

USB-UART 4-Channel Evaluation Board

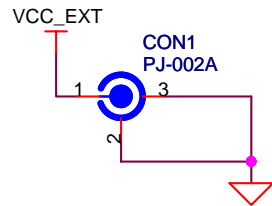
Exar XR21V1414 based 4-Channel USB-UART Evaluation Board with RS-232 and RS-485 interfaces

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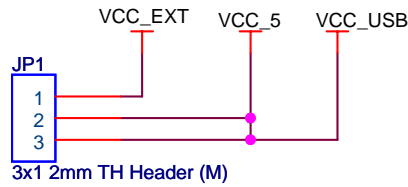
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EXAR
XR21V1414
Rev 1.0

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Schematic	sch_top	Cover Page
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Size A	Document Number SCH-UU4CHEVB-0911-B1B	Rev 1C
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External Power Input:
4-5.5V, 1A
2.1 mm ID, 5.5 mm OD

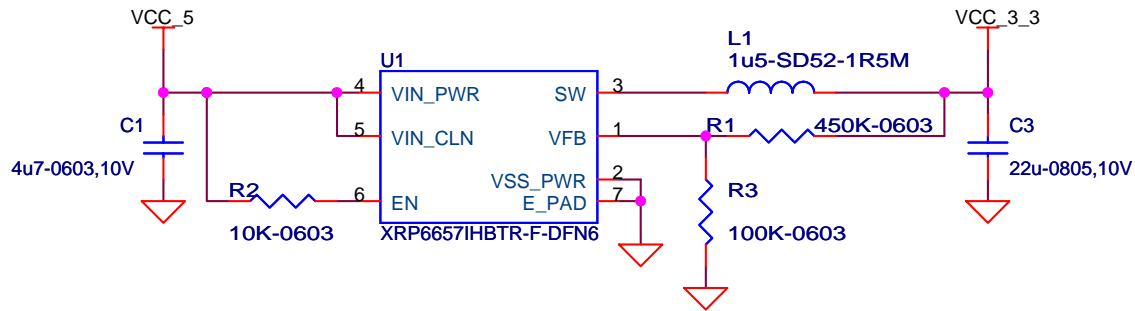


Power Select Header Jumper Options:

Short pins 2-1 => The board is powered from external power supply of 5V (self-powered)
Short pins 2-3 => The board is powered from USB VBUS power (bus-powered)

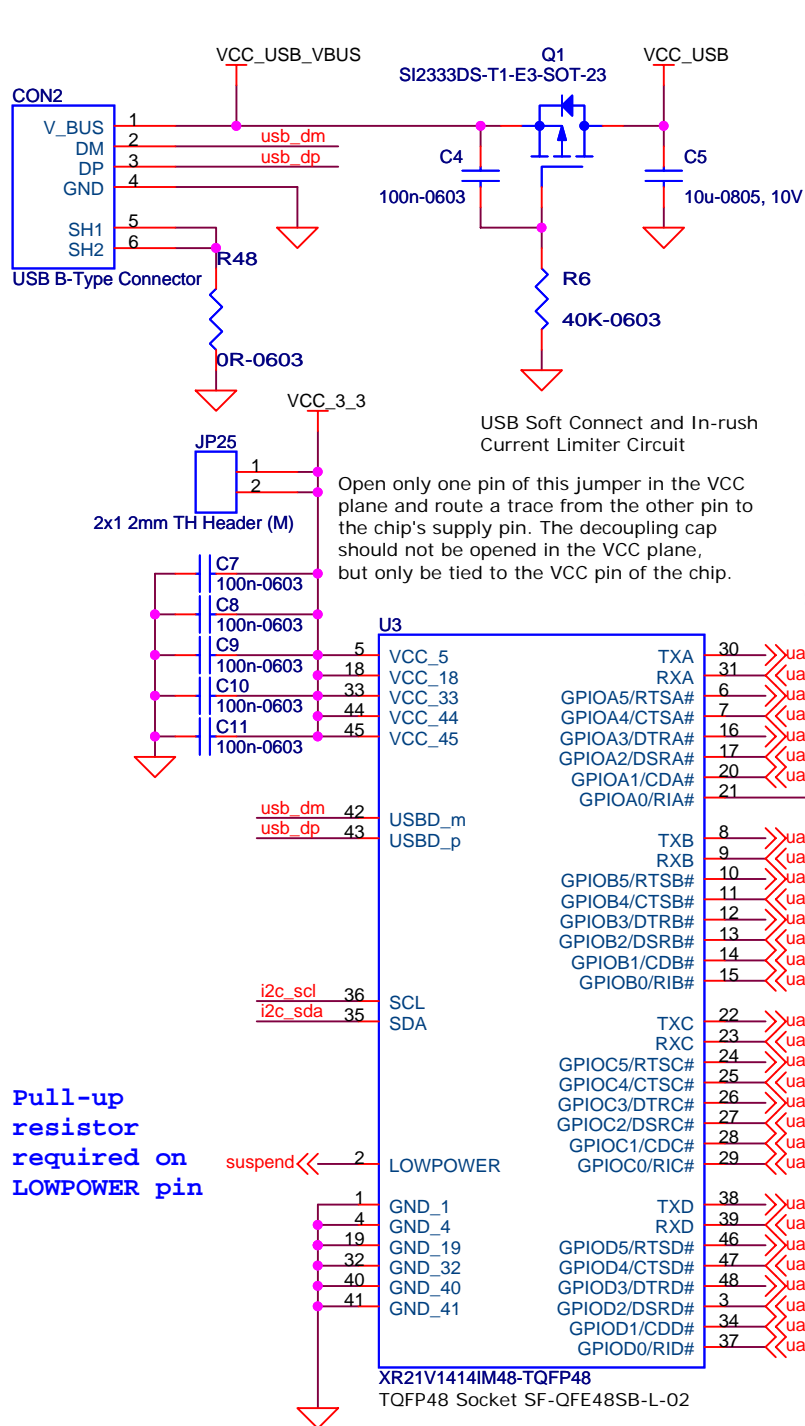
Notes:

