U_B2B-Connectors
B2B-Connectors.SchDoc

U_B13
B13.SchDoc

U_B14
B14.SchDoc

U_B15
B15.SchDoc

U_B16
B16.SchDoc

U_B34
B34.SchDoc

U_FPGA-MGT
FPGA-MGT.SchDoc

U_FPGA-CFG
FPGA-CFG.SchDoc

U_FPGA-PWR
FPGA-PWR.SchDoc

U_Clock
Clock.SchDoc

U_DDR3-RAM
DDR3-RAM.SchDoc

U_ETHERNET
ETHERNET.SchDoc

U_CPLD
CPLD.SchDoc

U_PWR1
PWR1.SchDoc

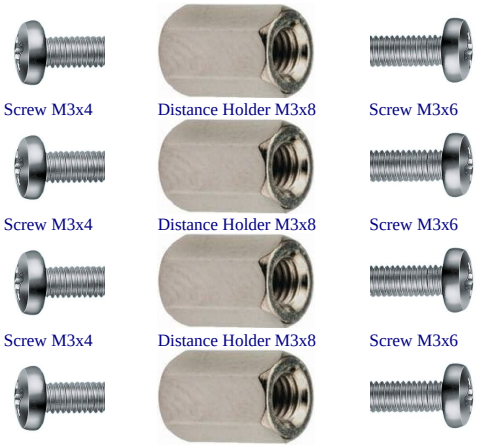
U_PWR2
PWR2.SchDoc

Serial
Serial
Serialnumber 6,3 x 6.3mm

FIDU-DOT - small FIDU-DOT - small
PM1 PM2
FIDU-DOT - small FIDU-DOT - small
PM3 PM4
FIDU-DOT - small FIDU-DOT - small
PM5 PM6

Mount.Hole 3.2mm Mount.Hole 3.2mm
GND GND
Mount.Hole 3.2mm Mount.Hole 3.2mm
GND GND

Top of Board



Screw M3x4 Distance Holder M3x8 Screw M3x6
Screw M3x4 Distance Holder M3x8 Screw M3x6
Screw M3x4 Distance Holder M3x8 Screw M3x6
Screw M3x4 Distance Holder M3x8 Screw M3x6

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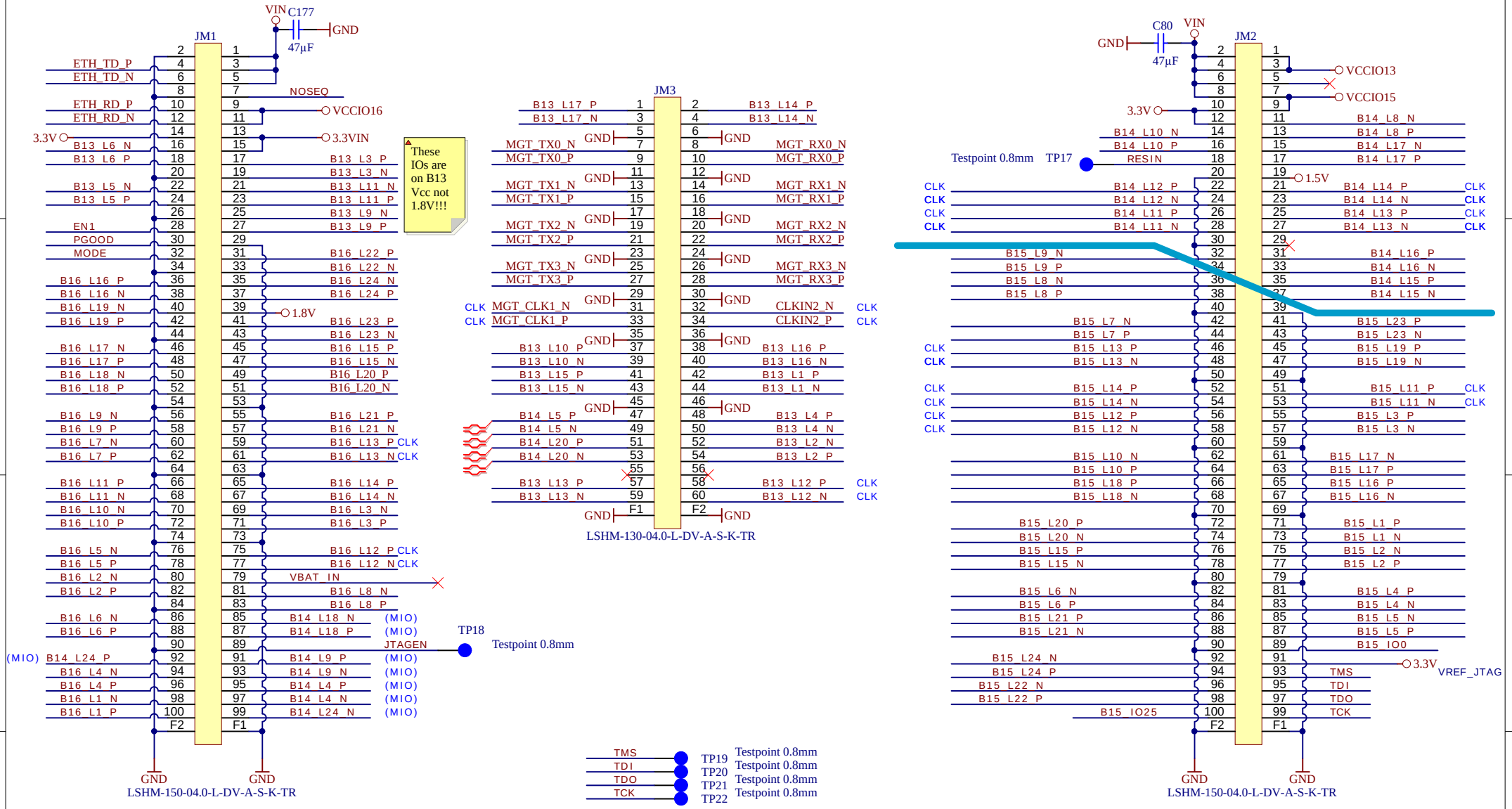
| | | |
|---|---|---|
| Title: TE0712 | | |
| A4 | Number: TE0712 [No Variations] | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | Page1 of 16 |
| Filename: TE0712.SchDoc | | |

