

REV	Description	DATE	BY
A4A	Initial production Release.	11/19/2012	GC
A5	On the initial production release the processors were incorrect as supplied by TI. Parts while marked AM3359 were actually AM3352. This revision uses the correct parts.	1/2/2013	GC
A5A	1. Deleted R29-R44 from the LCD lines. 2. Added 47pf capacitors C156-C173 to LCD data lines to ground. 3. Changed schematic revision to A5A. 4. Changed a few footprints after PCB update for above changes. 5. Added access point for the battery function of the TPS65217C. 6. Added Ferrite beads in series with LED power and 5V power rail of the USB host connector. Required to pass FCC/CE testing due to noise emissions on that pin. 7. Added power button to enable sleep, wakeup, power down and power up features on the system. 8. Added Modification to add 100K ohm resistor to ground to prvent crosstalk when serial cable is not plugged in.	2/28/2013	GC
A5B	1) Updated the PCB to incorporate the modification that was being done on Rev A5A. There is NO DIFFERENCE AT ALL in functionality between REV A5A and REV A5B. 2) Made the LEDs dimmer for those that could not sleep due to the brightness of the LEDs.	5/21/2013	GC
A5C	Production had some fallout of boards when running the HDMI tests in the previous production run. Resistor values were tweaked to improve the test results. No changes in features or operation of the board. 1) Changed R46,R47,R48 to a 0 ohm. 2) Changed R45 to a 22 Ohm. 3) Converted to DxDesigner/PADS 9.5	7/11/2013	GL


PAGE NO.	SCHEMATIC PAGE
1	COVER PAGE
2	POWER MANAGEMENT
3	PROCESSOR 1 OF 3, JTAG HEADER
4	PROCESSOR 2 OF 3, UAB PORTS
5	PROCESSOR 3 OF 3
6	LED, CONFIGURATION AND BUTTON
7	DDR3 MEMORY
8	eMMC FLASH
9	10/100 ETHERNET
10	HDMI FRAMER
11	EXP CONN, uSD


NOTE: PCB Revision for this board is Rev B4.

This schematic is ***NOT SUPPORTED*** and **DOES NOT** constitute a reference design. Only “community” support is allowed via resources at BeagleBoard.org/discuss.
THERE IS NO WARRANTY FOR THIS DESIGN , TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE DESIGN “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE DESIGN IS WITH YOU. SHOULD THE DESIGN PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

Prototype to Production[®]

Designer by





TITLE

BeagleBoneBlack

SIZE

DWG NO

REV

A3

450-5500-001

BeagleBoneBlack Cover Page

B4

DRAWN BY

SHEET

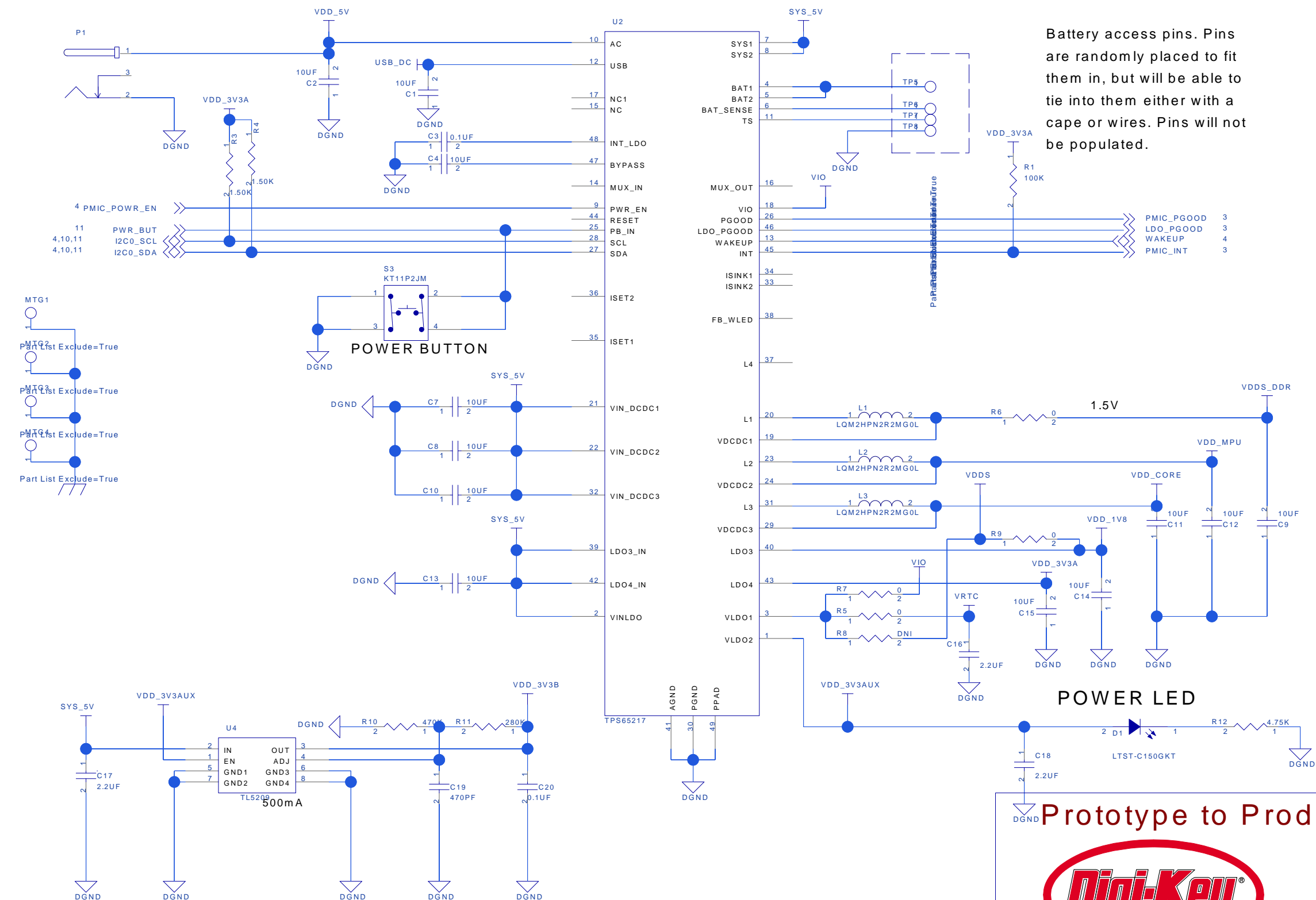
of

Mentor TME

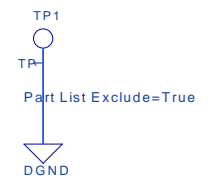
1

11

16/01/2015:11:44



Battery access pins. Pins are randomly placed to fit them in, but will be able to tie into them either with a cape or wires. Pins will not be populated.



