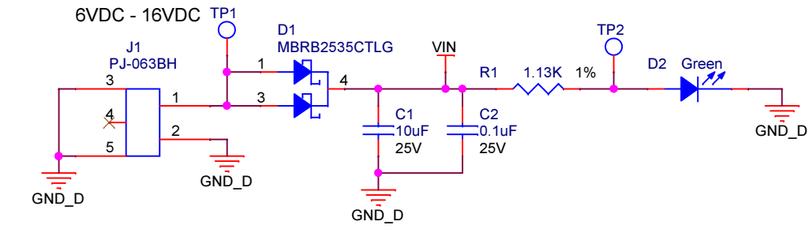
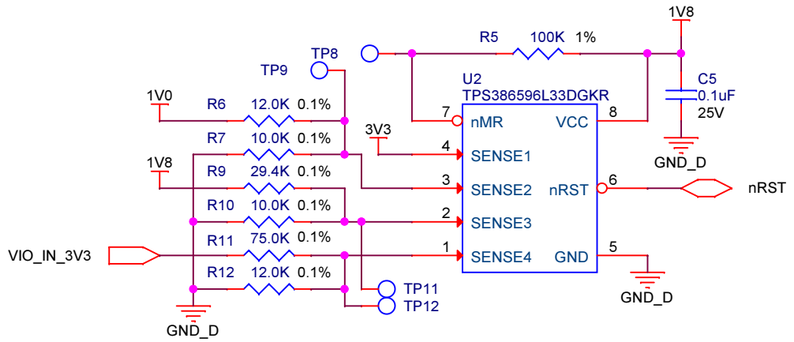
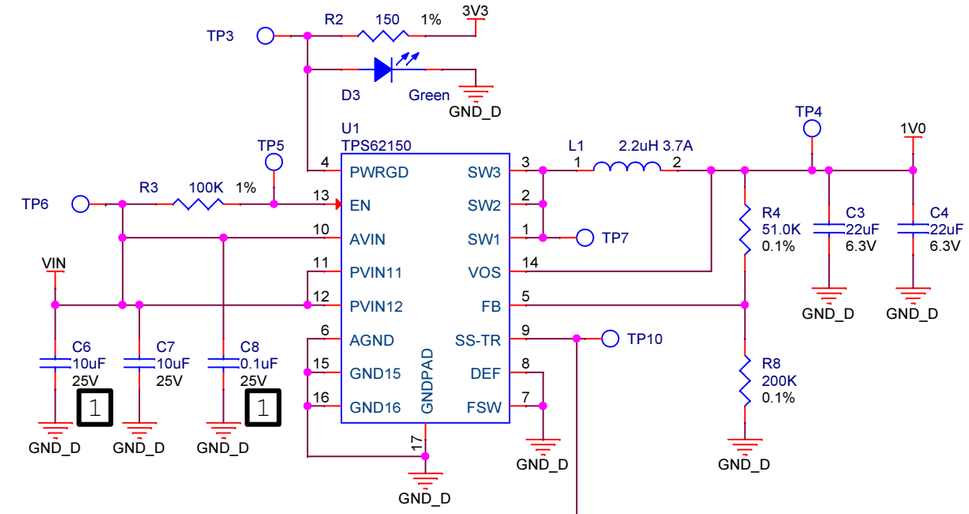
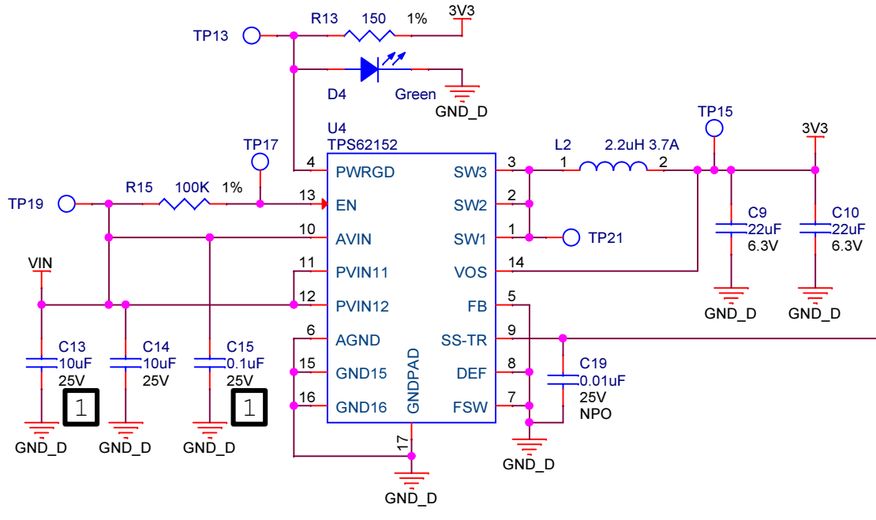
