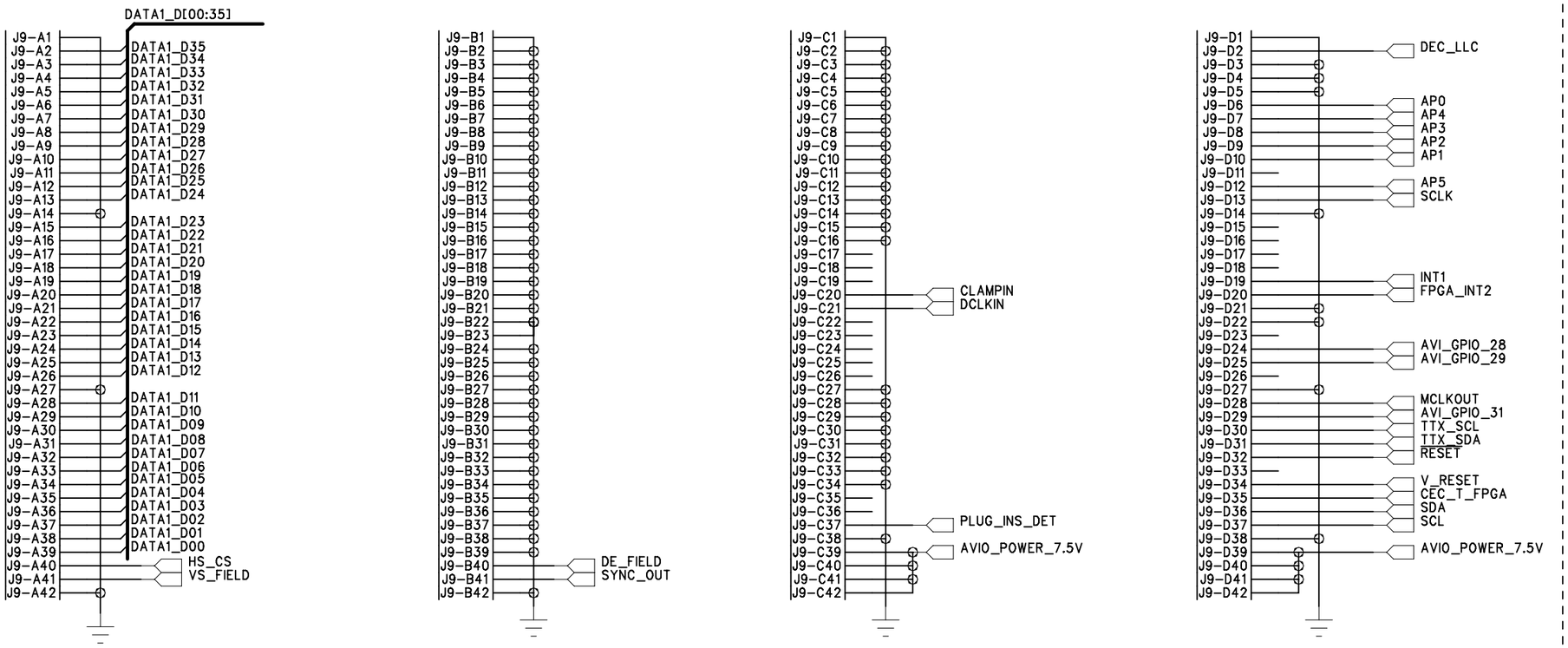
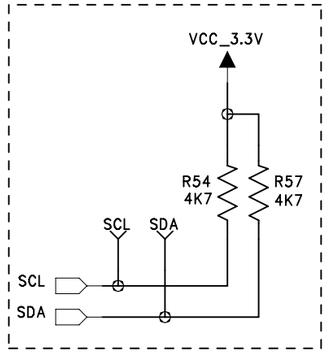
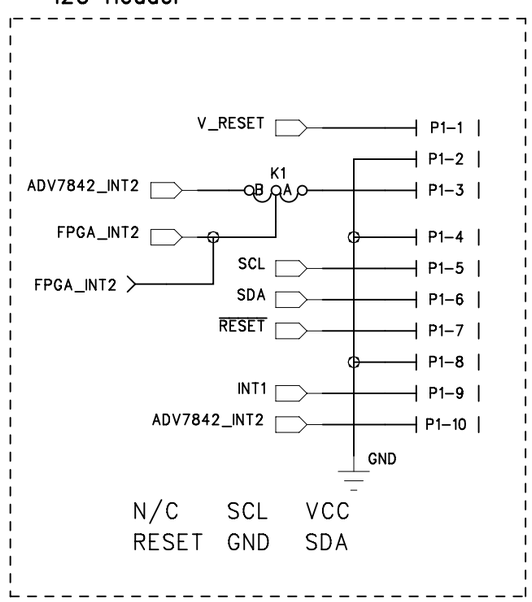
168-Pin Connector



