

# LPC54018 UART Server Board

Table of Content


|         |                       |
|---------|-----------------------|
| Page 1  | TITLE PAGE            |
| Page 2  | SYSTEM BLOCK DIAGRAM  |
| Page 3  | SYSTEM PWR SUPPLY     |
| Page 4  | LPC54018 IO MAP       |
| Page 5  | LPC54018 INTERFACE    |
| Page 6  | RS232-485 INTERFACE-1 |
| Page 7  | RS232-485 INTERFACE-2 |
| Page 8  | RS232-485 INTERFACE-3 |
| Page 9  | ETHERNET              |
| Page 10 | CAN BUS               |

Revision History

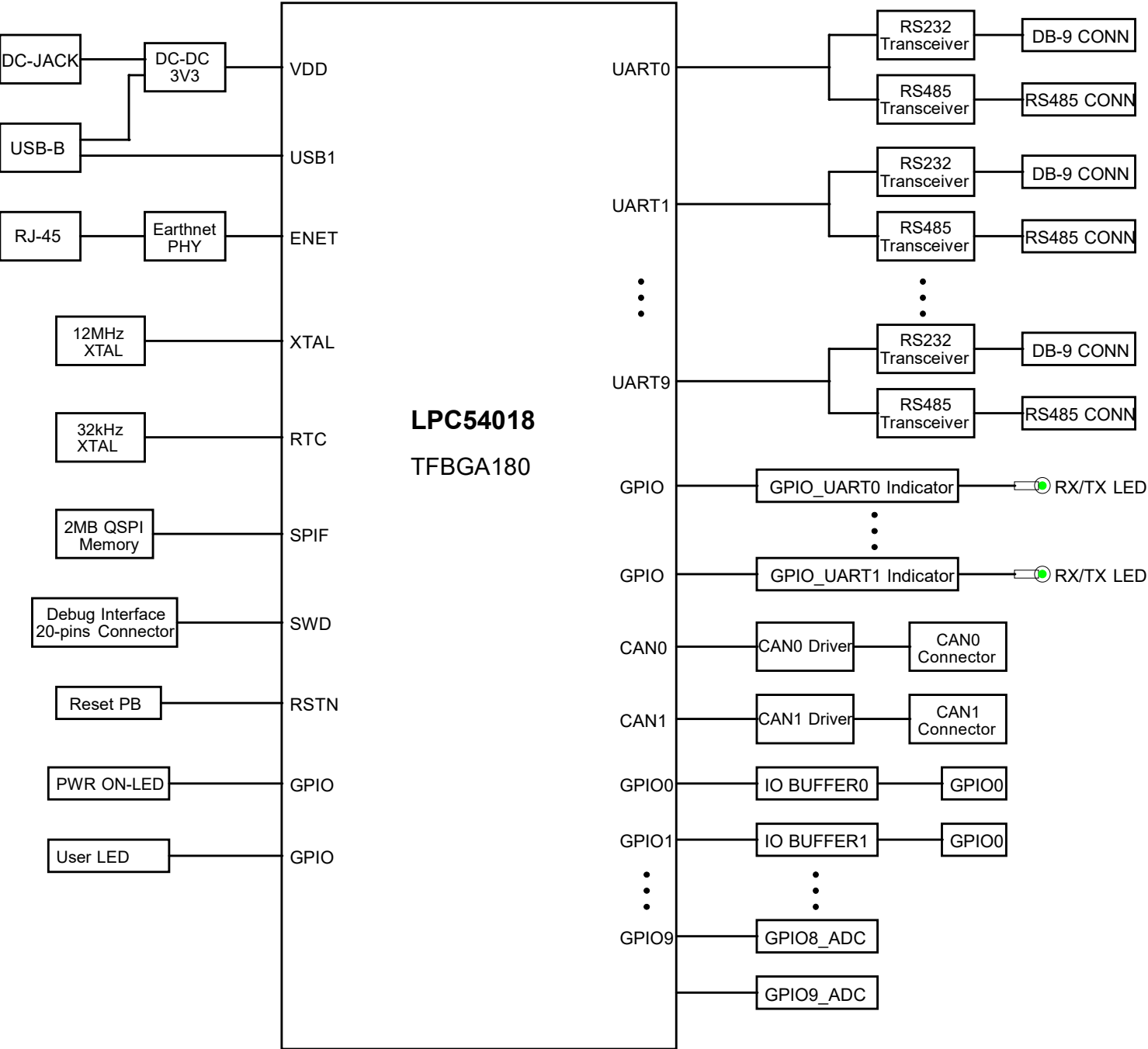
| Rev. Code | Date       | Description                   |
|-----------|------------|-------------------------------|
| X1        | 07/25/2019 | Rev X1 Draft Version Release. |
|           |            |                               |
|           |            |                               |
|           |            |                               |
|           |            |                               |
|           |            |                               |