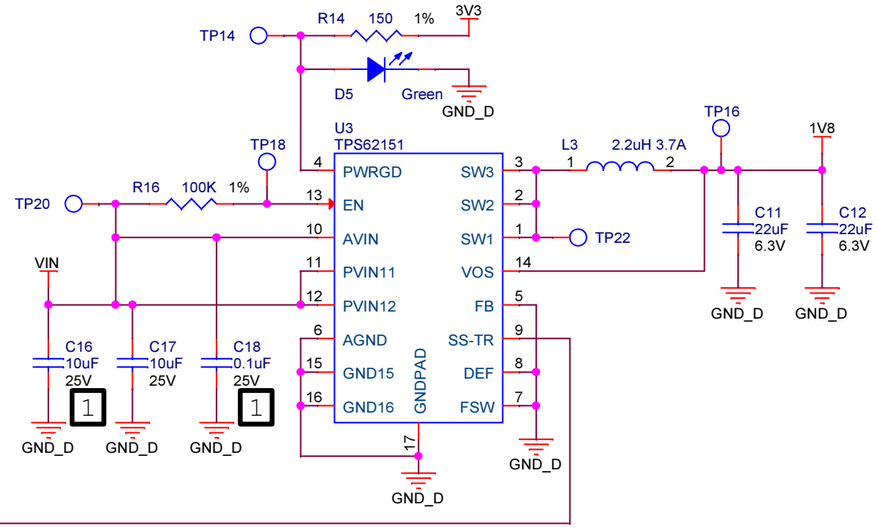
Rev.	Description	CO Number	Date	Approved By	Checked By
1.1	giggleBits design	00007	10/15/2015	BEH	JJW