Prototype to Production® Designer by

Digi-Key CORPORATION

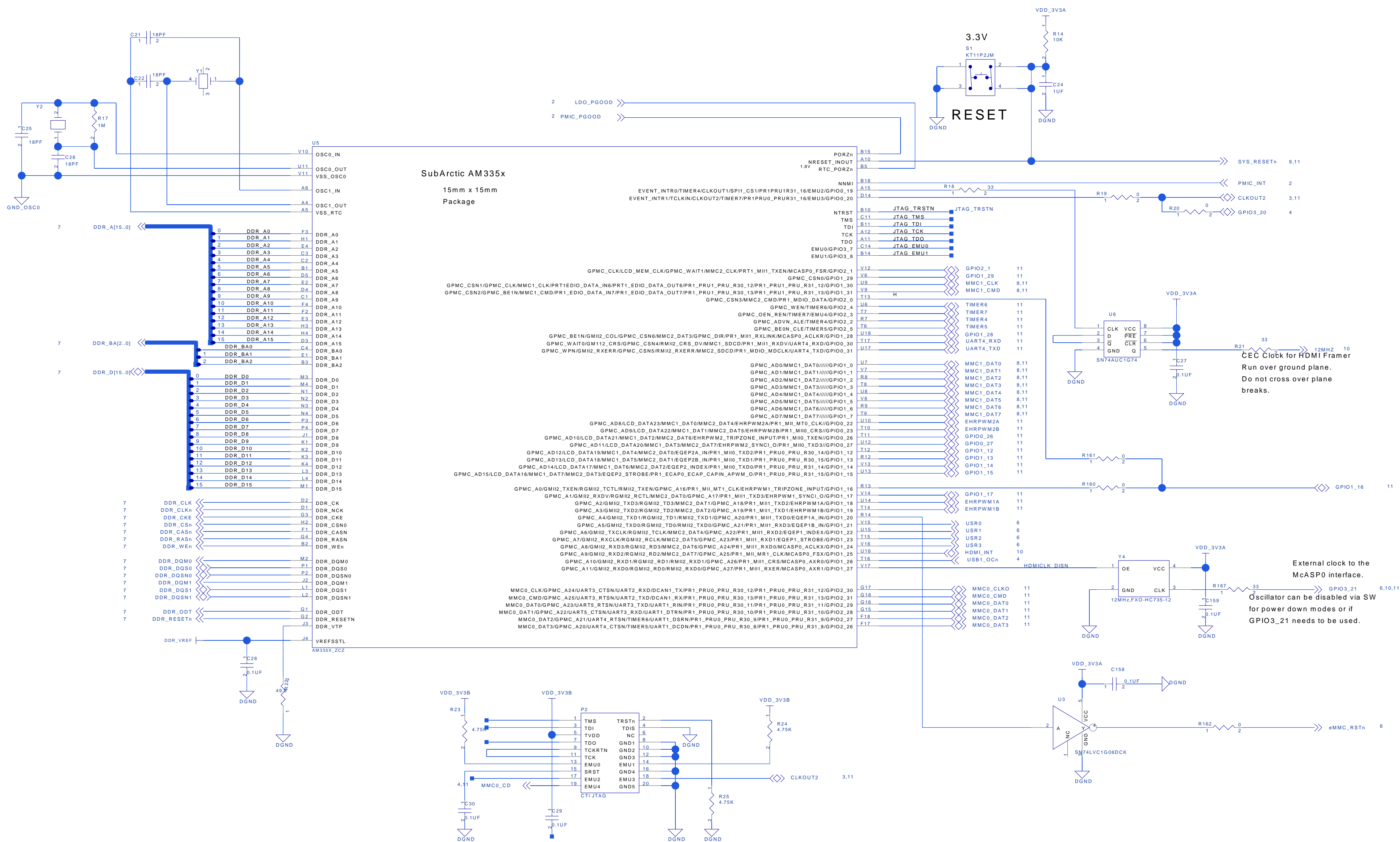
