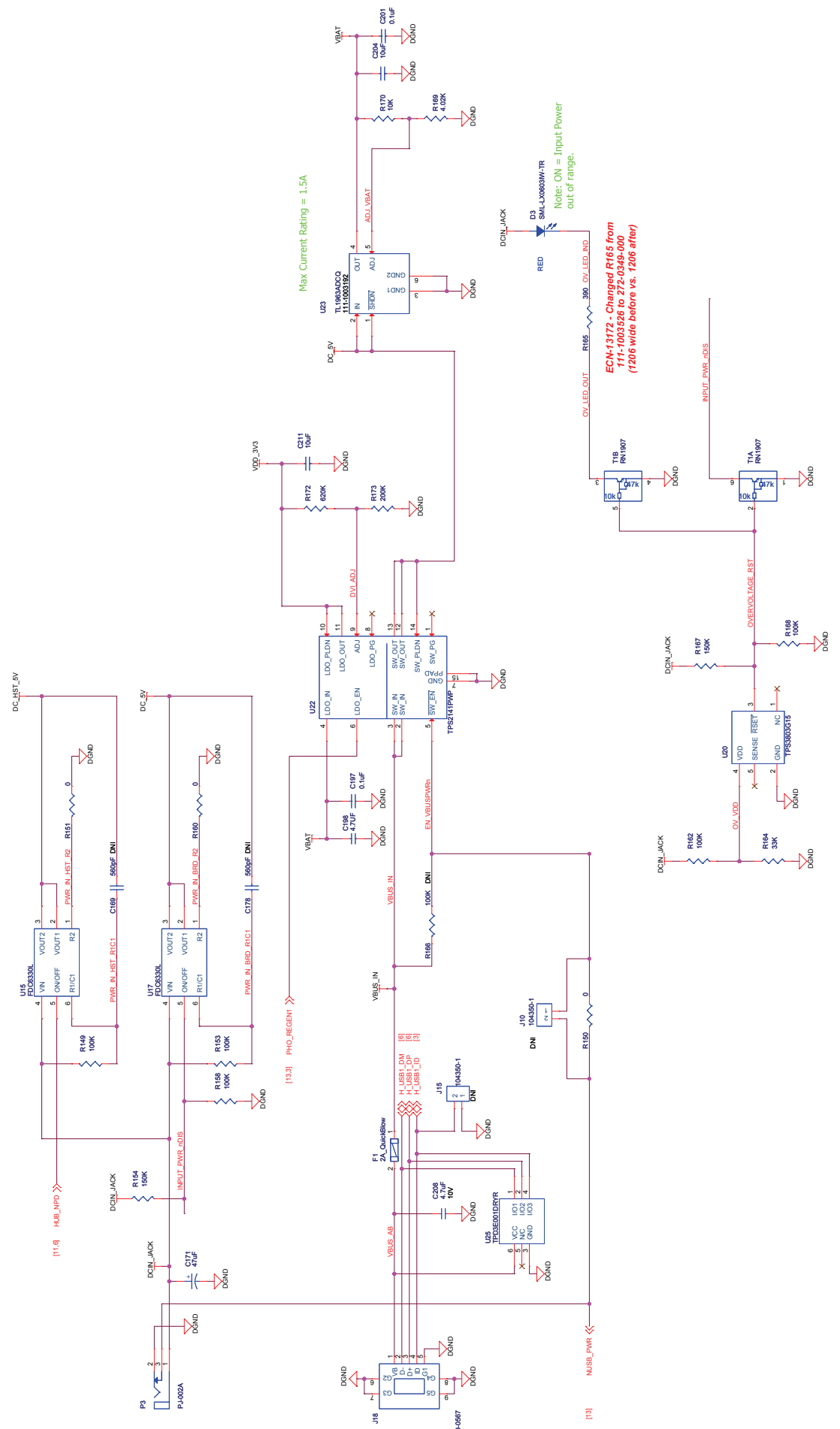


Rev	Date	Notes
A	9/10/2010	Created from 750-2152-001, changed input power sensing and enable circuitry, power changes to OMAP
B	10/11/2010	ECN-13172 - Changed U13, DNI R148, install board ID resistor R109, DNI Mic bias resistors, and change T/N for R165
C	10/28/2010	ECN-13183 - Changed resistor stuffing on JTAG connector
D	11/8/2010	ECN-13192 - Changed U14 IC to Schmitt-trigger device