NOTES:

1 Place decoupling capacitors as close to IC pins as possible.

krtkl inc.
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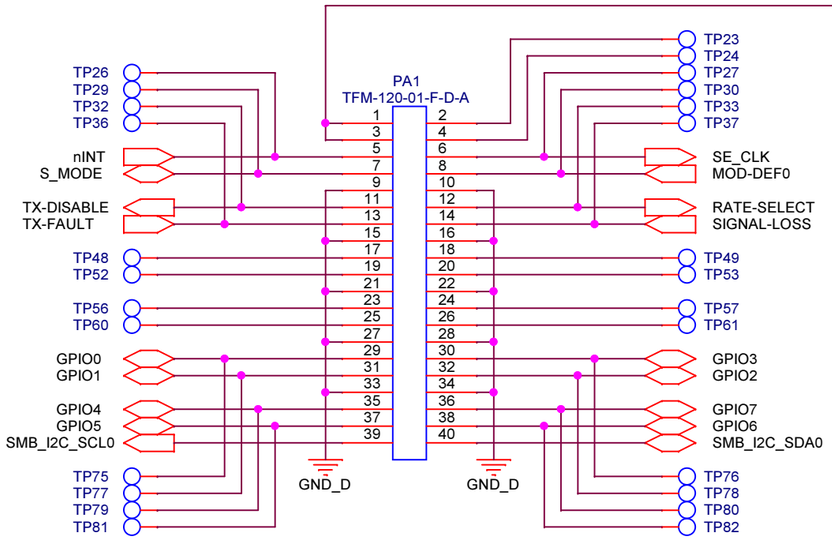
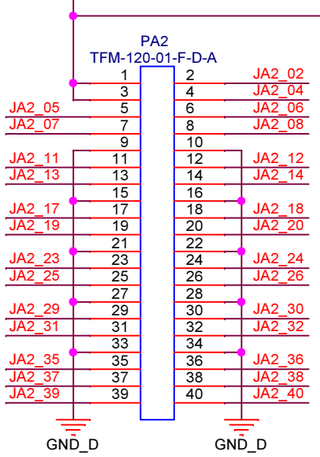
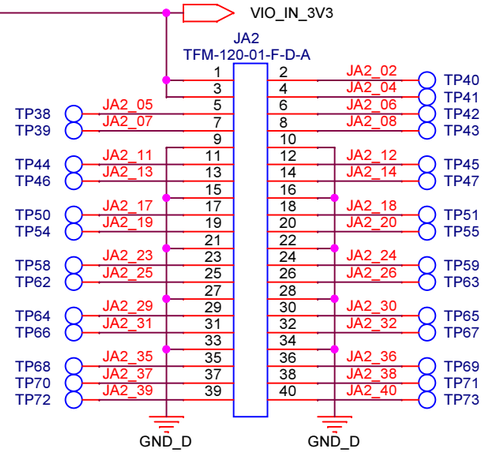
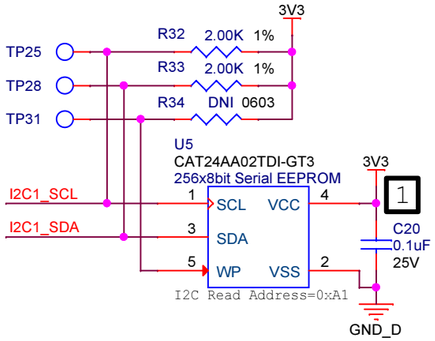
	NAME	DATE
DRAWN BY	B. Hammond	10/15/2015
CHECKED BY	J. Weatherbee	10/23/2015
APPROVED BY	R. Cousins	10/23/2015

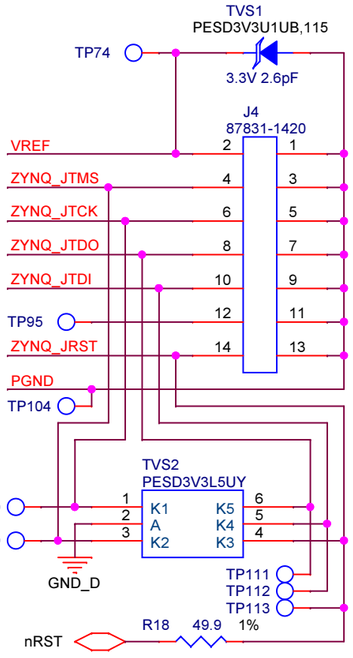
TITLE: giggleBits
PATH: /
DESCRIPTION: Power Supplies
SIZE: B
DRAWING NO.: 15101401-01
REV: 1.1
SHEET 1 OF 6