## GENERAL DESIGN NOTES

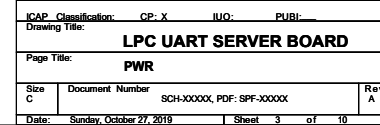
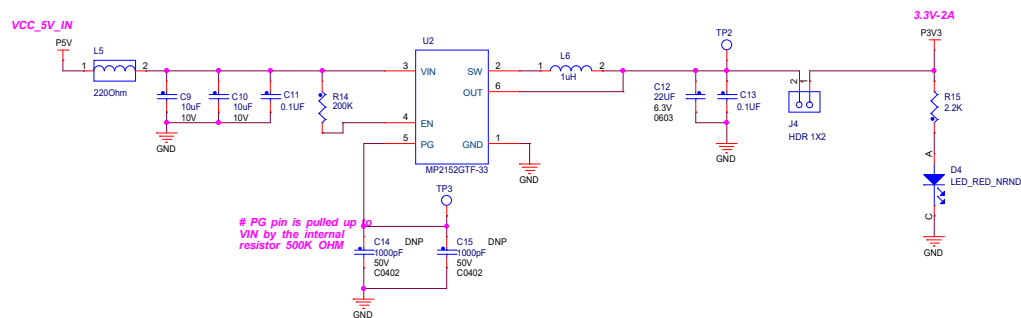
1. Unless Otherwise Specified:  
All resistors are in ohms, 5%, 1/16 Watt  
All capacitors are in uF, 20%, 50V  
All voltages are DC
2. Critical compenents that require tolerances tighter than listed in Note 1are labeled with required tolerance on schematic. Non-critical components may be filled with tighter tolerance parts for BOM consolidation purposes, but may be changed to meet the general tolerances of Note 1 if desired.
3. Interrupted lines coded with the same letter or letter combinations are electrically connected.
4. Device type number is for reference only. The number varies with the manufacturer.
5. Special signal usage:  
\_B or 'n' Denotes - Active-Low Signal  
<> or [] Denotes - Vectored Signals
6. Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology.