Table of Contents  
Pg# -- Schematic Page Name

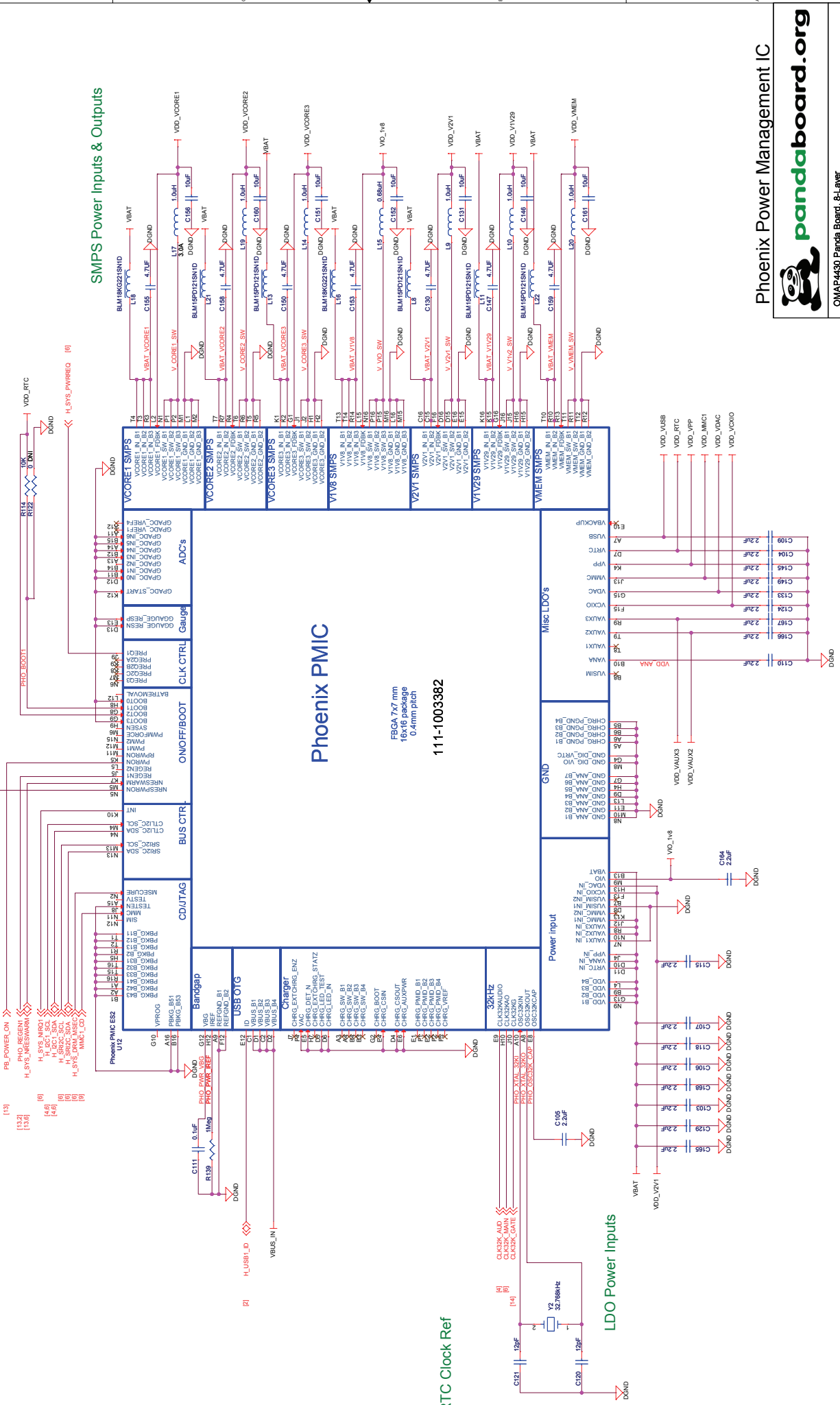
- 1 -- Title Page
- 2 -- Input Power
- 3 -- Phoenix Power Component
- 4 -- Phoenix Audio Component
- 5 -- OMAP4430 Symbol A
- 6 -- OMAP4430 Symbol B
- 7 -- OMAP4430 Symbol C
- 8 -- OMAP4430 Debug Interface
- 9 -- SDMMC Card Interface + USB Phy (Hub)
- 10 -- DVI & HDMI Connector
- 11 -- Debug Ethernet
- 12 -- Audio Jack/RS-232 Connection
- 13 -- Expansion Connectors
- 14 -- WLAN Subsystem





ECM-13192  
Changed U14 from a SN74LVC1G17DCKR to a SN74AUP1G17DCKR

BOOT13 = '0' -> Disable VAUX1 LDO @ Boot-up  
 BOOT12 = '1' -> VAUX1 LDO default = 1.8V  
 BOOT11 = '1' -> VMEM = 1.2V (S4b LPDDR2 used)  
 BOOT10 = '0' -> High battery thresholds for VBATMIN