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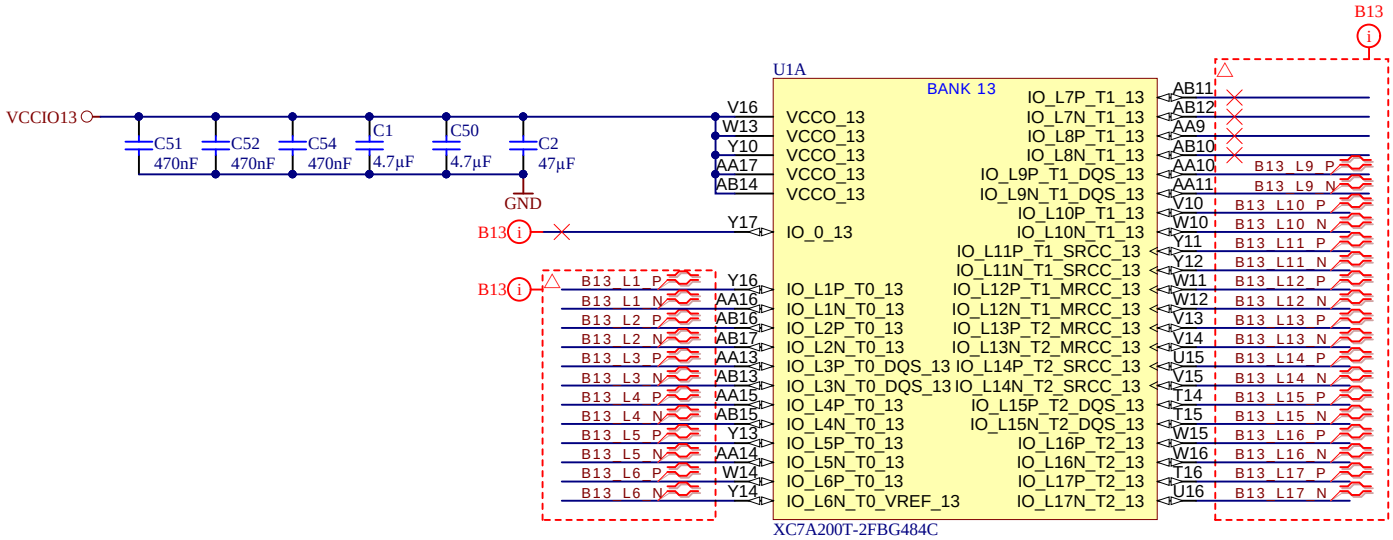
|---|---|---|---|
| Title: B2B | | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page2 of 16 |
| Filename: B2B-Connectors.SchDoc | | | |

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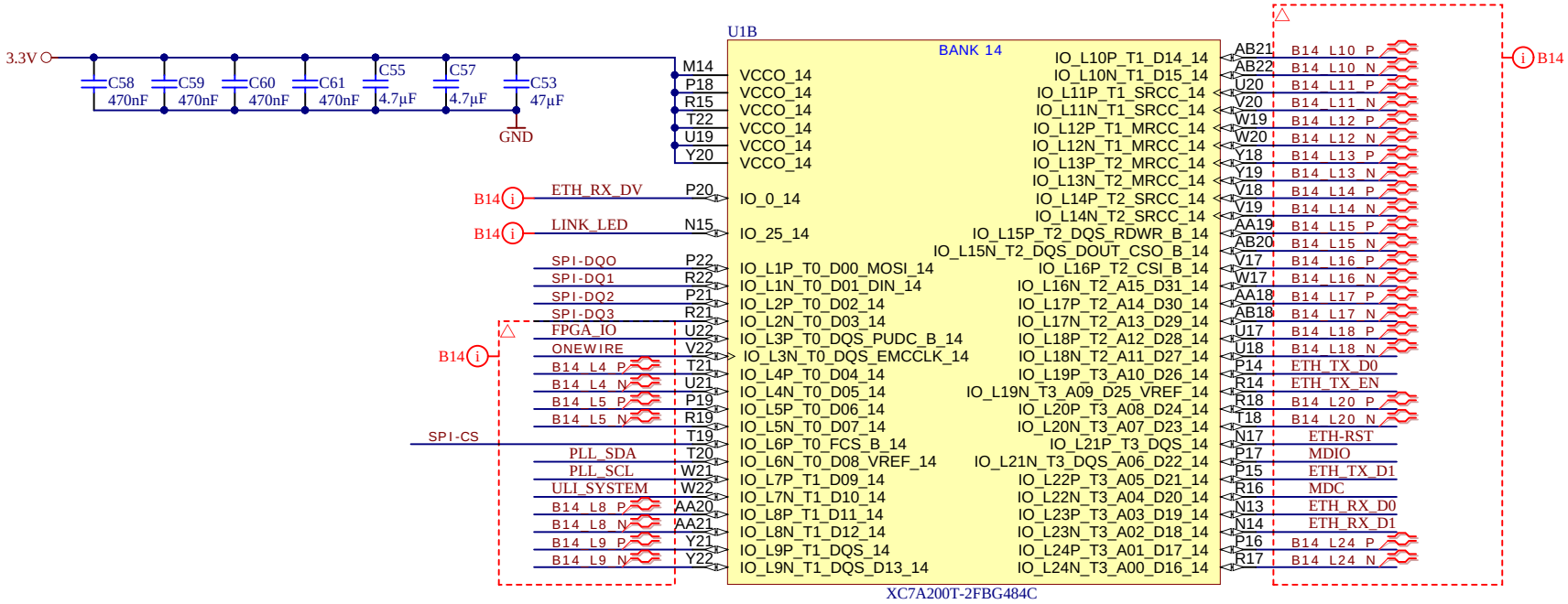
| trenz electronic | Title: B13 | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page3 of 16 |
| Filename: B13.SchDoc | | | |

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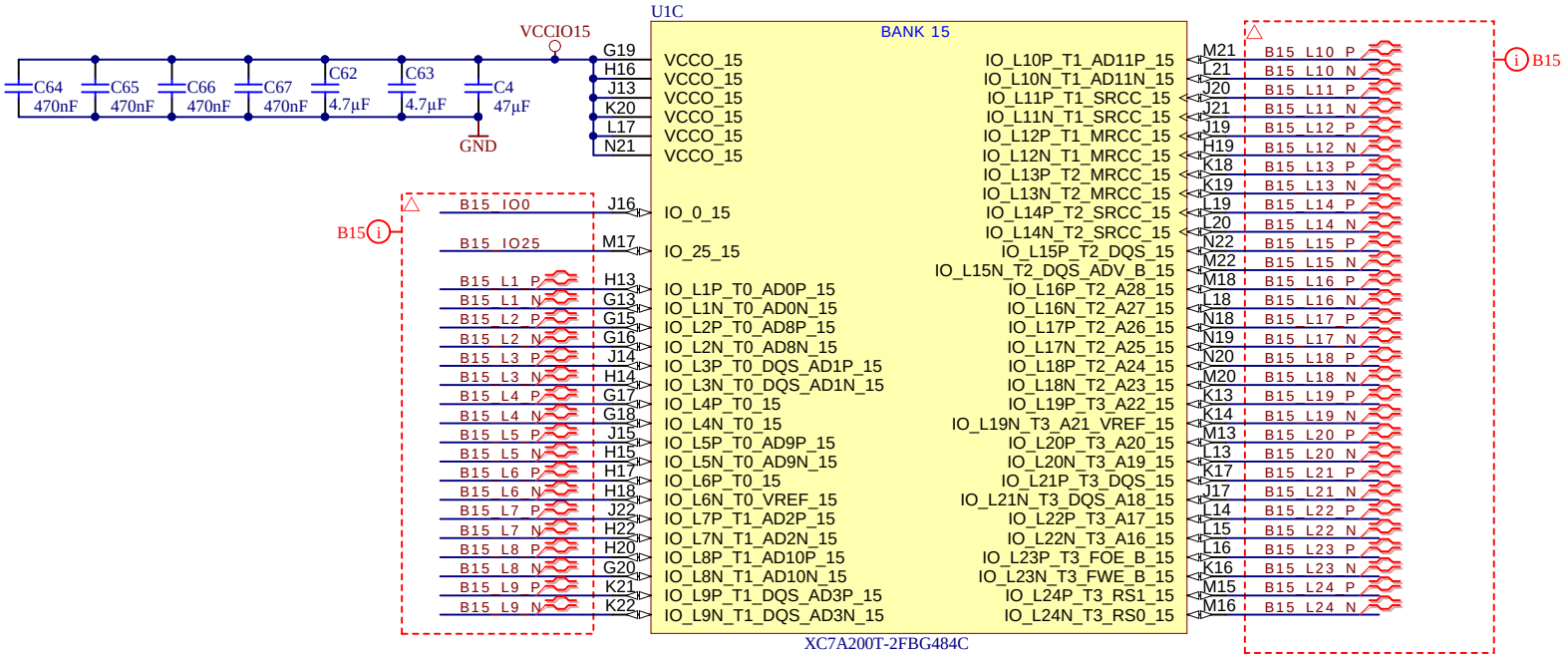
|---|---|---|---|
| trenz electronic | Title: B14 | | |
| | A4 | Number: TE0712 [No Variations] | Rev. 02 |
| | Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | Page4 of 16 |
| | Filename: B14.SchDoc | | |