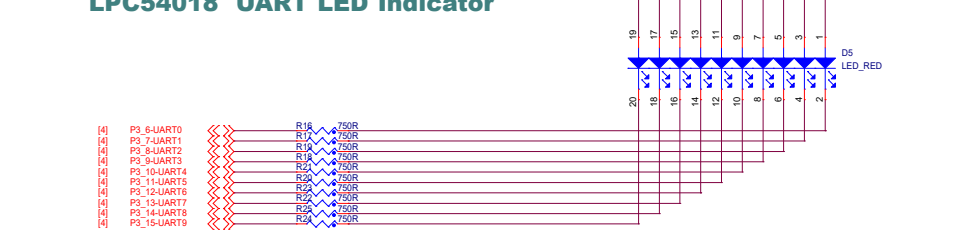
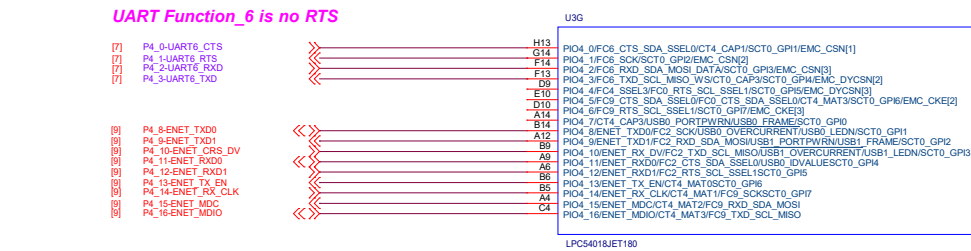
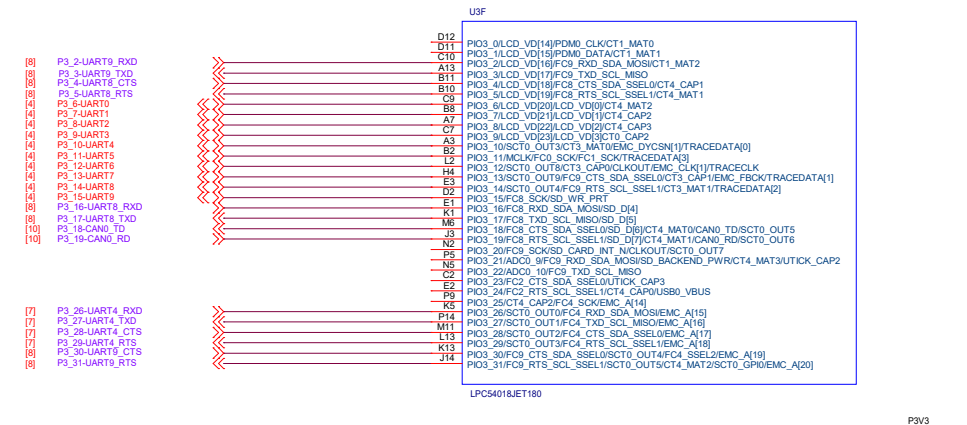
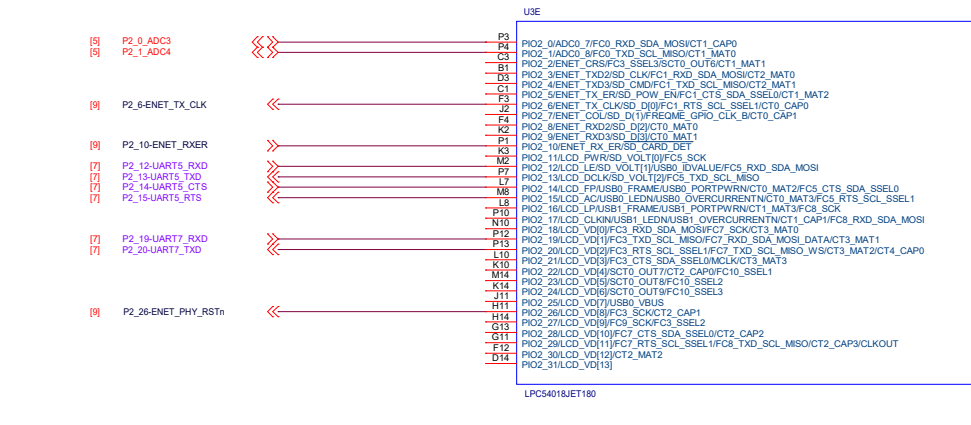
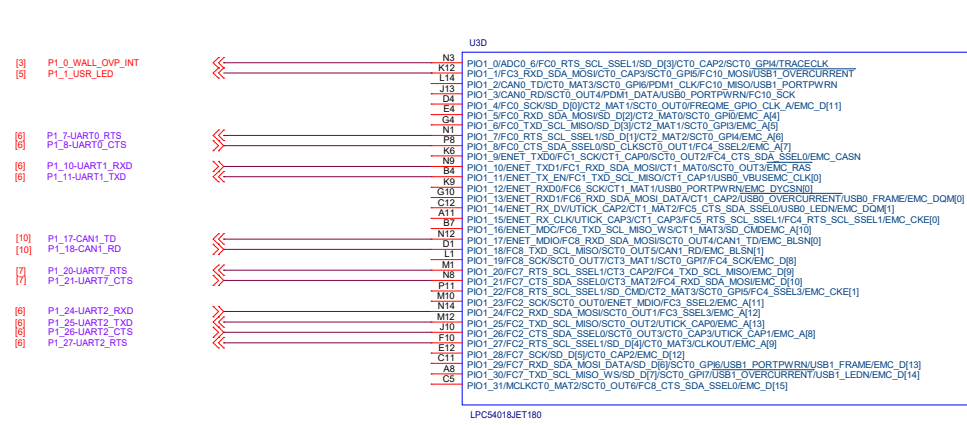
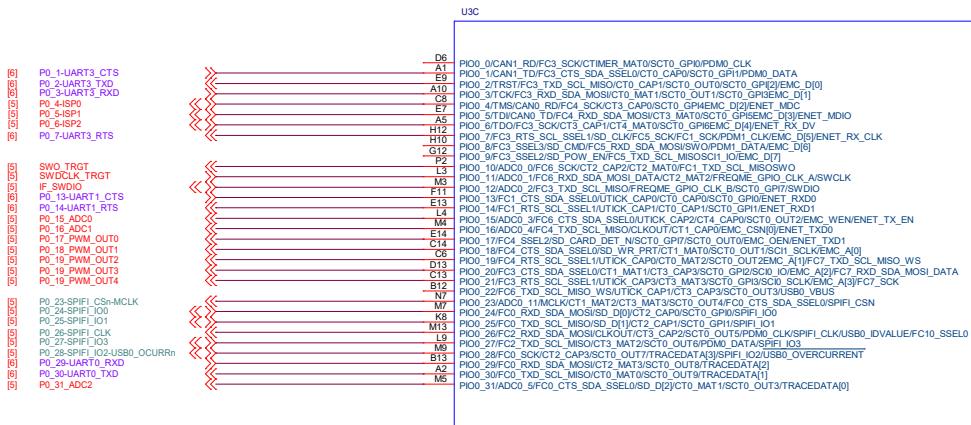
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|--|--|---|----------|--|--|
|   |  | <b>Microcontroller Product Group</b><br>6501 William Cannon Drive West<br>Austin, TX 78735-8500 |          |  |  |
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| ICAP: Classification: CP: X IJO: PUBL:   |  |   |          |  |  |
| Designer:<br>Tony Li   | Drawing Title:<br><b>LPC UART Server Board</b>     |   |          |  |  |
| Drawn by:<br>Tony Li   | Page Title:<br><b>Table of Contents, Revisions</b> |   |          |  |  |
| Approved:<br>CK Plus   | Size<br>C  | Document Number<br>SCH-XXXXX, PDF: SPF-XXXXX  | Rev<br>A |  |  |
| Date: Thursday, October 24, 2019   |  | Sheet 1 of 10   |          |  |  |