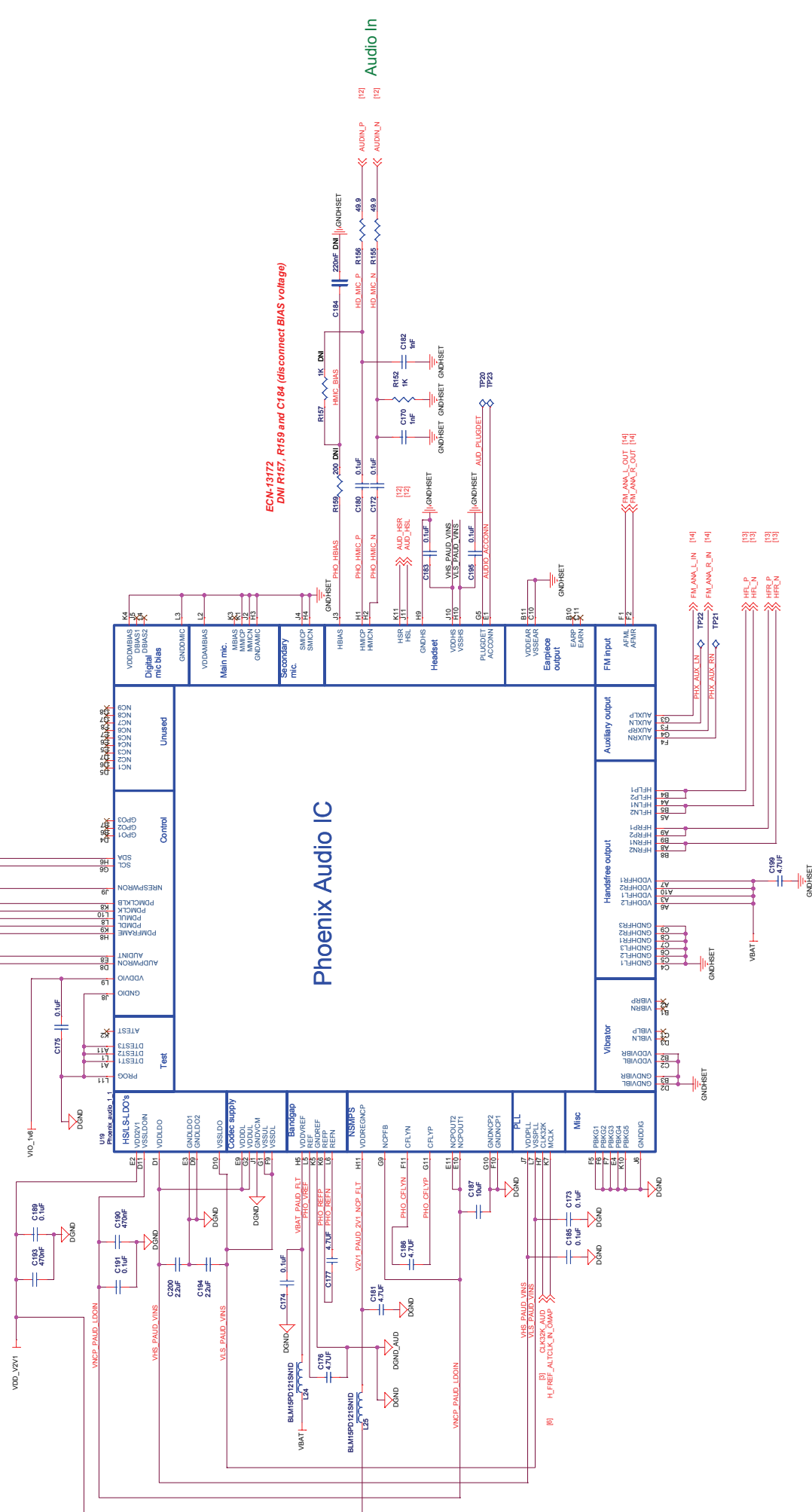
# OMAP4 Audio Interfaces

Component ROOM = PAUD

- TP45 H1SYS\_SDA
- TP46 H1SYS\_SCL
- TP47 H1SYS\_MISO
- TP48 H1SYS\_MOSI
- TP49 H1SYS\_CS
- TP50 H1SYS\_CLK
- TP51 H1SYS\_MCLK
- TP52 H1SYS\_MDATA
- TP53 H1SYS\_MFRAME
- TP54 H1SYS\_MCLK2
- TP55 H1SYS\_MDATA2
- TP56 H1SYS\_MFRAME2
- TP57 H1SYS\_MCLK3
- TP58 H1SYS\_MDATA3
- TP59 H1SYS\_MFRAME3
- TP60 H1SYS\_MCLK4
- TP61 H1SYS\_MDATA4
- TP62 H1SYS\_MFRAME4

## Controls

- [13] H1SYS\_SDA
- [14] H1SYS\_SCL
- [15] H1SYS\_MISO
- [16] H1SYS\_MOSI
- [17] H1SYS\_CS
- [18] H1SYS\_CLK
- [19] H1SYS\_MCLK
- [20] H1SYS\_MDATA
- [21] H1SYS\_MFRAME
- [22] H1SYS\_MCLK2
- [23] H1SYS\_MDATA2
- [24] H1SYS\_MFRAME2
- [25] H1SYS\_MCLK3
- [26] H1SYS\_MDATA3
- [27] H1SYS\_MFRAME3
- [28] H1SYS\_MCLK4
- [29] H1SYS\_MDATA4
- [30] H1SYS\_MFRAME4