Mentor Graphics®

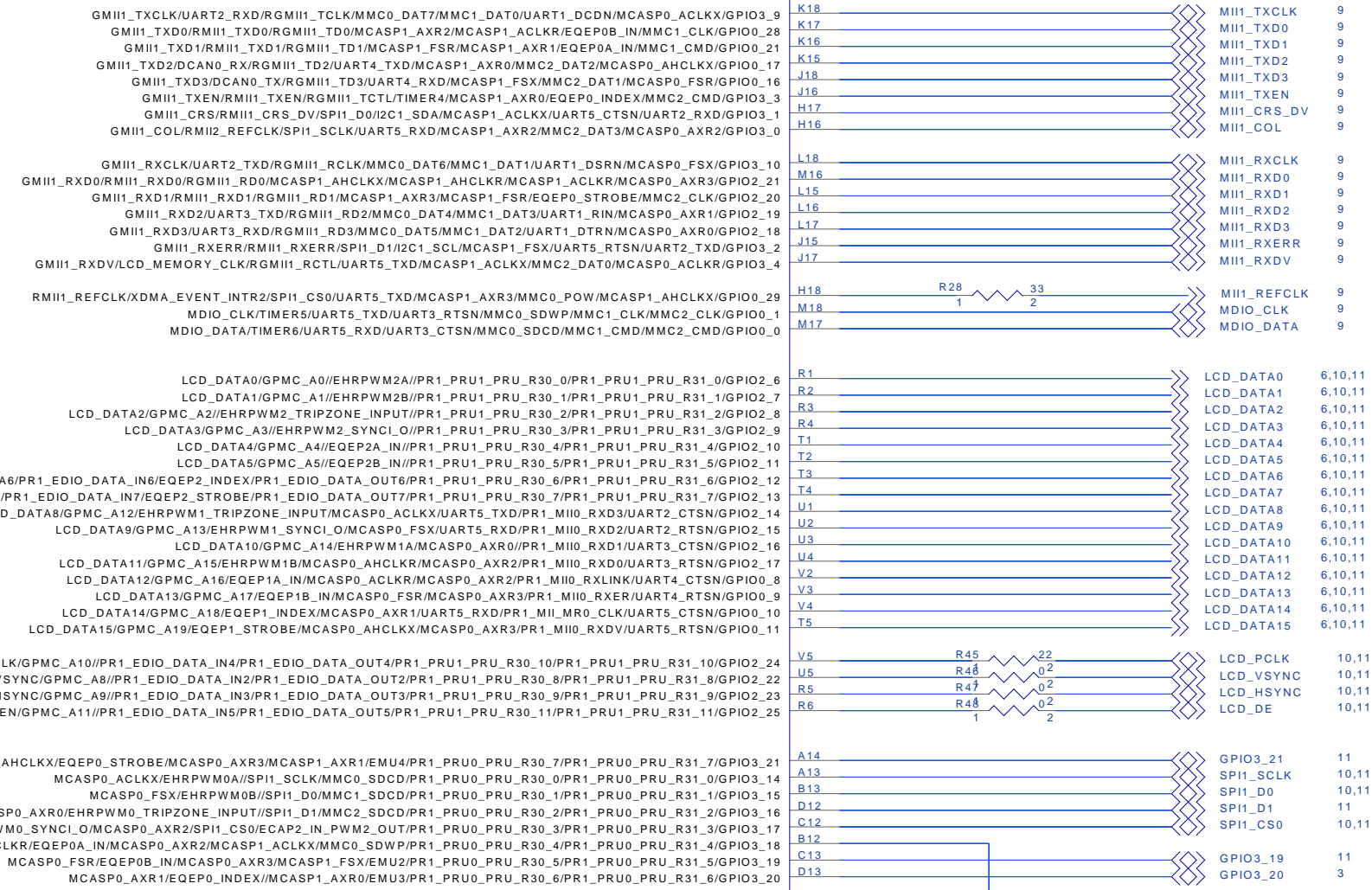
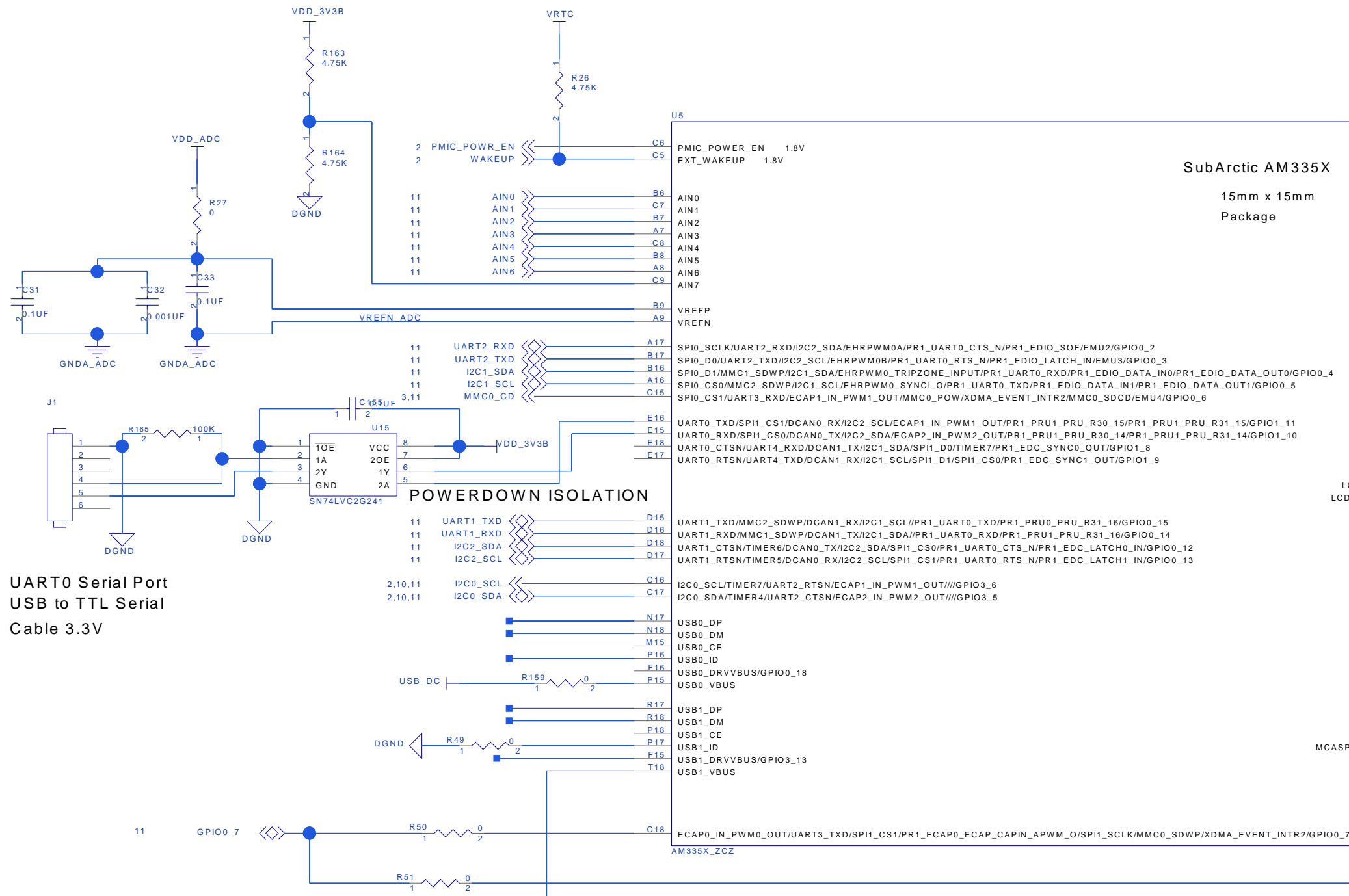
TITLE

