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CHANGES REV01 to REV02

- 1) MAC EEPROM Address patch fixed on PCB
- 2) lib components update

A

A

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|-----------------------------------|---------------------------------------|-------------|
| Title: TE0745 | | |
| A4 | Number: 1 45-2IA | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page1 of 25 |
| Filename: Revision Changes.SchDoc | | |

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U_J1
J1.SchDoc

U_J2
J2.SchDoc

U_J3
J3.SchDoc

U_ZYNQ
ZYNQ.SchDoc

U_POWER
POWER.SchDoc

U_POWER_2
POWER_2.SchDoc

U_RTC
SENSOR-RTC.SchDoc

U_POWER_3
POWER_3.SchDoc

U_CLK
CLK.SchDoc

U_DDR3
DDR3-RAM.SchDoc

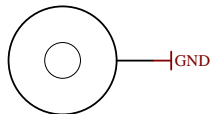
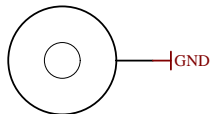
U_ETH_PHY
ETH-PHY.SchDoc

U_USB_PHY
USB-PHY.SchDoc

U_PowerOverview
PowerOverview.SchDoc

U_Revision Changes
Revision Changes.SchDoc

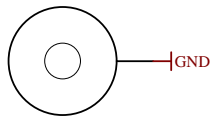
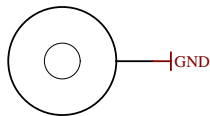
LOGO1
TE Logo PRINT Layer
LOGO PRINT



Mount.Hole 3.2mm für Unterlegscheibe

Mount.Hole 3.2mm für Unterlegscheibe

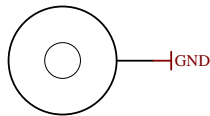
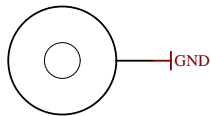
FIDU-DOT - small FIDU-DOT - small



Mount.Hole 3.2mm für Unterlegscheibe

Mount.Hole 3.2mm für Unterlegscheibe

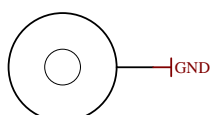
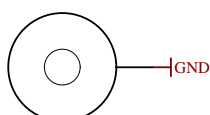
PM1 PM2
FIDU-DOT - small FIDU-DOT - small



Mount.Hole 3.2mm für Unterlegscheibe

Mount.Hole 3.2mm für Unterlegscheibe

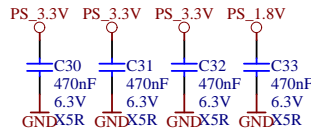
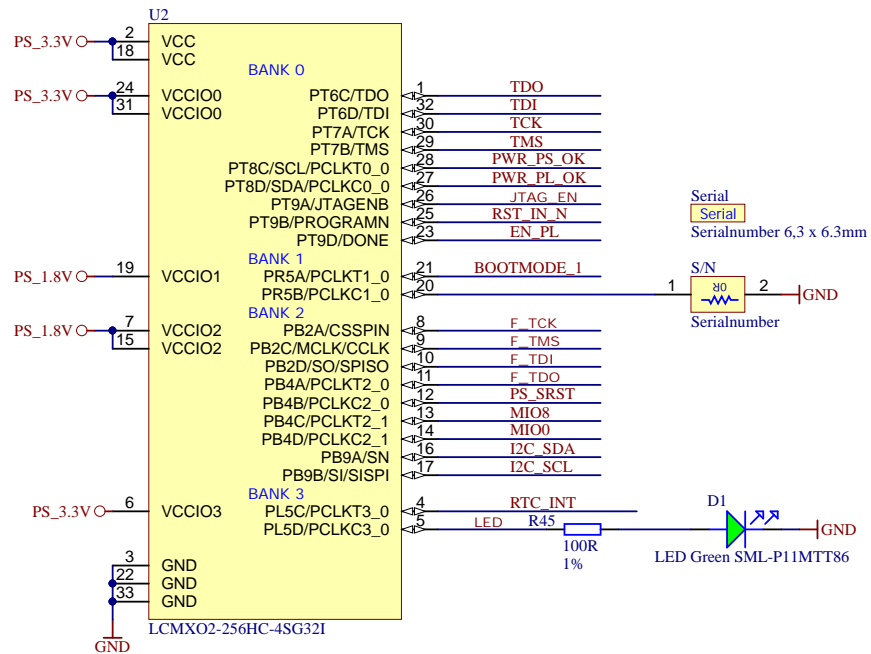
PM3 PM4
FIDU-DOT - small FIDU-DOT - small



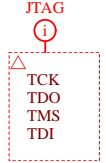
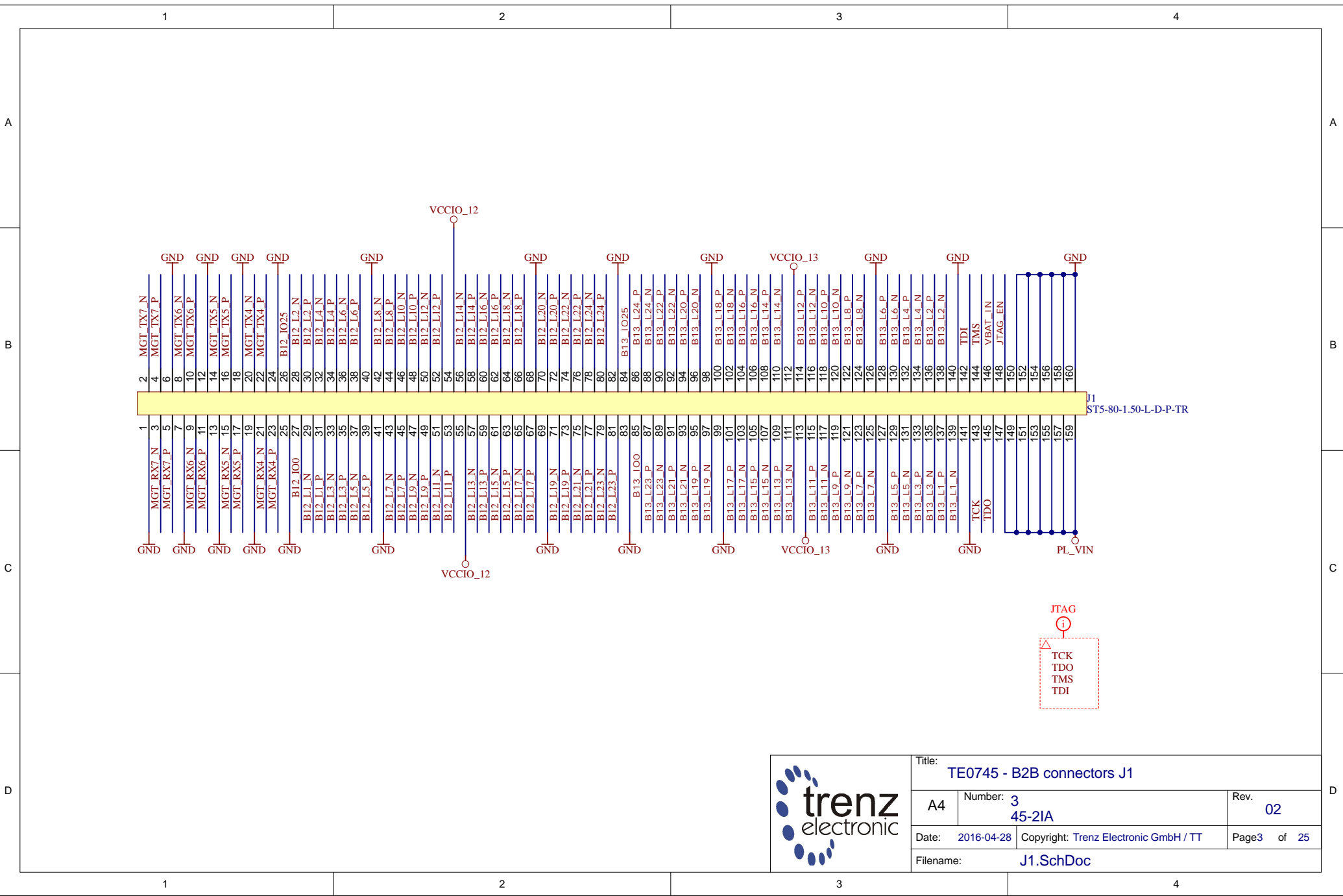
Mount.Hole 3.2mm für Unterlegscheibe

Mount.Hole 3.2mm für Unterlegscheibe

PM5 PM6



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|-------------------------|---------------------------------------|-------------|
| Title: TE0745 | | |
| A4 | Number: 2 45-21A | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page2 of 25 |
| Filename: TE0745.SchDoc | | |