- [1] This jumper can also be used for current/power measurement of the board. Remove the jumper and connect probe instead of the jumper.
- [2] The necessary strapping options must be selected for the USB-UART chip for the bus-powered or self-powered configurations.
- [3] None of these pins should be opened in the power plane to support the isolation of the traces.

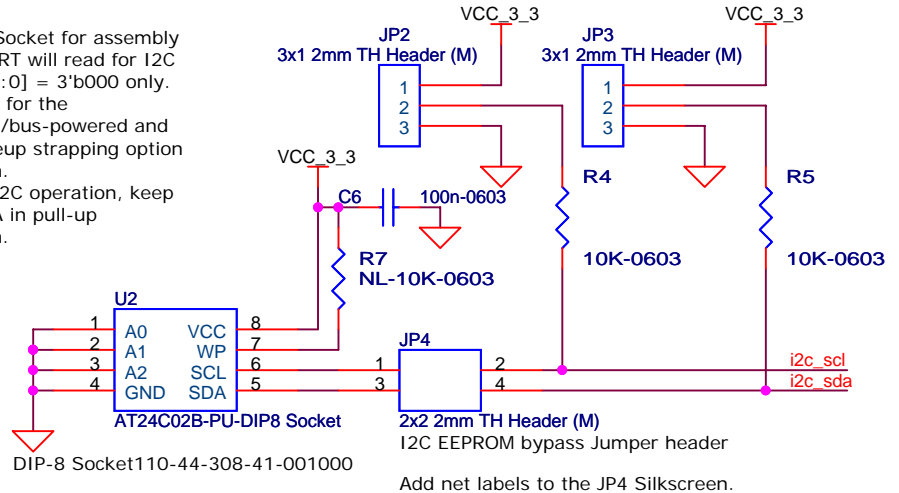


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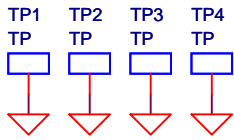
Schematic		sch_top		Power Supply	
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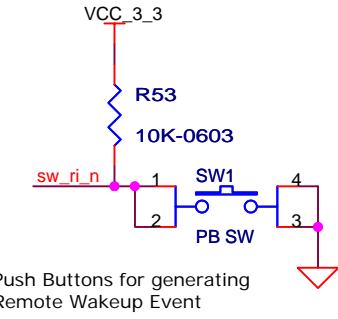
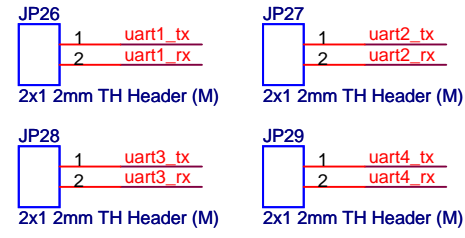
- Notes:
- [1] Use a DIP8 Socket for assembly
 - [2] The USB-UART will read for I2C Address A[2:0] = 3'b000 only.
 - [3] Use jumpers for the self-powered/bus-powered and remote-wakeup strapping option configuration.
 - [4] For normal I2C operation, keep SCL and SDA in pull-up configuration.