BeagleBoneBlack

SIZE A3 DWG NO 450-5500-001 BeagleBoneBlack Power ManagementB4 REV

DRAWN BY Mentor TME SHEET 2 of 11 16/01/2015:11:44





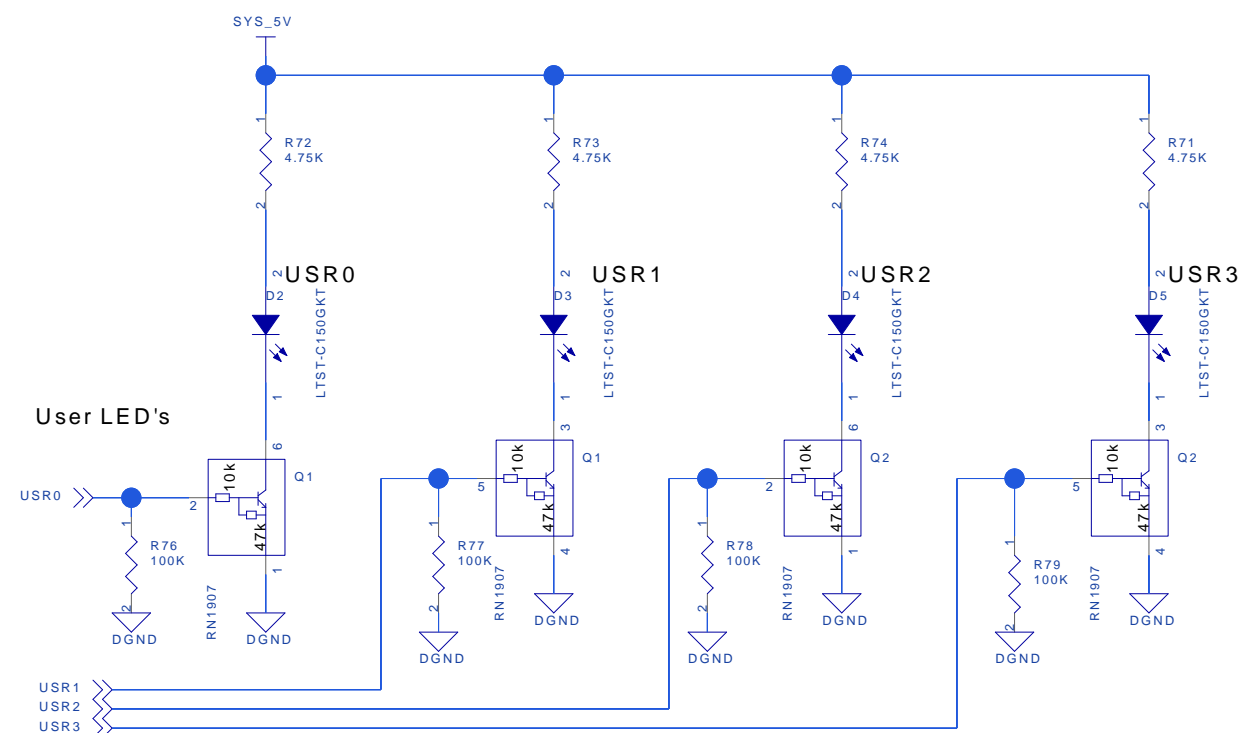
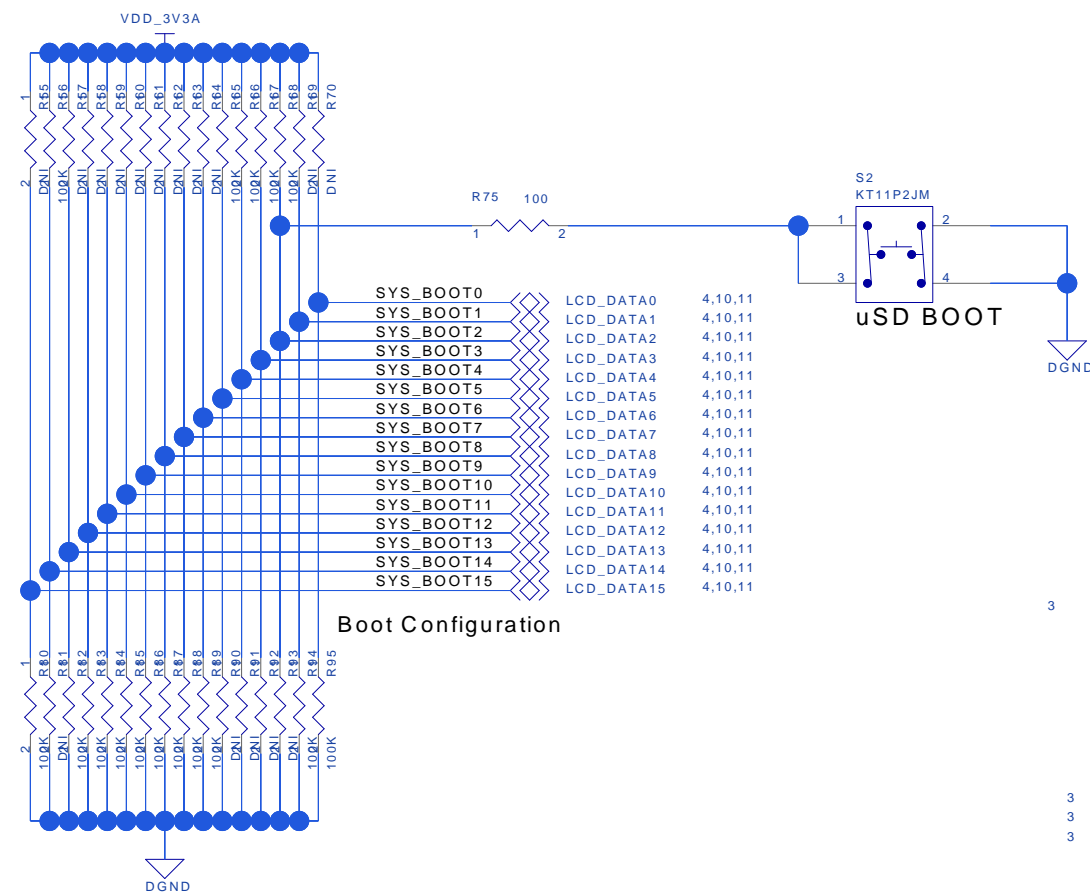
Prototype to Production[®] Designer by