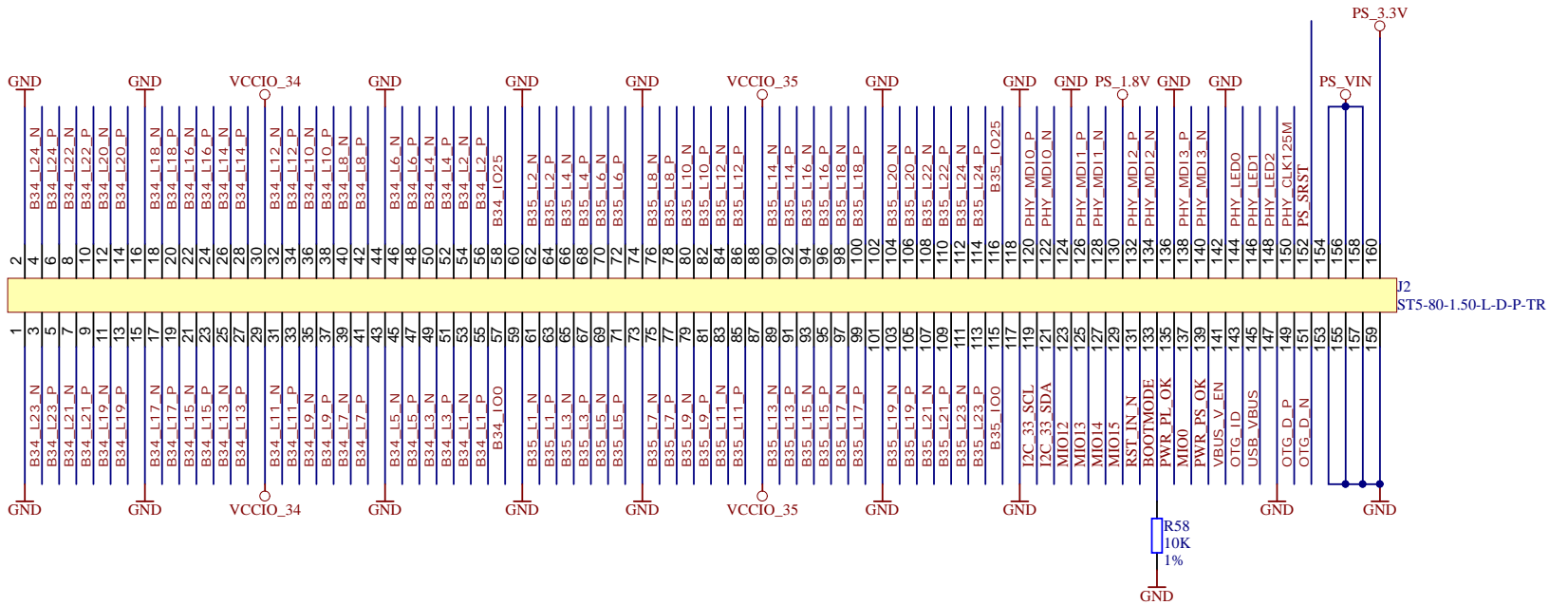


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| | Title: TE0745 - B2B connectors J1 | | |
| | A4 | Number: 3 45-2IA | Rev. 02 |
| | Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page3 of 25 |
| | Filename: J1.SchDoc | | |

ETH_MDI

i

PHY_MDI1_P
 PHY_MDI1_N
 PHY_MDI3_P
 PHY_MDI3_N
 PHY_MDI0_P
 PHY_MDI0_N
 PHY_MDI2_P
 PHY_MDI2_N



| | | |
|-----------------------------------|---------------------------------------|-------------|
| Title: TE0745 - B2B connectors J2 | | |
| A4 | Number: 4 45-21A | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page4 of 25 |
| Filename: J2.SchDoc | | |

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A

A

B

B

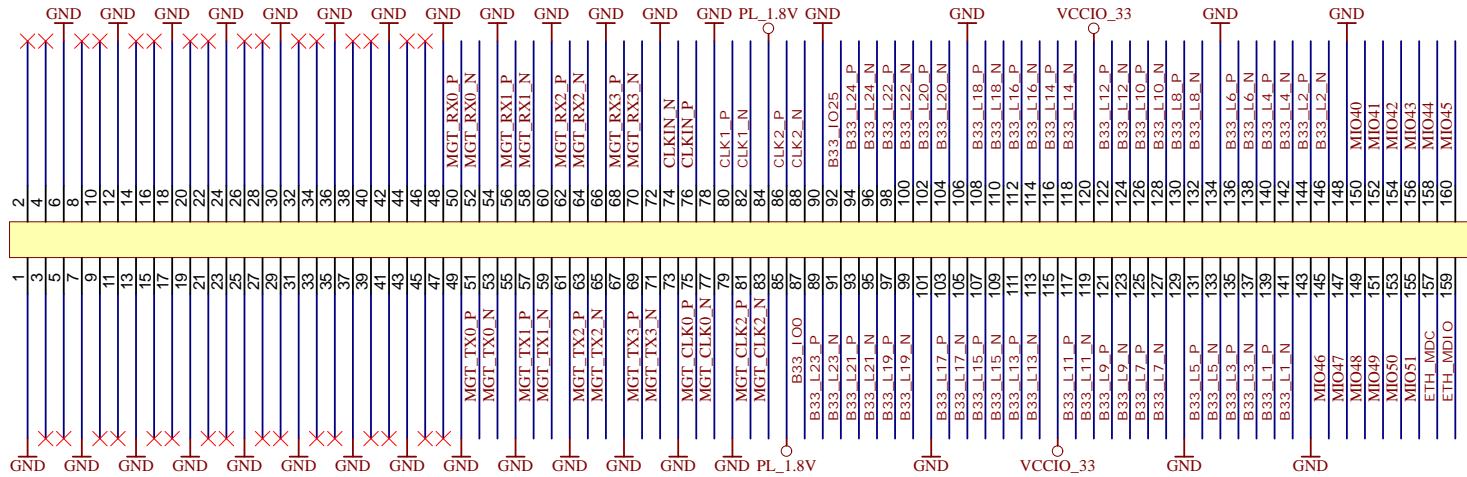
C

C

D

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RESERVED for additional 8 GTX lanes



J3
ST5-80-1.50-L-D-P-TR



| | | |
|-----------------------------------|---------------------------------------|-------------|
| Title: TE0745 - B2B connectors J3 | | |
| A4 | Number: 5 45-21A | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page5 of 25 |
| Filename: J3.SchDoc | | |

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U_B12
B12.SchDoc



U_B500
MIO_B500.SchDoc



U_B13
B13.SchDoc



U_PS_DDR
PS-DDR.SchDoc



U_B33
B33.SchDoc



U_MISC
ZYNQ_MISC.SchDoc



U_B34
B34.SchDoc



U_ZYNQ_POWER
ZYNQ_POWER.SchDoc



U_B35
B35.SchDoc



U_FPGA_MGT
FPGA_MGT.SchDoc



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A

A

B

B

C

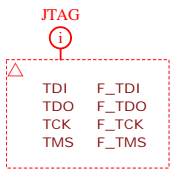
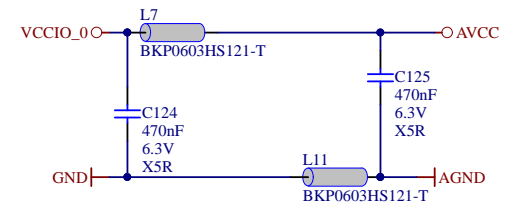
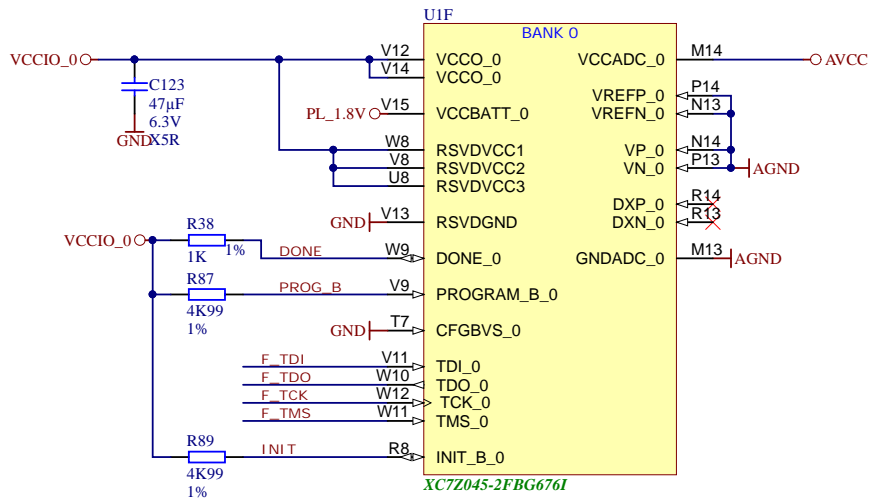
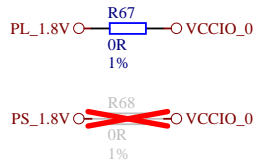
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D