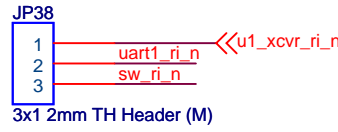
Pull-up resistor required on GPIO pins used as inputs to minimize ICC in suspend mode



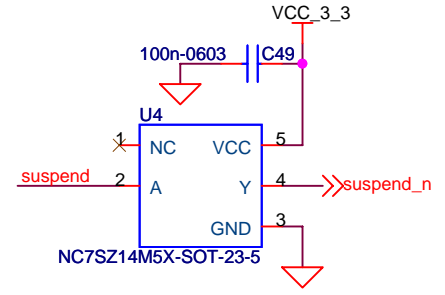
Add net labels to the JP26-JP29 Silkscreen.



Push Buttons for generating Remote Wakeup Event

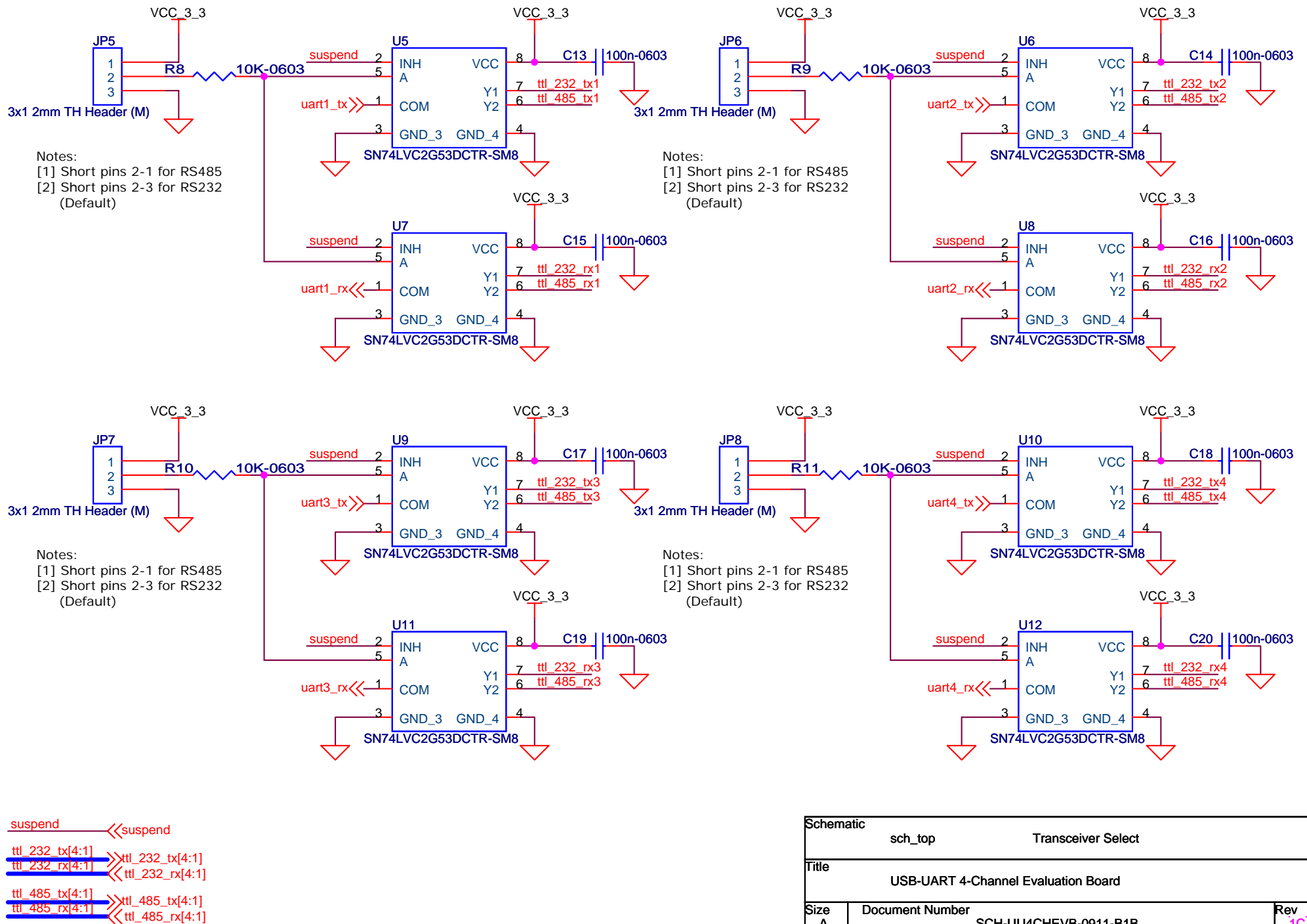


Pull-up resistor required on GPIO pins used as inputs to minimize ICC in suspend mode