BeagleBoneBlack

SIZE	DWG NO	SHEET	of	REV
A2	450-5500-001	4	11	16/01/2015:11:44
DRAWN BY	Mentor TME			

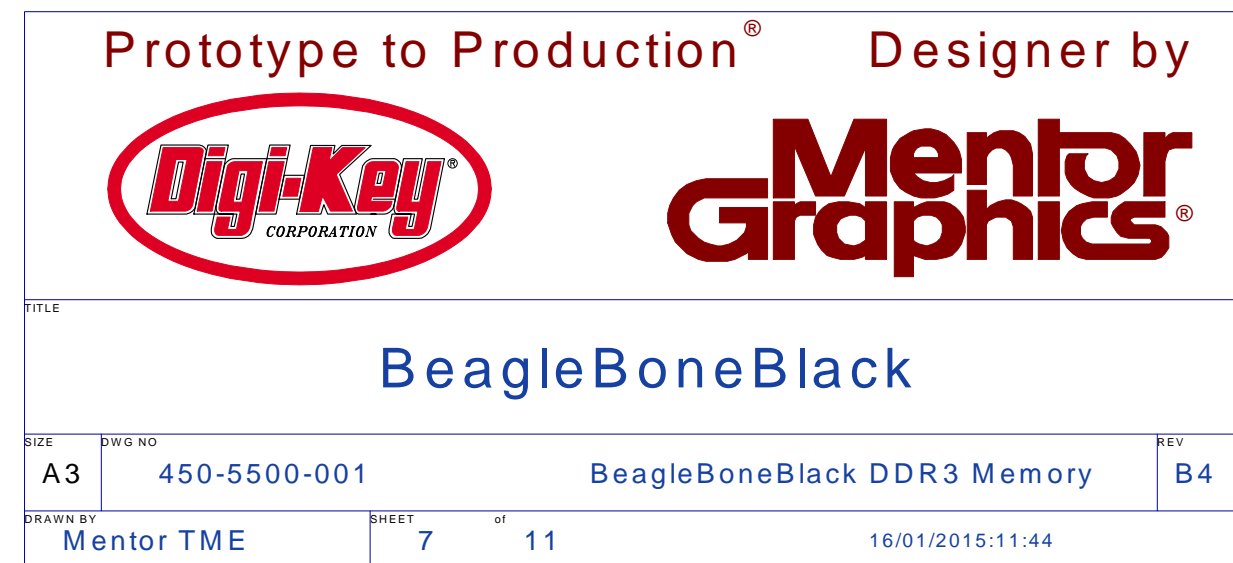
BeagleBoneBlack Processor II / USB / Serial

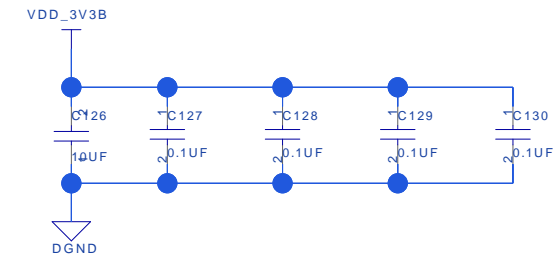
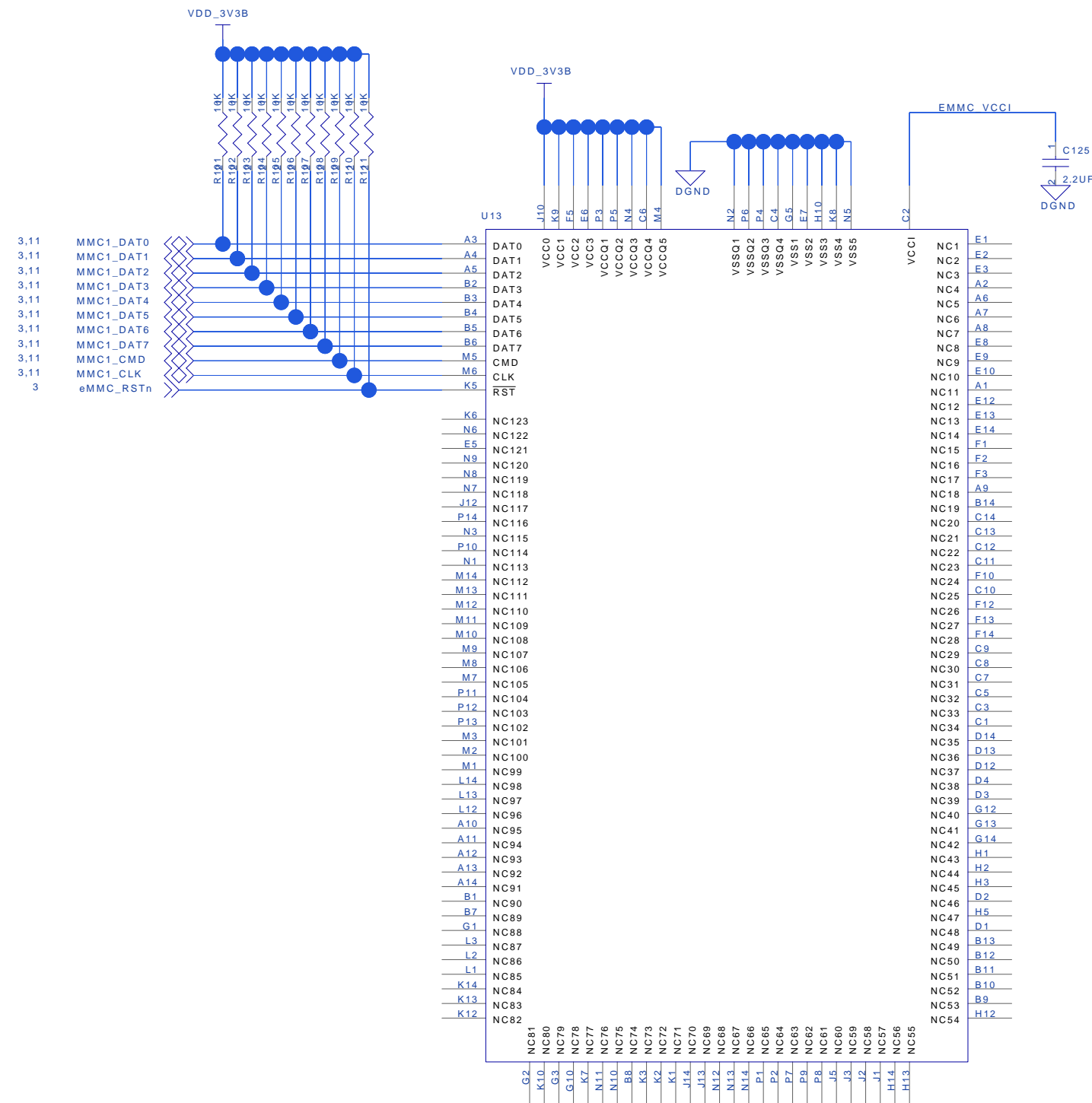