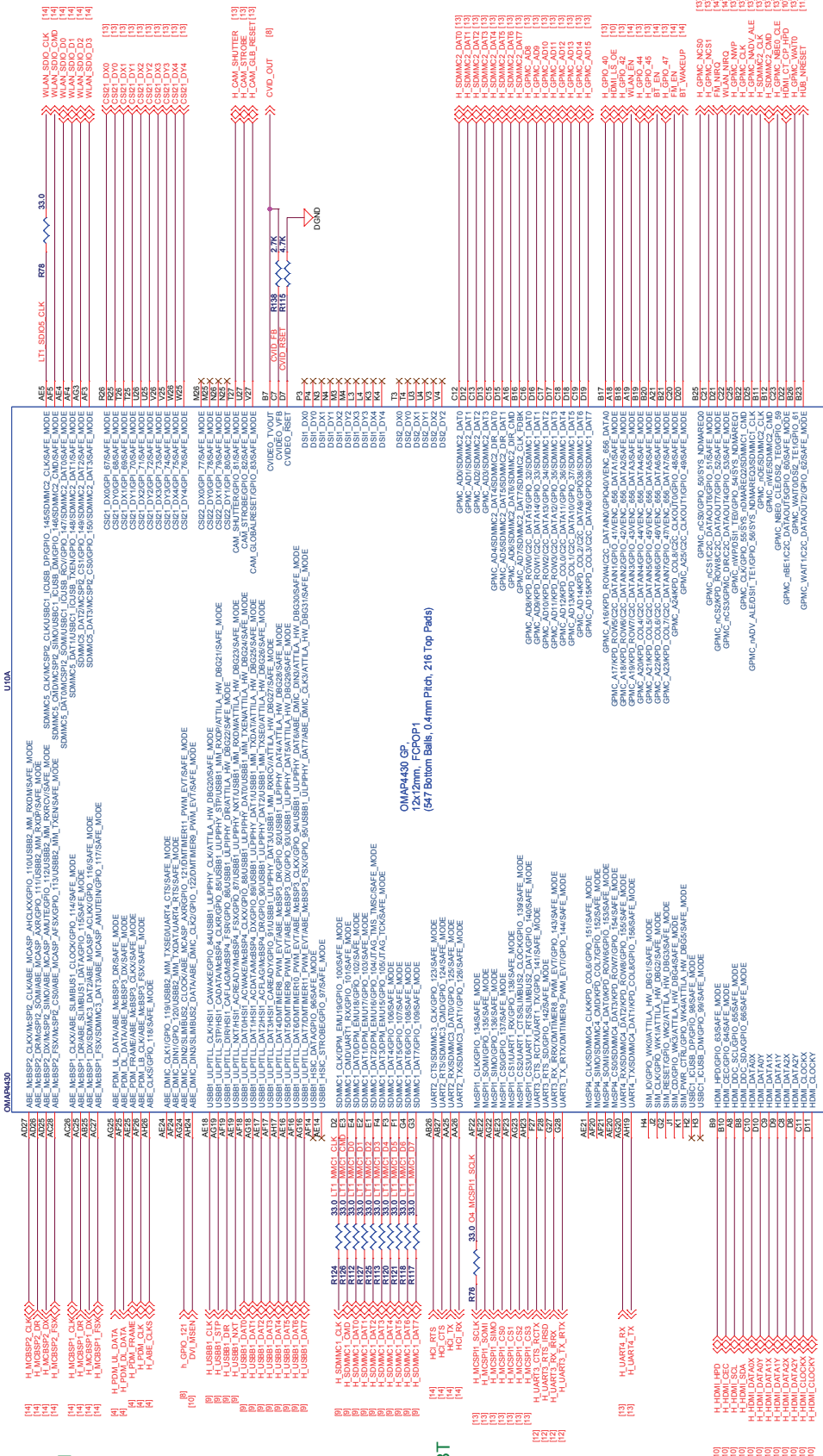


ECN-13172  
DNI R157, R159 and C184 (disconnect BIAS voltage)

Audio In

Phoenix Audio IC

OMAP4430 Panda Board, 8-Layer  
TWL6040 Audio Companion IC  
Document Number: 790-2152-002-SCH  
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Sheet 4 of 14