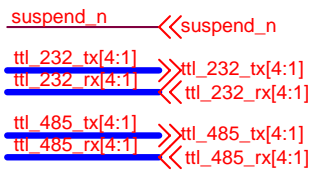
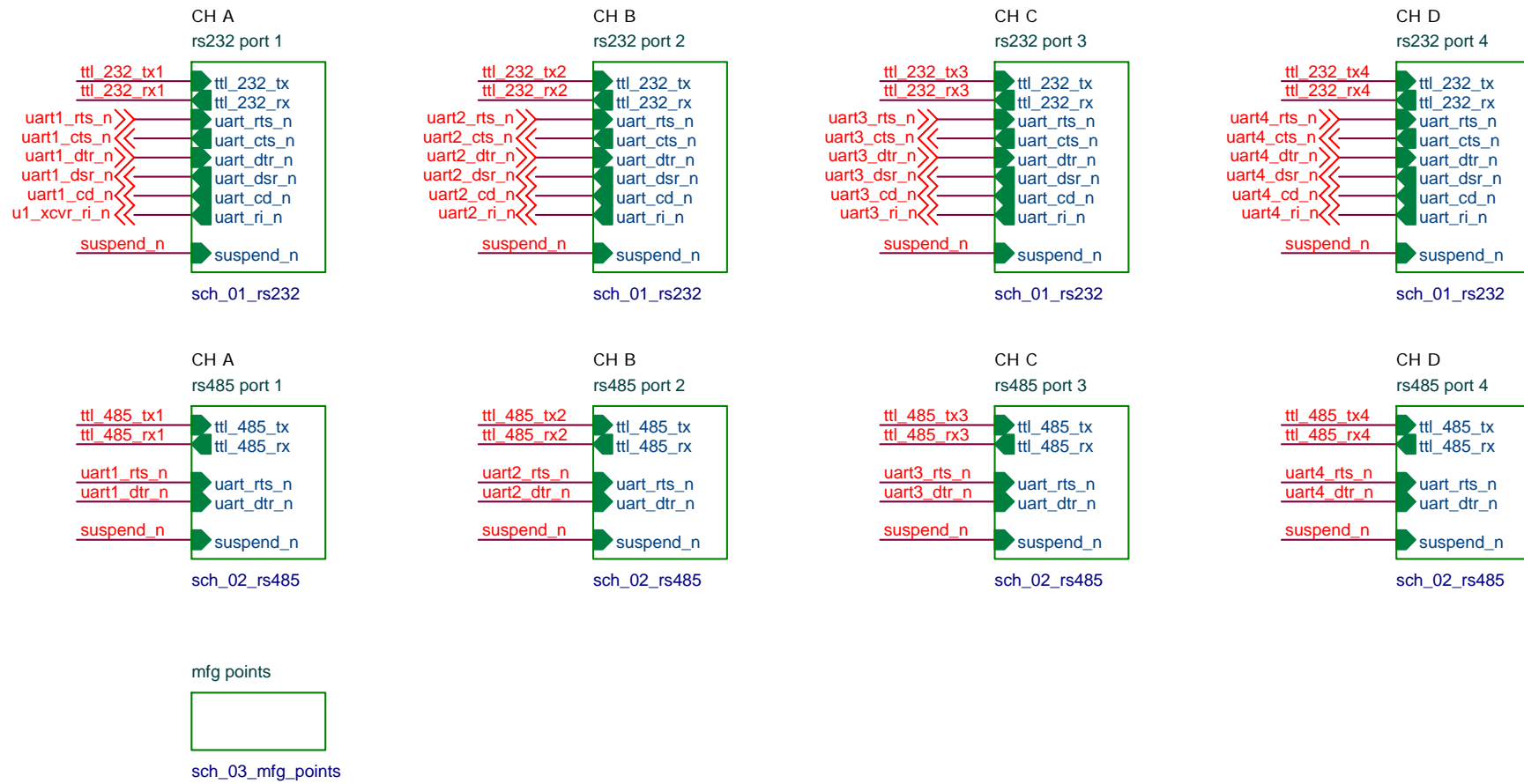


Pull-up resistor required on LOWPOWER pin

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Schematic		sch_top Exar 4-Channel USB-UART	
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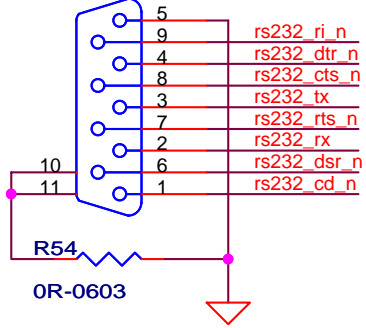