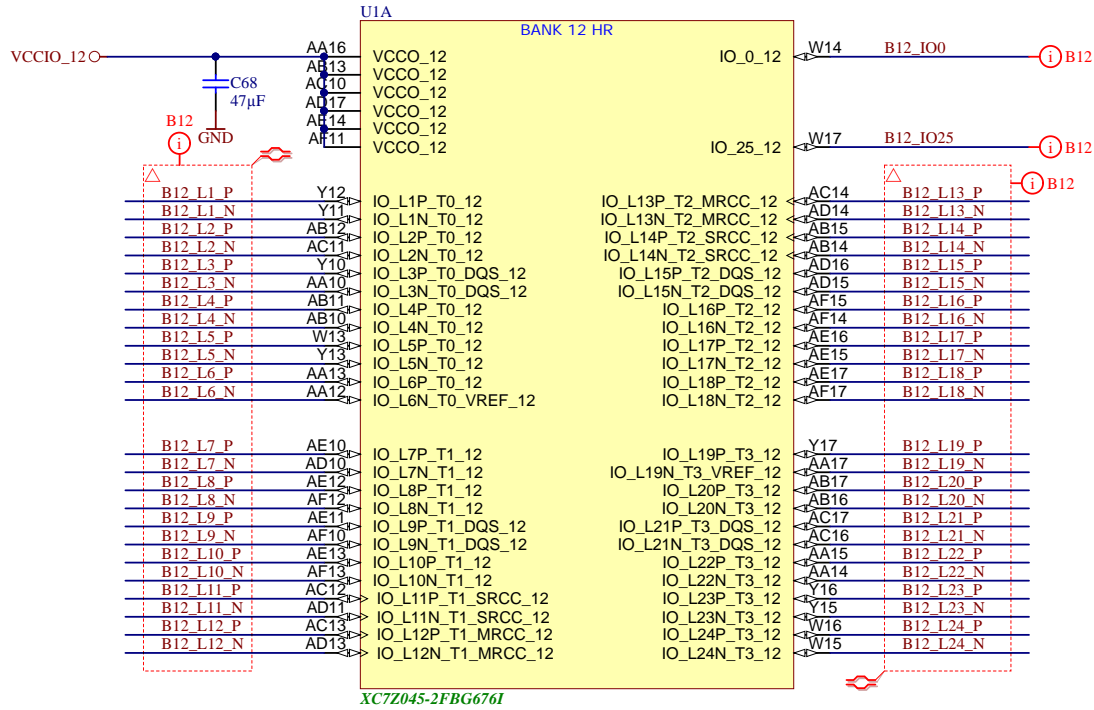
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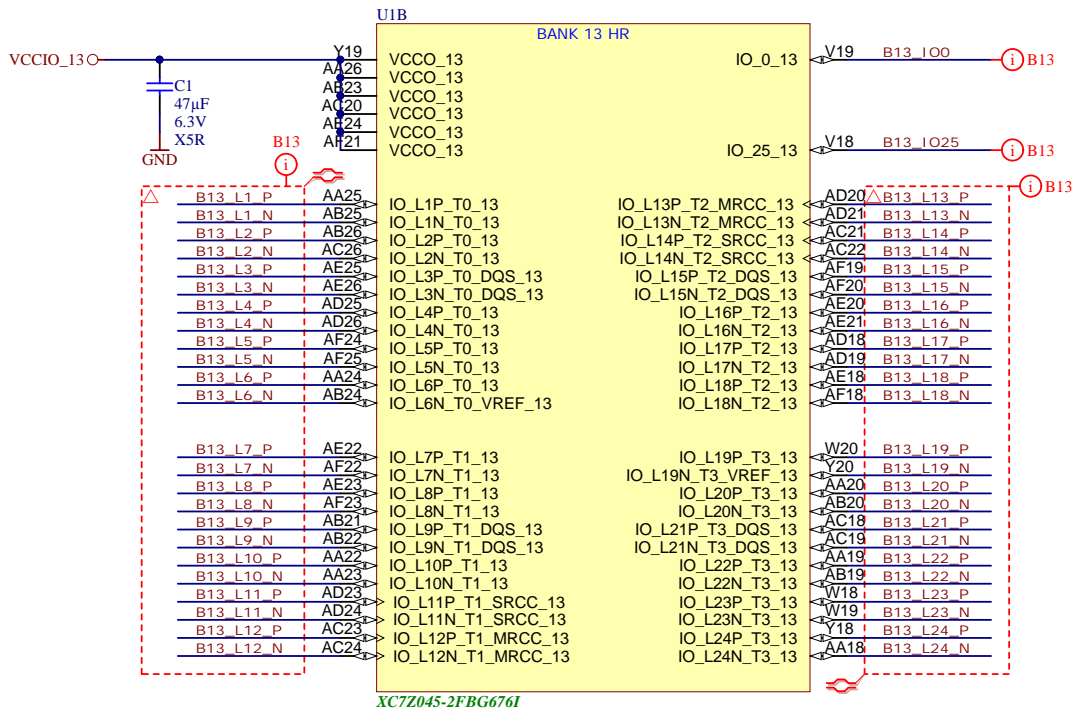
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| A4 | Number: 6 45-21A | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page6 of 25 |
| Filename: ZYNQ.SchDoc | | |



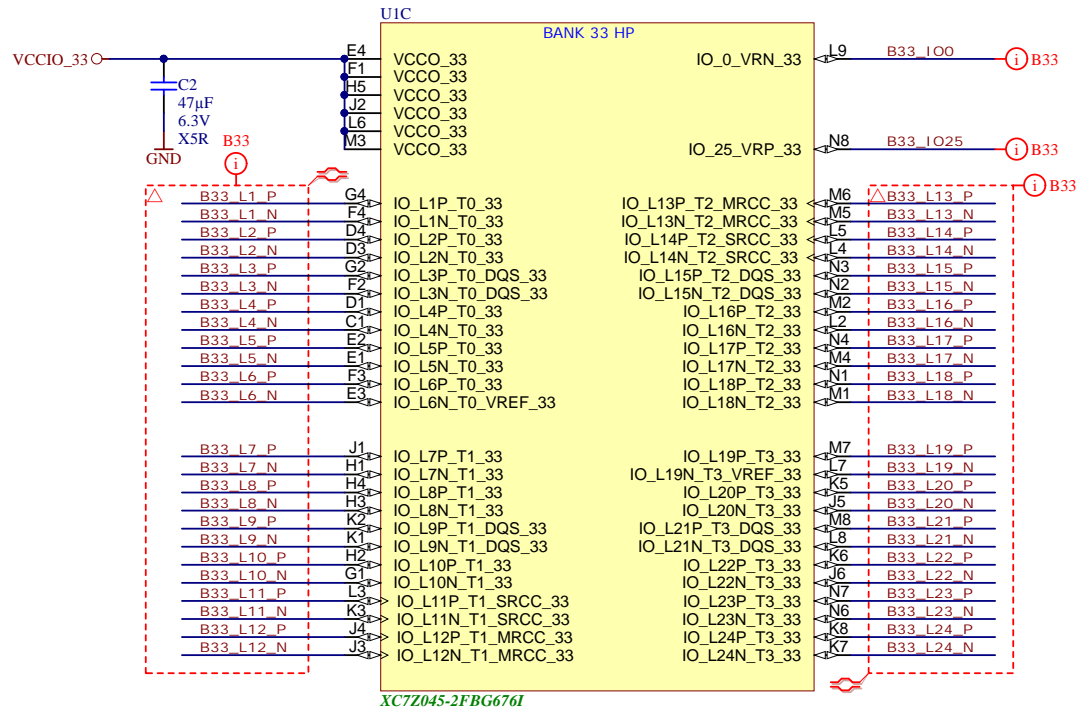
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| | Title: TE0745 - Zynq_MISC | | |
| | A4 | Number: 7 45-2IA | Rev. 02 |
| | Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page 7 of 25 |
| | Filename: ZYNQ_MISC.SchDoc | | |



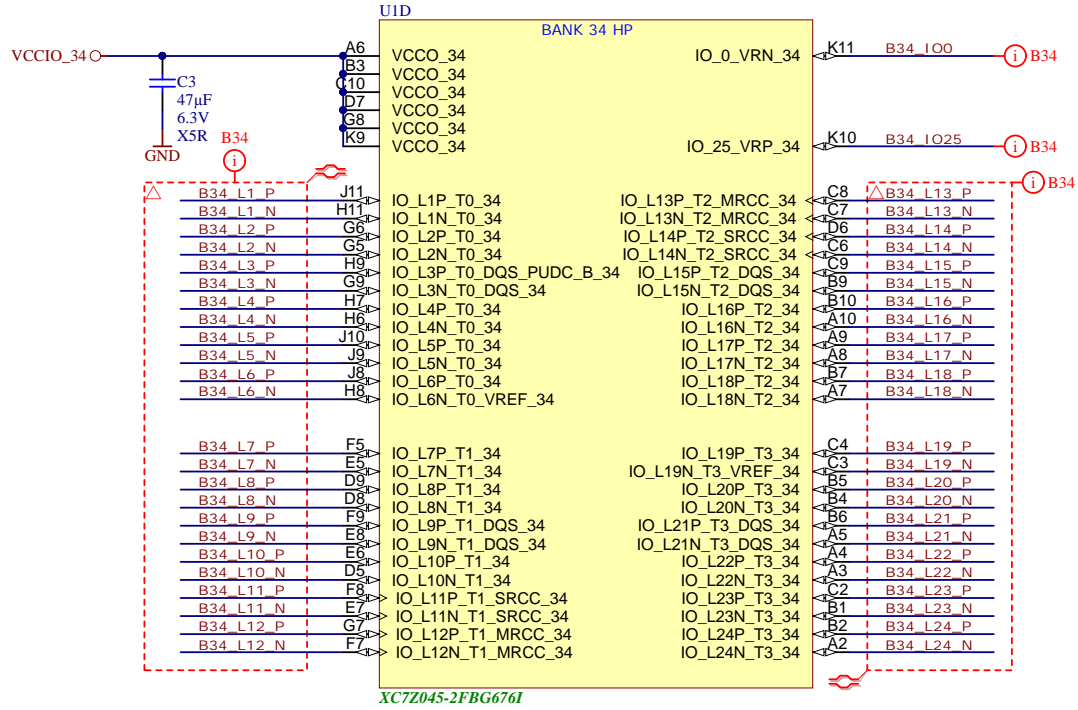
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| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page8 of 25 |
| Filename: B12.SchDoc | | |



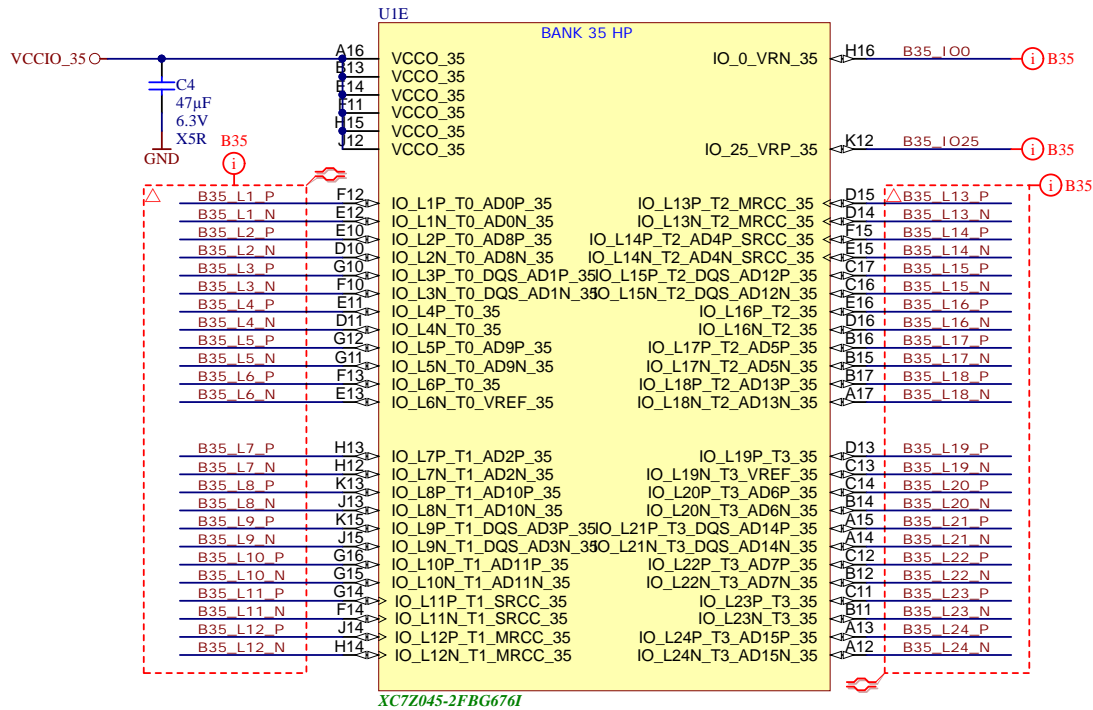
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| A4 | Number: 9 45-2IA | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page9 of 25 |
| Filename: B13.SchDoc | | |



