

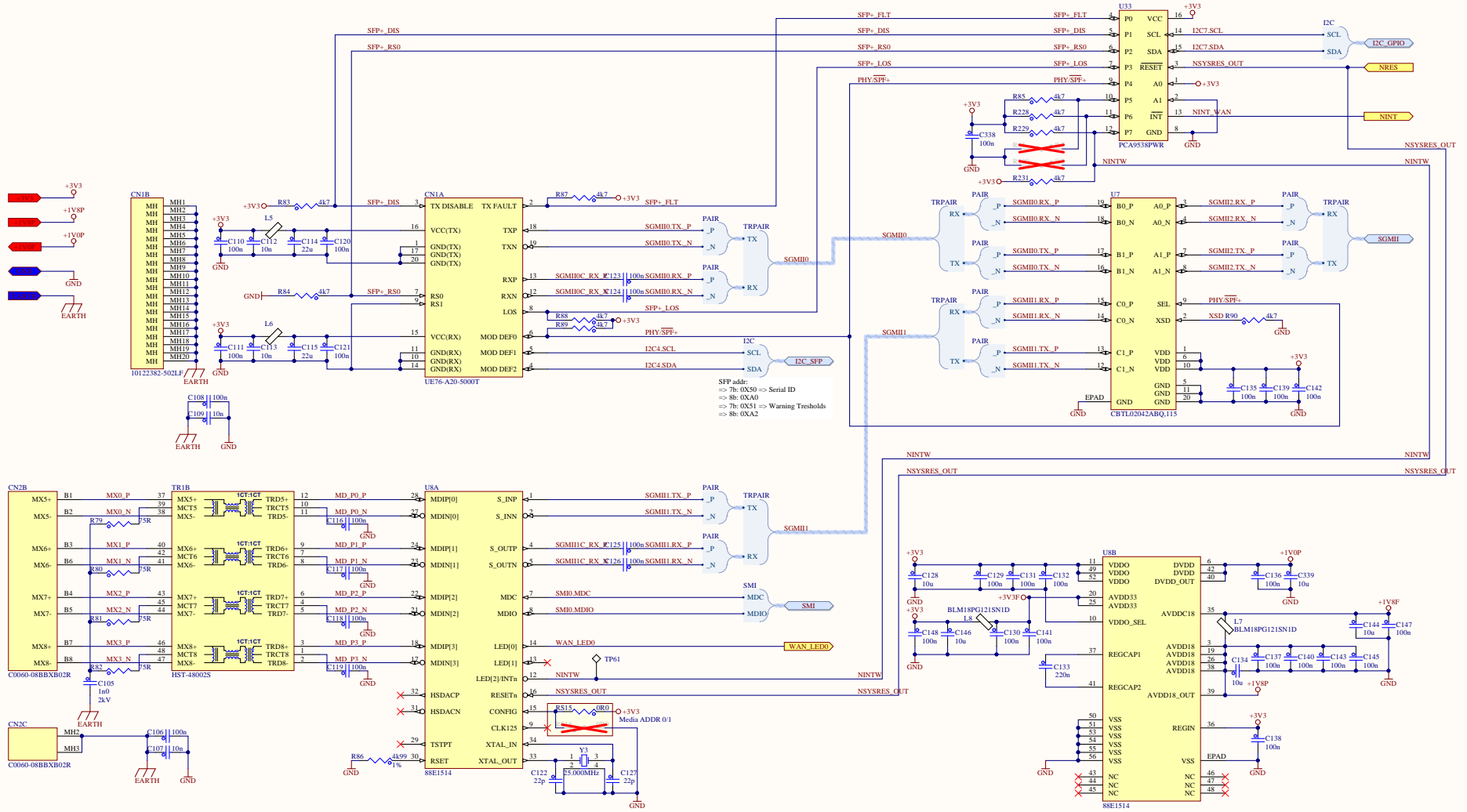
Boot ROM addr:
 => 7b: 0X54
 => 8b: 0XA8
 => E2=1, E1=0, E0=0

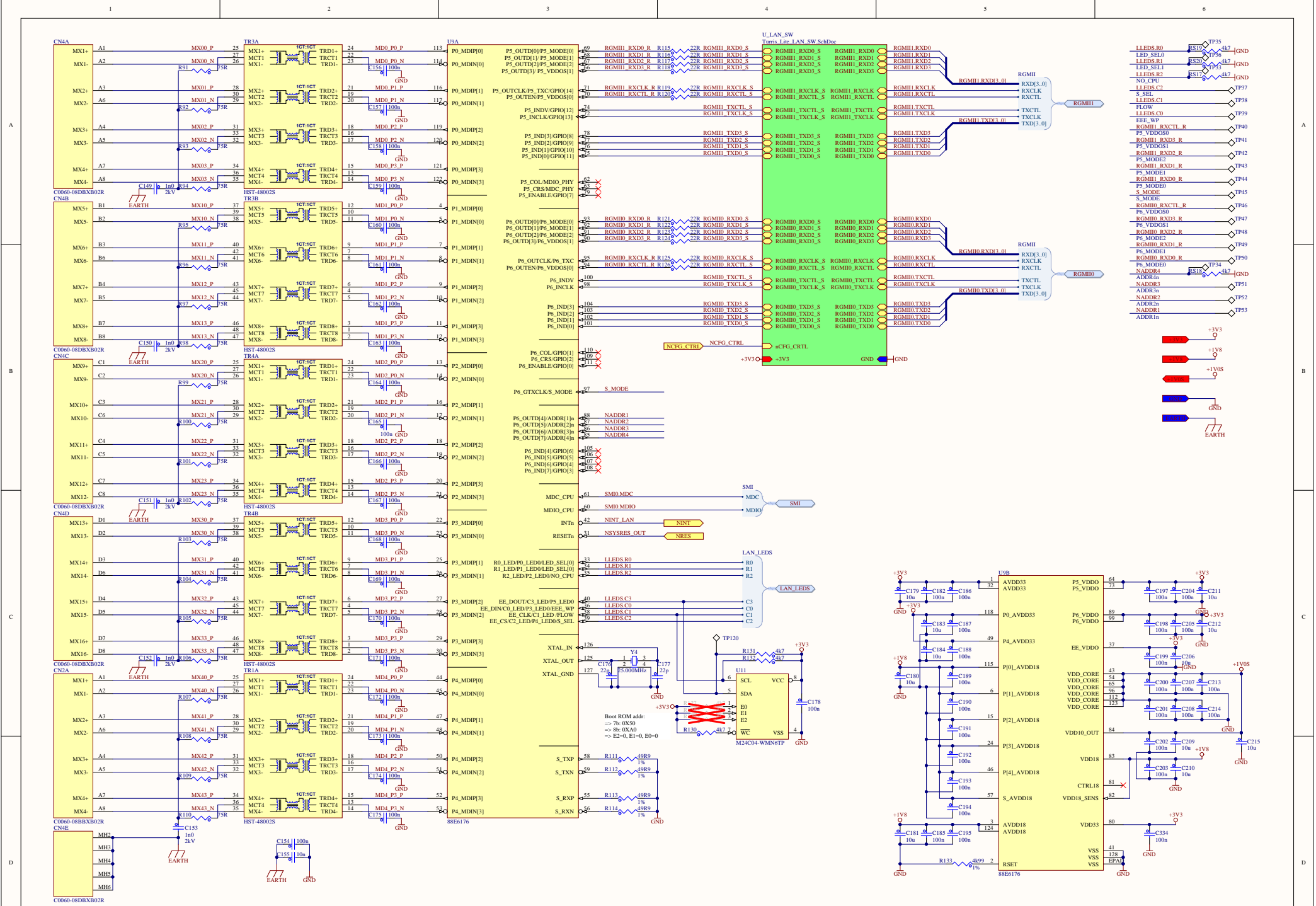


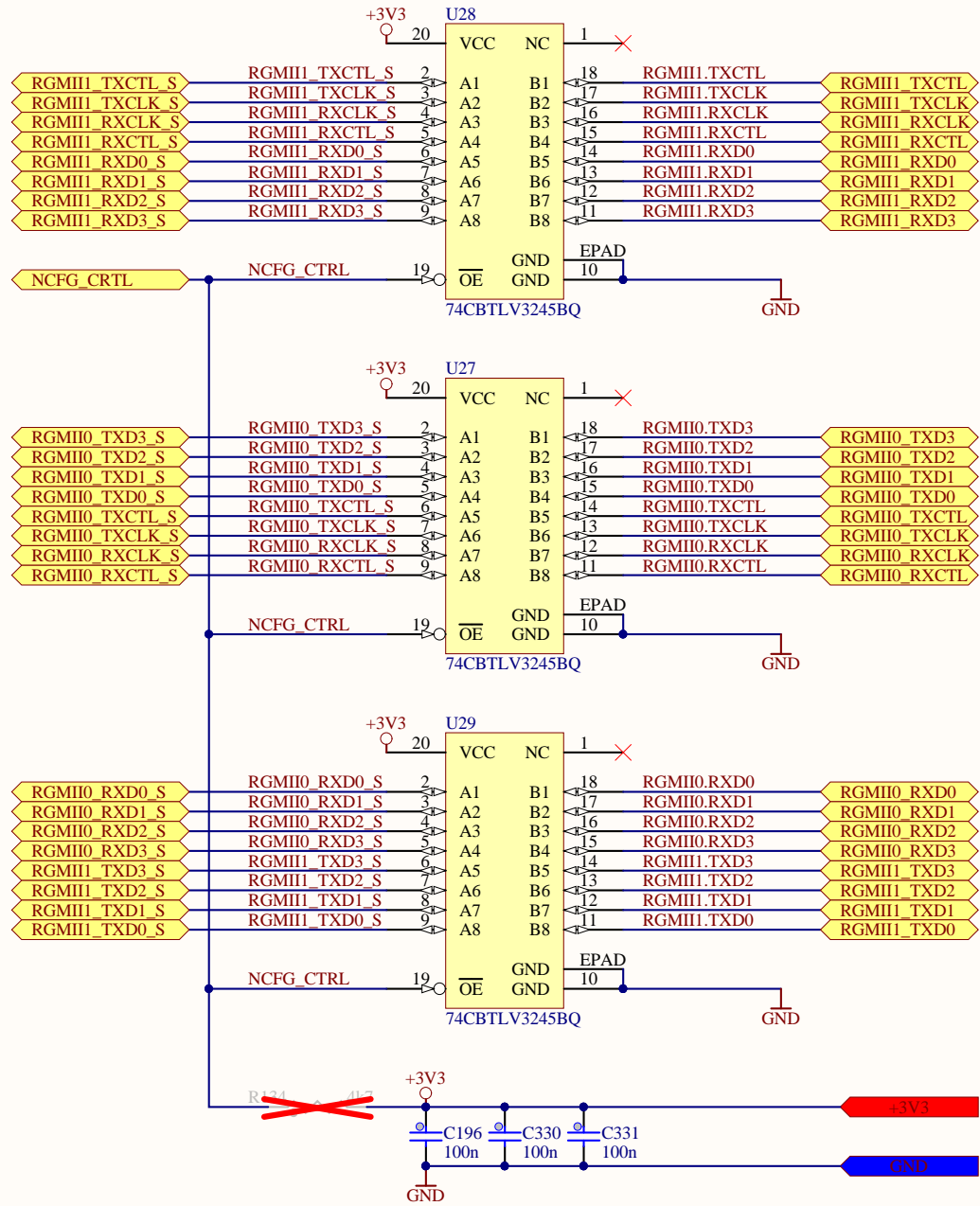
Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - ROM**
 Document Number: CZ11NIC130000-4
 Sheet 4 of 20
 Name: Turris Lite ROM.SchDoc