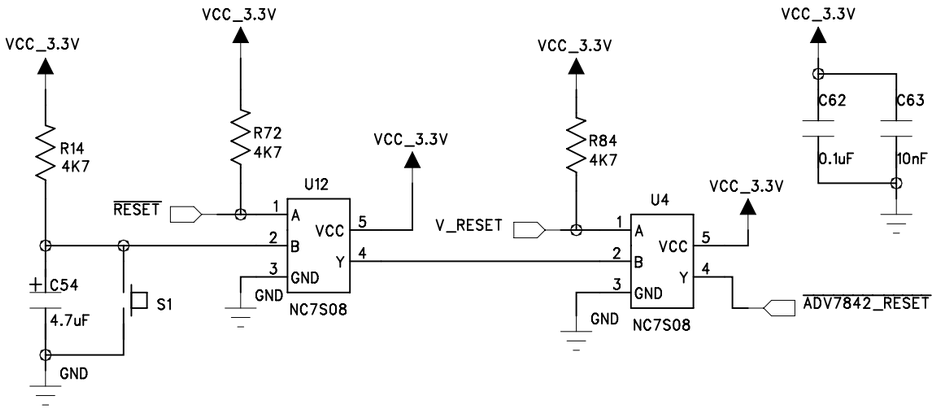
I2C Pull-Up Resistors



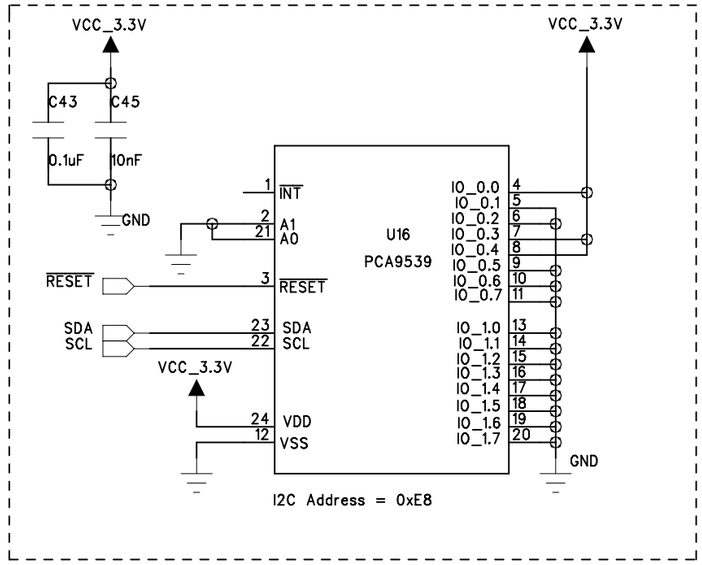
I2C Header



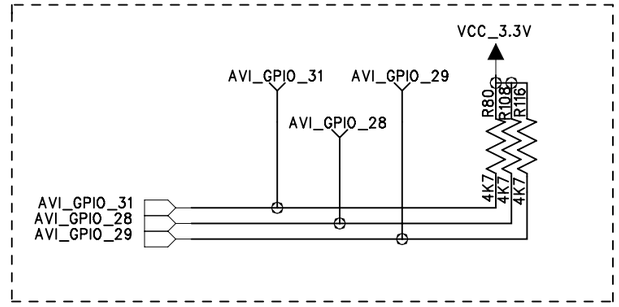
Reset Circuitry



Board Identification Bus Expander = 0x0019



GPIO



MH1 MH2 MH3 MH4

ADV7842 Input Module	
Sheet: No. 8 – Connector	
Video Applications	
Date: July 2010	Revision: C

Large through Hole testpoints – keep PWR & GND together

PWR
D12
D14
D15
D3
D11
D19
AVIO_POWER_7.5V
NON_DUT_POWER
centre is +ve
J14-2
J14-1
GND
D13 Internal resistor
GND

SHUTDOWN THRESHOLD:
1V8_EN > 1.3V = ENABLED
1V8_EN < 0.3V = DISABLED

1V8_EN
U20
EN
VIN
GND
ADJ/EF
VOUT
R100 100K
C36 150uF
GND
NCP5662DS18R4G

F2 EMC_FILTER
VDD1V8
VDD_1.8V
C84 220uF
C85 33uF
C101 10uF
F4 EMC_FILTER
PVDD1V8
PVDD_1.8V
C99 220uF
C93 33uF
C90 10uF
Make DUT Power Via's Large
F1 EMC_FILTER
AVDD1V8
AVDD_1.8V
C48 220uF
C5 33uF
C92 10uF
F6 EMC_FILTER
CVDD1V8
CVDD_1.8V
C120 220uF
C121 33uF
C81 10uF