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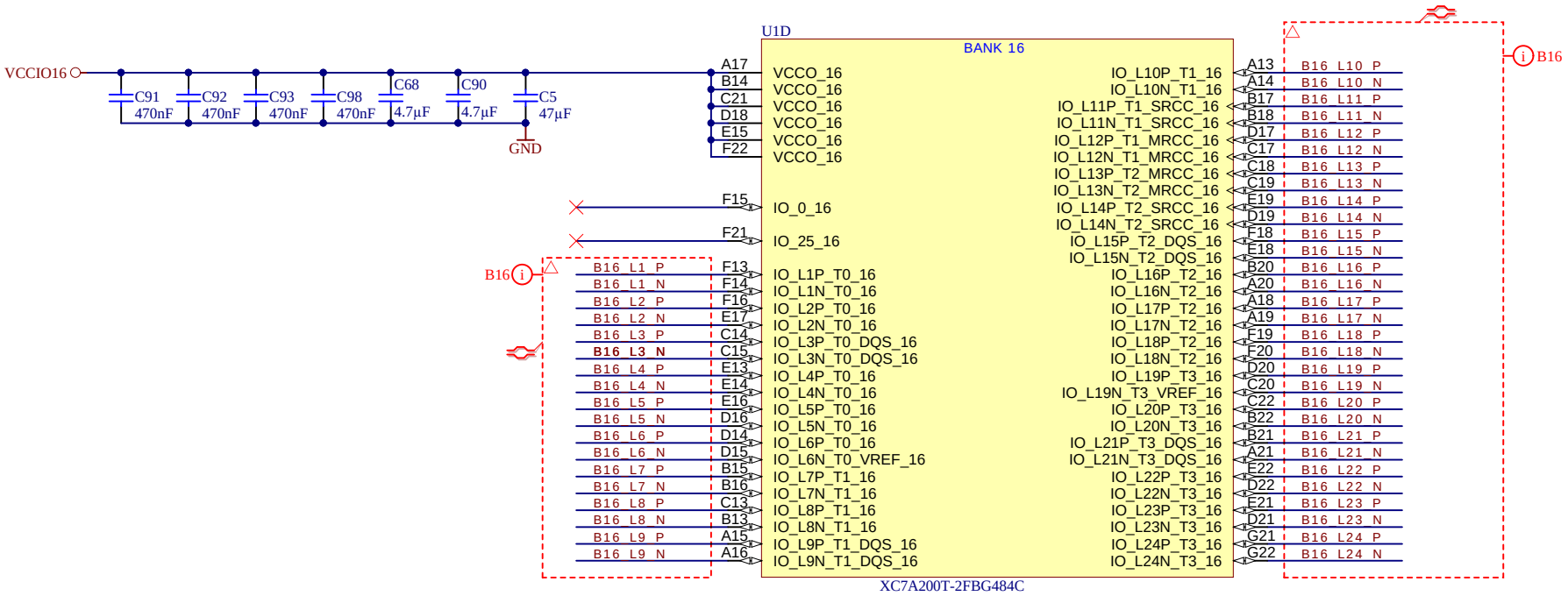
|---|---|---|---|
| Title: B15 | | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page5 of 16 |
| Filename: B15.SchDoc | | | |