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 130 00 Praha 3







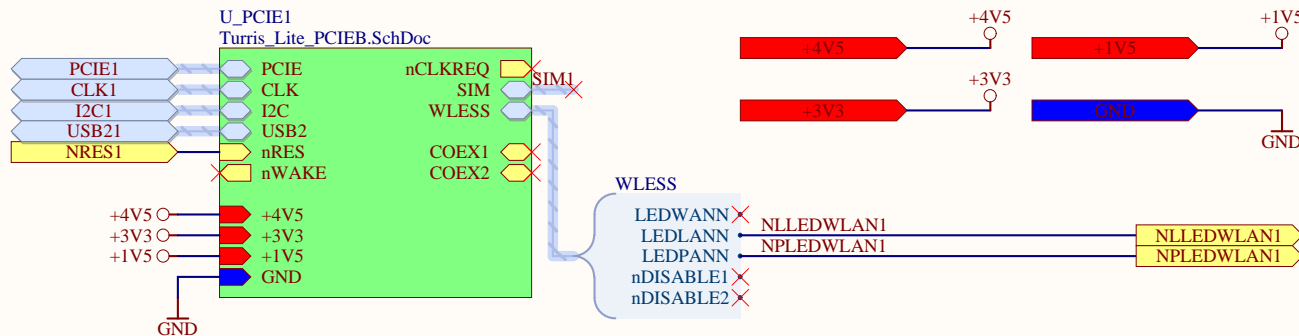
Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - LAN - Switch**
 Document Number: CZ11NIC130000-7
 Sheet 7 of 20
 Name: Turris Lite LAN_SW.SchDoc

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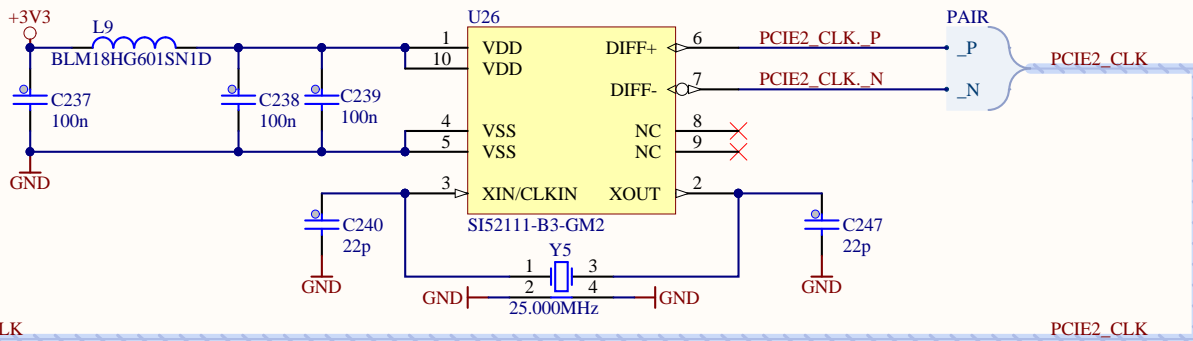

A

A



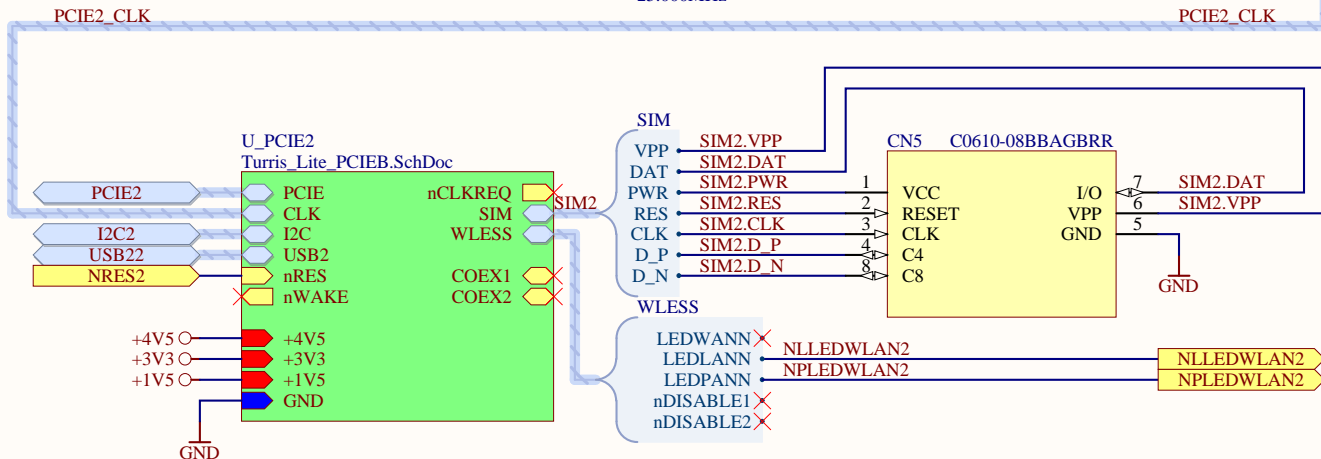
B

B



C

C



D

D

Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - PCIE**
 Document Number: CZ11NIC130000-8
 Revision: 130000
 Sheet 8 of 20
 Date: * *
 Name: Turris Lite PCIE.SchDoc

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A

A

B

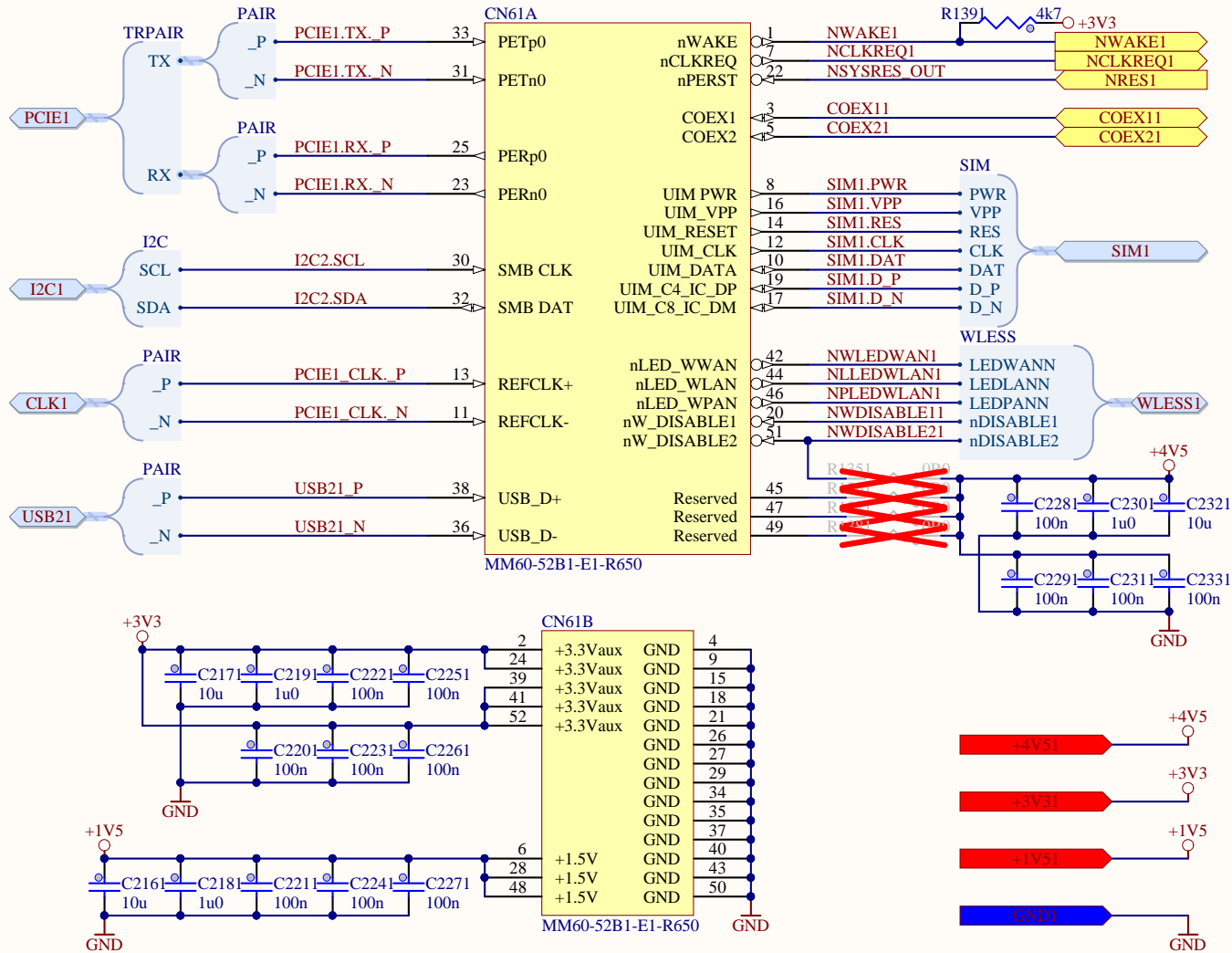
B

C

C

D

D



Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - PCIE - Single Slot**
 Document Number: CZ11NIC130000-9
 Sheet 9 of 20
 Name: Turris Lite_PCIEB.SchDoc