Schematic		sch_top		Transceiver Select	
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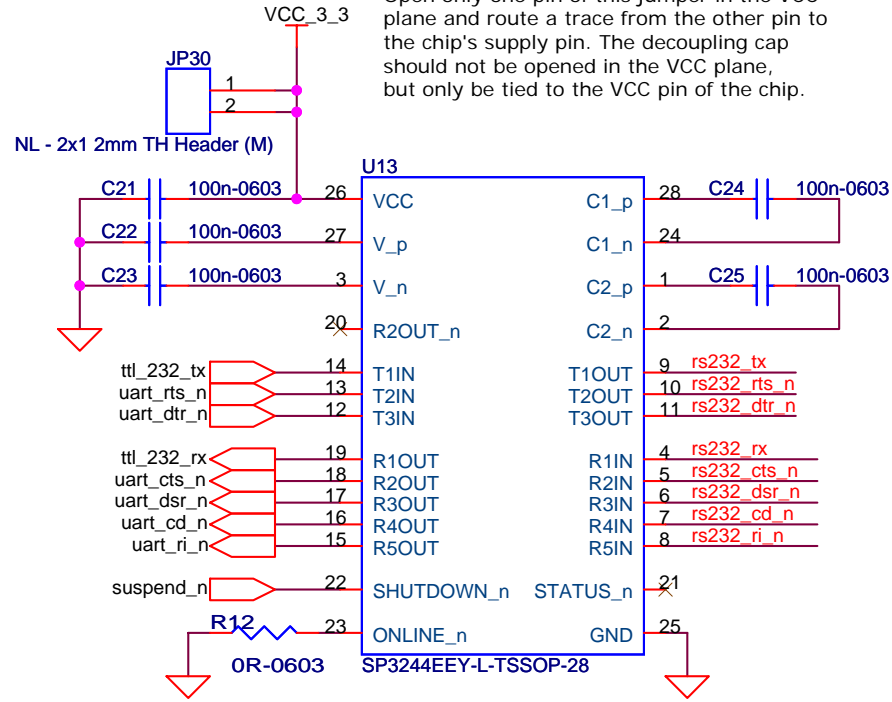


Schematic		sch_top		Transceivers	
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CON3
RA DB9 Male Connector
182-009-113R161

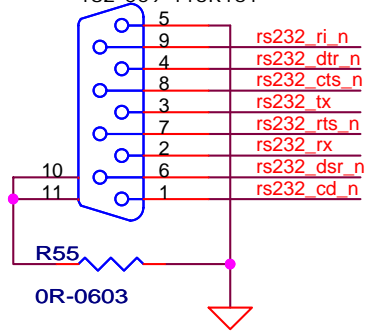


Open only one pin of this jumper in the VCC plane and route a trace from the other pin to the chip's supply pin. The decoupling cap should not be opened in the VCC plane, but only be tied to the VCC pin of the chip.

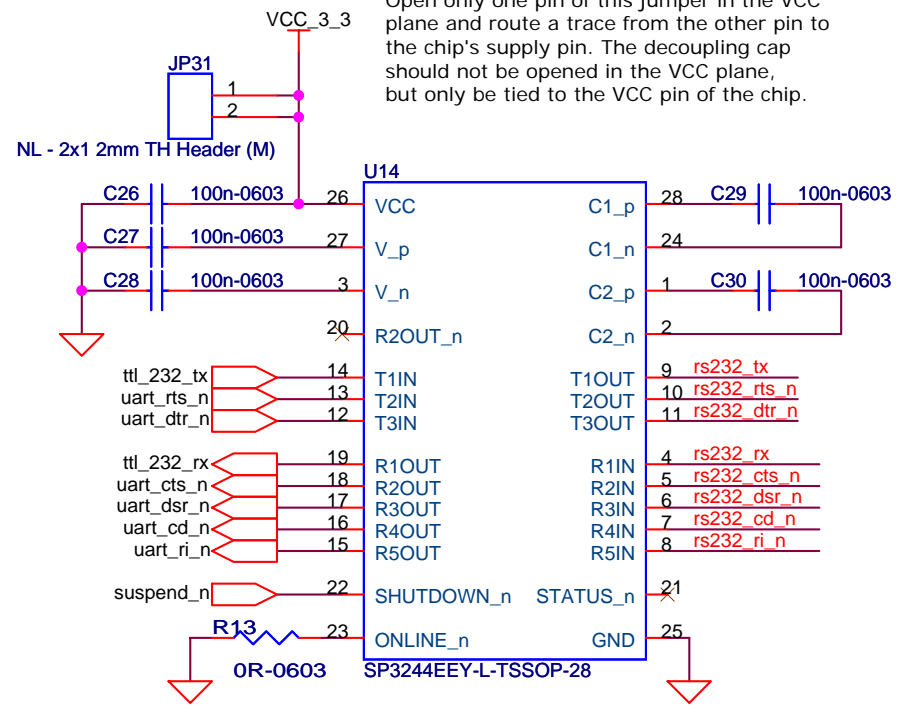


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CON4
RA DB9 Male Connector
182-009-113R161