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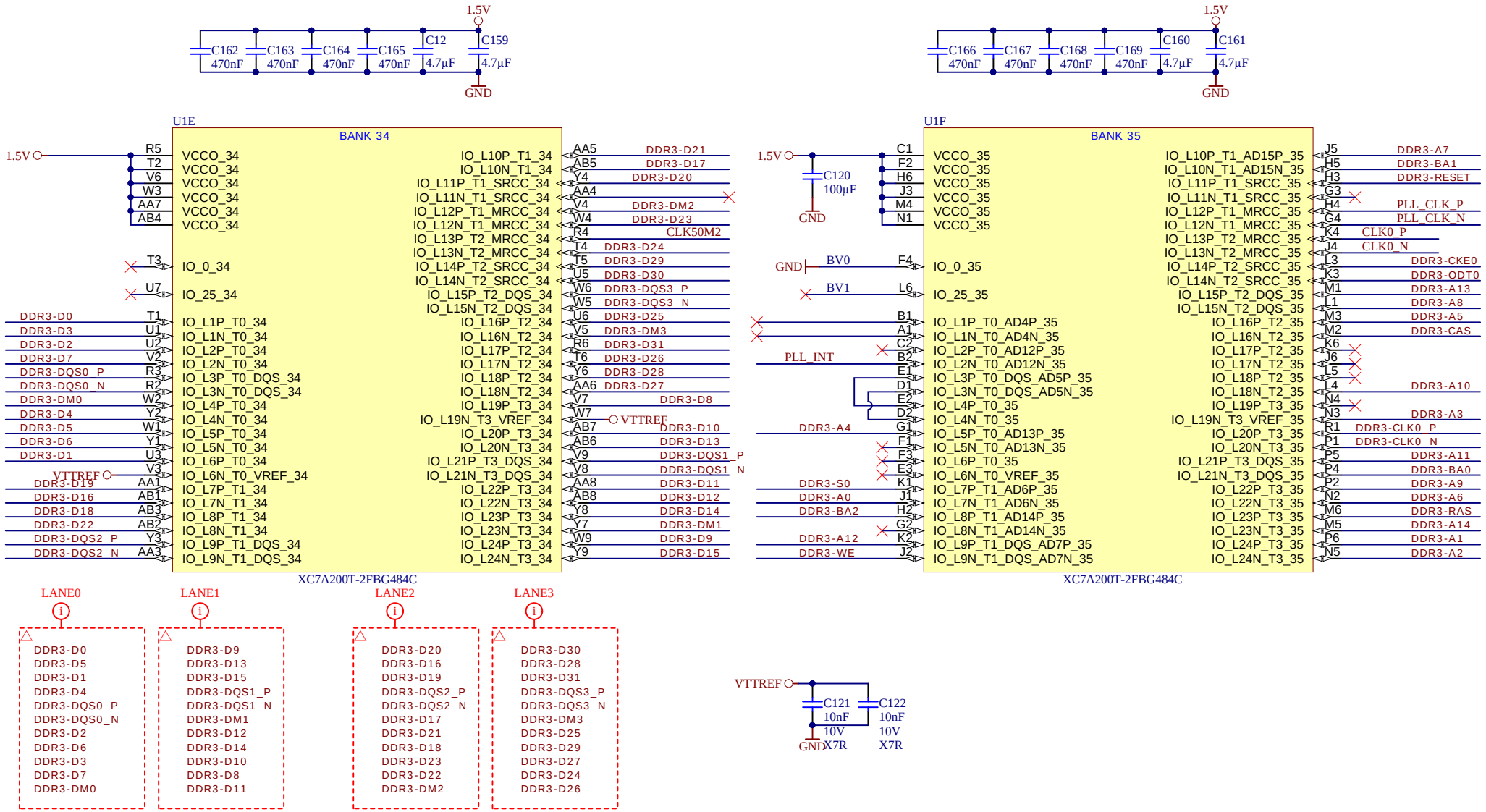
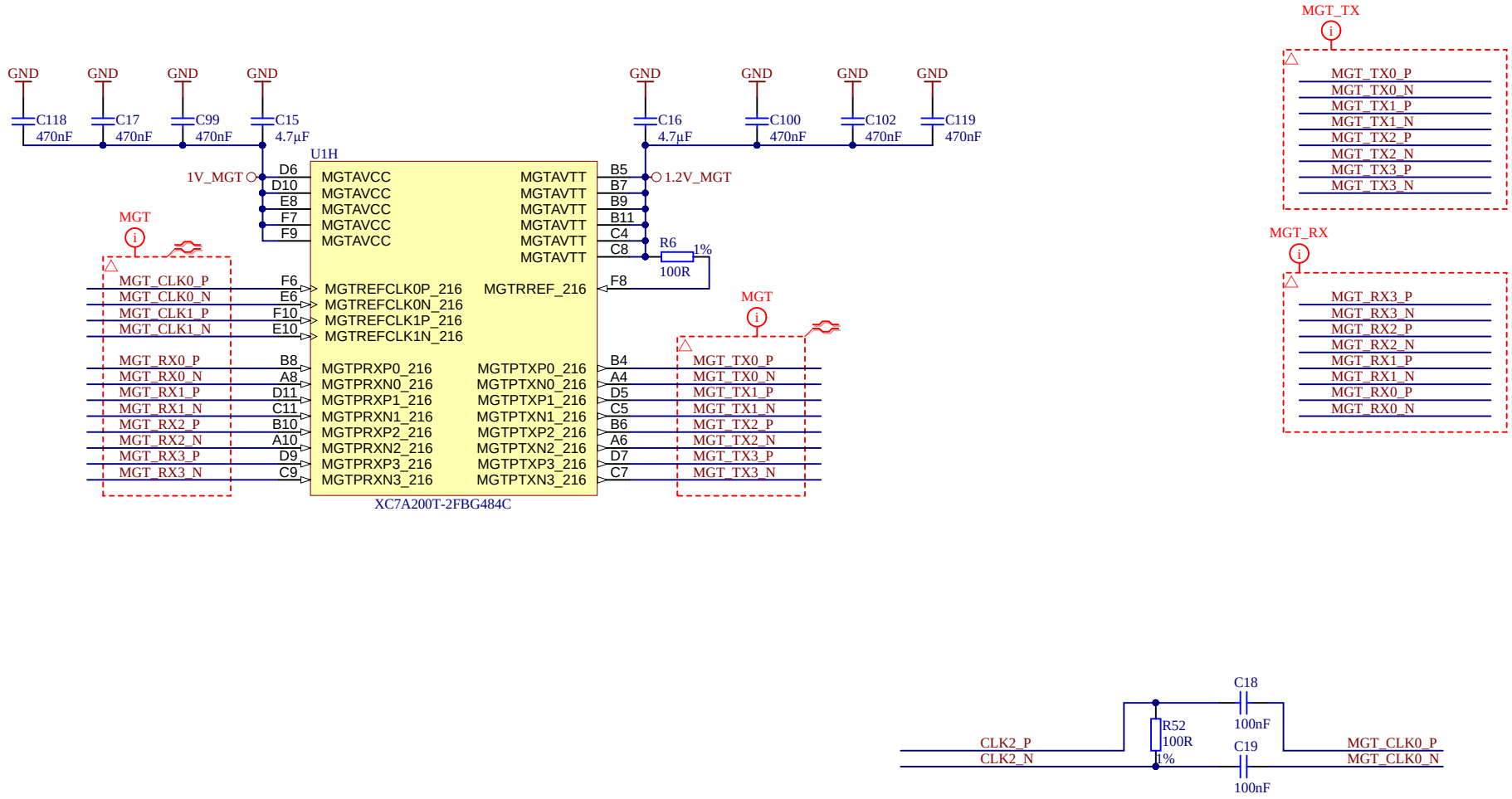
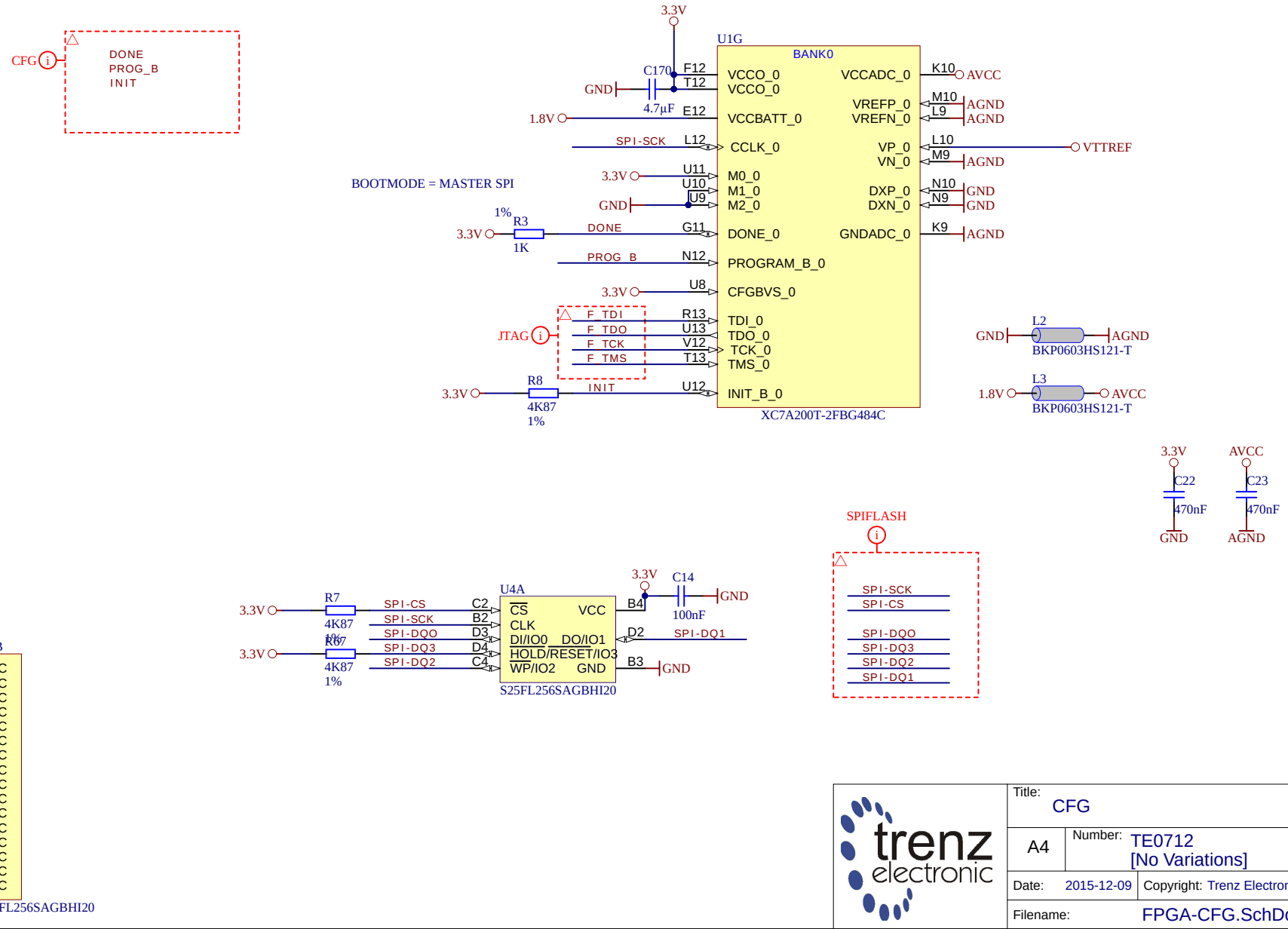
|---|---|---|---|
| trenz electronic | Title: B16 | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page6 of 16 |
| Filename: B16.SchDoc | | | |