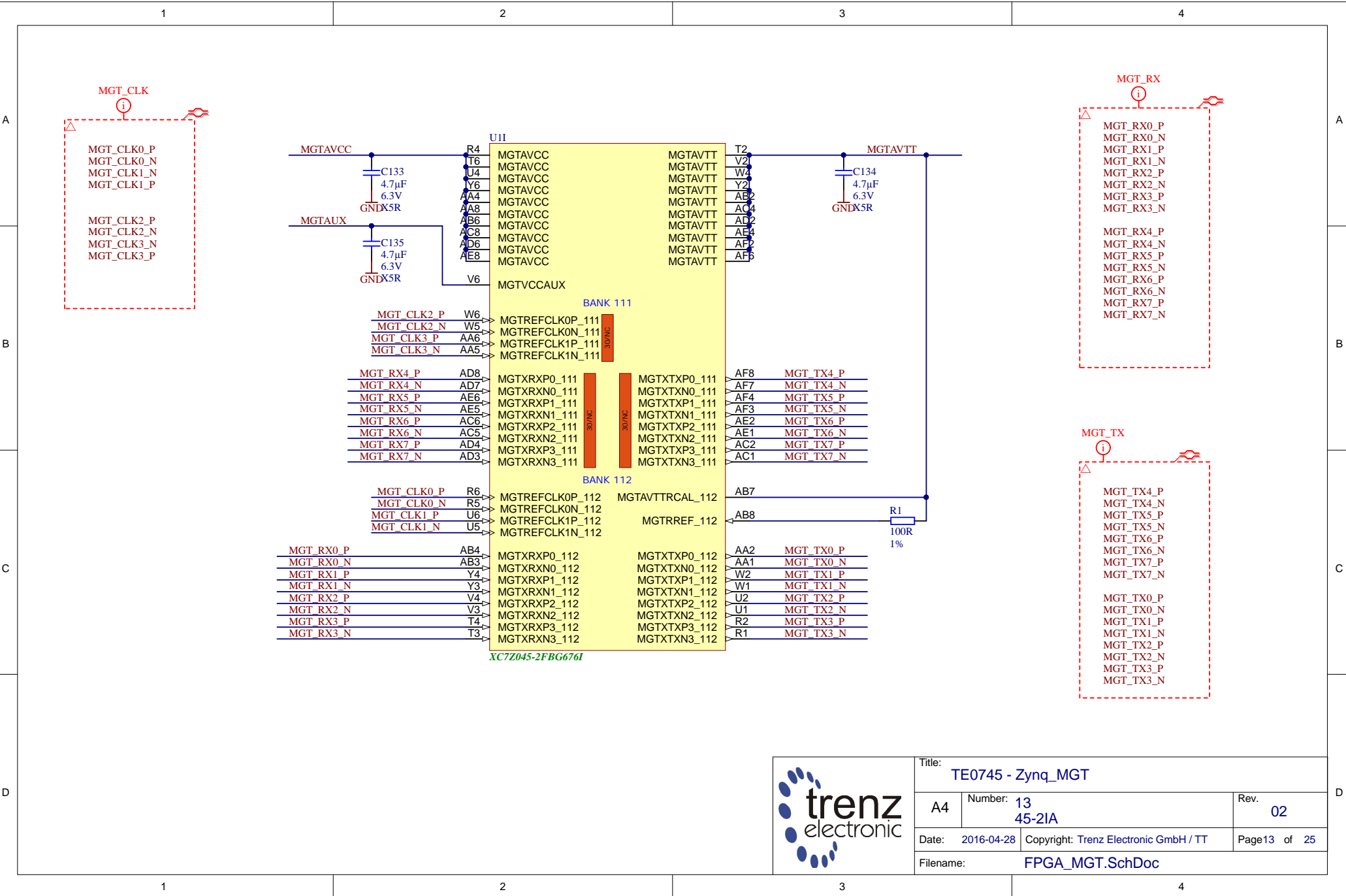
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| | Title: TE0745 - Zynq_B33 | | |
| | A4 | Number: 10 45-2IA | Rev. 02 |
| | Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page 10 of 25 |
| | Filename: B33.SchDoc | | |



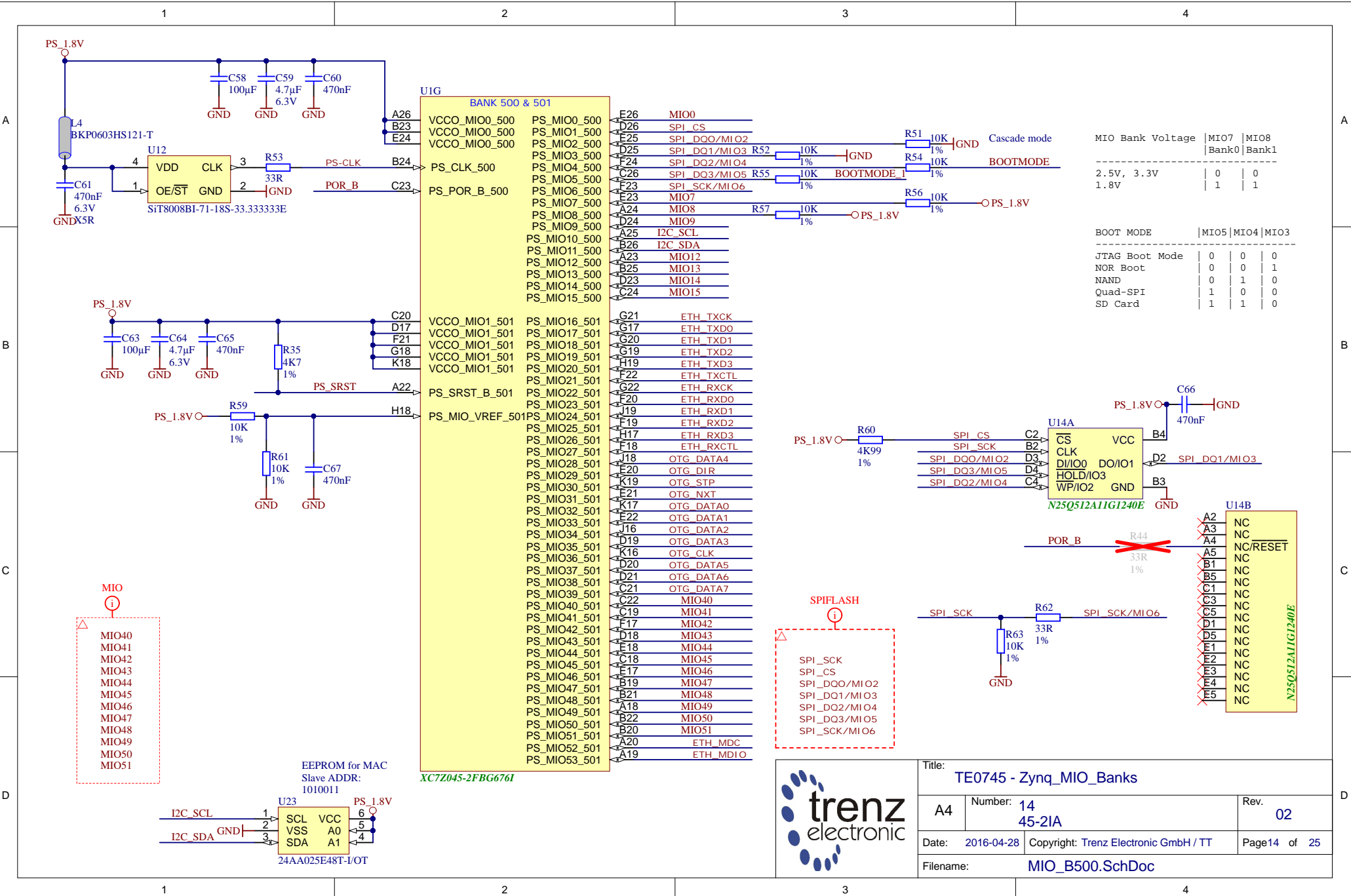
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| | | A4 | Number: 11 45-2IA |
| Date: 2016-04-28 | | Copyright: Trenz Electronic GmbH / TT | |
| Filename: B34.SchDoc | | Page 11 of 25 | |



| | | |
|--------------------------|---------------------------------------|---------------|
| Title: TE0745 - Zynq_B35 | | |
| A4 | Number: 12 45-2IA | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page 12 of 25 |
| Filename: B35.SchDoc | | |



| | | | |
|--|---------------------------|---------------------------------------|---------------|
| | Title: TE0745 - Zynq_MGT | | |
| | A4 | Number: 13 45-2IA | Rev. 02 |
| | Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page 13 of 25 |
| | Filename: FPGA_MGT.SchDoc | | |



| MIO Bank Voltage | MIO7 Bank0 | MIO8 Bank1 |
|------------------|----------------|----------------|
| 2.5V, 3.3V | 0 | 0 |
| 1.8V | 1 | 1 |

| BOOT MODE | MIO5 | MIO4 | MIO3 |
|----------------|------|------|------|
| JTAG Boot Mode | 0 | 0 | 0 |
| NOR Boot | 0 | 0 | 1 |
| NAND | 0 | 1 | 0 |
| Quad-SPI | 1 | 0 | 0 |
| SD Card | 1 | 1 | 0 |