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A

A

B

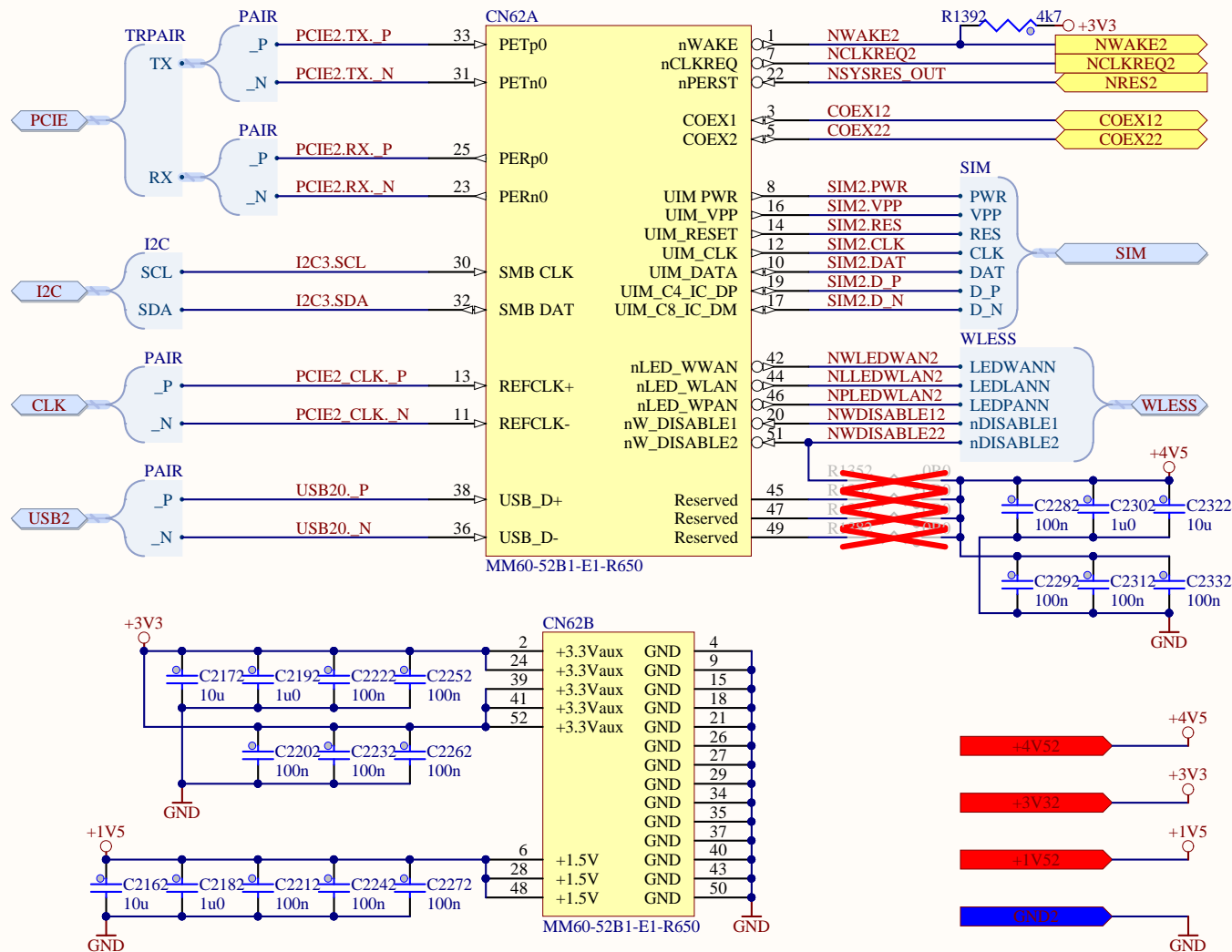
B

C

C

D

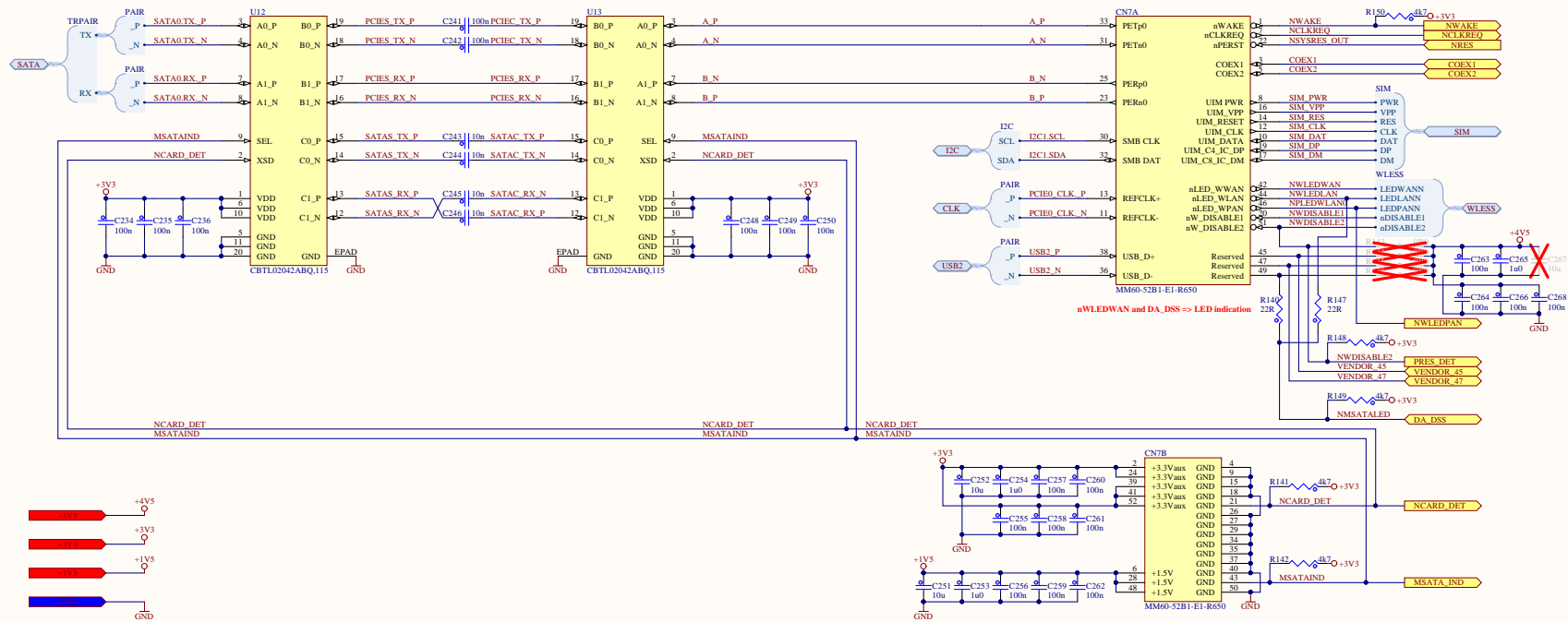
D



Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - PCIE - Single Slot**
 Document Number: CZ11NIC130000-9
 Sheet 9 of 20
 Name: Turris Lite_PCIEB.SchDoc

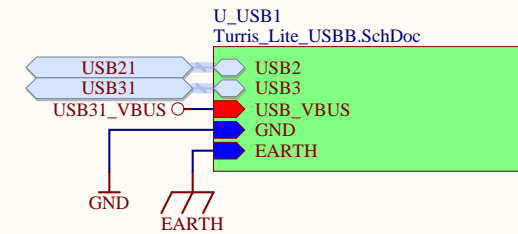
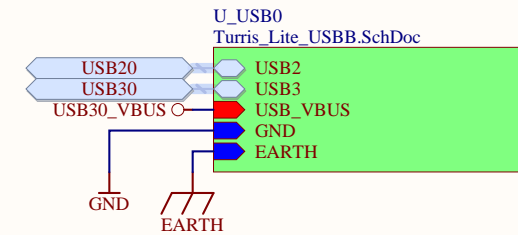
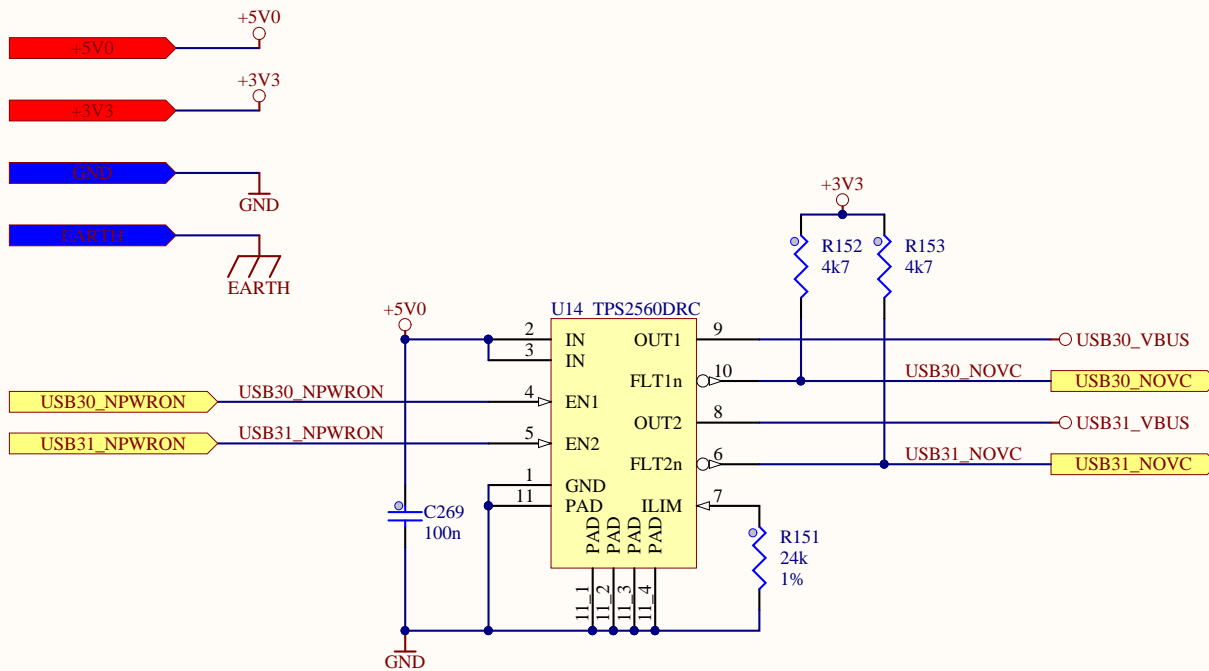
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 Milešovská 5
 130 00 Praha 3



Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by:
<http://www.atc.cz>

Title: Turris Omnia - mSATA/PCIE Slot
 Document Number: CZ11NIC13000-10
 Sheet: 10 of 20
 Name: Turris Lite_mSATA_SchDoc

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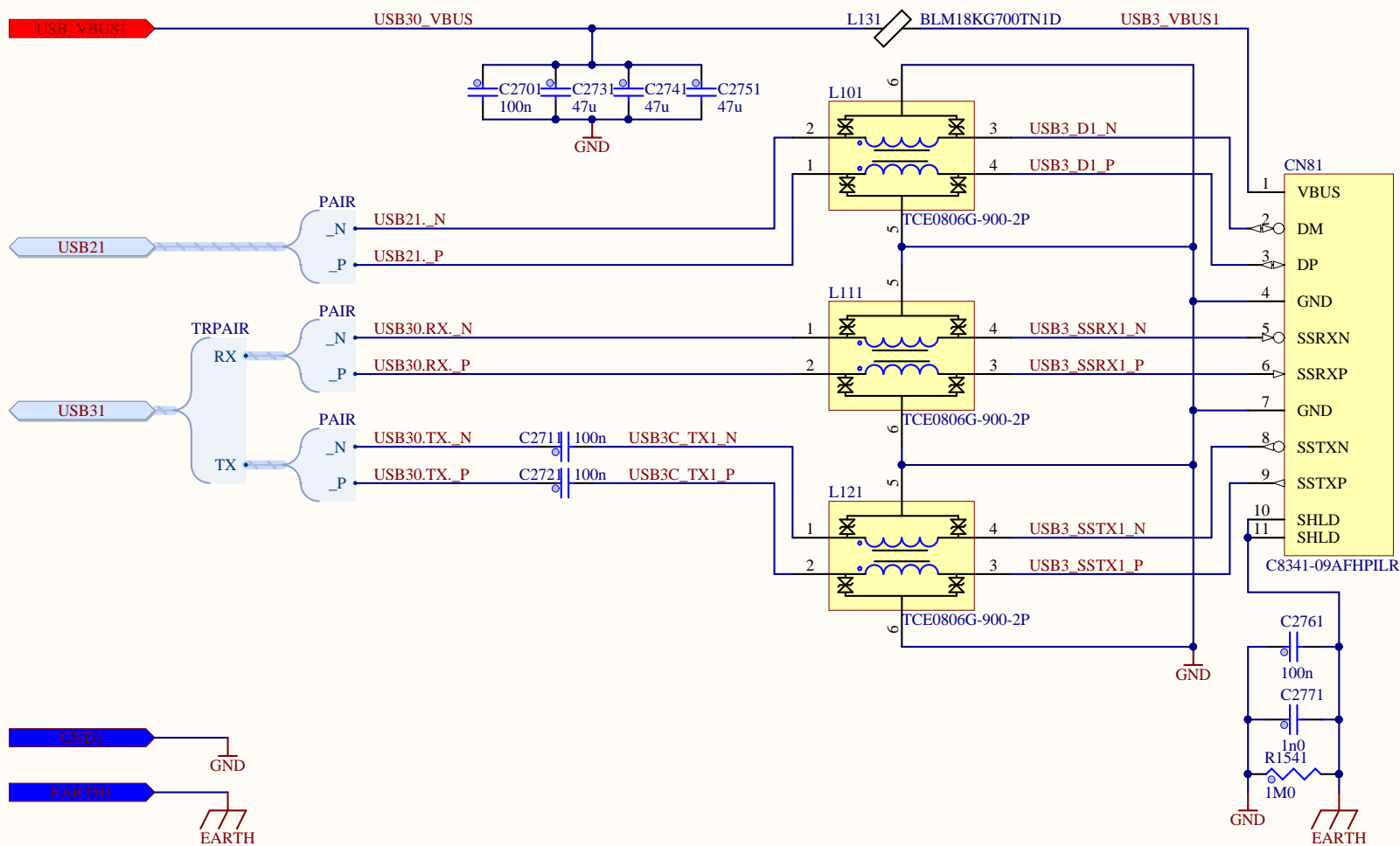
Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - USB 3.0**
 Document Number: CZ11NIC130000-11
 Sheet 11 of 20
 Name: Turris_Lite_USB.SchDoc

Revision: 130000
 Date: * *

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 130 00 Praha 3





Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

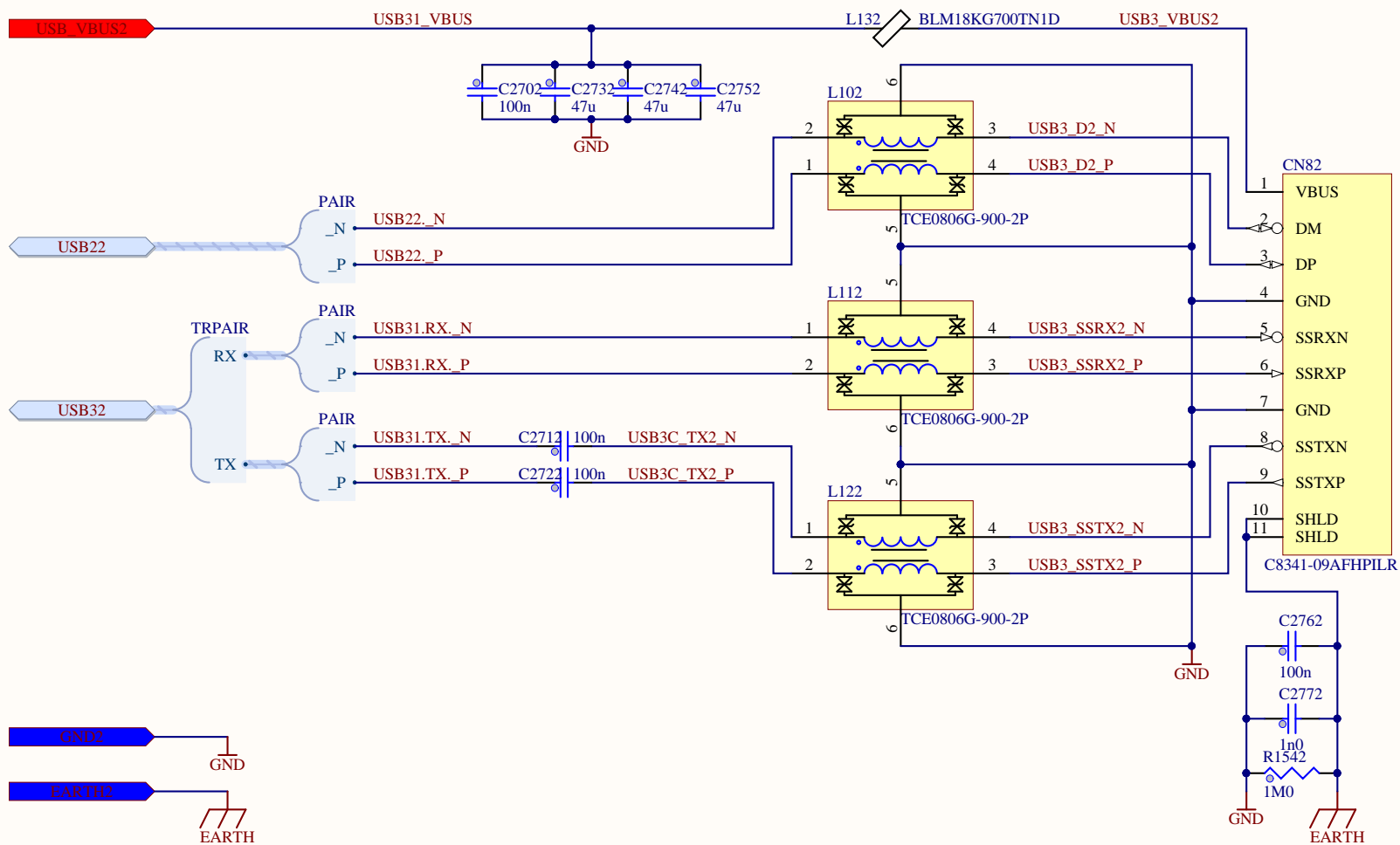
Title: **Turris Omnia - USB 3.0 - Single Slot**
 Document Number: CZ11NIC130000-12
 Sheet 12 of 20
 Name: Turris Lite_USB.SchDoc