BLOCK DIAGRAM

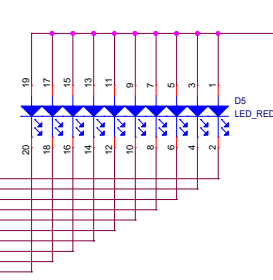


## +5V PWR





## LPC54018 UART LED Indicator



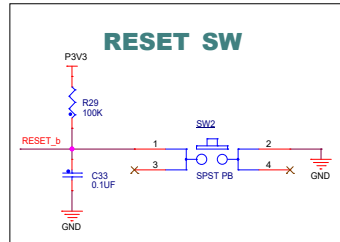
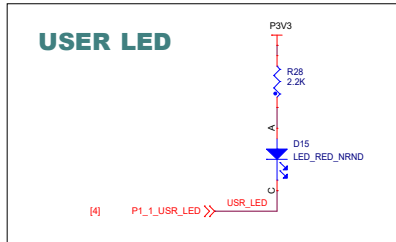
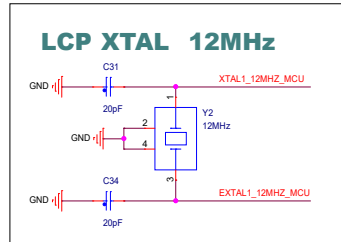
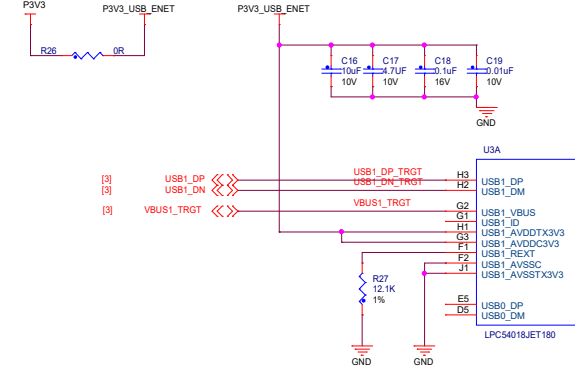
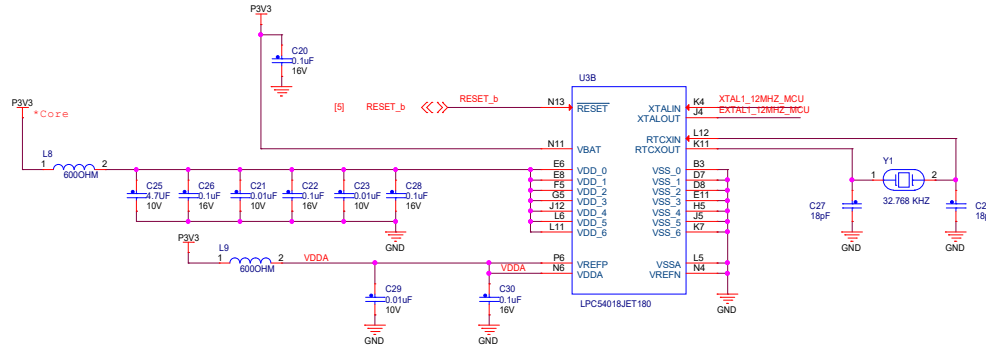
ICAP Classification: CP: X I/O: PUBI:

Drawing Title: LPC UART Server Board

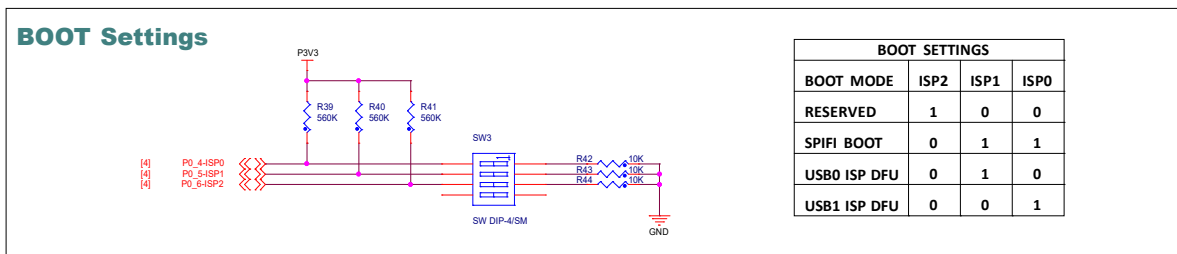
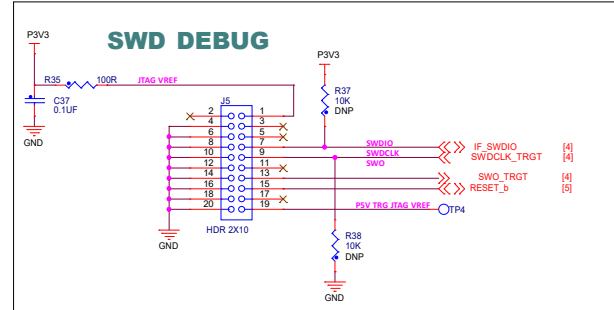
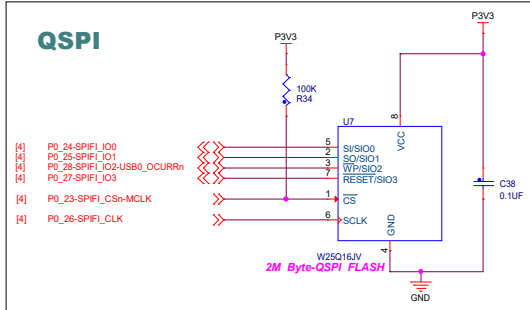
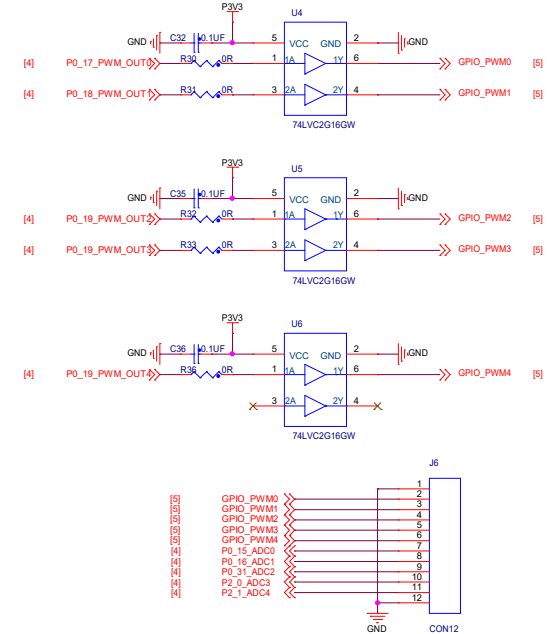
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Size C Document Number SCH-XXXXX, PDF: SPF-XXXXX Rev A