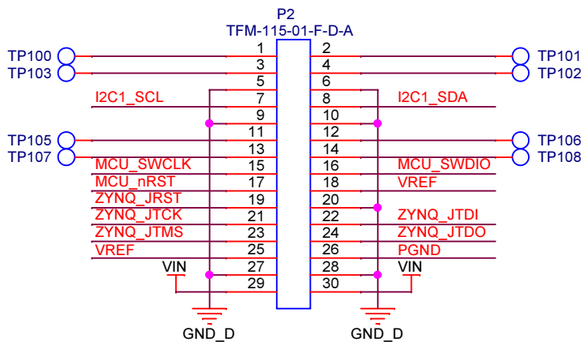


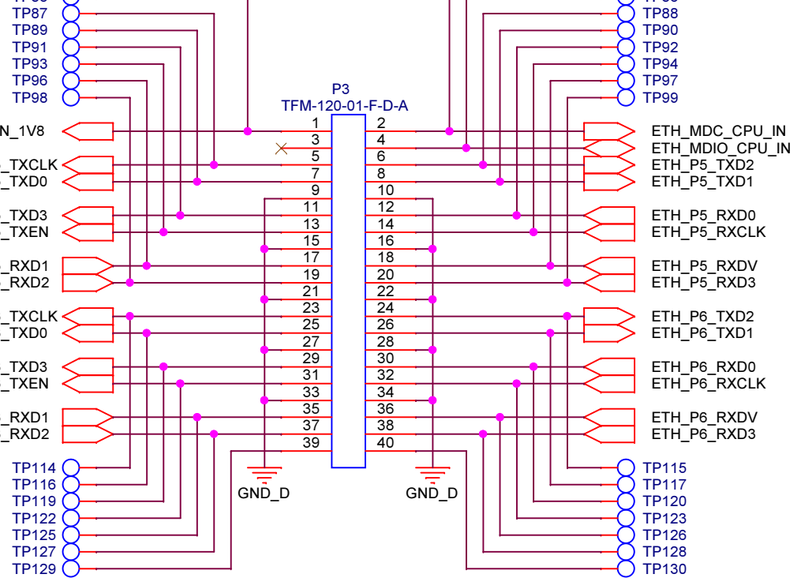


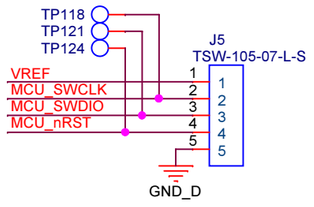












NOTES:

1. Place decoupling capacitors as close to IC pins as possible.

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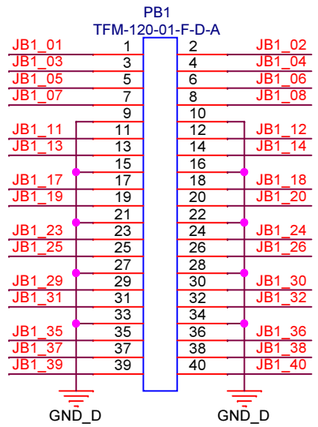
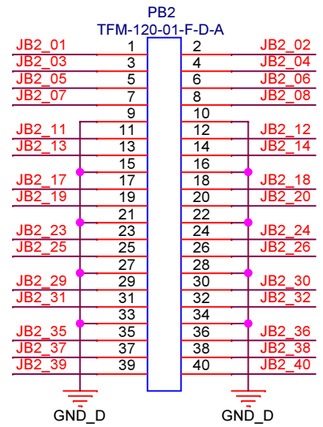
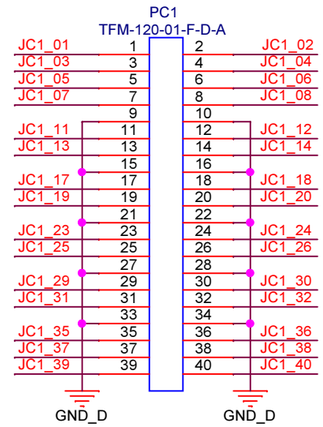
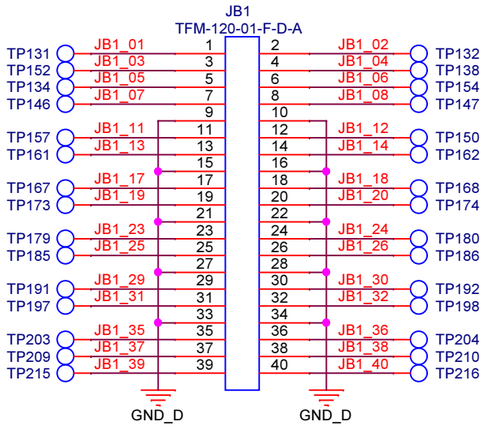
	NAME	DATE
DRAWN BY	B. Hammond	10/16/2015
CHECKED BY	J. Weatherbee	10/23/2015
APPROVED BY	R. Cousins	10/23/2015