Revision: 130000

Date: * *

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 130 00 Praha 3





Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

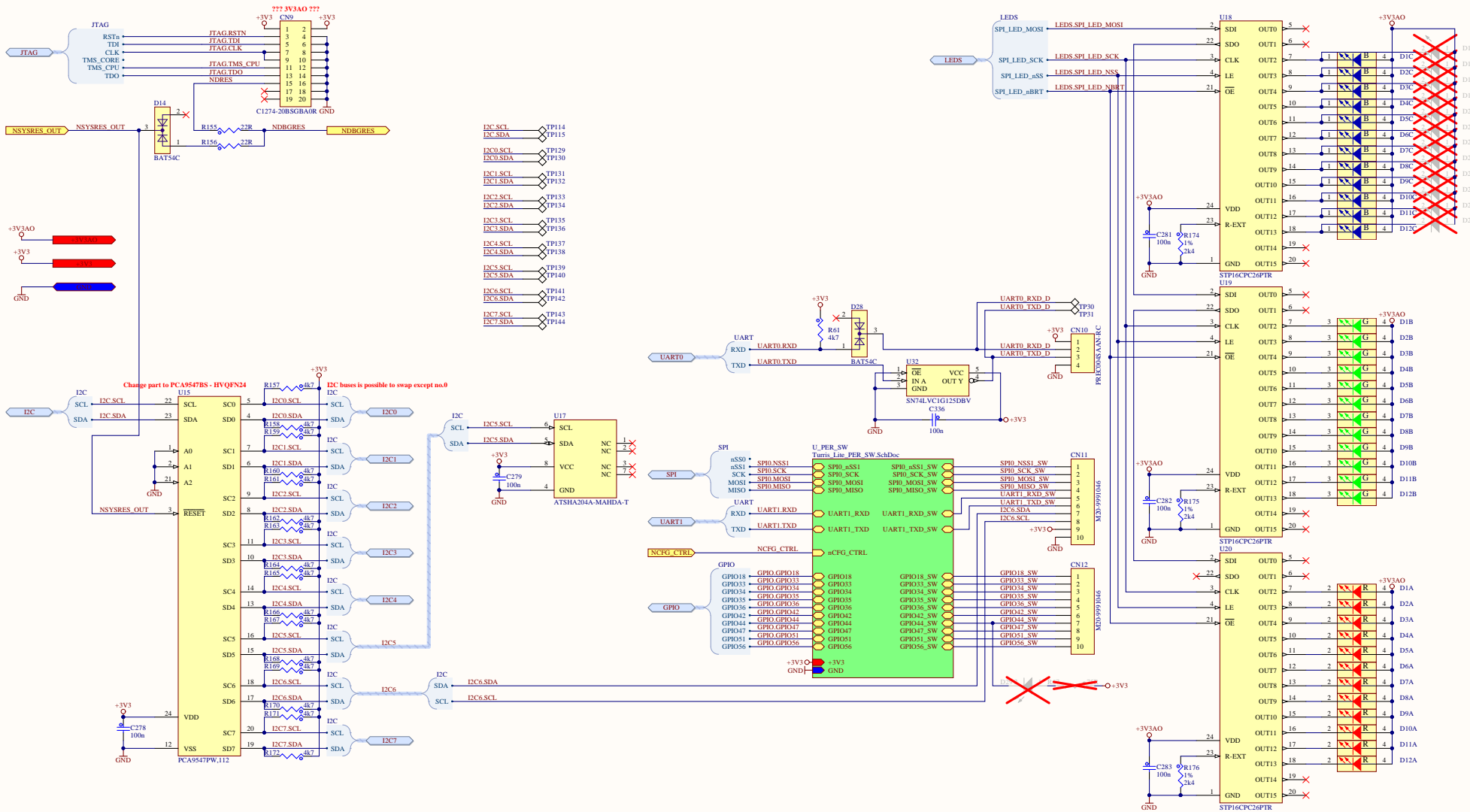
Title: **Turris Omnia - USB 3.0 - Single Slot**
 Document Number: CZ11NIC130000-12
 Sheet 12 of 20
 Name: Turris Lite USBB.SchDoc

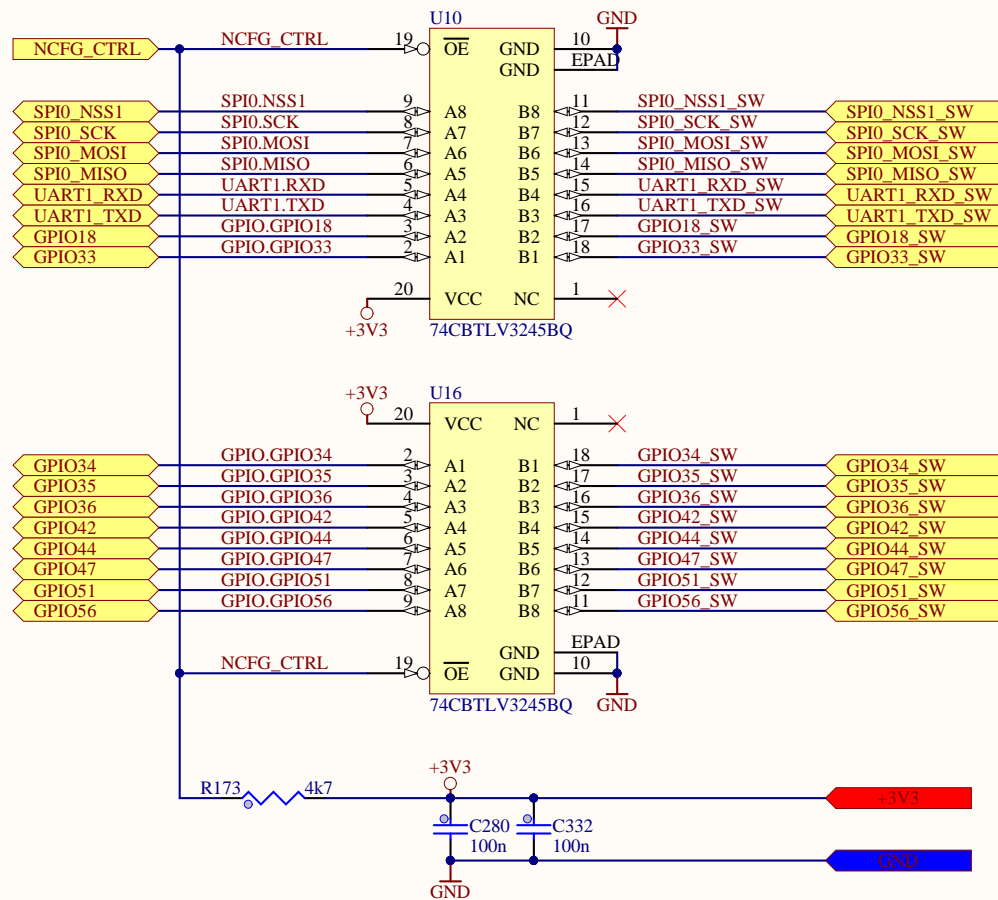
Revision: 130000

Date: * *

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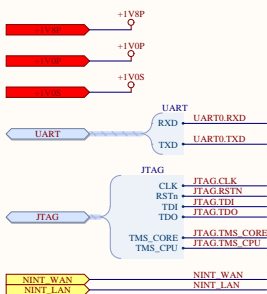


Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

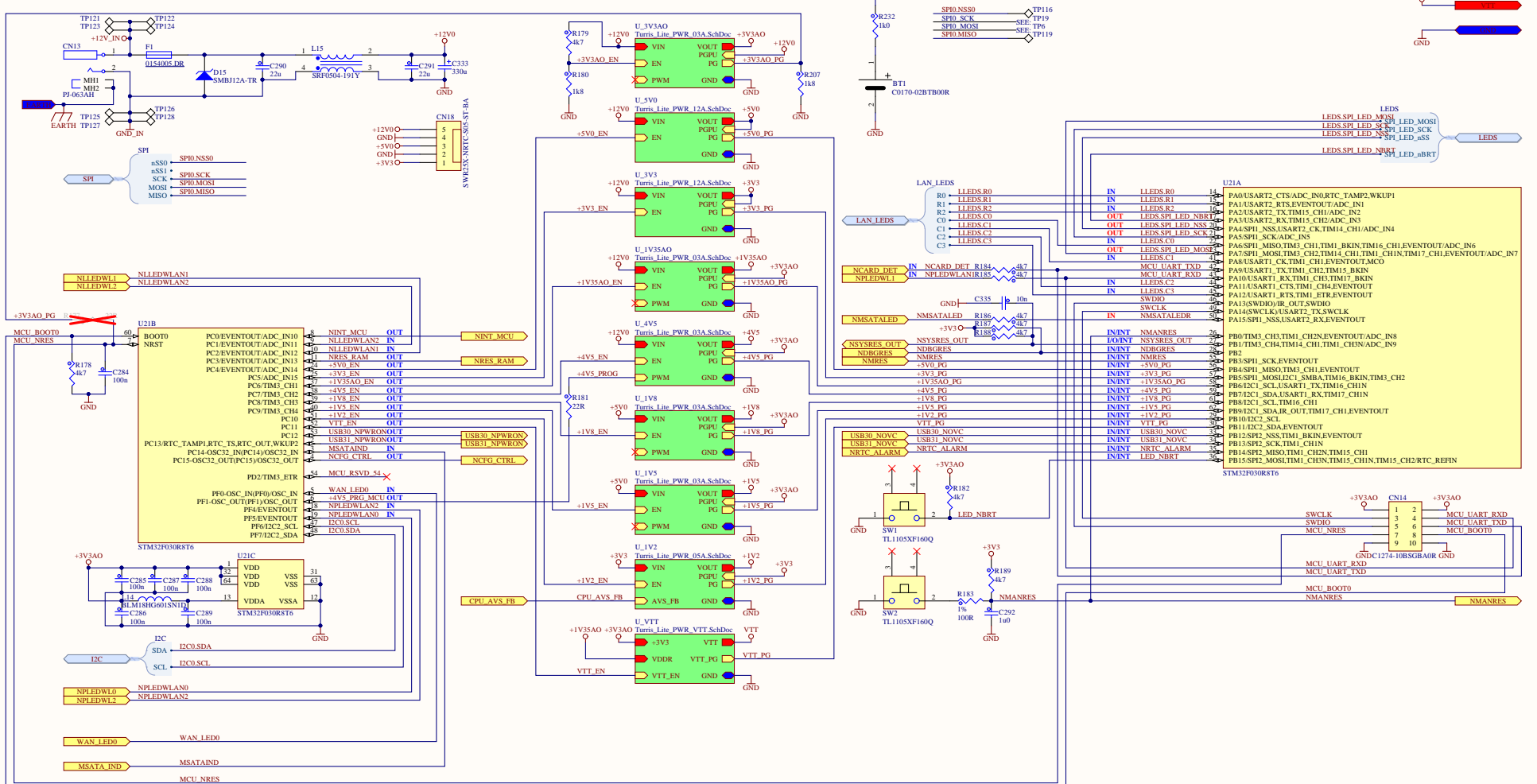
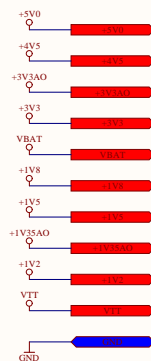
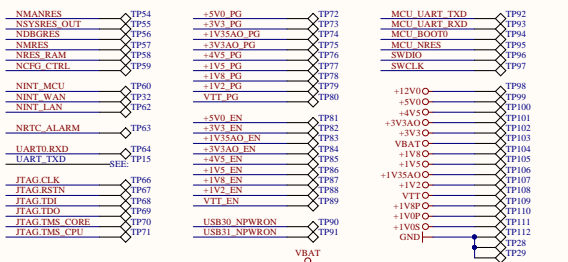
Title: **Turris Omnia - PER - SW**
 Document Number: CZ11NIC130000-14
 Sheet 14 of 20
 Name: Turris Lite_PER_SW.SchDoc