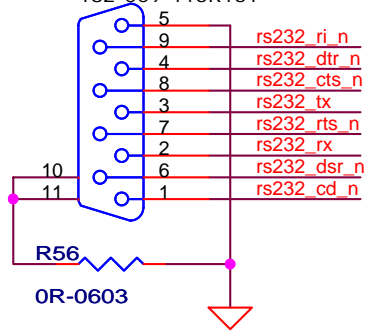


Open only one pin of this jumper in the VCC plane and route a trace from the other pin to the chip's supply pin. The decoupling cap should not be opened in the VCC plane, but only be tied to the VCC pin of the chip.

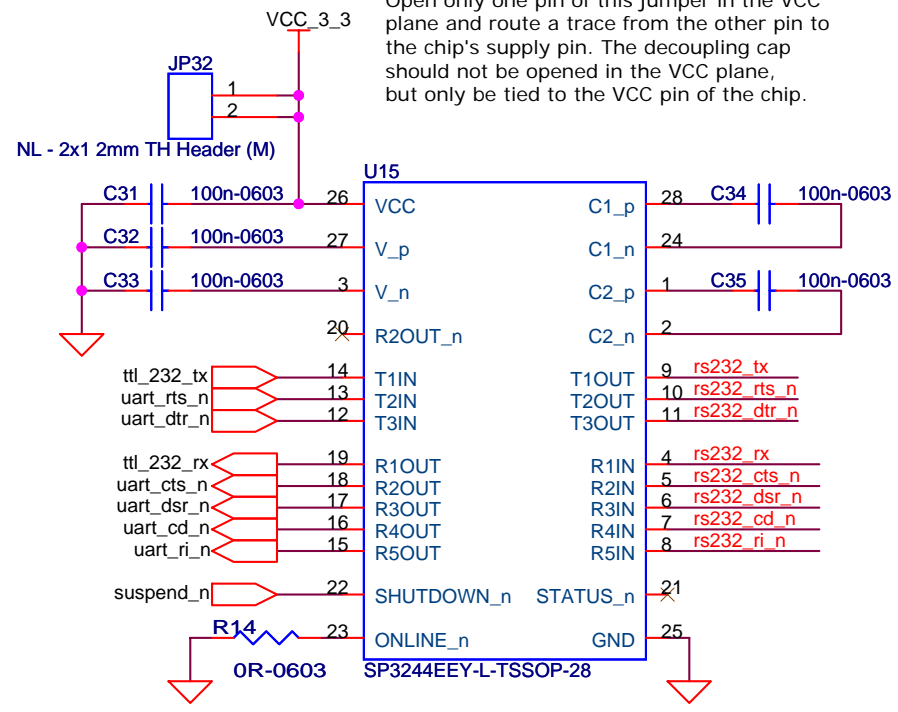


Schematic		sch_01_rs232		RS-232 Transceiver	
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CON5
RA DB9 Male Connector
182-009-113R161

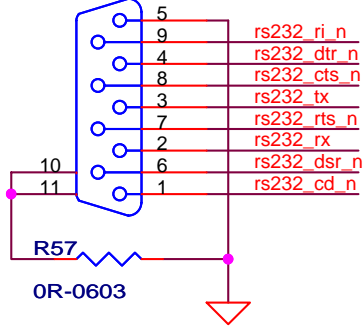


Open only one pin of this jumper in the VCC plane and route a trace from the other pin to the chip's supply pin. The decoupling cap should not be opened in the VCC plane, but only be tied to the VCC pin of the chip.