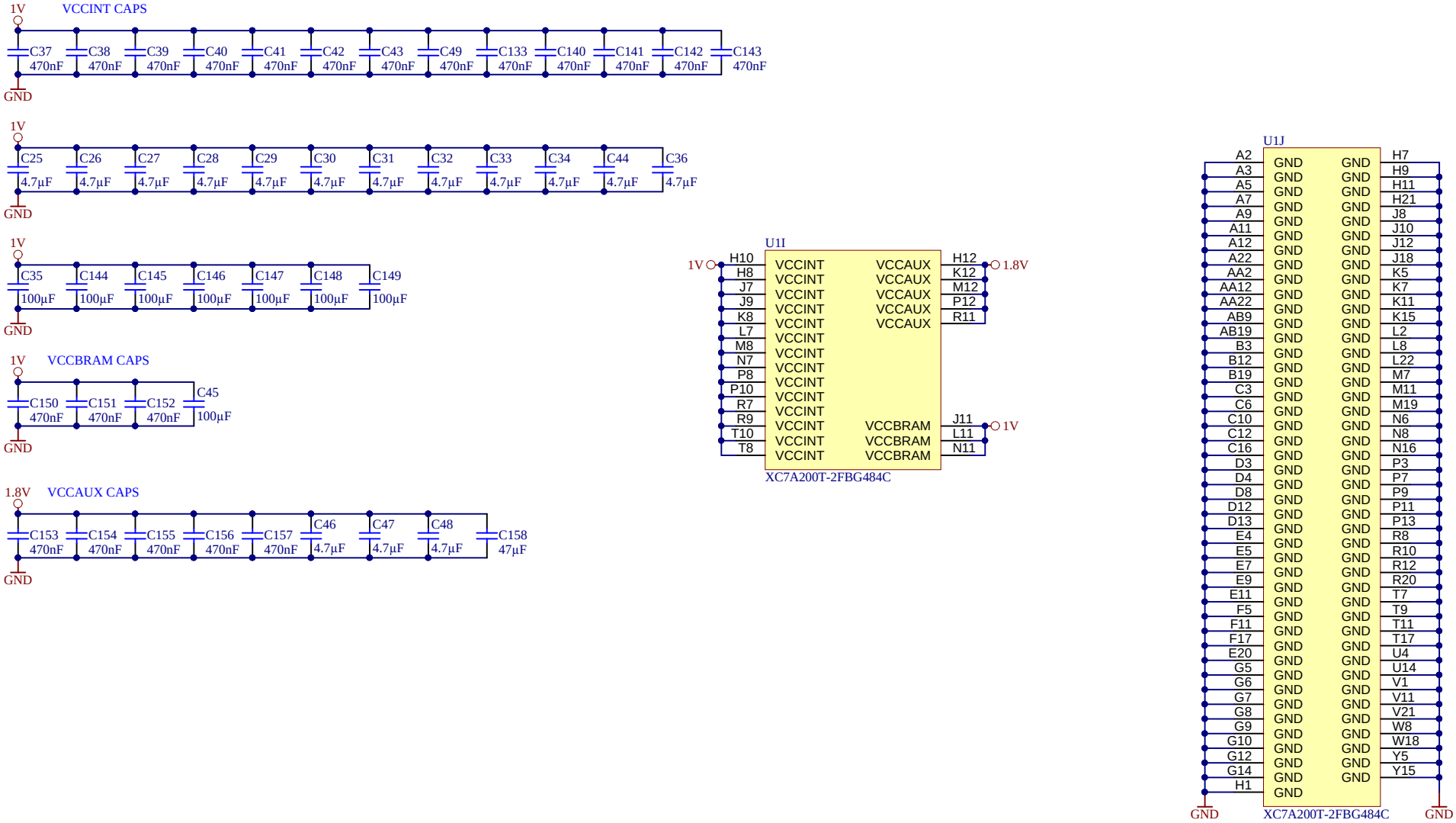

1.5V
C162 470nF
C163 470nF
C164 470nF
C165 470nF
C12 4.7µF
C159 4.7µF
GND
C166 470nF
C167 470nF
C168 470nF
C169 470nF
C160 4.7µF
C161 4.7µF
U1E
BANK 34
XC7A200T-2FBG484C
U1F
BANK 35
XC7A200T-2FBG484C
C120 100µF
BV0
BV1
PLL_INT
VTTREF
C121 10nF 10V X7R
C122 10nF 10V X7R
LANE0
LANE1
LANE2
LANE3
Title: B34
A4
Number: TE0712 [No Variations]
Rev. 02
Date: 2015-12-09
Copyright: Trenz Electronic GmbH
Page7 of 16
Filename: B34.SchDoc




| | | | |
|---|---|---|---|
| trenz electronic | Title: MGT | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page 8 of 16 |
| Filename: FPGA-MGT.SchDoc | | | |




| | | | |
|---|---|---|---|
| trenz electronic | Title: CFG | | |
| | A4 | Number: TE0712 [No Variations] | Rev. 02 |
| | Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | Page9 of 16 |
| | Filename: FPGA-CFG.SchDoc | | |