Date: Thursday, October 24, 2019 Sheet 4 of 10

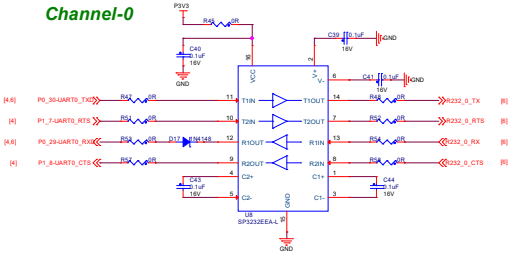


## LPC54018 GPIO Buffer

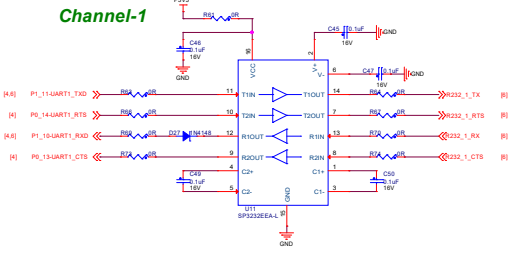


RS-232 Interface

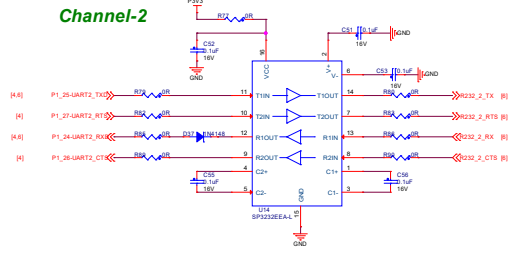
Channel-0



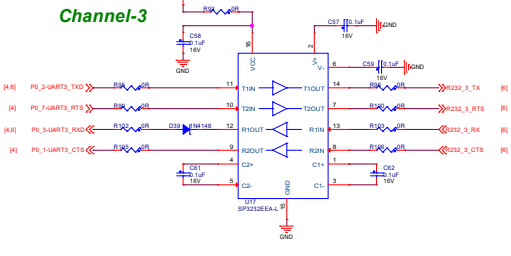
Channel-1



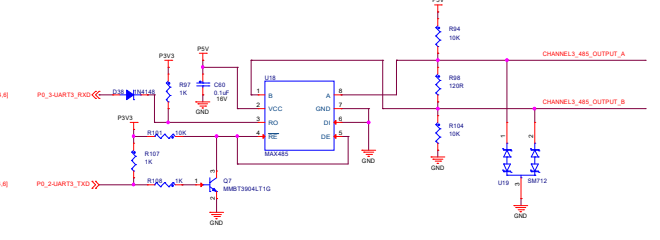
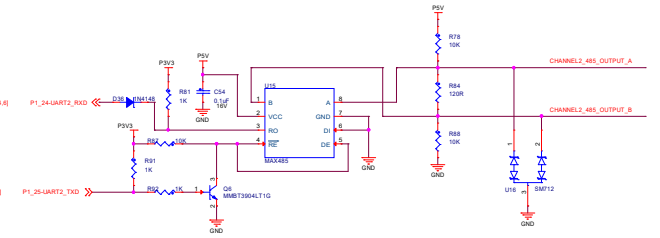
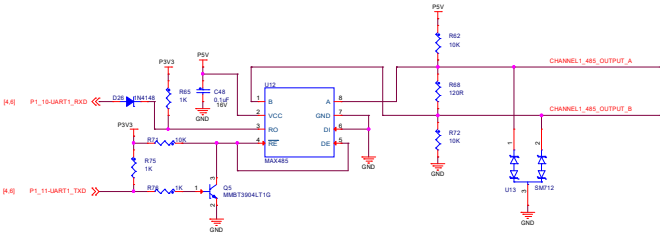
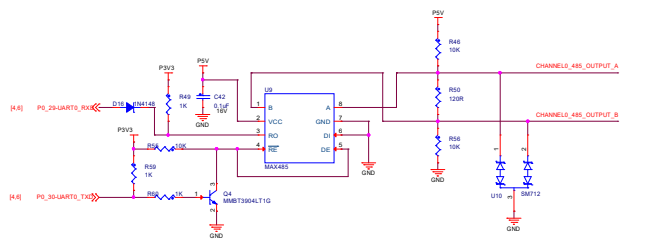
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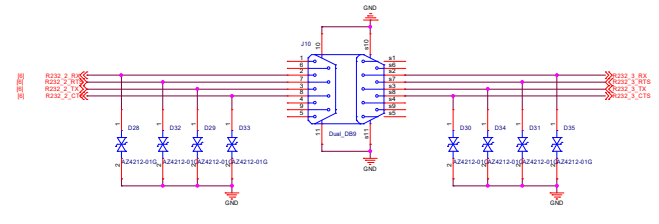
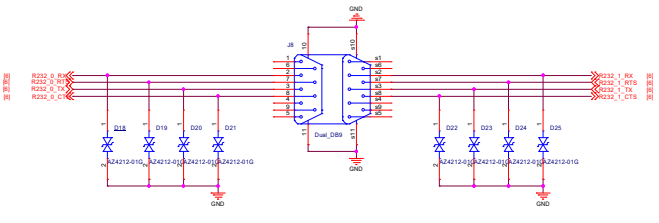
Channel-3