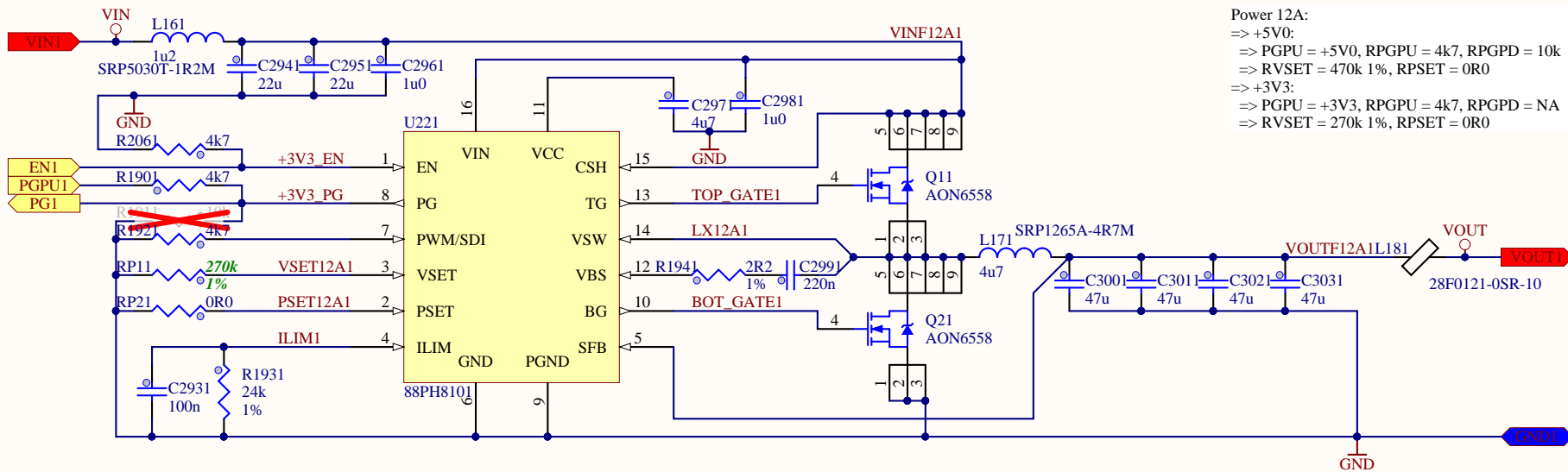
Revision: 130000
 Date: * * *

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59 Test Points



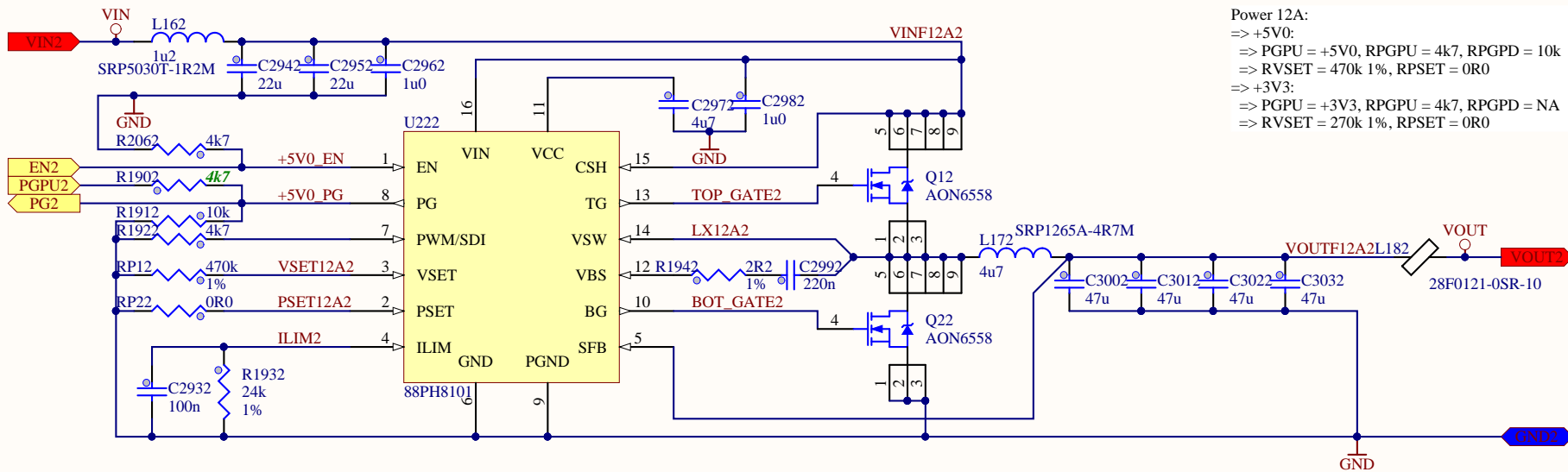


Power 12A:
=> +5V0:
=> PGPU = +5V0, RGPU = 4k7, RGPDP = 10k
=> RVSET = 470k 1%, RPSET = 0R0
=> +3V3:
=> PGPU = +3V3, RGPU = 4k7, RGPDP = NA
=> RVSET = 270k 1%, RPSET = 0R0

Author: Zbyněk Kos & Tomáš Rykl
Engineer: Zbyněk Kos & Tomáš Rykl
Drawn by: Zbyněk Kos
Checked by: Tomáš Rykl
Approved by: *
<http://www.nic.cz>

Title: **Turrus Omnia - Power - 12A Regulator**
Document Number: CZ11NIC130000-16
Sheet 16 of 20
Revision: 130000
Date: * * *
Name: Turrus Lite_PWR_12A.SchDoc

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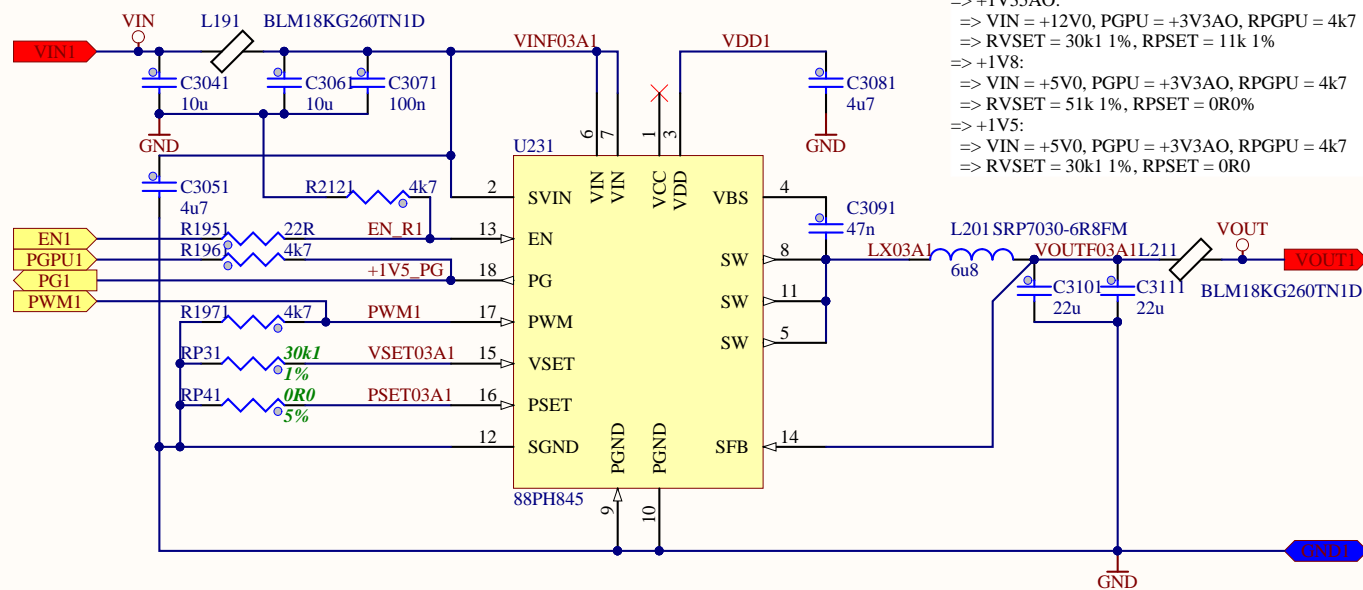


Power 12A:
 => +5V0:
 => PGPU = +5V0, RGPU = 4k7, RGPDP = 10k
 => RVSET = 470k 1%, RPSET = 0R0
 => +3V3:
 => PGPU = +3V3, RGPU = 4k7, RGPDP = NA
 => RVSET = 270k 1%, RPSET = 0R0

Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - Power - 12A Regulator**
 Document Number: CZ11NIC130000-16
 Sheet 16 of 20
 Name: Turris Lite_PWR_12A.SchDoc

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Power 03A:

=> +4V5:

=> VIN = +12V, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 470k 1%, RPSET = 11k 1%

=> +3V3AO:

=> VIN = +12V0, PGPU = +12V0, RPGPU = 4k7

=> RVSET = 270k 1%, RPSET = 0R0

=> EN_PD = NA

=> +1V35AO:

=> VIN = +12V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 30k1 1%, RPSET = 11k 1%

=> +1V8:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 51k 1%, RPSET = 0R0%