EDID HDMI Power & Reset/Power Circuit

VCC_5V
EDID_PWR
D22
HDMI_A_5V
D16
HDMI_B_5V
D17
VGA_5V
BAT54J
D4
L1
330uH
IND
Q6 BSS84LT1G
ADV7842_RESET
R17 0r
R18 100K
Q2 BSS123LT1
R87 12K
R83 10K
Q1 BSS123LT1
R2 0r
R85 10K
PWRDN1
GND

PUT C117 CLOSE TO U27

2V5_EN
U13
VIN
SD
BYPASS
GND
VOUT
NC
NC
ADJ
LP3878-ADJ
C37 150uF
C35 0.1uF
C14 2200pF
R109 2K32
R112 4.22k
R113 100K
R110 1K
1V8_EN
C39 470nF
2V5_EN > 1.6V = ENABLED

MEMORY CONFIGURATION	
	R112
SDR (3V3)	DO NOT STUFF
DDR (2V5)	4.22k

RES NOT_INSERTED (0805)
R67 NI
DVDDRAM
DVDD_RAM
VDD2V5
VDD_2.5/3.3V
F9 EMC_FILTER
C153 220uF
C154 33uF
C103 10uF
Q3 NDS351AN
R102 47r
NON_DUT_POWER
C91 10uF

DVDDIO
DVDDIO_3.3V
F3 EMC_FILTER
C86 220uF
C87 33uF
C83 10uF

Misc. Regulators

Make DUT Power Via's Large
NON_DUT_POWER
ADP3338-5V
U10
IN
OUT
GND
VCC5V
F8 EMC_FILTER
VCC5V1
VCC_5V
5V HPD
C152 220uF
C151 33uF
C108 10uF

EEPROM, Bus Expander
I2C Pullups, RESET

U14
EN
VIN
GND
ADJ/EF
VOUT
+3V3REG
R101 100K
C38 150uF
R89 100K
C157 470nF
2V5_EN
C82 NI

F5 EMC_FILTER
TVDD3V3
TVDD_3.3V
C114 220uF
C111 33uF
C104 10uF
C148 220uF
F7 EMC_FILTER
VCC_3.3V
VCC3V3
C149 33uF
C88 10uF

Ground Test Points 1

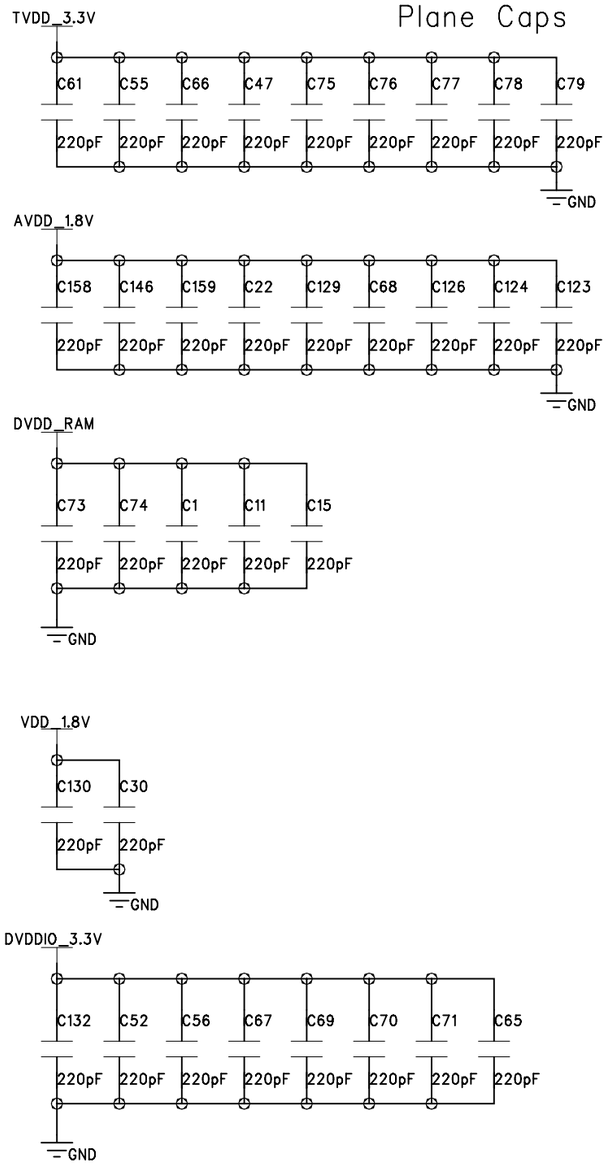
Distribute around the board
GND1 GND2 GND3 GND4 GND5 GND6 GND7 GND8 GND9
GND