RS-485 Interface

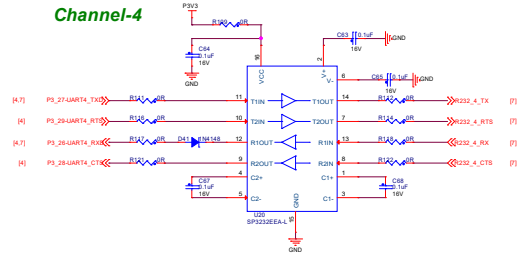


RS-232 Connector

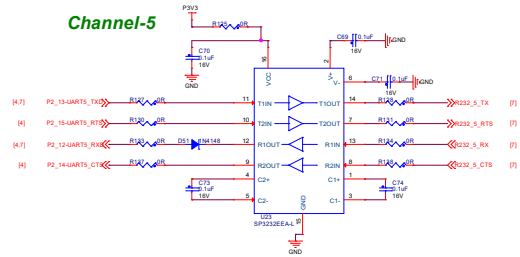


## RS-232 Interface

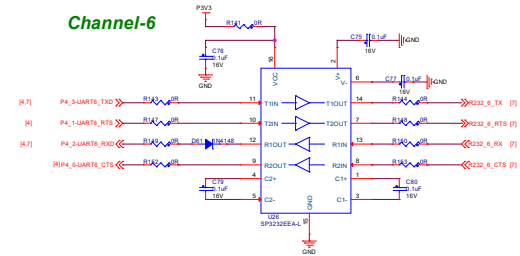
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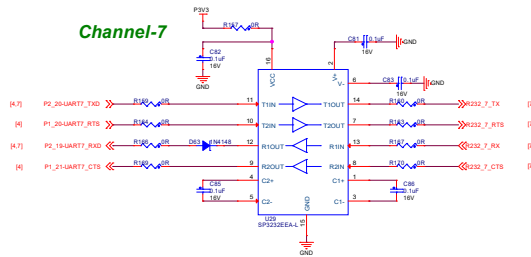
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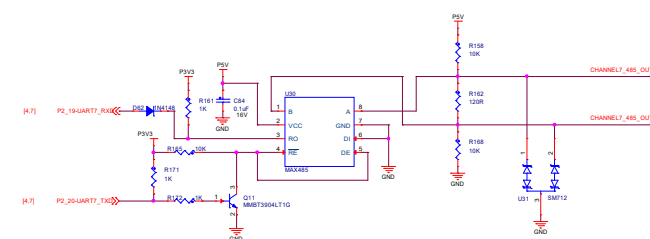
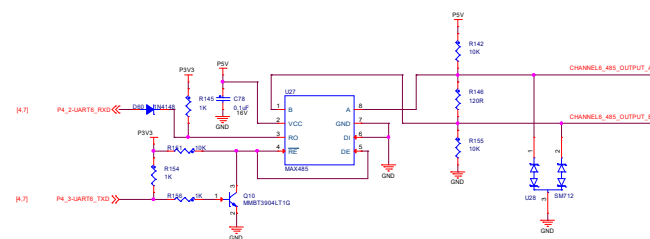
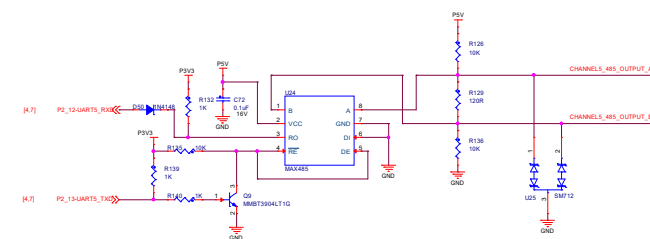
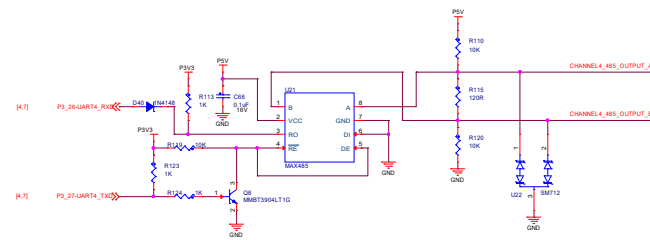
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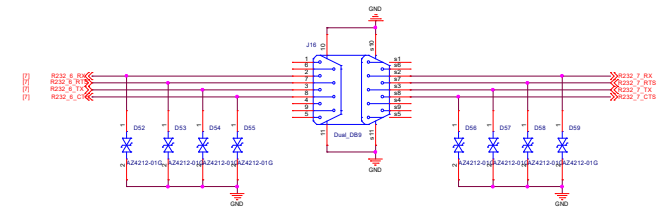
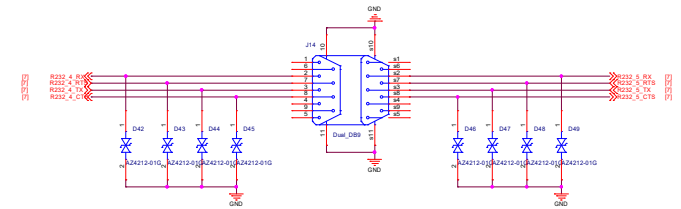
### Channel-7