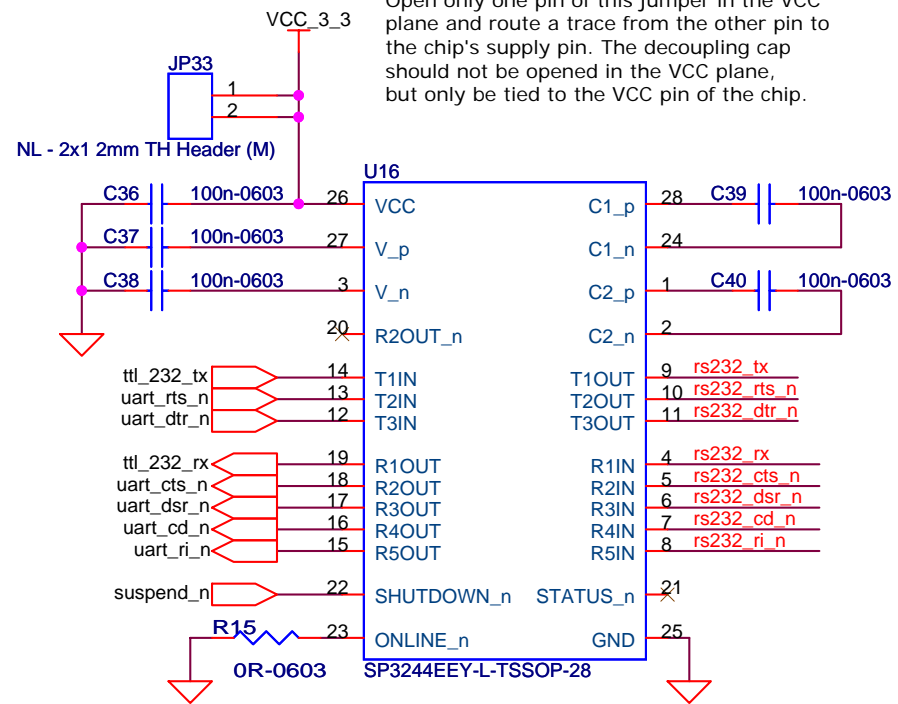


Schematic		sch_01_rs232		RS-232 Transceiver	
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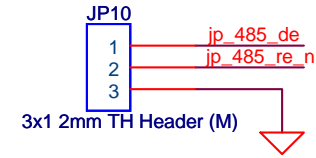
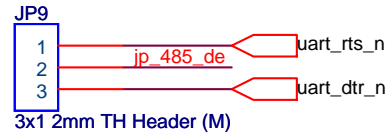
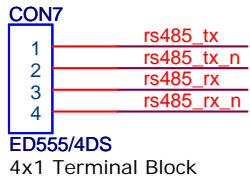
CON6
RA DB9 Male Connector
182-009-113R161



Open only one pin of this jumper in the VCC plane and route a trace from the other pin to the chip's supply pin. The decoupling cap should not be opened in the VCC plane, but only be tied to the VCC pin of the chip.

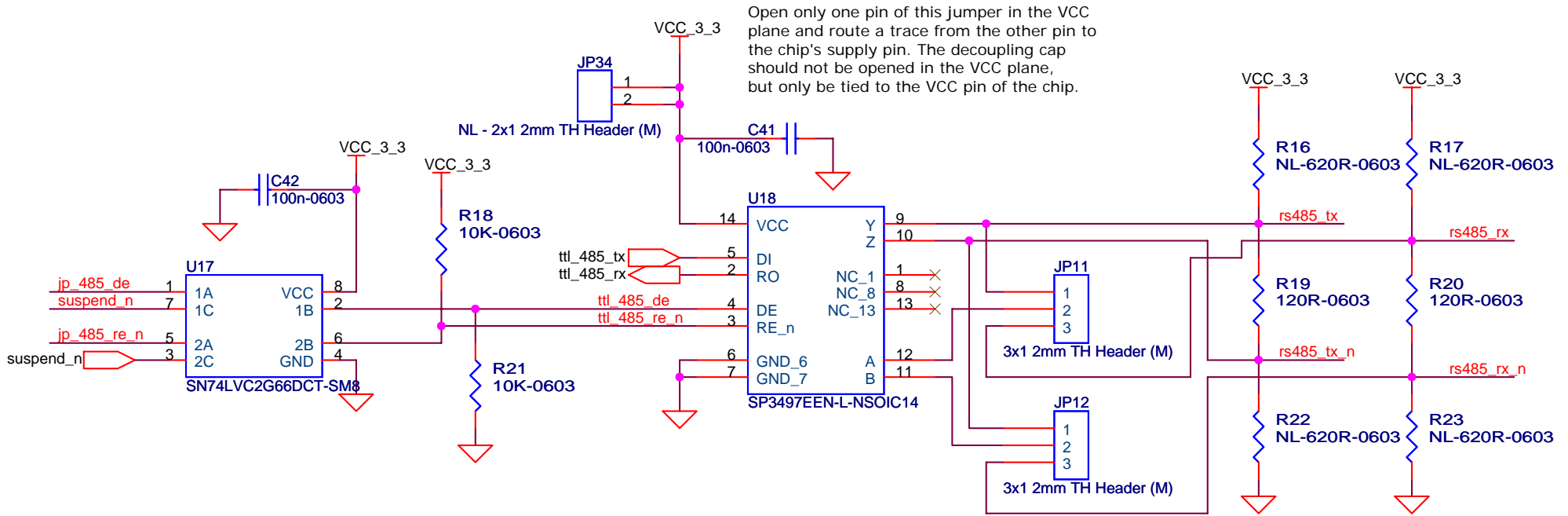


Schematic		sch_01_rs232		RS-232 Transceiver	
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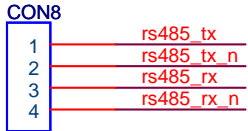
Notes:
 [1] Short pins 2-1 for RTS based direction control for TX
 [2] Short pins 2-3 for DTR based direction control for TX (Default)