Prototype to Production® Designer by



BeagleBoneBlack



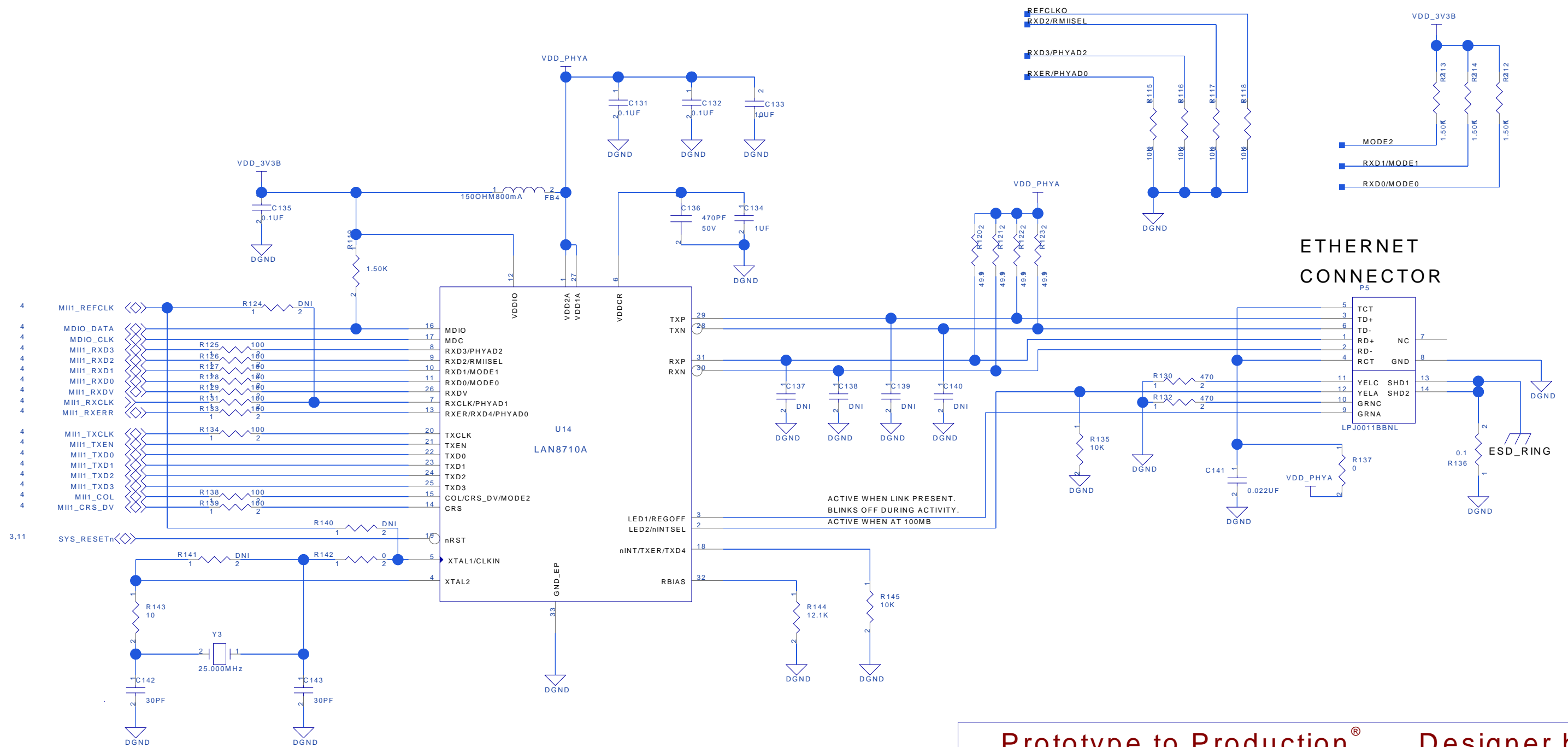


Prototype to Production[®] Designer by



BeagleBoneBlack

SIZE	DWG NO	REV
A3	450-5500-001	B4
BeagleBoneBlack 2G eMMC		
DRAWN BY	SHEET	of
Mentor TME	8	11
16/01/2015:11:44		