EXPANSION

PDM

WLAN

CAMERA SENSOR

CAMERA SENSOR

USB B1

SD/MMC1

BT

RS-232

HDMI

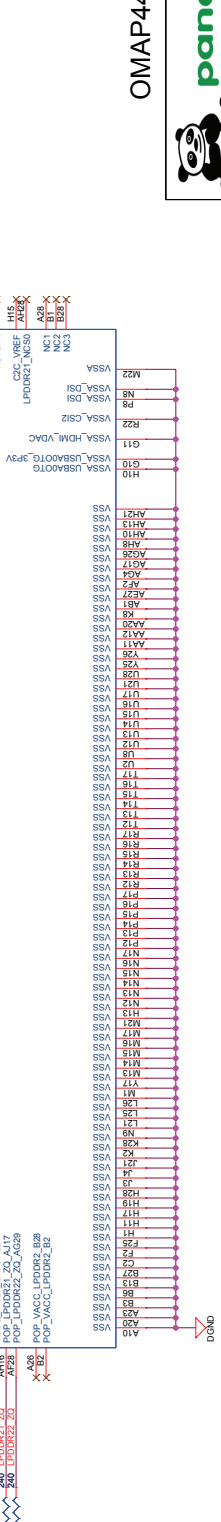
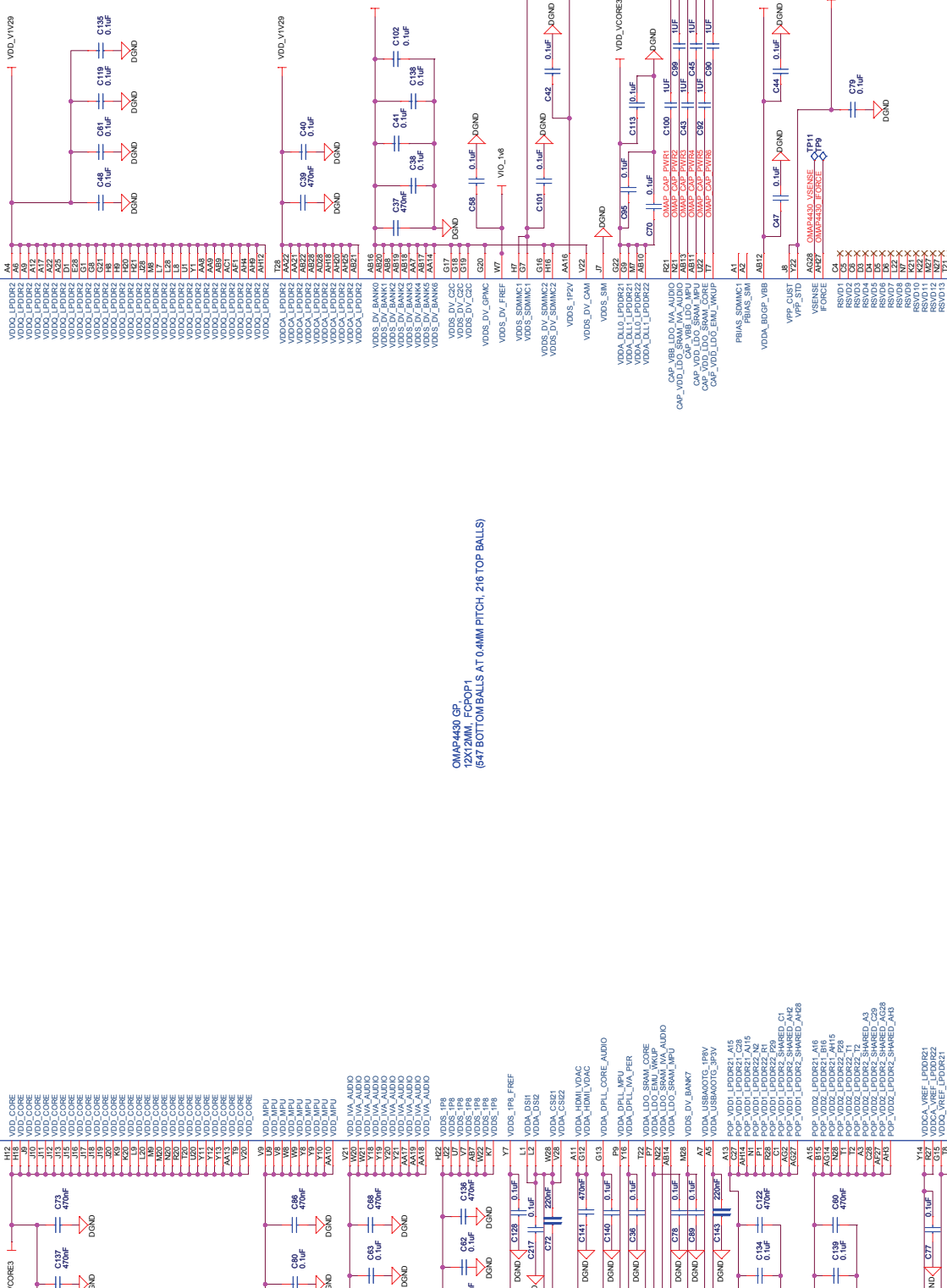
111-000322  
 E6806481PE-3D-F  
 68k-POP MEMORY (MOUNT ON TOP OF OMAP4430)

OMAP4430 Symbol "A"

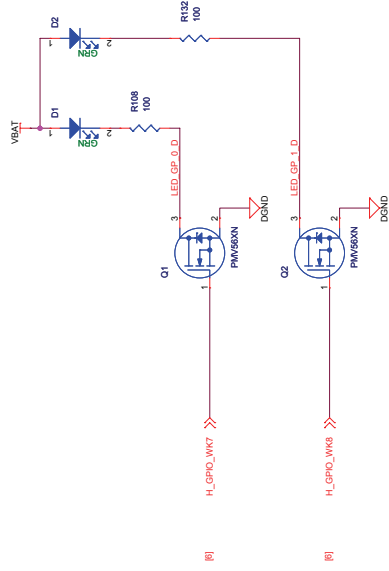
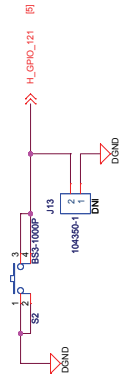
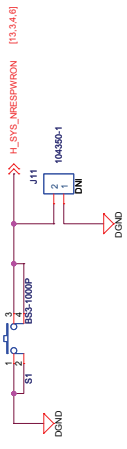


OMAP4430 Panda Board, 6-Layer  
 Document Number 790-2152-002-SCH  
 Date: Monday, November 29, 2010





OMAP4430 CP  
(647 BOTTOM BALLS AT 0.4MM PITCH, 216 TOP BALLS)



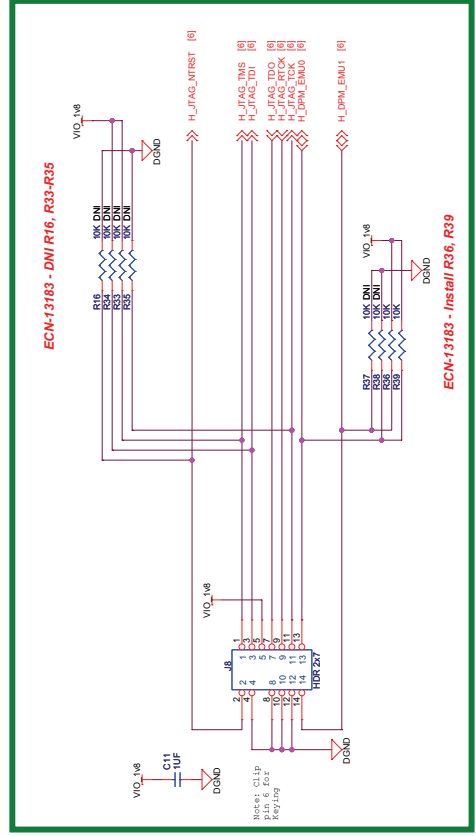
These three OMAP GPIOs are intended for use as board ID indicators, allowing up to a unique Panda builds variants.