- MIO
- MIO40
 - MIO41
 - MIO42
 - MIO43
 - MIO44
 - MIO45
 - MIO46
 - MIO47
 - MIO48
 - MIO49
 - MIO50
 - MIO51

EEPROM for MAC
Slave ADDR:
1010011

- SPIFLASH
- SPI_SCK
 - SPI_CS
 - SPI_DQ0/MIO2
 - SPI_DQ1/MIO3
 - SPI_DQ2/MIO4
 - SPI_DQ3/MIO5
 - SPI_SCK/MIO6



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|--------------------------------|---------------------------------------|---------------|--|
| Title: TE0745 - Zynq_MIO_Banks | | | |
| A4 | Number: 14 45-21A | Rev. 02 | |
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| Filename: MIO_B500.SchDoc | | | |

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A

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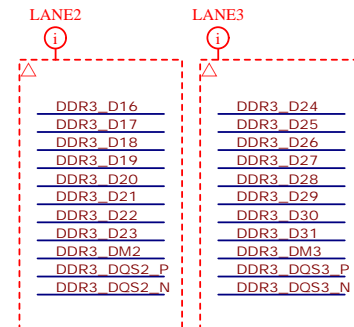
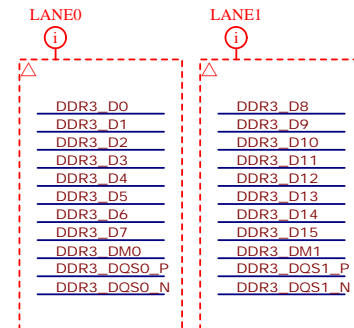
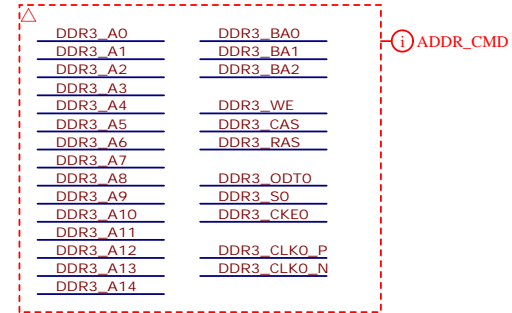
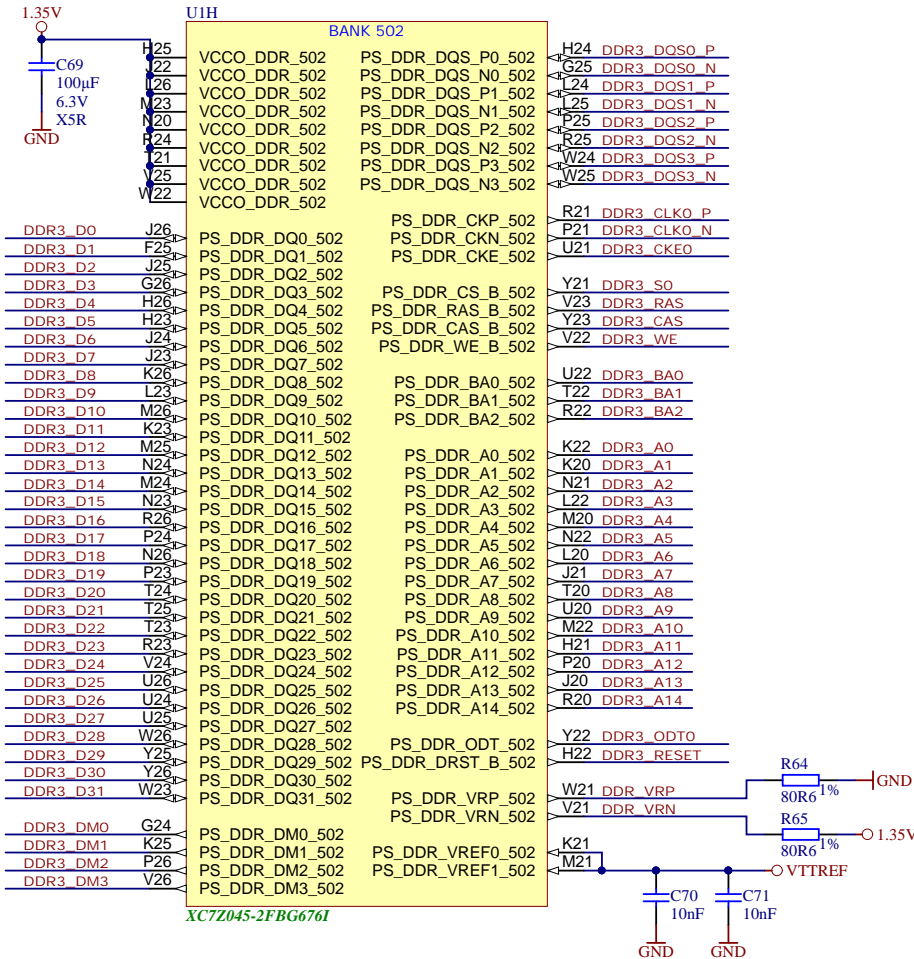
B

C

C

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D



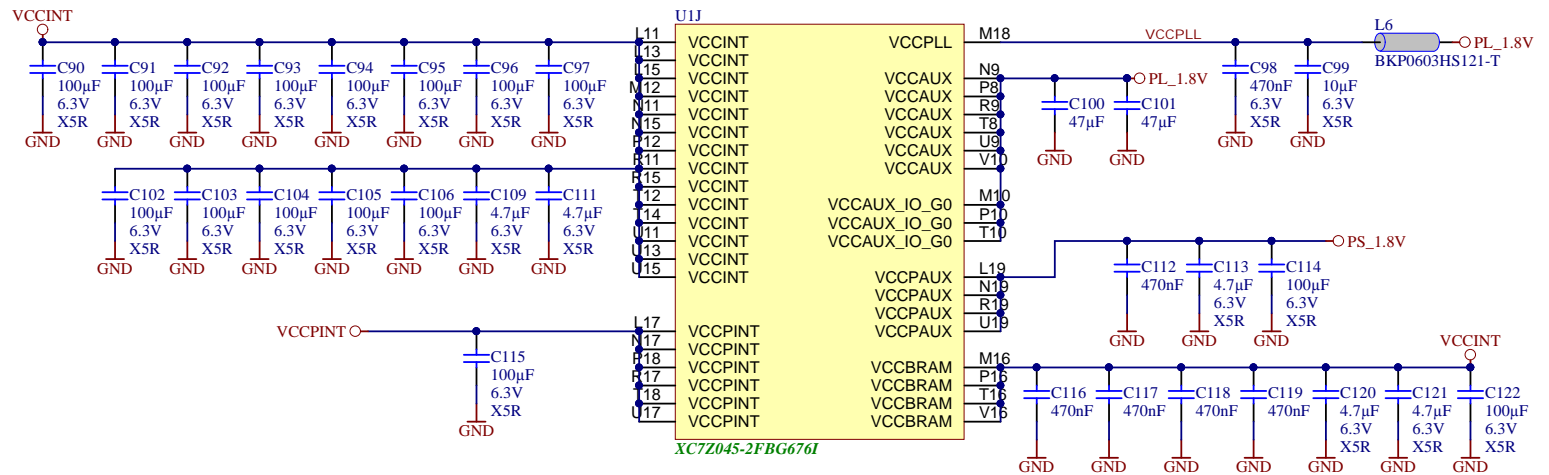
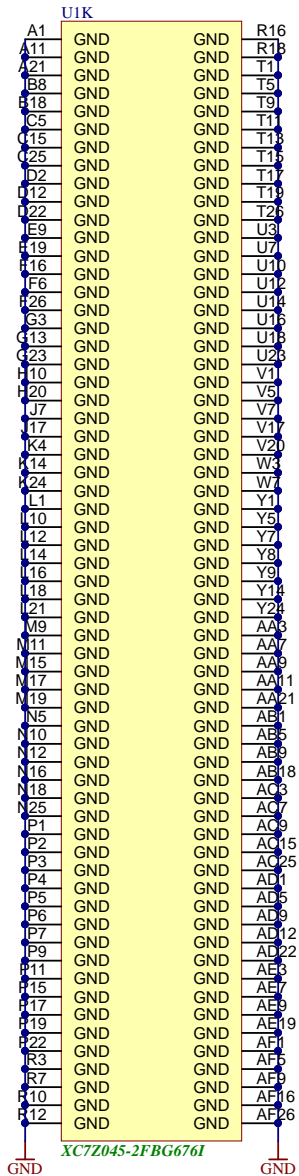
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|-----------------------------|---------------------------------------|---------------|
| Title: TE0745 - Zynq_PS_DDR | | |
| A4 | Number: 15 45-2IA | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page 15 of 25 |
| Filename: PS-DDR.SchDoc | | |