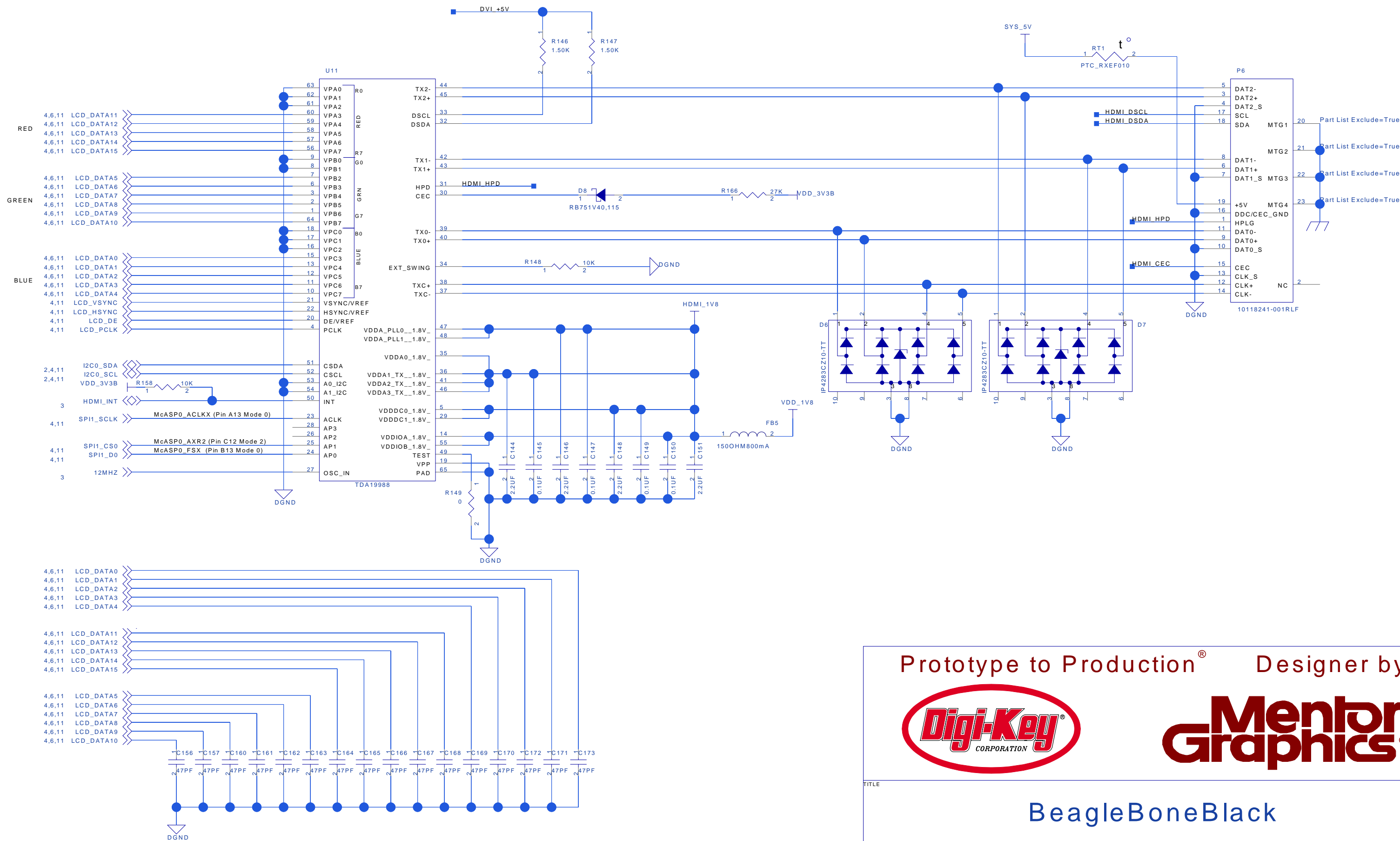


Prototype to Production[®] Designer by





BeagleBoneBlack

SIZE	DWG NO	BeagleBoneBlack Ethernet	REV
A3	450-5500-001		B4
DRAWN BY	Mentor TME	SHEET 9 of 11	16/01/2015:11:44



Prototype to Production[®]