Valid values are:

- "000" - 720-2151-001 6-layer PCB
- "001" - 720-2152-001 8-layer PCB
- "011" - 720-2152-002 8-layer PCB



ECN-13172 - Install R109



ECN-13183 - DNI R16, R33-R35

ECN-13183 - Install R36, R39

# OMAP Debug IF - JTAG Connectors

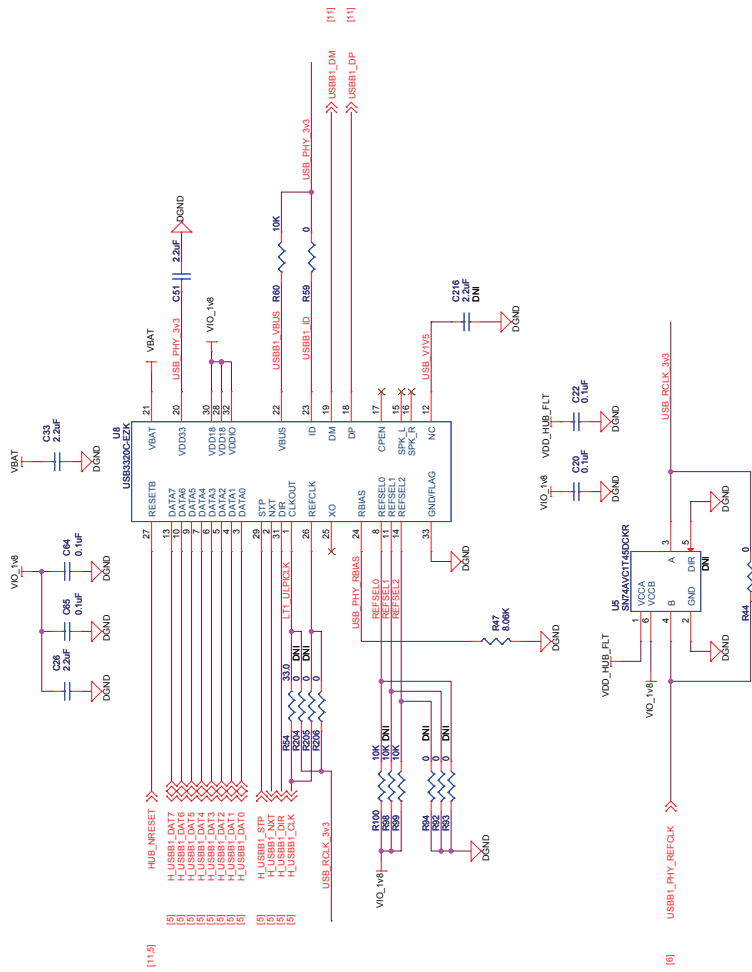
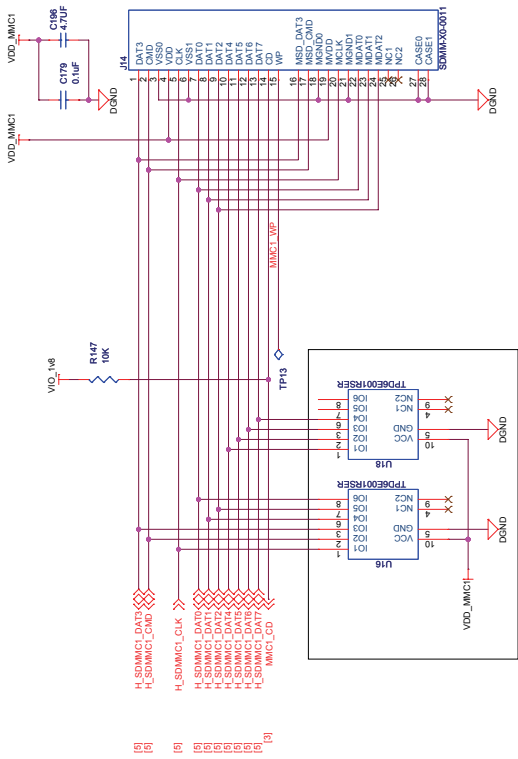