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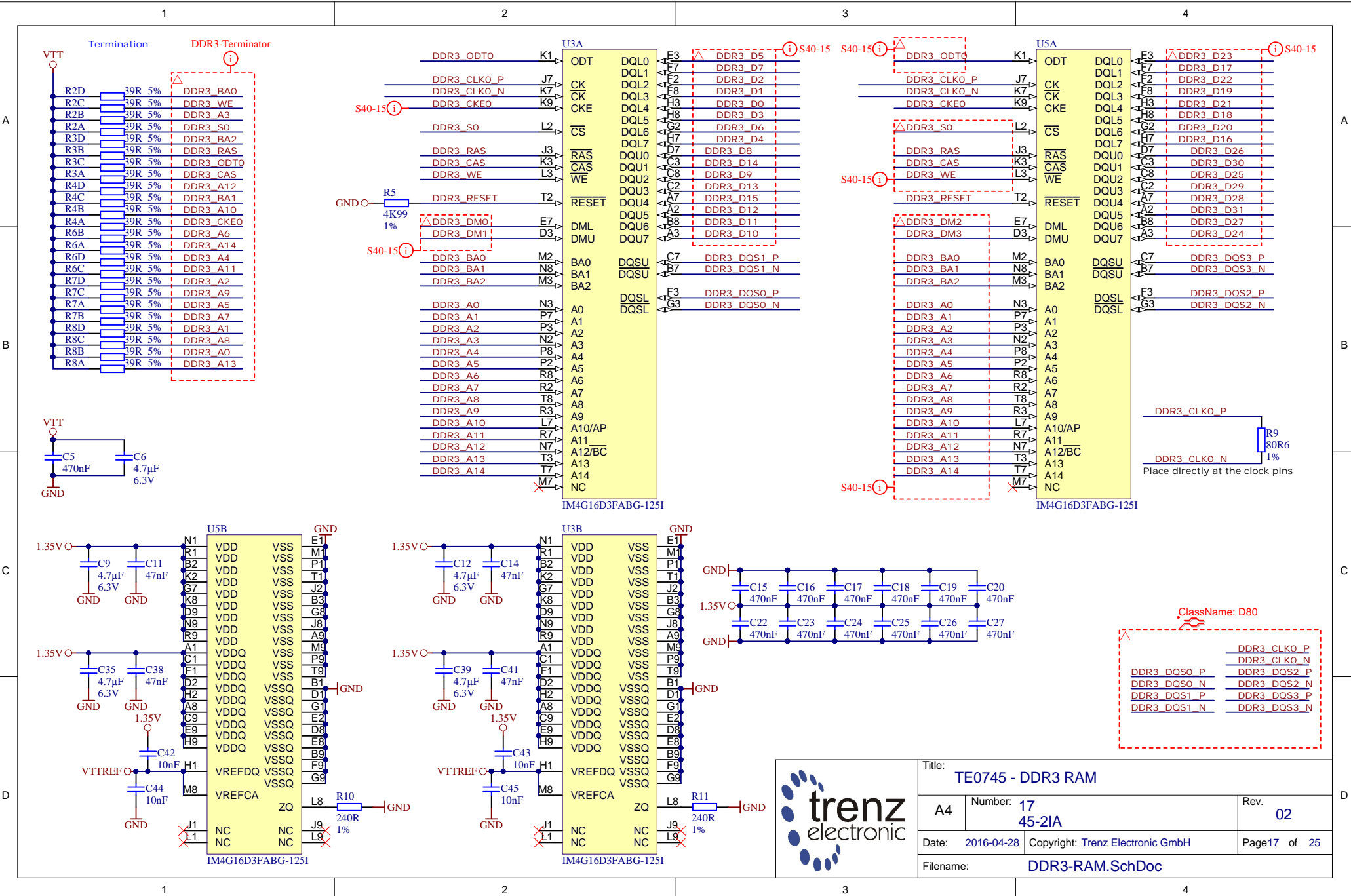
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| Title: TE0745 - Zynq_Power | | |
| A4 | Number: 16 45-2IA | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page 16 of 25 |
| Filename: ZYNC_POWER.SchDoc | | |



trenz electronic

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|---------------------------|----------------------------------|---------------|
| Title: TE0745 - DDR3 RAM | | |
| A4 | Number: 17 45-21A | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH | Page 17 of 25 |
| Filename: DDR3-RAM.SchDoc | | |

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A

A

B

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C

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D

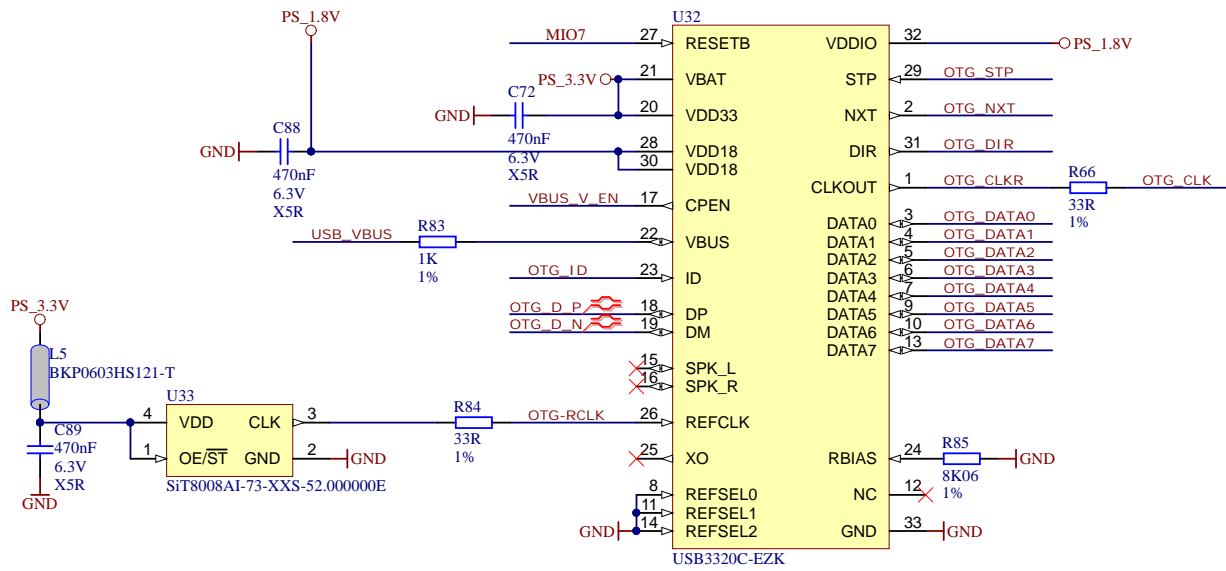
D

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ULPI

OTG_STP
 OTG_NXT
 OTG_DIR
 OTG_CLKR
 OTG_CLK
 OTG_DATA0
 OTG_DATA1
 OTG_DATA2
 OTG_DATA3
 OTG_DATA4
 OTG_DATA5
 OTG_DATA6
 OTG_DATA7

| | | |
|--|--------------------------|---------------------------------------|
| | Title: TE0745 - USB_PHY | |
| | A4 | Number: 18 45-2IA |
| | Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT |
| | Filename: USB-PHY.SchDoc | Rev. 02 |

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| Title: TE0745 - USB_PHY | |
| A4 | Number: 18 45-2IA |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT |
| Filename: USB-PHY.SchDoc | Rev. 02 |