=> +1V5:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

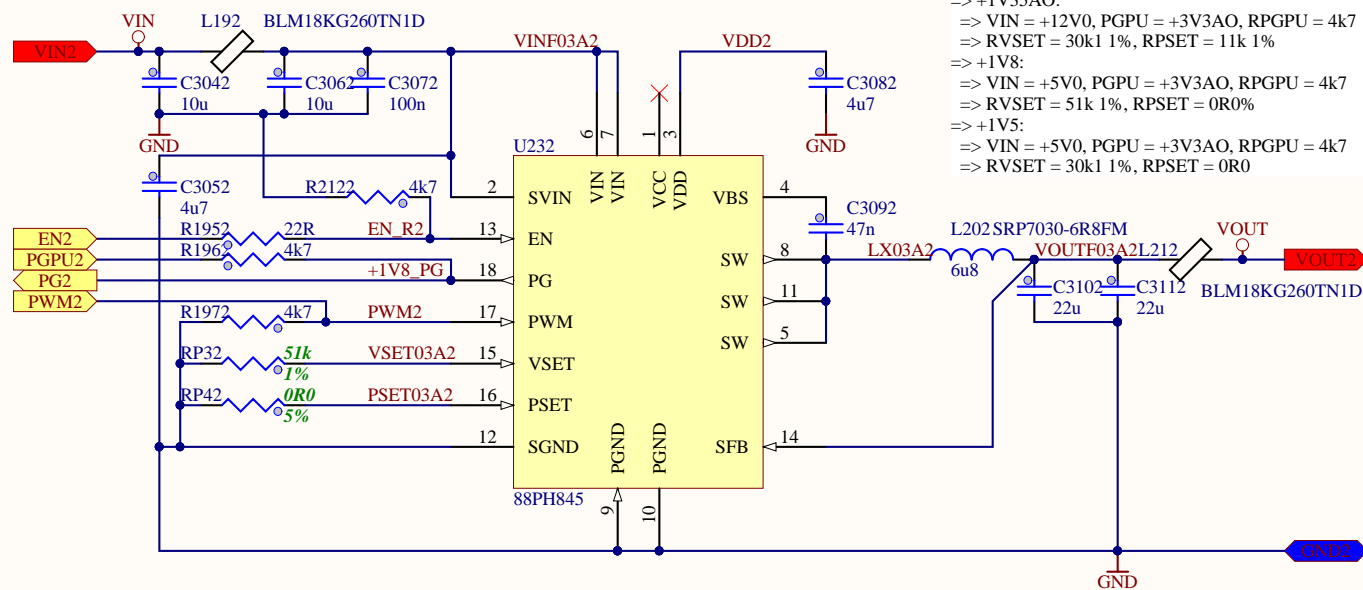
=> RVSET = 30k1 1%, RPSET = 0R0

Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - Power - 3A Regulator**
 Document Number: CZ11NIC130000-17
 Sheet 17 of 20
 Name: Turris Lite_PWR_03A.SchDoc

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 130 00 Praha 3





Power 03A:

=> +4V5:

=> VIN = +12V, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 470k 1%, RPSET = 11k 1%

=> +3V3AO:

=> VIN = +12V0, PGPU = +12V0, RPGPU = 4k7

=> RVSET = 270k 1%, RPSET = 0R0

=> EN_PD = NA

=> +1V35AO:

=> VIN = +12V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 30k1 1%, RPSET = 11k 1%

=> +1V8:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 51k 1%, RPSET = 0R0%

=> +1V5:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

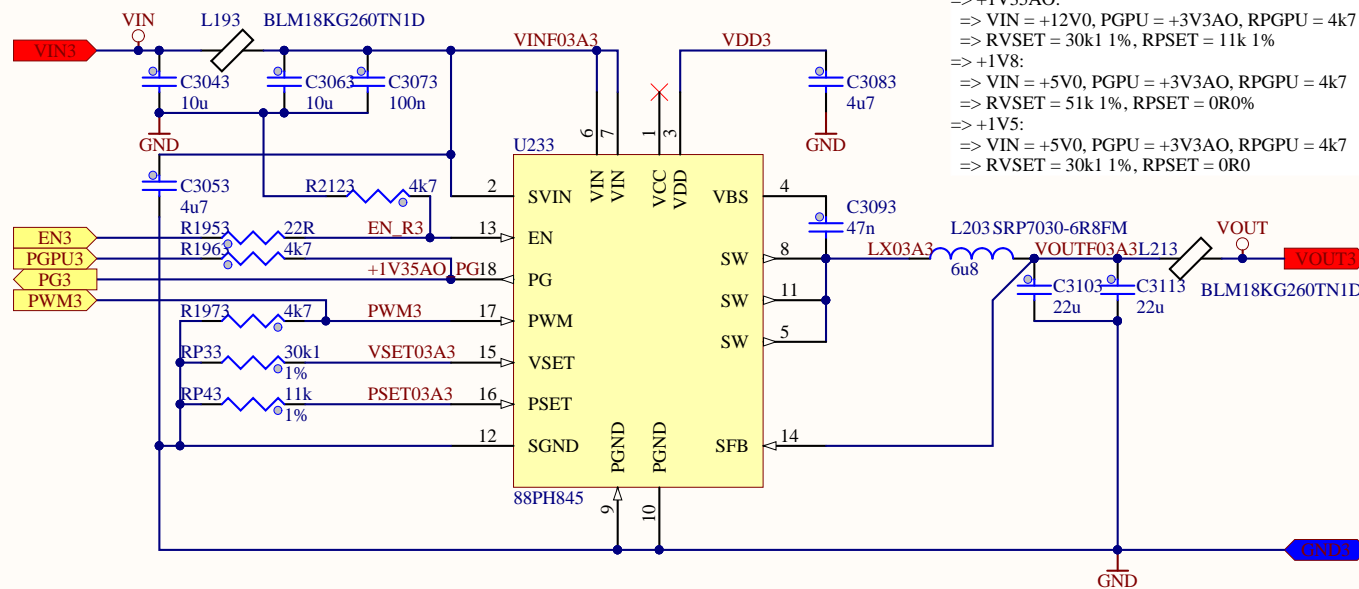
=> RVSET = 30k1 1%, RPSET = 0R0

Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turrís Omnia - Power - 3A Regulator**
 Document Number: CZ11NIC130000-17
 Sheet 17 of 20
 Name: Turrís Lite_PWR_03A.SchDoc

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Power 03A:

=> +4V5:

=> VIN = +12V, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 470k 1%, RPSET = 11k 1%

=> +3V3AO:

=> VIN = +12V0, PGPU = +12V0, RPGPU = 4k7

=> RVSET = 270k 1%, RPSET = 0R0

=> EN_PD = NA

=> +1V35AO:

=> VIN = +12V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 30k1 1%, RPSET = 11k 1%

=> +1V8:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 51k 1%, RPSET = 0R0%

=> +1V5:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

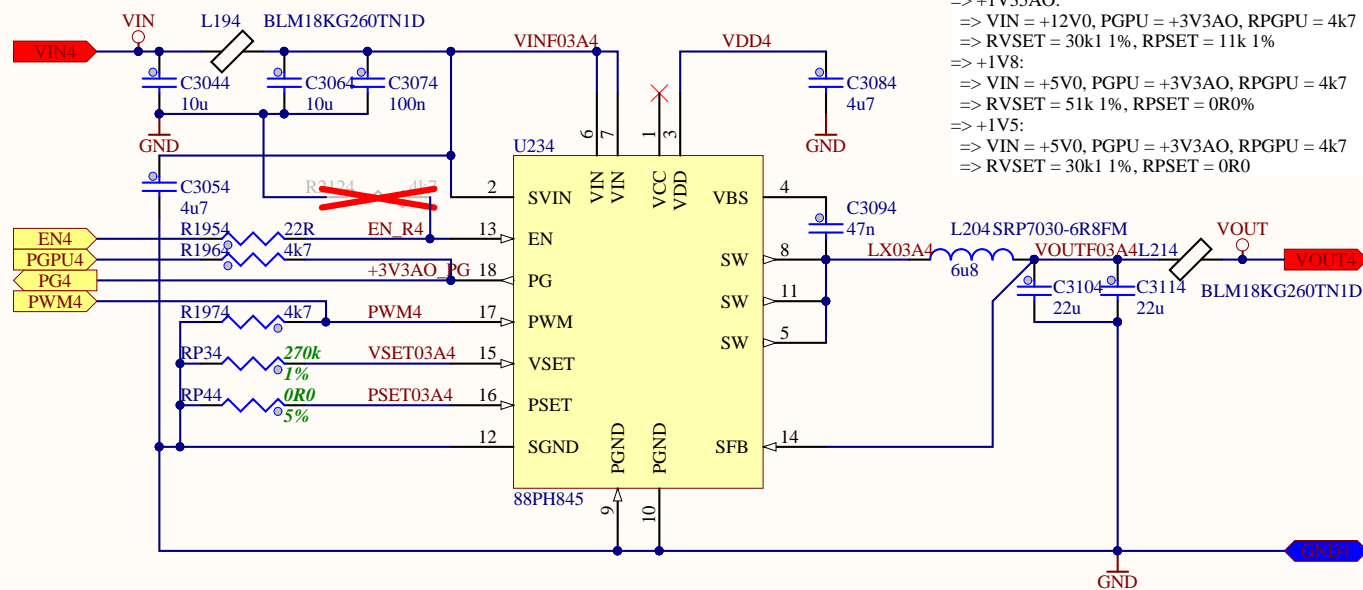
=> RVSET = 30k1 1%, RPSET = 0R0

Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - Power - 3A Regulator**
 Document Number: CZ11NIC130000-17
 Sheet 17 of 20
 Name: Turris_Lite_PWR_03A.SchDoc

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Power 03A:

=> +4V5:

=> VIN = +12V, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 470k 1%, RPSET = 11k 1%

=> +3V3AO:

=> VIN = +12V0, PGPU = +12V0, RPGPU = 4k7

=> RVSET = 270k 1%, RPSET = 0R0

=> EN_PD = NA

=> +1V35AO:

=> VIN = +12V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 30k1 1%, RPSET = 11k 1%

=> +1V8:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 51k 1%, RPSET = 0R0%