Ground Test Points 2

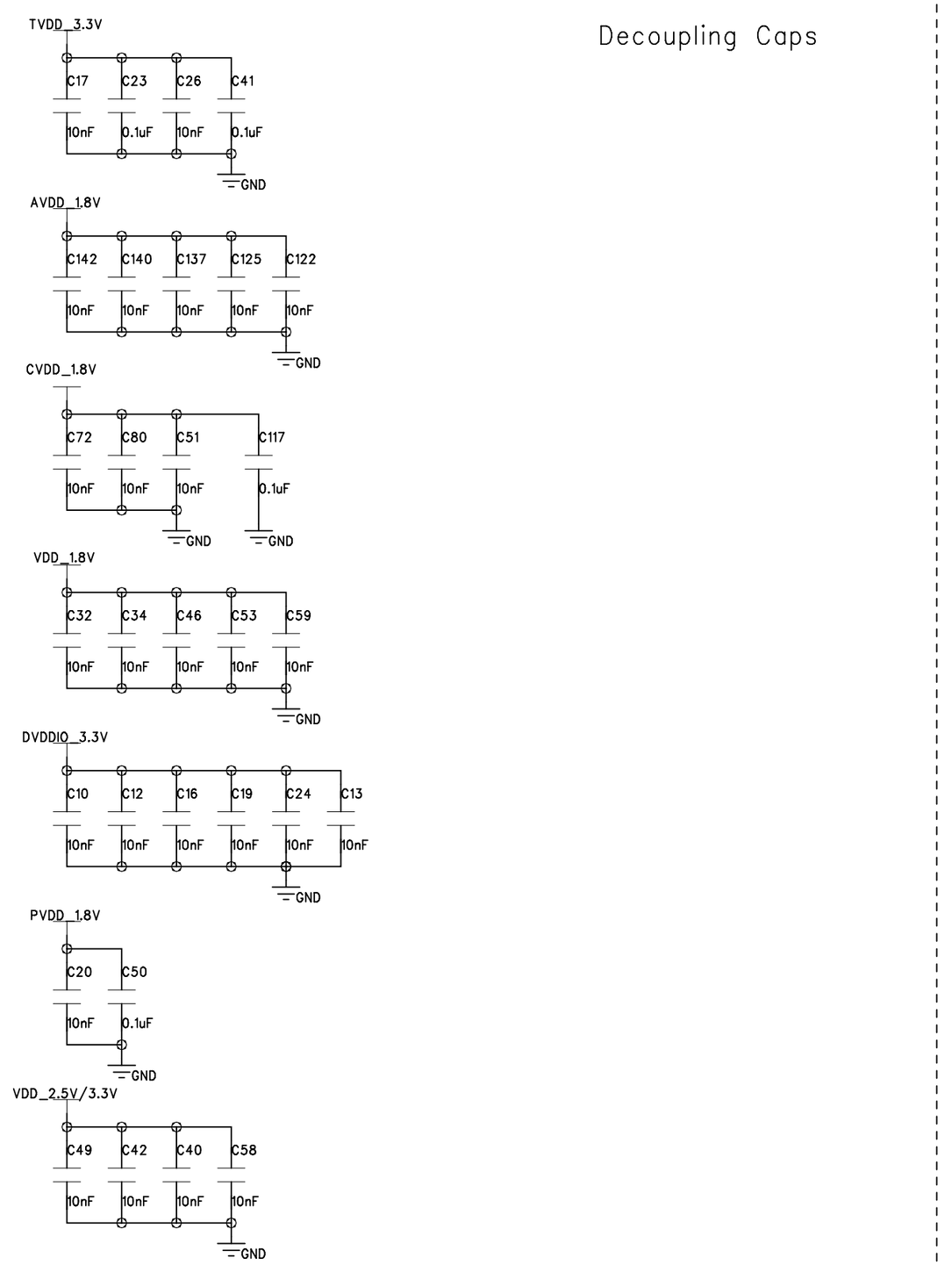
Locate close to power regulators
GND10 GND11 GND12 GND13
GND

ADV7842 Input Module
Sheet: No. 9 – Power Supply
Video Applications
Date: July 2010 Revision: C

Plane Caps



Decoupling Caps



ADV7842 Input Module
Sheet: No. 10 – ADV7842 Decoupling
Video Applications
Date: July 2010 Revision: C