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A

A

B

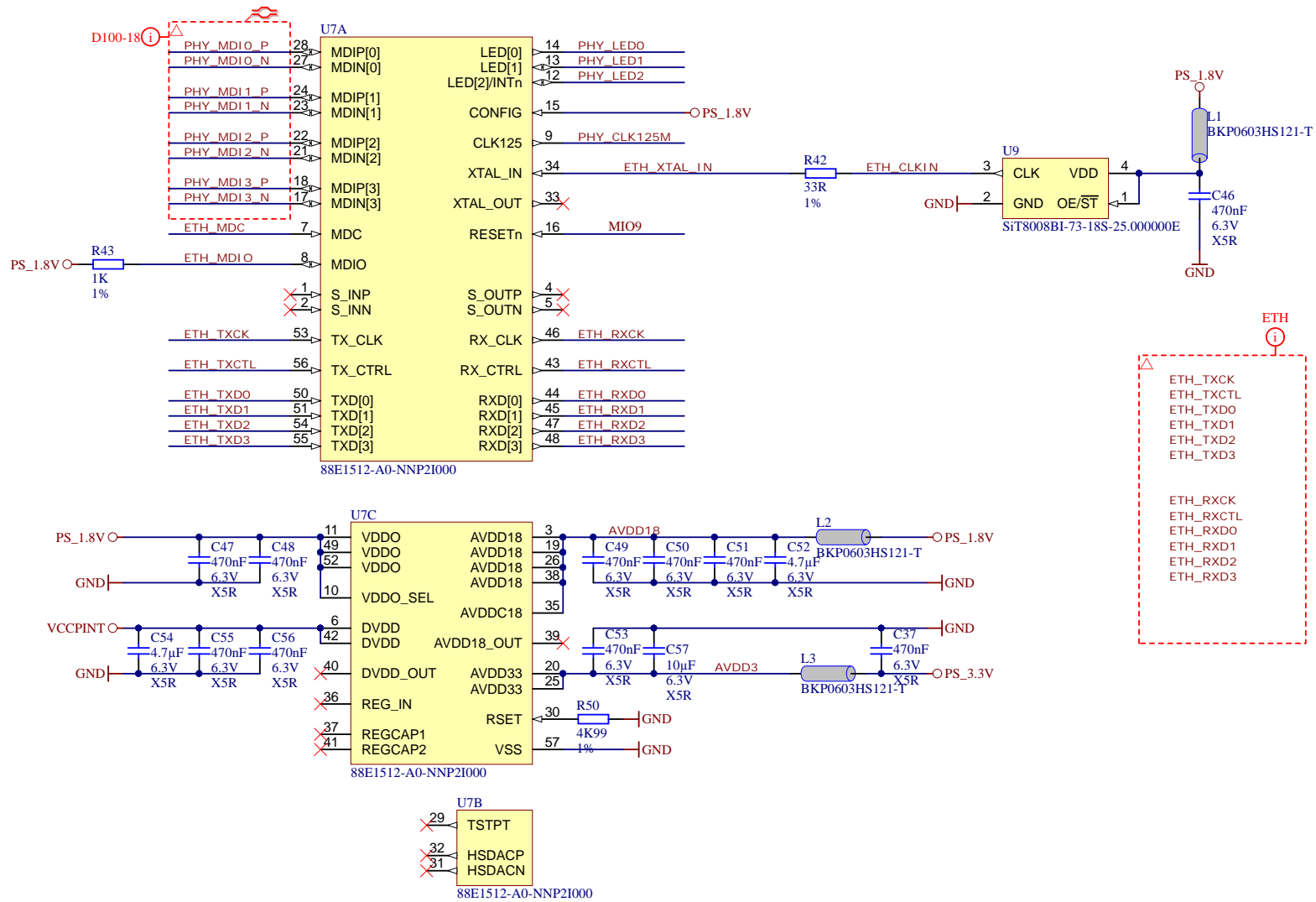
B

C

C

D

D



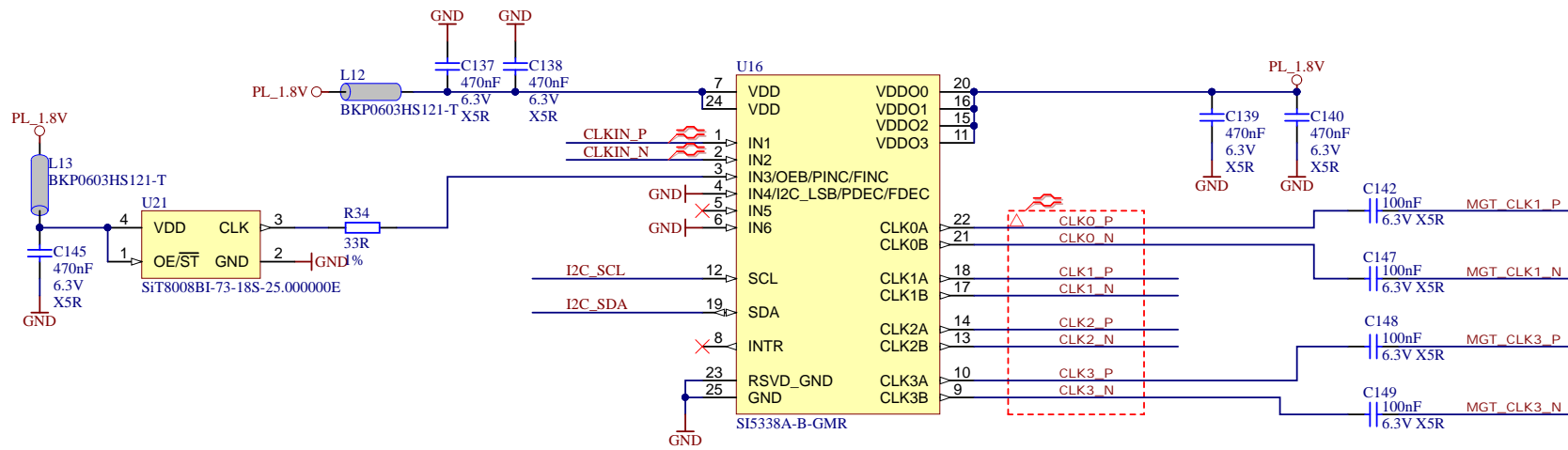
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| Title: TE0745 - ETH_PHY | | |
| A4 | Number: 19 45-21A | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page 19 of 25 |
| Filename: ETH-PHY.SchDoc | | |

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Slave ADDR:
1110000 OR 1110001

| | | | |
|--|----------------------|---------------------------------------|--------------|
| | Title: TE0745 - CLK | | |
| | A4 | Number: 20 45-21A | Rev. 02 |
| | Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page20 of 25 |
| | Filename: CLK.SchDoc | | |

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A

A

B

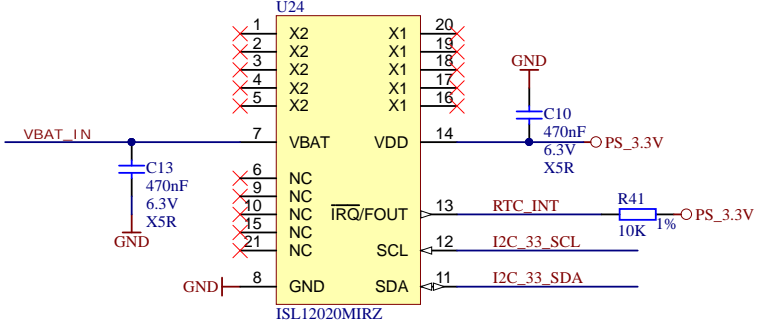
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C

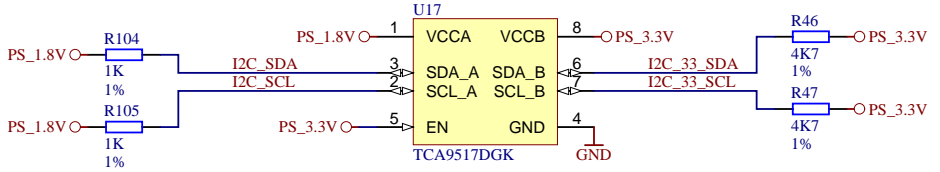
C

D

D



Slave ADDR:
 for RTC registers: 1101111
 for User SRAM: 1010111



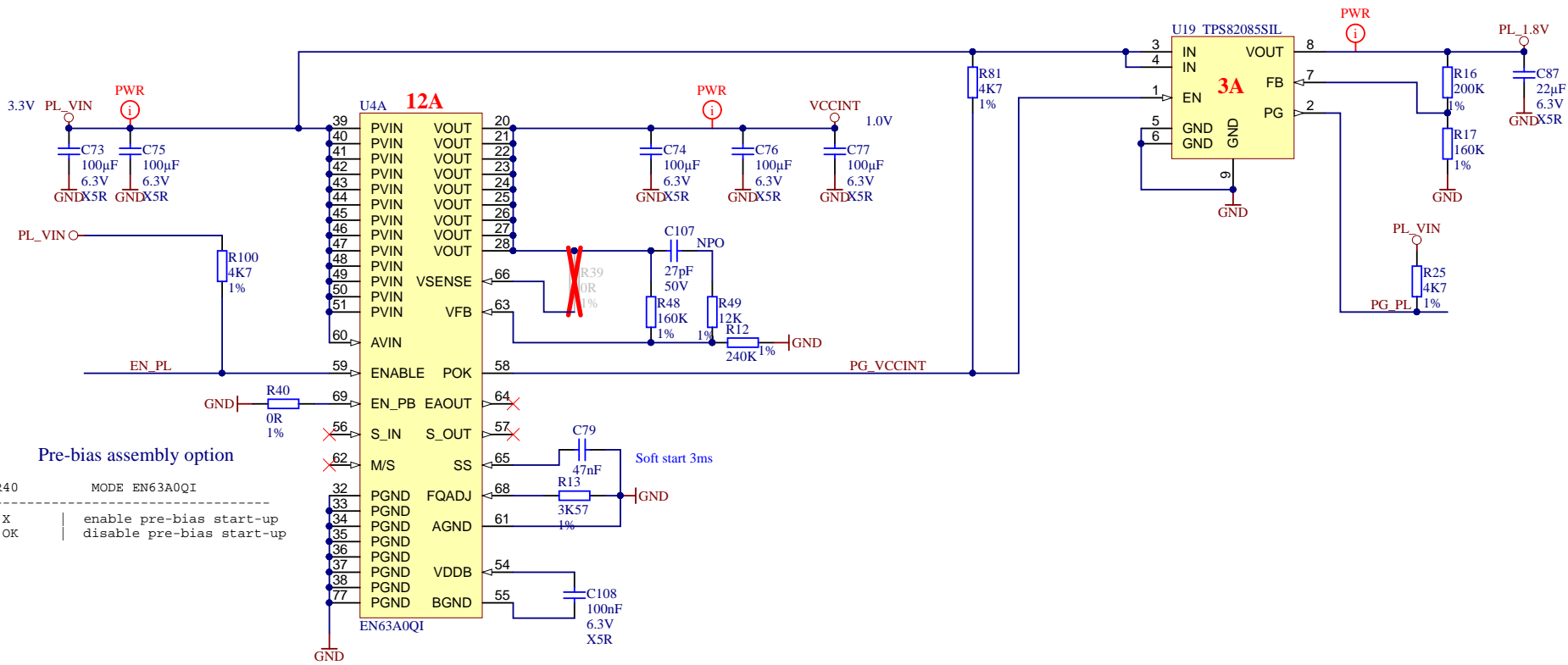
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| Title: TE0745 - RTC | | |
| A4 | Number: 21 45-2IA | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page 21 of 25 |
| Filename: SENSOR-RTC.SchDoc | | |

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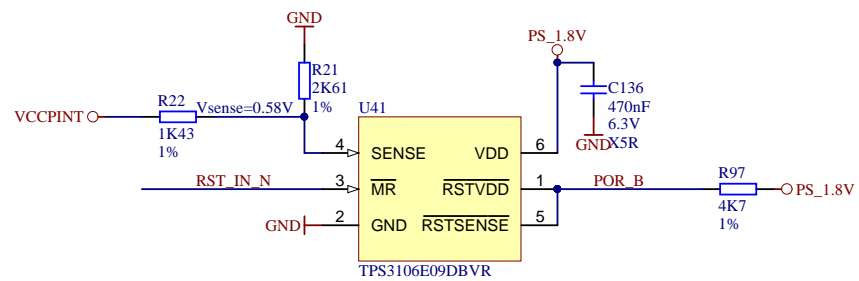
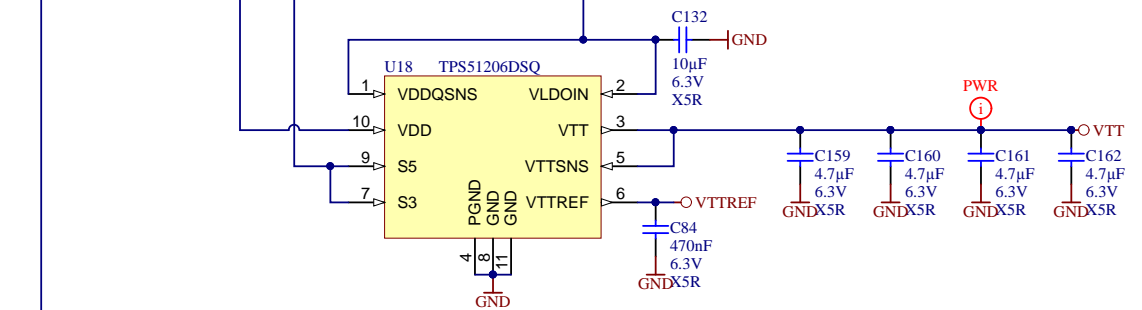
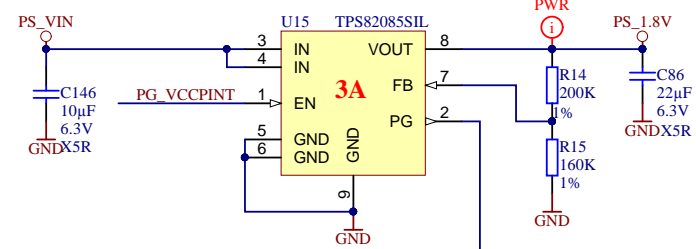
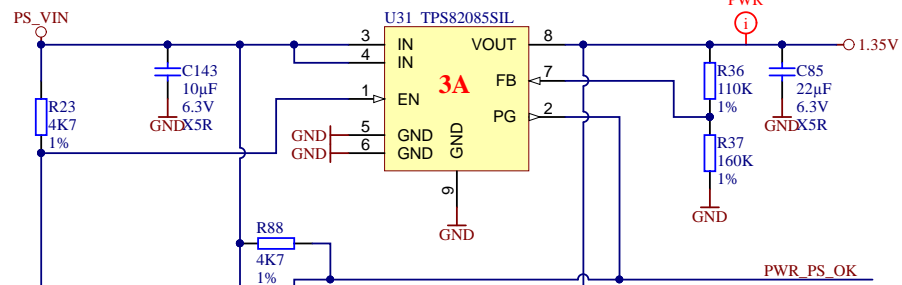
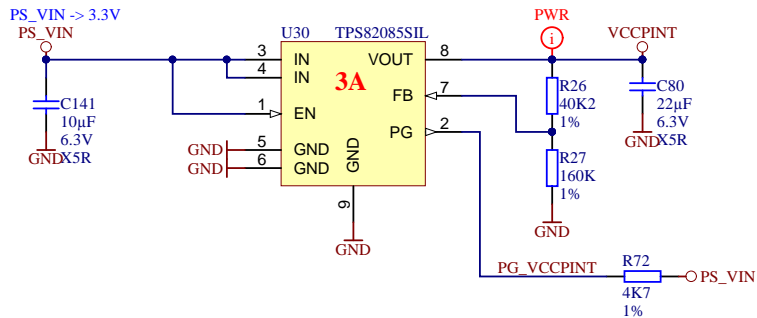