## RS-485 Interface



## RS-232 Connector



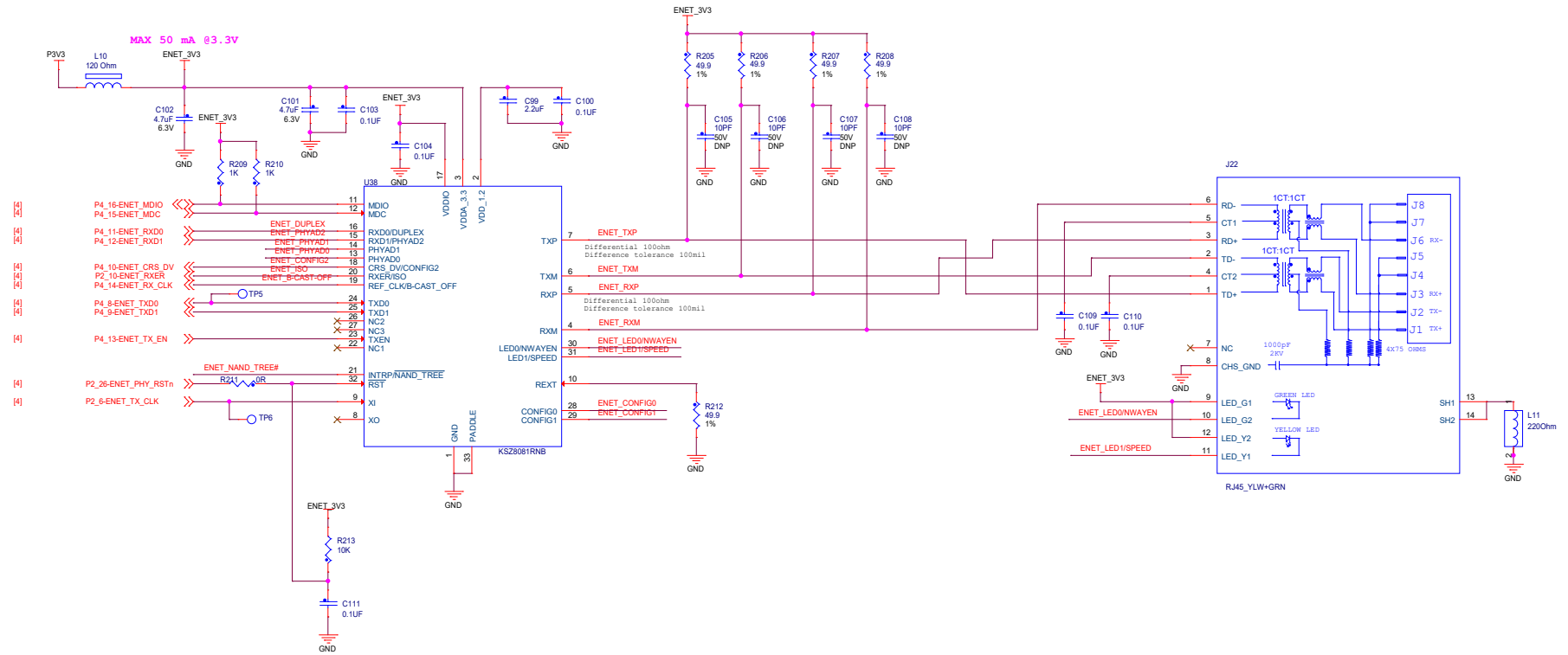
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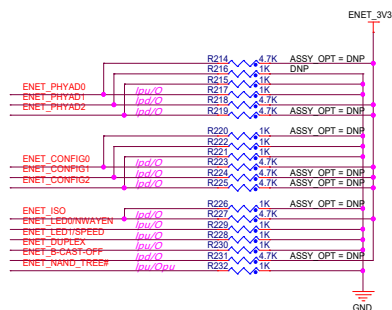
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| ICAP Classification:         |                            | CP: X | I/O: | PUB:  |
| Drawing Title:               |                            |       |      |       |
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| <b>RS232-485 INTERFACE-3</b> |                            |       |      |       |
| Size C                       | Document Number            |       |      | Rev A |
|                              | SCH-XXXXX, PDF: SPF-XXXXX  |       |      |       |
| Date:                        | Thursday, October 24, 2019 | Sheet | 8    | of 10 |