OMAP4430 Panda Board, 6-Layer  
JTAG Debug Connectors

Document Number: 790-2152-002-SCH

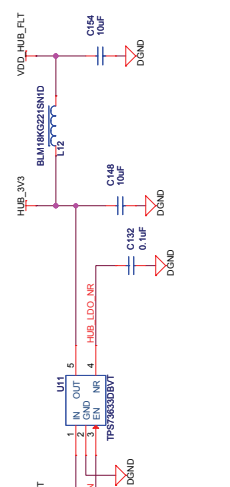
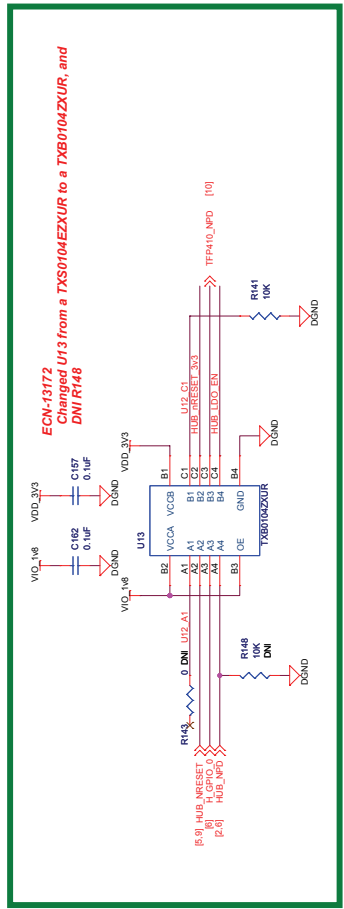
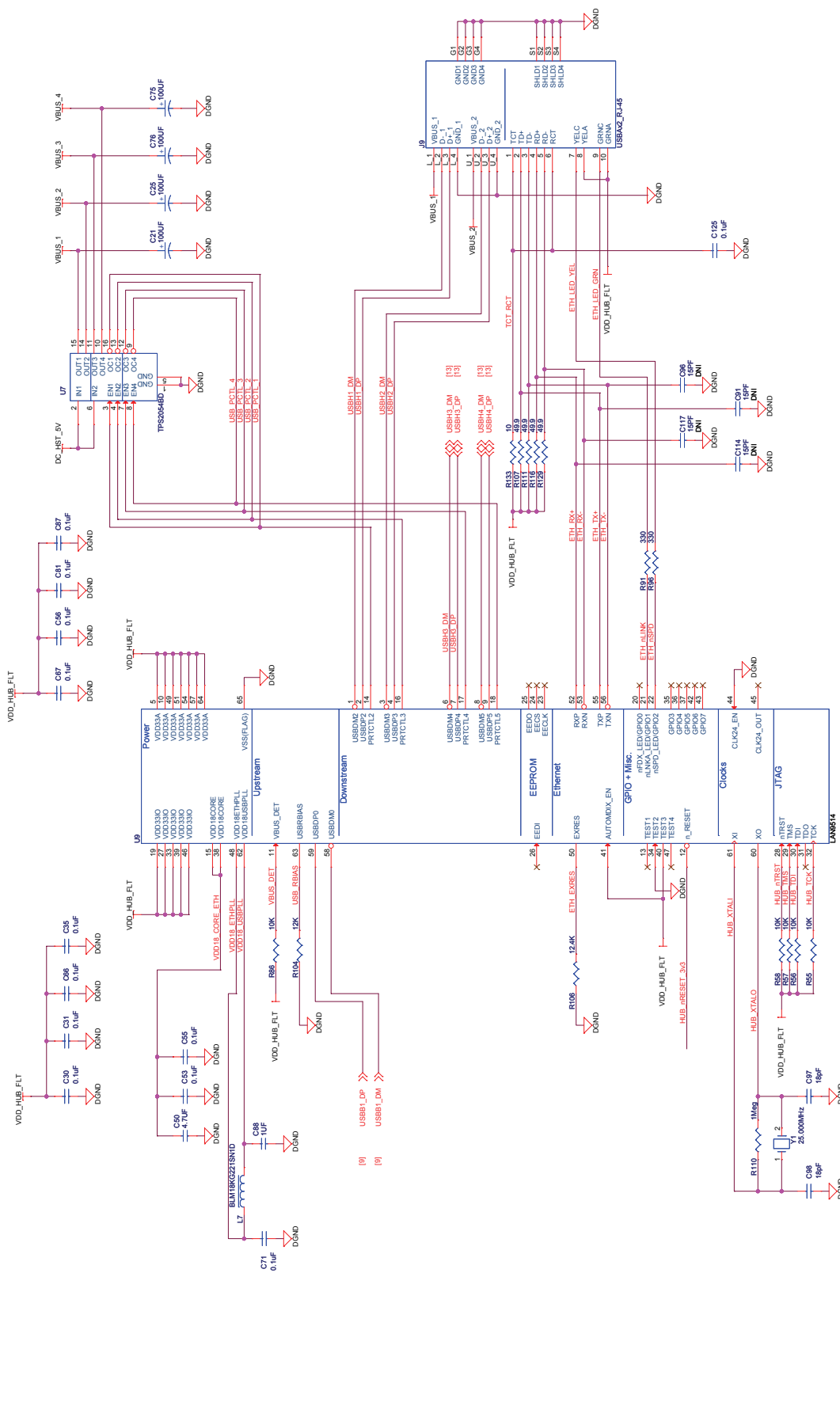
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# USB + Ethernet Hub



USB/Ethernet Hub

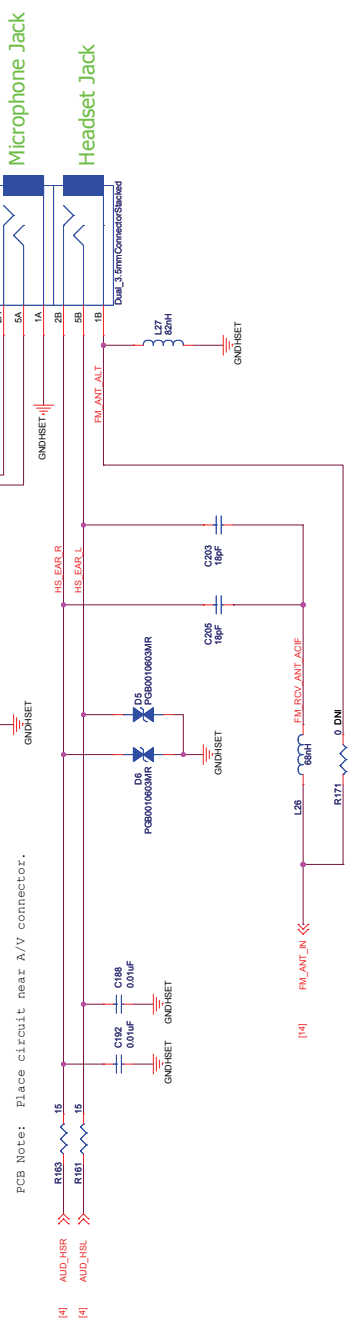


ONIA-P430 Panda Board, 8-Layer  
 Hub IC (Ethernet + 2X USB Host Ports)  
 Document Number: 790-2192-002-SCH  
 Date: Monday, November 29, 2010

FCB Note:  
Traces surrounded by GNDHSET shield  
& routed diff to connector.