Designer by



TITLE

BeagleBoneBlack

SIZEA3

DWG NO450-5500-001

BeagleBoneBlack HDMI Interface

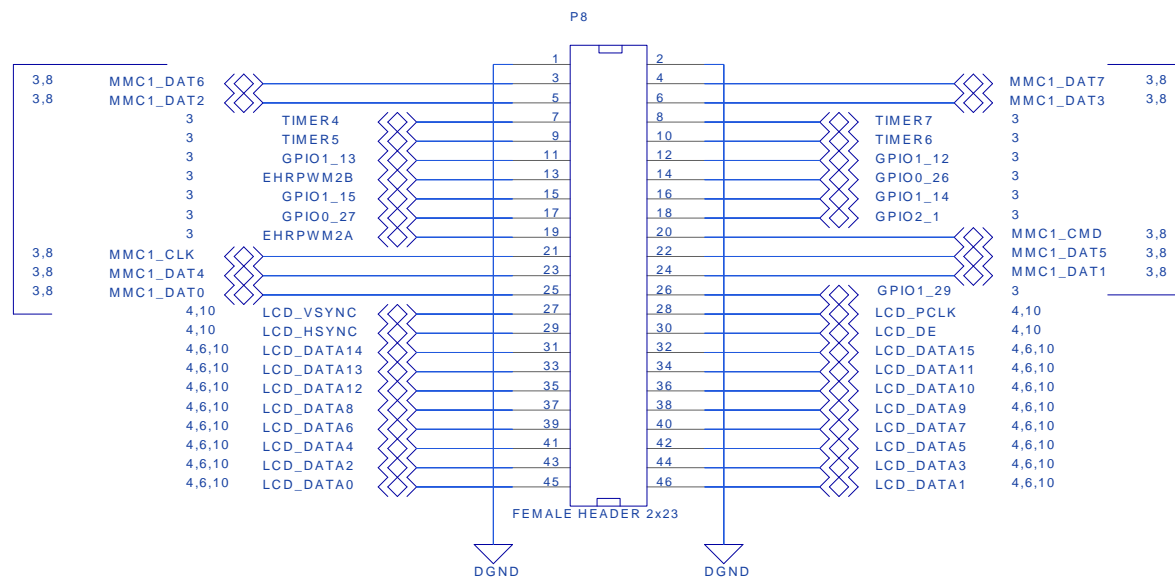
REV B4

DRAWN BYMentor TME

SHEET10 of 11

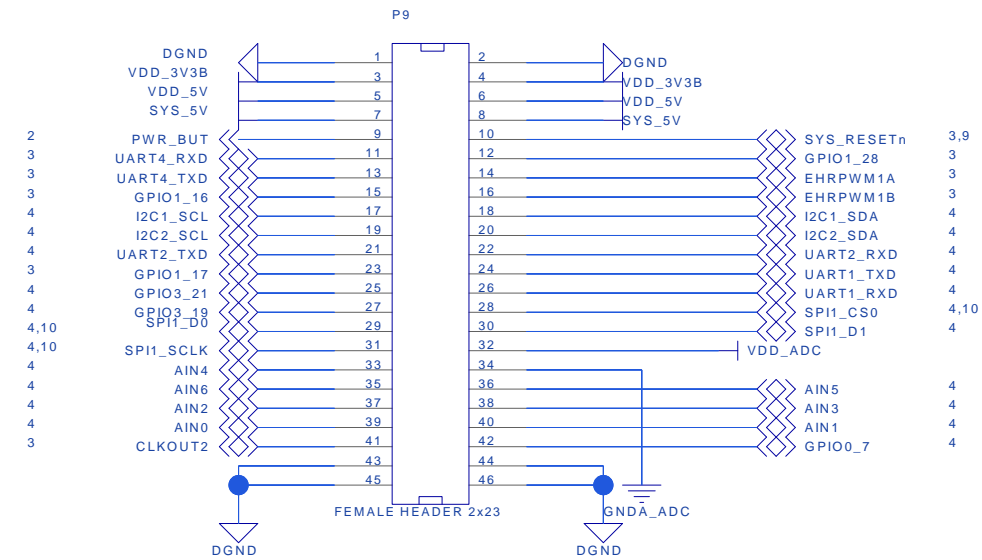
16/01/2015:11:44

CAUTION: USED ON BOARD

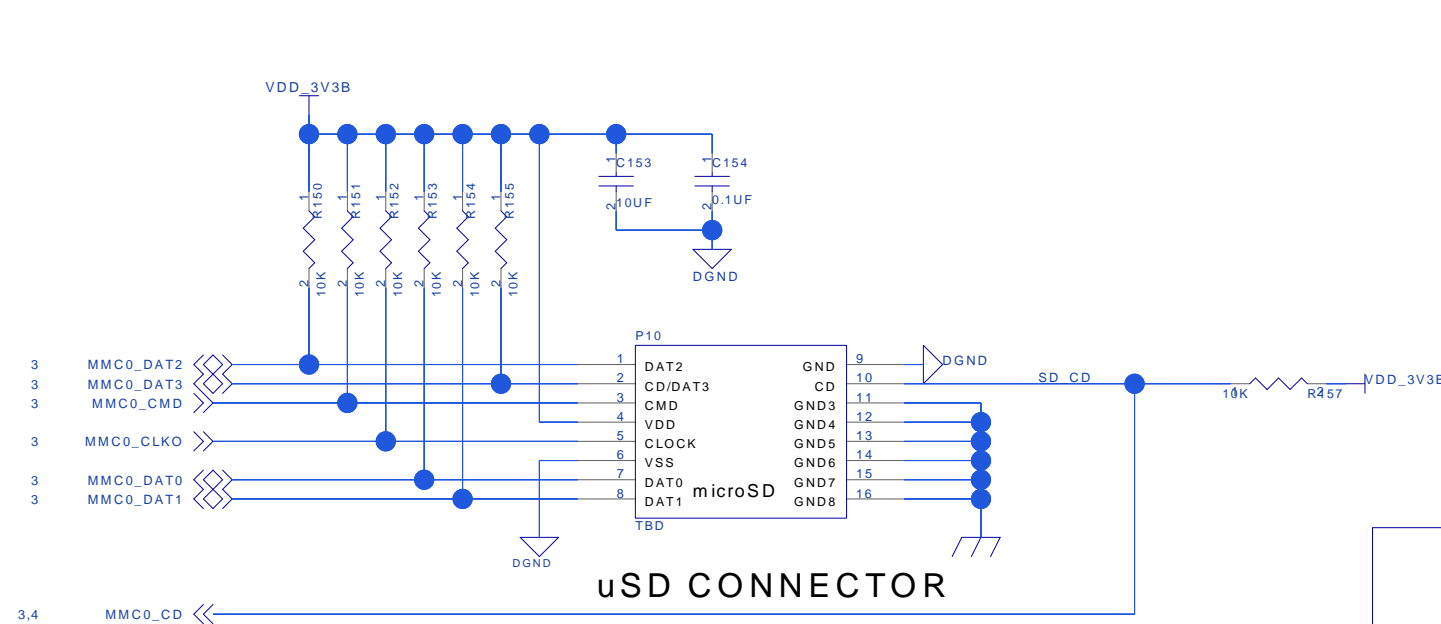


EXPANSION HEADER

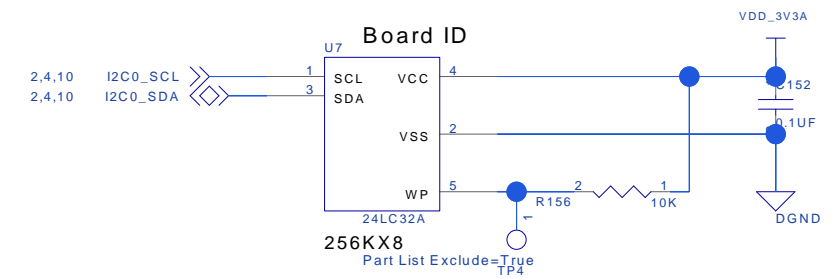
CAUTION: USED ON BOARD



EXPANSION HEADER



uSD CONNECTOR



Prototype to Production® Designer by



BeagleBoneBlack