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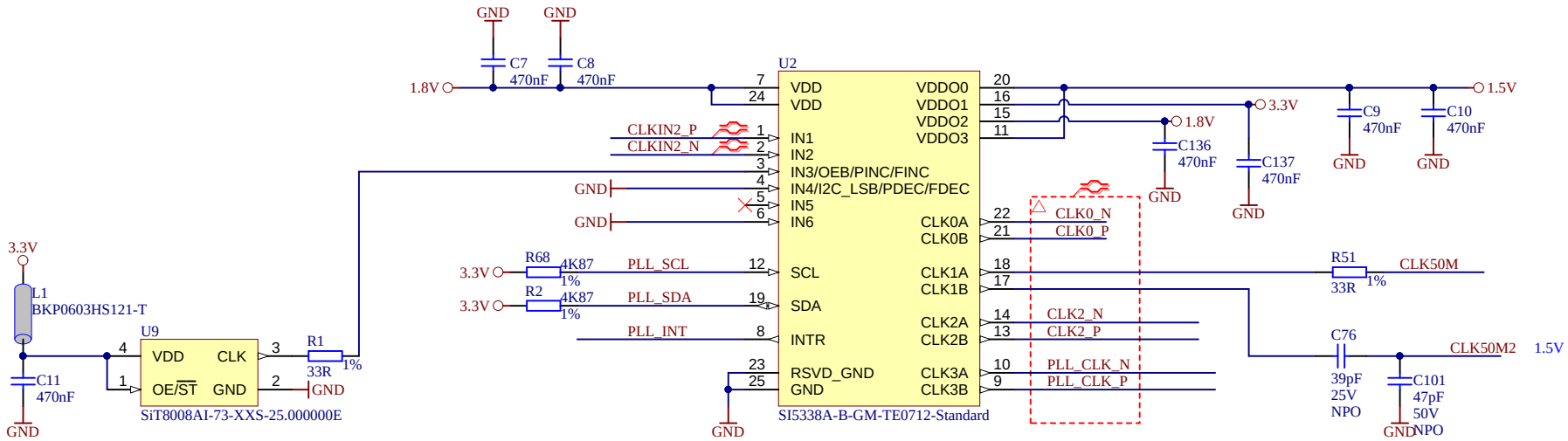
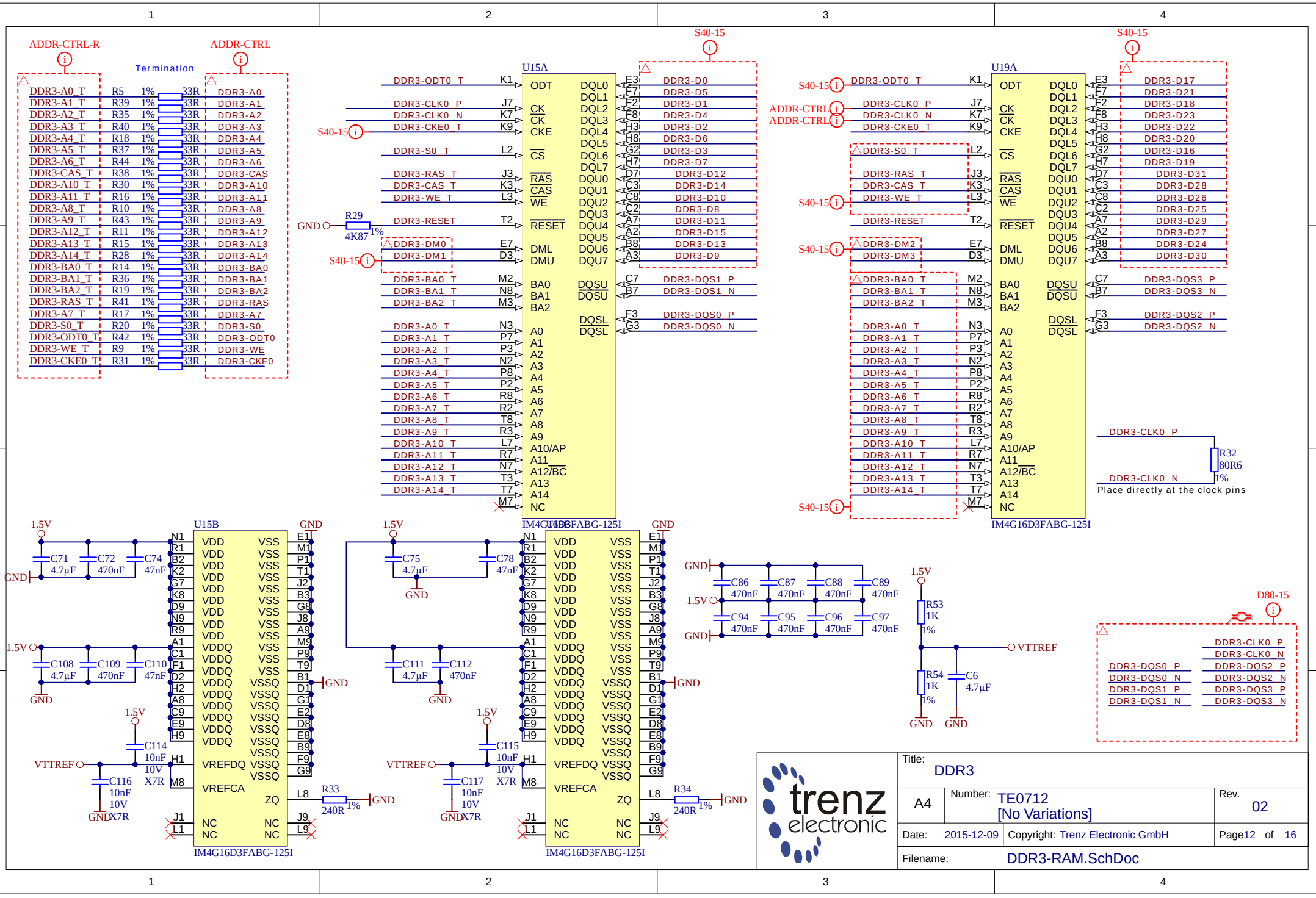
| | | | |
|---|---|---|---|
| Title: PWR | | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page10 of 16 |
| Filename: FPGA-PWR.SchDoc | | | |




| | | | |
|---|---|---|---|
| trenz electronic | Title: Clock | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page 11 of 16 |
| Filename: Clock.SchDoc | | | |