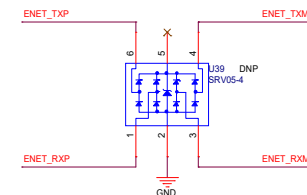
## Ethernet Circuit




## EARTNNET SETTING

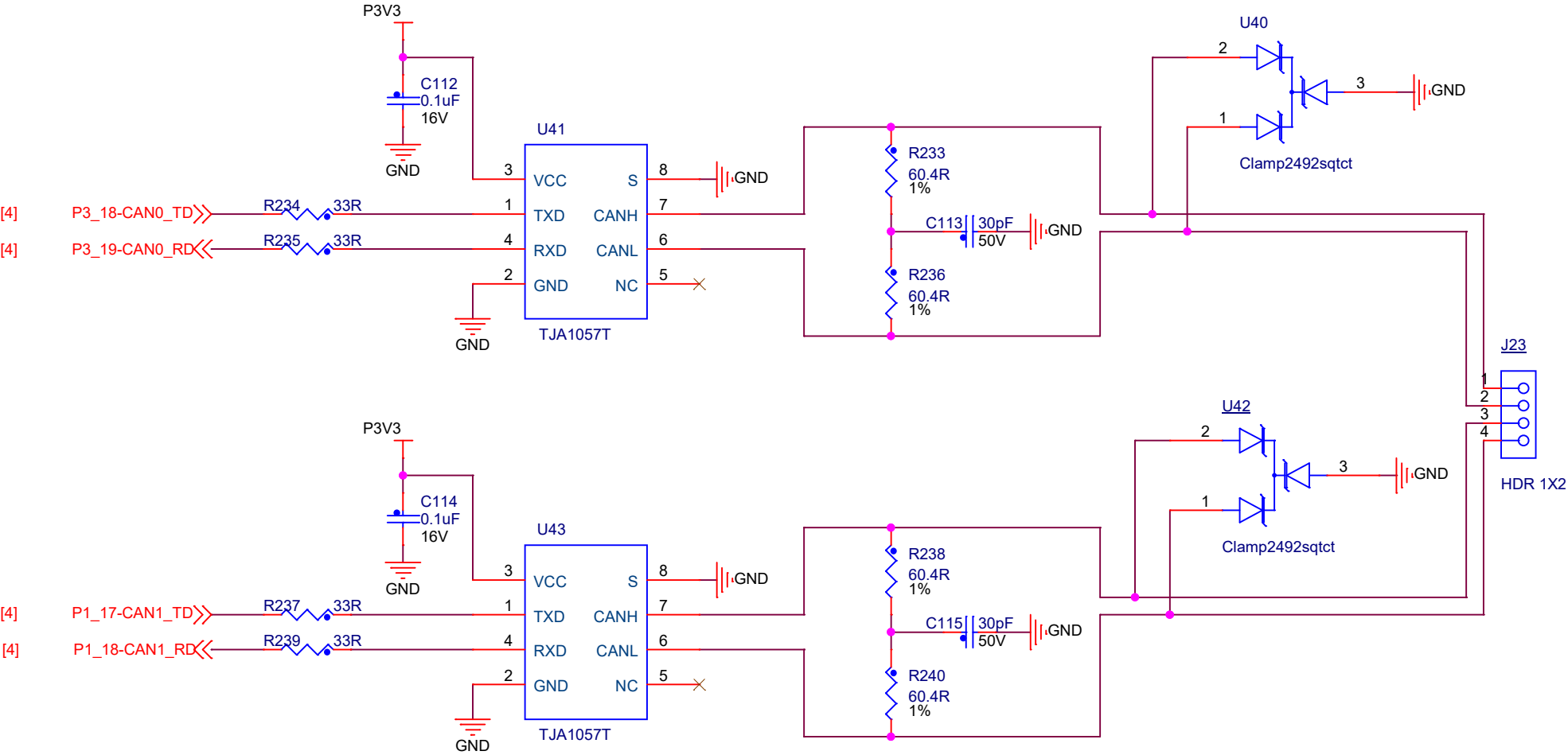


| # CFG       | Description   | # CFG      | Description  |
|-------------|---|------------|--|
| PHYAD[2:0]  | PHY ADDR<br>00:XXX (00010 DEFAULT)                                    | DUPLEX     | DUPLEX mode<br>Pull-up (default) = Half Duplex<br>Pull-down = Full Duplex  |
| CONFIG[2:0] | IF MODE<br>001 RMII<br>101 RMII Back-to-Back<br>xxx Reserved-not used | NWAYEN     | Nway Auto-Negotiation<br>Pull-up (default) = Enable<br>Pull-down = Disable   |
| ISO         | ISOLATE mode<br>Pull-up = Enable<br>Pull-down (default) = Disable     | B_CAST_OFF | Broadcast Off - for PHY Address 0<br>Pull-up = PHY Address 0 set as unique PHY addr<br>Pull-down (default) = PHY Address 0 set as broadcast PHY addr |
| SPEED       | SPEED mode<br>Pull-up (default) = 100Mbps<br>Pull-down = 10Mbps       | NAND_TREE# | NAND Tree Mode<br>Pull-up (default) = Disable<br>Pull-down = Enable  |



|   |                            |                           |            |             |
|---|----------------------------|---------------------------|------------|-------------|
|  |                            |                           |            | A           |
| ICAP Classification:  |                            | CP: X                     | IUC: _____ | PUBI: _____ |
| Drawing Title:<br><b>LPC UART Server Board</b>  |                            |                           |            |             |
| Page Title:<br><b>EARTHNET</b>  |                            |                           |            |             |
| Size C  | Document Number            | SCH-XXXXX, PDF: SPF-XXXXX |            | Rev A       |
| Date:   | Thursday, October 24, 2019 | Sheet                     | 9          | of 10       |

# CAN Interface



|  |   |      |       |          |       |
|--|---|------|-------|----------|-------|
| ICAP Classification: OP                        |   | IUO: |       | PUBI:    |       |
| Drawing Title:<br><b>LPC UART Server Board</b> |   |      |       |          |       |
| Page Title:<br><b>CAN BUS</b>                  |   |      |       |          |       |
| Size A   | Document Number<br>SCH-XXXXX PDF: SPF-XXXXX |      |       |          | Rev X |
| Date:  | Thursday, October 24, 2019                  |      | Sheet | 10 of 10 |       |