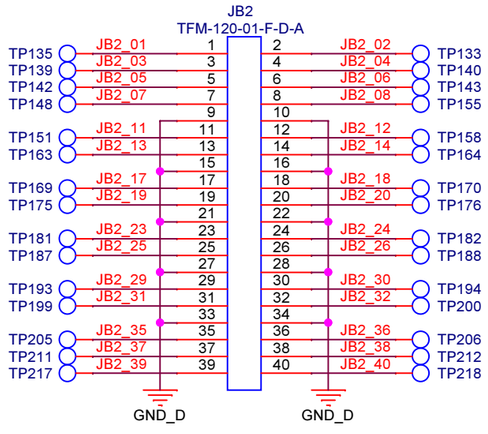
TITLE: giggleBit
PATH: /
DESCRIPTION: Main Interconnect
SIZE: B
DRAWING NO.: 15101401-01
REV: 1.1
SHEET 2 OF 6

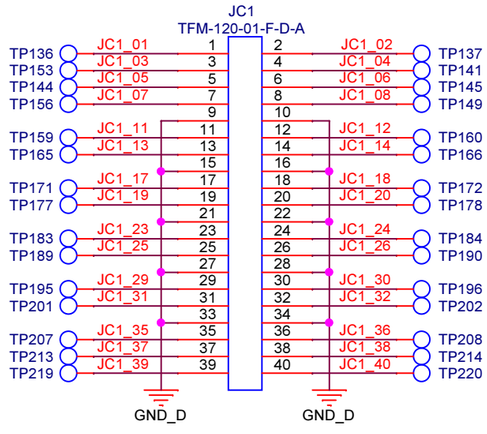












NOTES:

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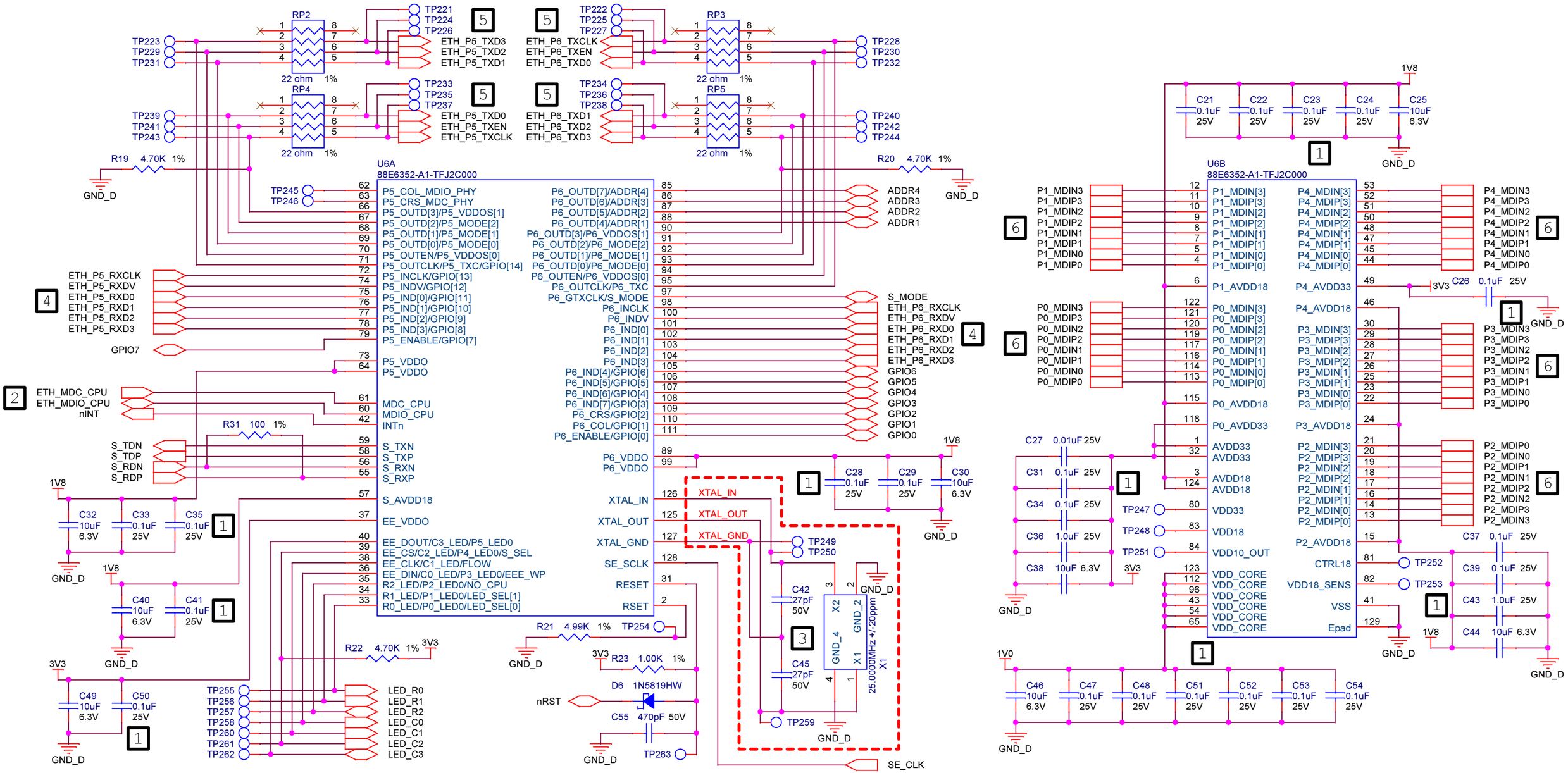
	NAME	DATE
DRAWN BY	B. Hammond	10/16/2015
CHECKED BY	J. Weatherbee	10/23/2015
APPROVED BY	R. Cousins	10/23/2015