ADDR-CTRL-R
ADDR-CTRL
Termination
DDR3-A0_T R5 1% 33R DDR3-A0
DDR3-A1_T R39 1% 33R DDR3-A1
DDR3-A2_T R35 1% 33R DDR3-A2
DDR3-A3_T R40 1% 33R DDR3-A3
DDR3-A4_T R18 1% 33R DDR3-A4
DDR3-A5_T R37 1% 33R DDR3-A5
DDR3-A6_T R44 1% 33R DDR3-A6
DDR3-CAS_T R38 1% 33R DDR3-CAS
DDR3-A10_T R30 1% 33R DDR3-A10
DDR3-A11_T R16 1% 33R DDR3-A11
DDR3-A8_T R10 1% 33R DDR3-A8
DDR3-A9_T R43 1% 33R DDR3-A9
DDR3-A12_T R11 1% 33R DDR3-A12
DDR3-A13_T R15 1% 33R DDR3-A13
DDR3-A14_T R28 1% 33R DDR3-A14
DDR3-BA0_T R14 1% 33R DDR3-BA0
DDR3-BA1_T R36 1% 33R DDR3-BA1
DDR3-BA2_T R19 1% 33R DDR3-BA2
DDR3-RAS_T R41 1% 33R DDR3-RAS
DDR3-A7_T R17 1% 33R DDR3-A7
DDR3-S0_T R20 1% 33R DDR3-S0
DDR3-ODT0_T R42 1% 33R DDR3-ODT0
DDR3-WE_T R9 1% 33R DDR3-WE
DDR3-CKE0_T R31 1% 33R DDR3-CKE0
U15A
S40-15
ODT CK CKE CS RAS CAS WE RESET DML DMU BA0 BA1 BA2 A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10/AP A11 A12/BC A13 A14 NC
DQL0 DQL1 DQL2 DQL3 DQL4 DQL5 DQL6 DQL7 DQU0 DQU1 DQU2 DQU3 DQU4 DQU5 DQU6 DQU7 DQSU DQSU DQSL DQSL
DDR3-D0 DDR3-D5 DDR3-D1 DDR3-D4 DDR3-D2 DDR3-D6 DDR3-D3 DDR3-D7 DDR3-D12 DDR3-D14 DDR3-D10 DDR3-D8 DDR3-D11 DDR3-D15 DDR3-D13 DDR3-D9
DDR3-DQS1_P DDR3-DQS1_N DDR3-DQS0_P DDR3-DQS0_N
R29 4K87 1%
U19A
DDR3-D17 DDR3-D21 DDR3-D18 DDR3-D23 DDR3-D22 DDR3-D20 DDR3-D16 DDR3-D19 DDR3-D31 DDR3-D28 DDR3-D26 DDR3-D25 DDR3-D29 DDR3-D27 DDR3-D24 DDR3-D30
DDR3-DQS3_P DDR3-DQS3_N DDR3-DQS2_P DDR3-DQS2_N
IM4G16D3FABG-125I
DDR3-CLK0_P
R32 80R6 1%
DDR3-CLK0_N
Place directly at the clock pins
U15B
1.5V GND
C71 4.7µF C72 470nF C74 47nF
C108 4.7µF C109 470nF C110 47nF
C114 10nF 10V X7R
C116 10nF 10V X7R
C75 4.7µF C78 47nF
C111 4.7µF C112 470nF
C115 10nF 10V X7R
C117 10nF 10V X7R
VDD VDDQ VREFDQ VREFCA VSS VSSQ ZQ NC
R33 240R 1%
R34 240R 1%
C86 C87 C88 C89 C94 C95 C96 C97 470nF
R53 1K 1%
R54 1K 1%
C6 4.7µF
VTTREF
D80-15
DDR3-CLK0_P DDR3-CLK0_N DDR3-DQS0_P DDR3-DQS0_N DDR3-DQS1_P DDR3-DQS1_N DDR3-DQS2_P DDR3-DQS2_N DDR3-DQS3_P DDR3-DQS3_N
trenz electronic
Title: DDR3
A4
Number: TE0712 [No Variations]
Rev. 02
Date: 2015-12-09
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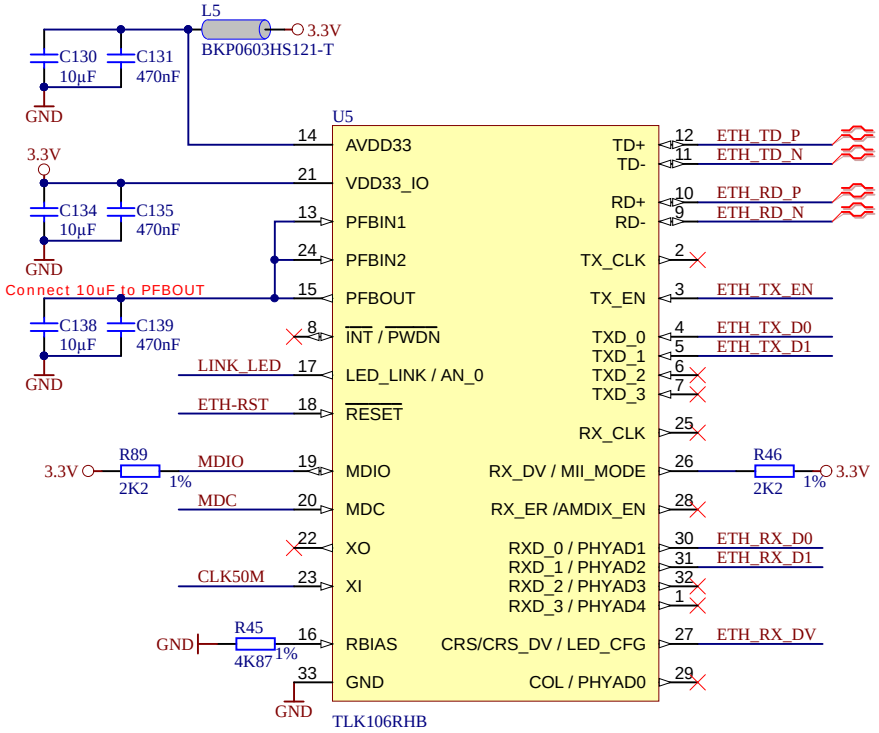
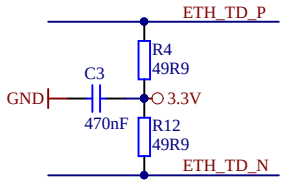
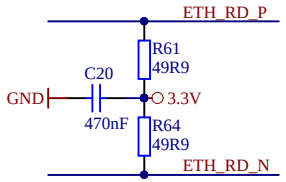
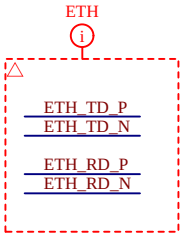
Page12 of 16
Filename: DDR3-RAM.SchDoc

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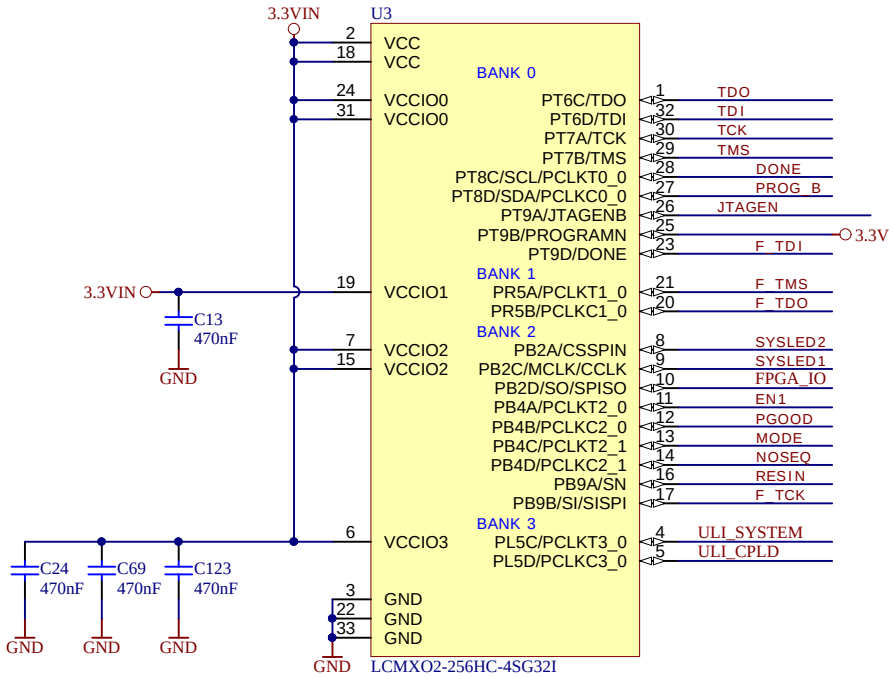
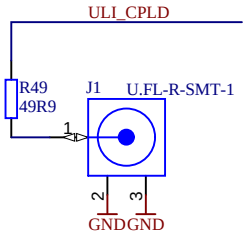
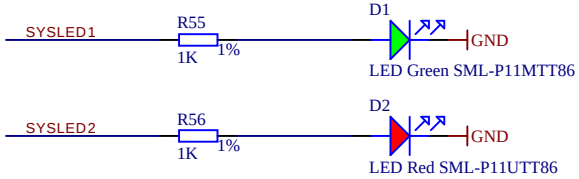
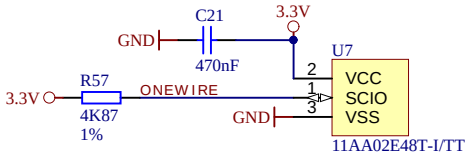
|---|---|---|---|
| trenz electronic | Title: ETH | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page13 of 16 |
| Filename: ETHERNET.SchDoc | | | |