Pre-bias assembly option

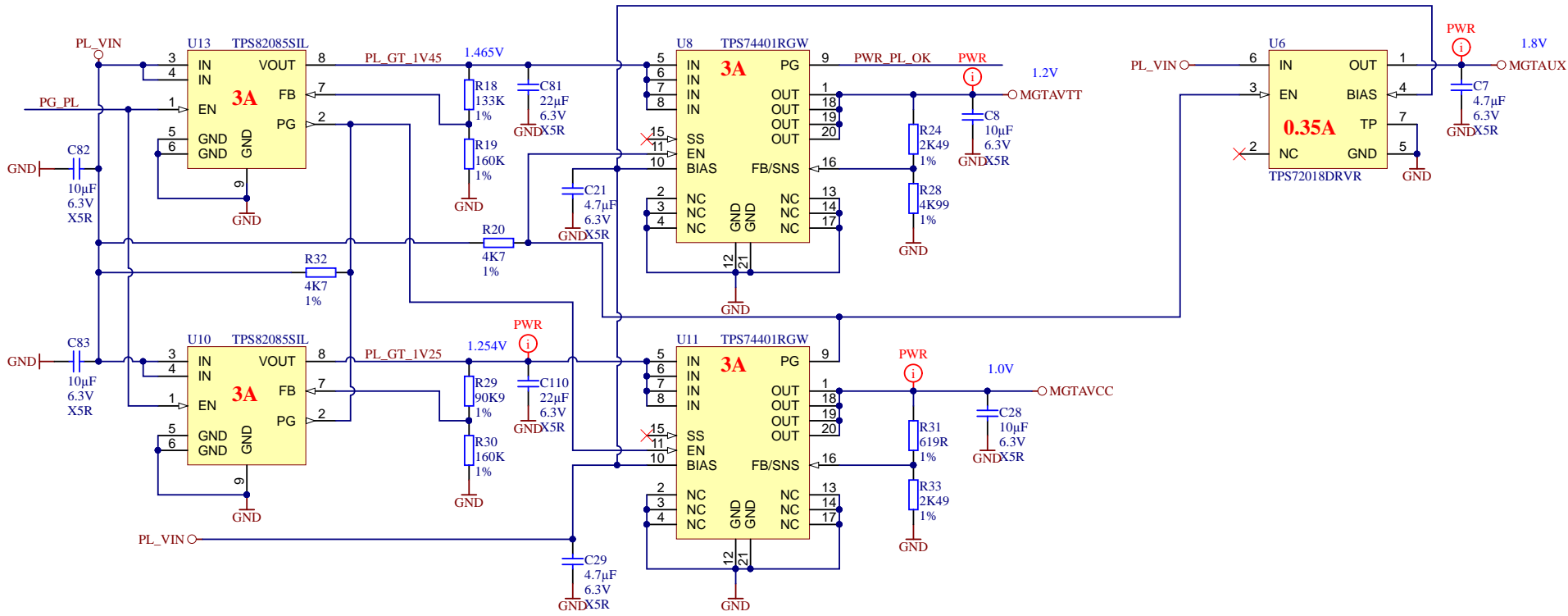
| R39 | R40 | MODE | EN63A0QI |
|-----|-----|------|---------------------------|
| OK | X | | enable pre-bias start-up |
| X | OK | | disable pre-bias start-up |


| U4B | | EN63A0QI | |
|-----|----|----------|----|
| 1 | NC | NC | 17 |
| 2 | NC | NC | 18 |
| 3 | NC | NC | 19 |
| 4 | NC | NC | 29 |
| 5 | NC | NC | 30 |
| 6 | NC | NC(SW) | 31 |
| 7 | NC | NC(SW) | 52 |
| 8 | NC | NC | 53 |
| 9 | NC | NC | 67 |
| 10 | NC | NC(SW) | 70 |
| 11 | NC | NC(SW) | 71 |
| 12 | NC | NC(SW) | 72 |
| 13 | NC | NC | 73 |
| 14 | NC | NC | 74 |
| 15 | NC | NC | 75 |
| 16 | NC | NC | 76 |

| | | | |
|--|-------------------------------|---------------------------------------|----------------|
| | Title: TE0745 - Power | | |
| | A4 | Number: 22 45-21A | Rev. 02 |
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| | Filename: POWER.SchDoc | | |



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|--------------------------|---------------------------------------|--------------|
| Title: TE0745 - Power2 | | |
| A4 | Number: 23 45-2IA | Rev. 02 |
| Date: 2016-04-28 | Copyright: Trenz Electronic GmbH / TT | Page23 of 25 |
| Filename: POWER_2.SchDoc | | |



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|  | Title: TE0745 - Power3 | | |
| | A4 | Number: 24 45-21A | Rev. 02 |
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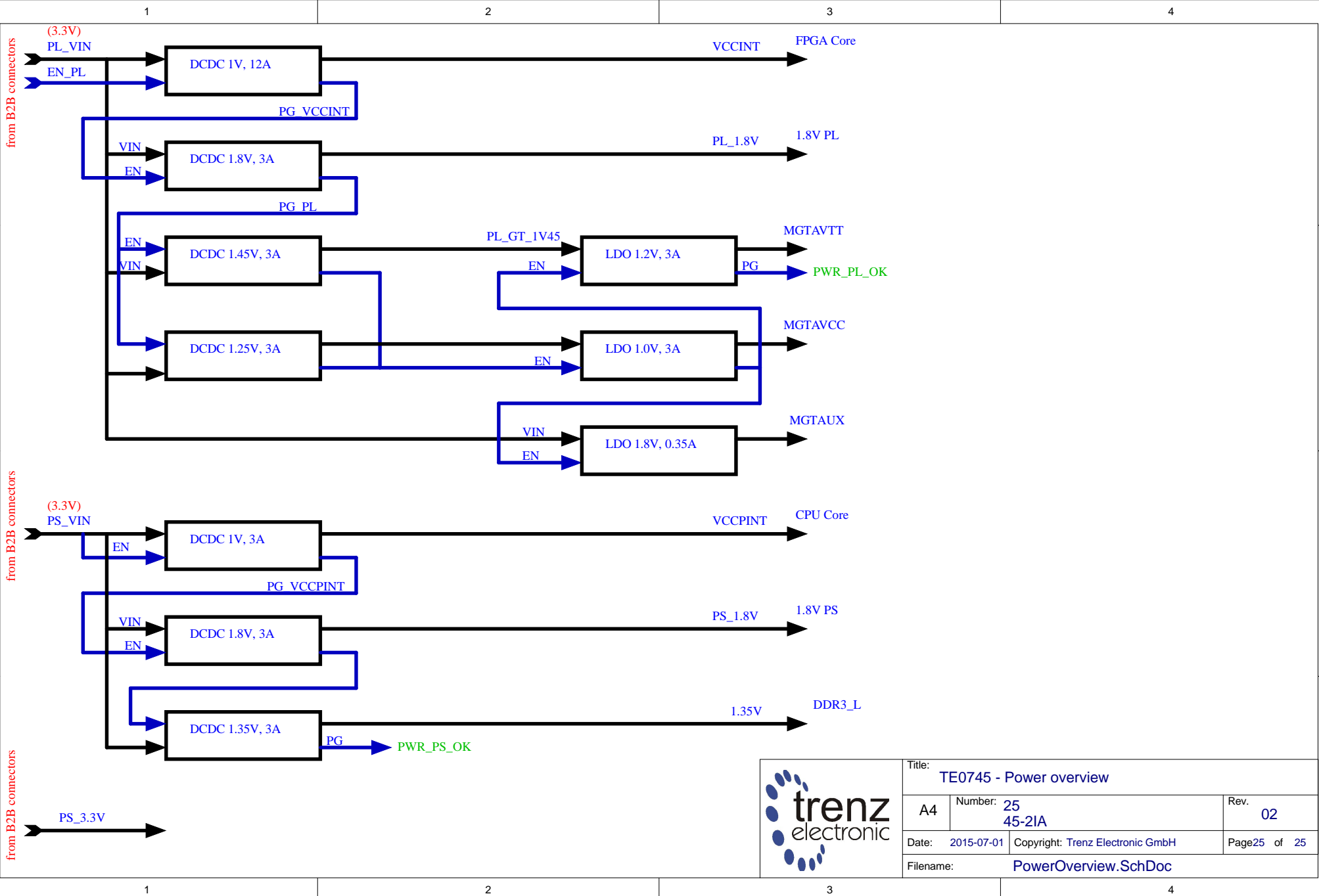
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| | | |
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| Title: TE0745 - Power overview | | |
| A4 | Number: 25 45-21A | Rev. 02 |
| Date: 2015-07-01 | Copyright: Trenz Electronic GmbH | Page 25 of 25 |
| Filename: PowerOverview.SchDoc | | |