TITLE: giggleBits
PATH: /
DESCRIPTION: Main Interconnect 2
SIZE: B
DRAWING NO.: 15101401-01
REV: 1.1
SHEET 3 OF 6



NOTES:

1. Place decoupling capacitors as close to IC pins as possible.
2. High speed signal traces should be length matched to within 50mils for each set of grouped signals.
3. Minimize capacitance between the crystal drive signals by shielding with the local crystal ground. Also minimize coupling of these signals to other signal lines.
4. U6 RGMII inputs ETH_Px_RXxx: match trace lengths from connector P3 such that data bit to data bit skew is between -500ps and +500ps, and data bits to clock skew is between 1.0ns and 2.6ns.
5. U6 RGMII outputs ETH_Px_TXxx: match trace lengths from connector P3 such that data bit to data bit skew and data bits to clock skew is between -500ps and +500ps.
6. Route signal pairs with 50ohm single, 100ohm differential impedance.

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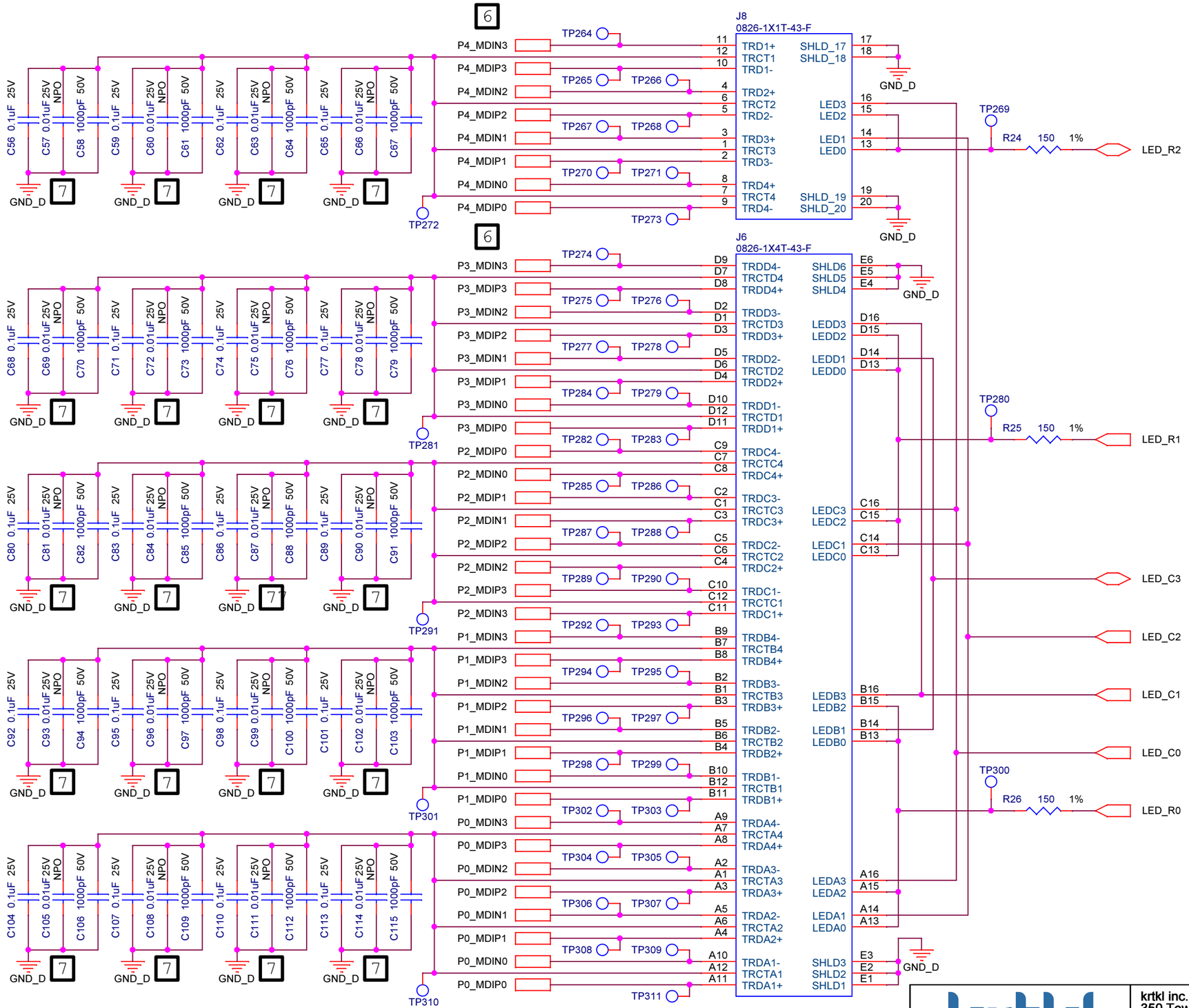
	NAME	DATE
DRAWN BY	B. Hammond	10/16/2015
CHECKED BY	J. Weatherbee	10/23/2015
APPROVED BY	R. Cousins	10/23/2015

TITLE: giggleBits
PATH: /
DESCRIPTION: Gigabit Ethernet Switch
SIZE: B
DRAWING NO.: 15101401-01
REV: 1.1
SHEET 4 OF 6



NOTES:

6 Route signal pairs with 50ohm single, 100ohm differential impedance.

7 Place each set of three decoupling capacitors as close to Ethernet connector pins as possible.

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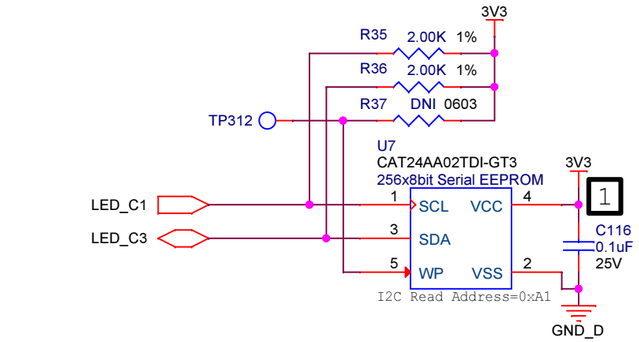
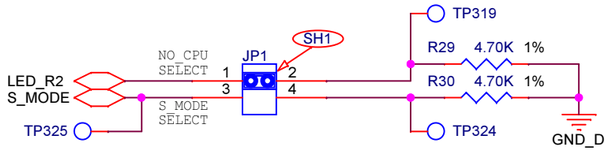
	NAME	DATE
DRAWN BY	B. Hammond	10/16/2015
CHECKED BY	J. Weatherbee	10/23/2015
APPROVED BY	R. Cousins	10/23/2015