=> +1V5:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

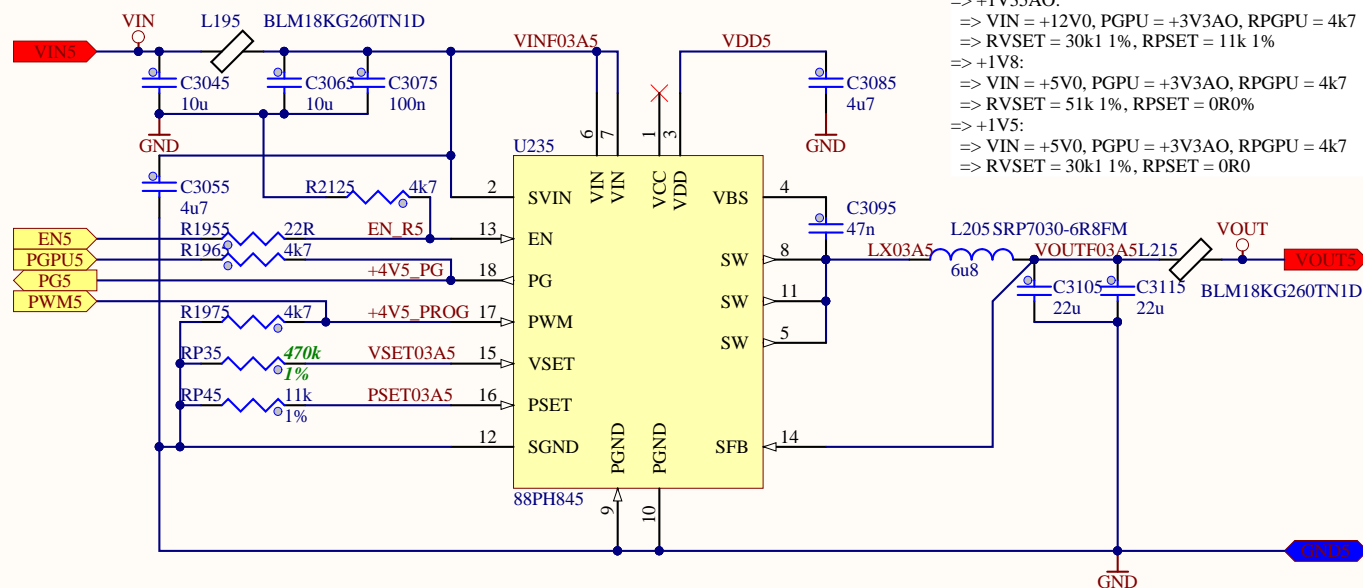
=> RVSET = 30k1 1%, RPSET = 0R0

Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turrís Omnia - Power - 3A Regulator**
 Document Number: CZ11NIC130000-17 Revision: 130000
 Sheet 17 of 20 Date: * *
 Name: Turrís Lite_PWR_03A.SchDoc

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Power 03A:

=> +4V5:

=> VIN = +12V, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 470k 1%, RPSET = 11k 1%

=> +3V3AO:

=> VIN = +12V0, PGPU = +12V0, RPGPU = 4k7

=> RVSET = 270k 1%, RPSET = 0R0

=> EN_PD = NA

=> +1V35AO:

=> VIN = +12V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 30k1 1%, RPSET = 11k 1%

=> +1V8:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

=> RVSET = 51k 1%, RPSET = 0R0%

=> +1V5:

=> VIN = +5V0, PGPU = +3V3AO, RPGPU = 4k7

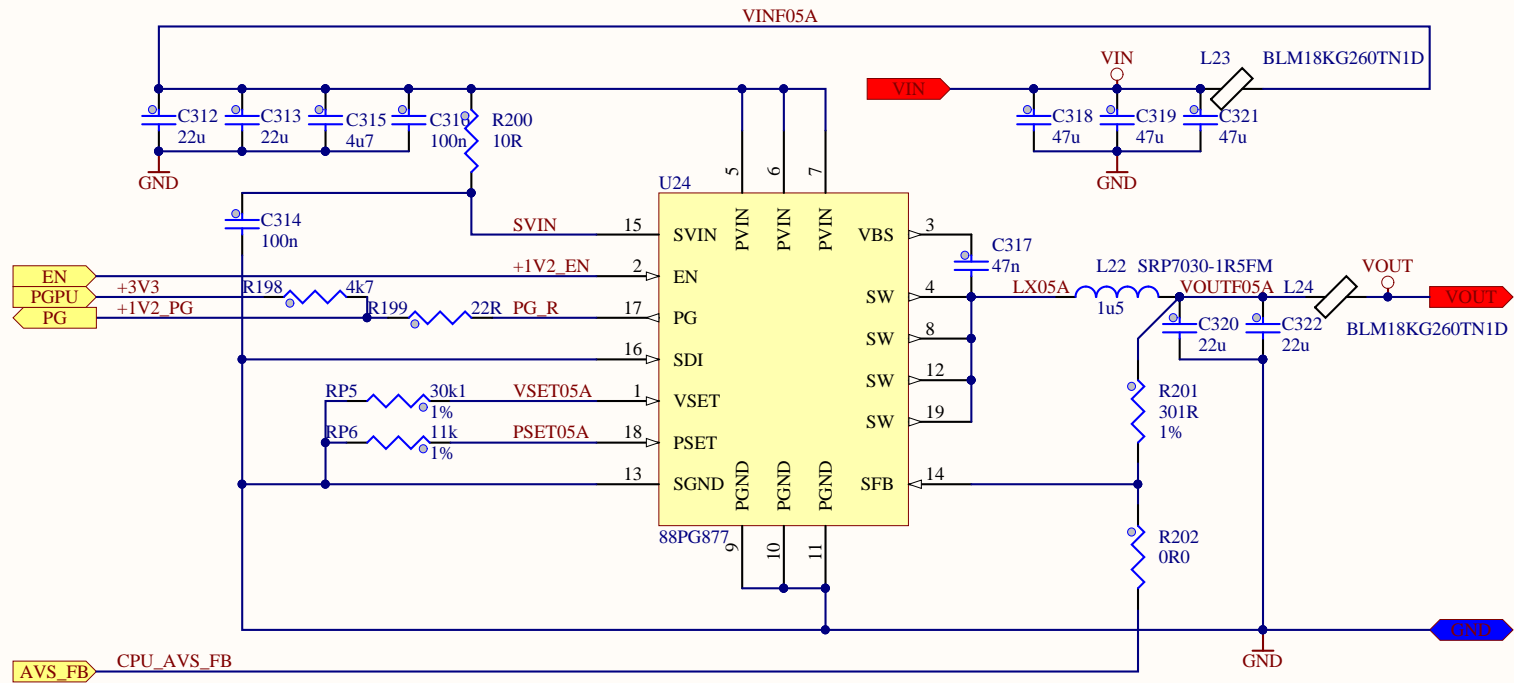
=> RVSET = 30k1 1%, RPSET = 0R0

Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - Power - 3A Regulator**
 Document Number: CZ11NIC130000-17
 Sheet 17 of 20
 Name: Turris Lite_PWR_03A.SchDoc

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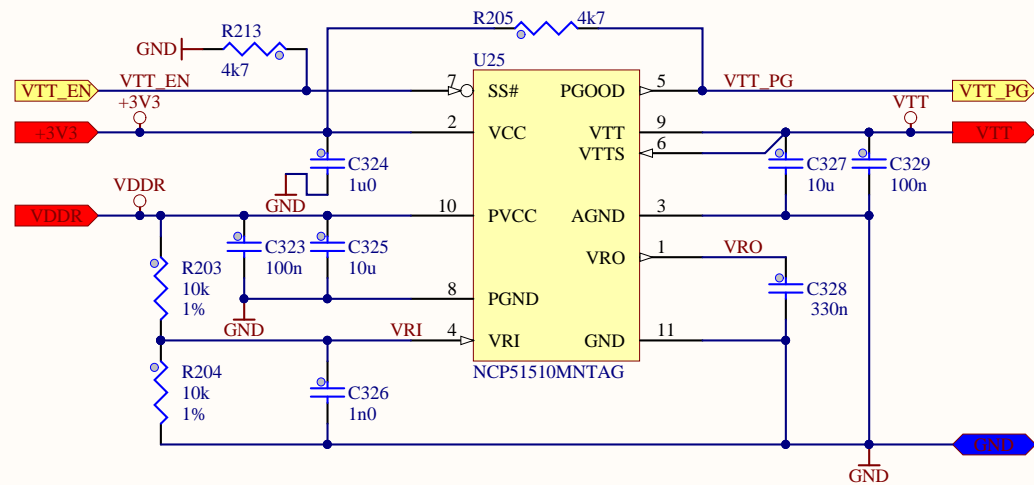


Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

Title: **Turris Omnia - Power - 5A Regulator**
 Document Number: CZ11NIC130000-18
 Sheet 18 of 20
 Name: Turris Lite_PWR_05A.SchDoc

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 130 00 Praha 3





Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.nic.cz>

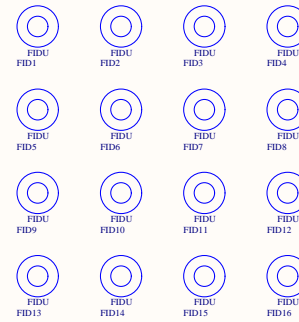
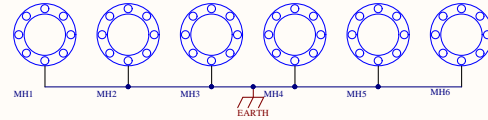
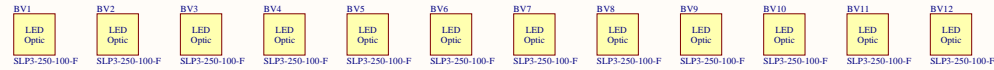
Title: **Turris Omnia - Power - VTT Regulator**
 Document Number: CZ11NIC130000-19
 Sheet 19 of 20
 Name: Turris_Lite_PWR_VTT.SchDoc

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Revision: 130000
 Date: * *

Mechanical components
 - mounting holes
 - screws
 - box elements
 - distribution box
 - distribution box content (manual etc.)
 - fiducial marks???

Connect all mount holes to EARTH



- Screws**
- Heatsinks**
- Thermal tapes**
- Thermal polymers**
- AL Box parts**
- Battery**
- Antennas**
- Paper Box**
- Manual**
- Power Supply**
- ETH cables - optional**
- WiFi cards - optional**
- Diplexers - optional**
- SFP module - optional**
- Jumper**

Author: Zbyněk Kos & Tomáš Rykl
 Engineer: Zbyněk Kos & Tomáš Rykl
 Drawn by: Zbyněk Kos
 Checked by: Tomáš Rykl
 Approved by: *
<http://www.ans.cz>

Title: Turris Omnia - Mech. & SW & Accs
 Document Number: CZ11NIC130000-20
 Sheet: 20 of 20
 Name: Turris_Lite_MECH_SchDoc

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