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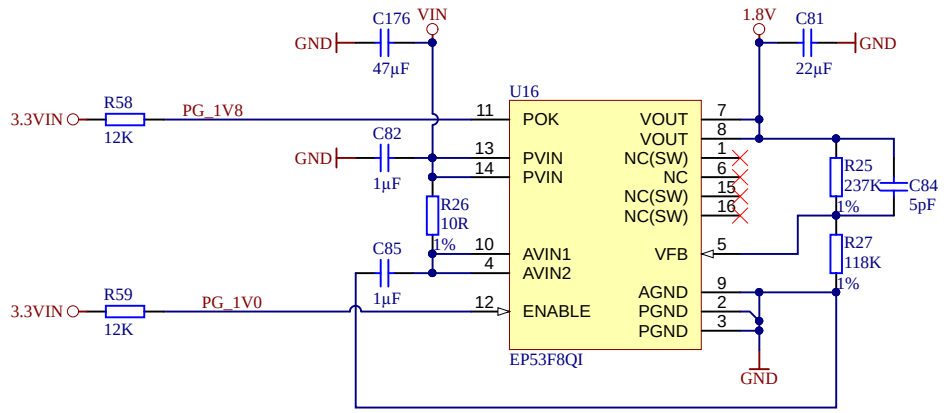
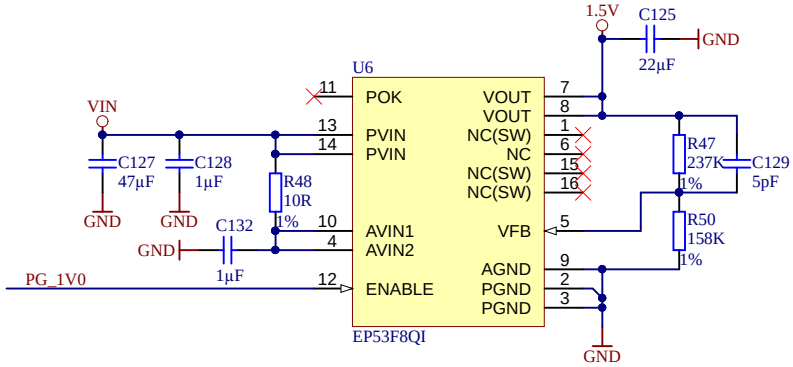
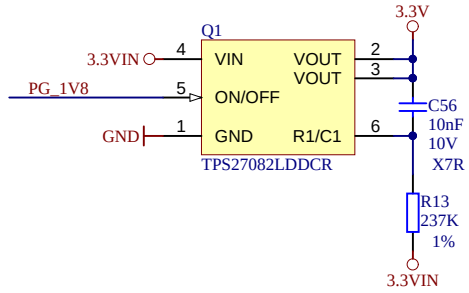
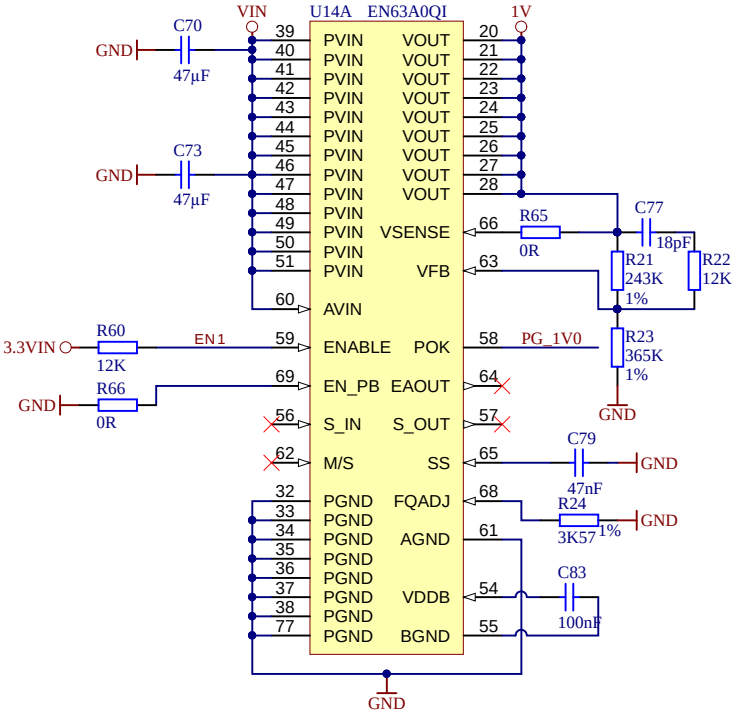
|---|---|---|---|
| trenz electronic | Title: CPLD | | |
| | A4 | Number: TE0712 [No Variations] | Rev. 02 |
| | Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | Page14 of 16 |
| | Filename: CPLD.SchDoc | | |

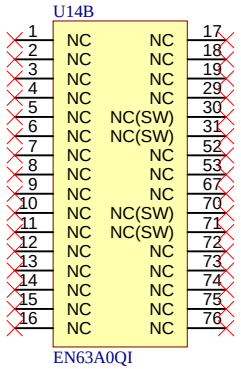



```
R65 R66          MODE EN63A0QI
-------------------------------------
OK   X       |  enable pre-bias start-up
X    OK      |  disable pre-bias start-up
```




| | | | | | |
|---|---|---|---|---|---|
| VIN | TP1 | Testpoint 0.8mm | 1V | TP2 | Testpoint 0.8mm |
| 3.3VIN | TP4 | Testpoint 0.8mm | 1.2V_MGT | TP5 | Testpoint 0.8mm |
| 3.3V | TP7 | Testpoint 0.8mm | VCCIO13 | TP8 | Testpoint 0.8mm |
| 1.8V | TP10 | Testpoint 0.8mm | VCCIO15 | TP11 | Testpoint 0.8mm |
| 1.5V | TP13 | Testpoint 0.8mm | VCCIO16 | TP14 | Testpoint 0.8mm |
| VTTREF | TP3 | Testpoint 0.8mm | | | |

| | | | |
|---|---|---|---|
| GND | TP6 | Testpoint 0.8mm | |
| GND | TP9 | Testpoint 0.8mm | |
| GND | TP12 | Testpoint 0.8mm | |
| GND | TP15 | Testpoint 0.8mm | |
| GND | TP16 | Testpoint 0.8mm | |

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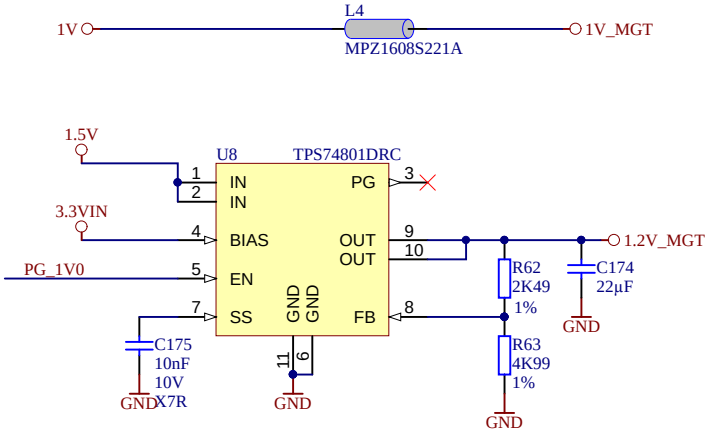
| | | | |
|---|---|---|---|
| Title: PWR | | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page15 of 16 |
| Filename: PWR1.SchDoc | | | |

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|---|---|---|---|
| Title: PWR | | | |
| A4 | Number: TE0712 [No Variations] | | Rev. 02 |
| Date: 2015-12-09 | Copyright: Trenz Electronic GmbH | | Page16 of 16 |
| Filename: PWR2.SchDoc | | | |