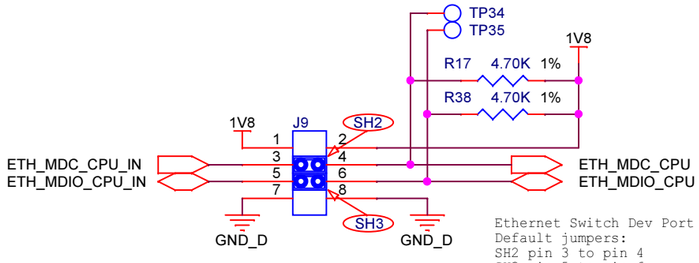
TITLE: giggleBits
PATH: /
DESCRIPTION: Gigabit Ethernet Connectors
SIZE: B
DRAWING NO.: 15101401-01
REV: 1.1
SHEET 5 OF 6



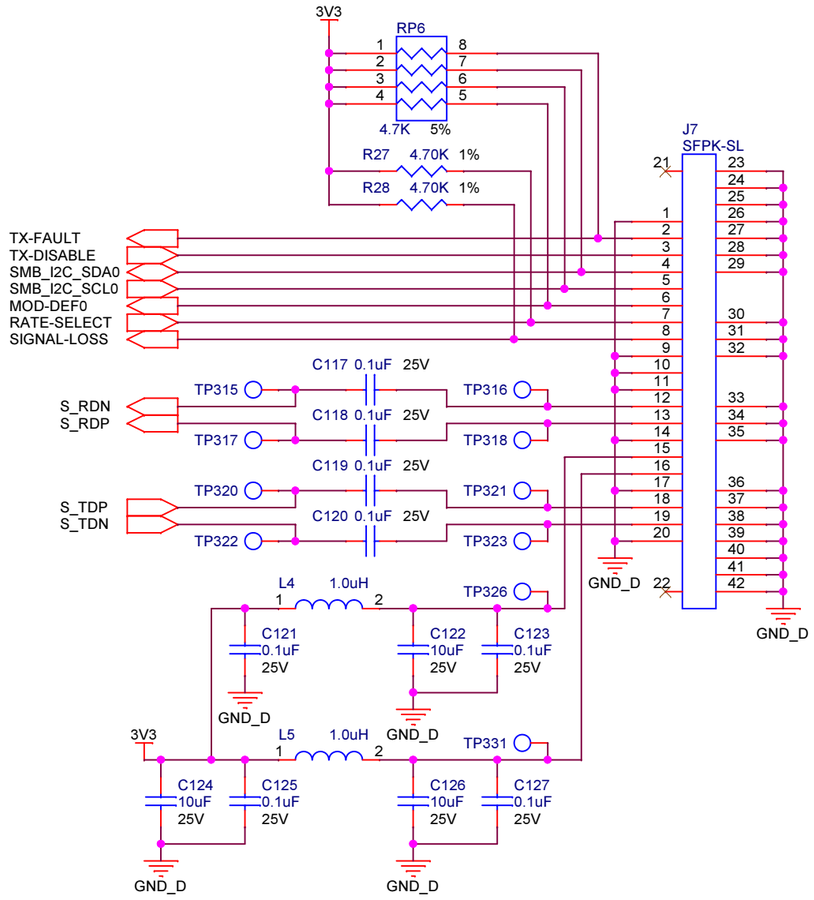


NO_CPU
Jumpered = CPU (Default SH1)
Open = No CPU

S_MODE
Jumpered = 100BASE-FX
Open = SERDES to
1000BASE-X or SGMII
(Default)



Ethernet Switch Dev Port
Default jumpers:
SH2 pin 3 to pin 4
SH3 pin 5 to pin 6



NOTES:

1. Place decoupling capacitors as close to IC pins as possible.

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	NAME	DATE
DRAWN BY	B. Hammond	10/16/2015
CHECKED BY	J. Weatherbee	10/23/2015
APPROVED BY	R. Cousins	10/23/2015

TITLE: giggleBits
PATH: /
DESCRIPTION: Configuration & SFP/SFP+
SIZE: B
DRAWING NO.: 15101401-01
REV: 1.1
SHEET 6 OF 6