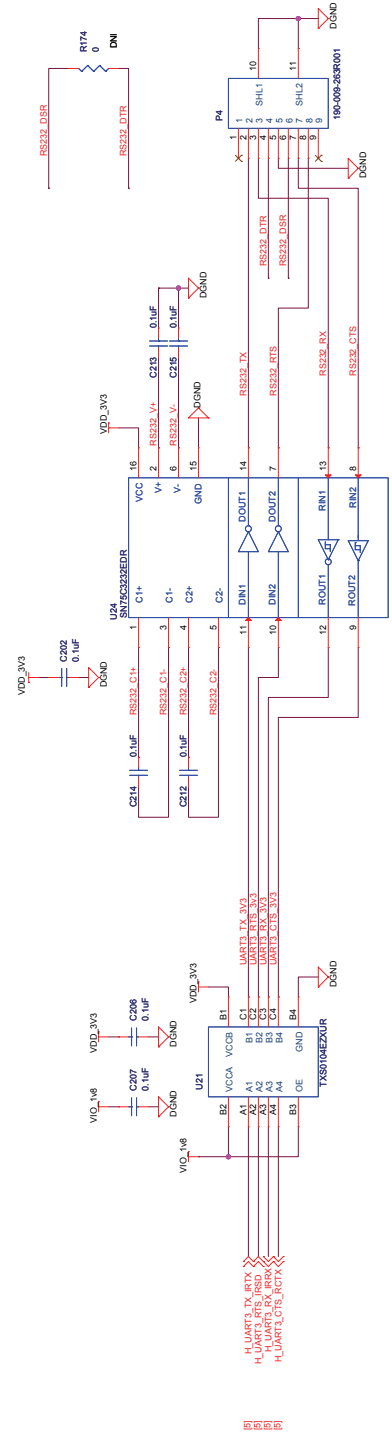
[4] AUDIN\_P  
[4] AUDIN\_N

FCB Note: Place circuit near A/V connector.



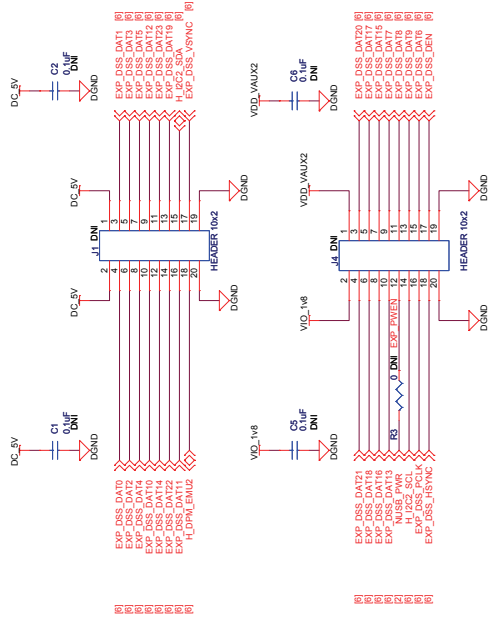
Microphone Jack  
Headset Jack

RS-232  
CONNECTOR

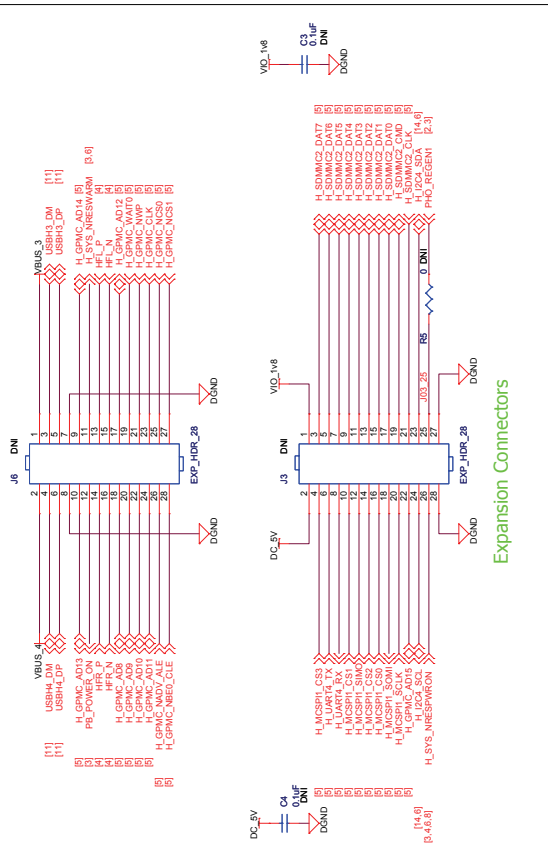


3.5mm Audio Conn + RS-232 I/F

### LCD Expansion Connectors (Beagle Legacy)



### Expansion Connectors



### Camera Sensor Expansion Connector