Notes:
 [1] Short pins 2-1 for common direction control for RX and TX (Default)
 [2] Short pins 2-3 for always enabled RX (This will result in TX Echo mode in Half Duplex Mode)

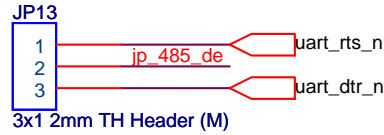


Notes:
 [1] Short pins 2-1 for Half Duplex Mode
 [2] Short pins 2-3 for Full Duplex Mode (Default)
 [3] TX channel is used for TX and RX in Half Duplex Mode

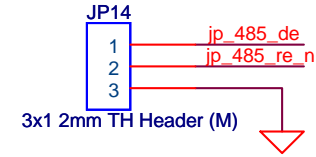
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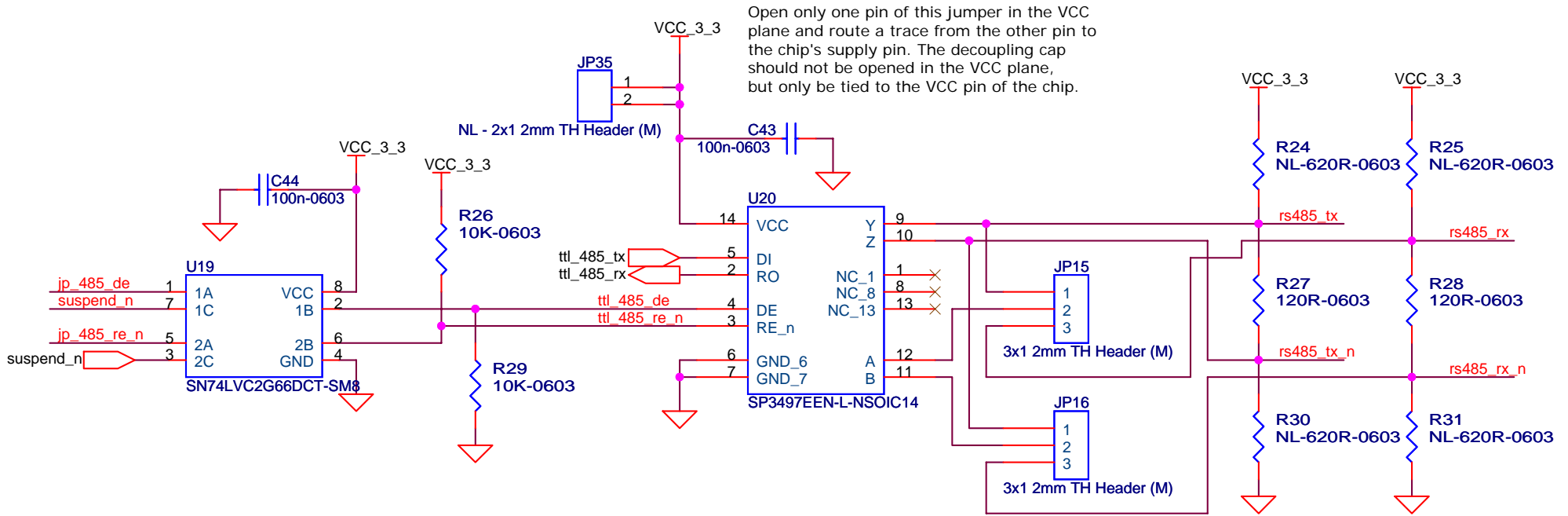
ED555/4DS
4x1 Terminal Block



Notes:
 [1] Short pins 2-1 for RTS based direction control for TX
 [2] Short pins 2-3 for DTR based direction control for TX (Default)

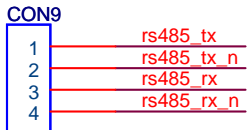


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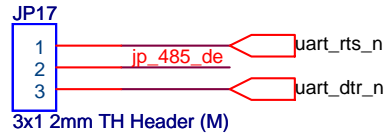


Notes:
 [1] Short pins 2-1 for Half Duplex Mode
 [2] Short pins 2-3 for Full Duplex Mode (Default)
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Schematic		sch_02_rs485
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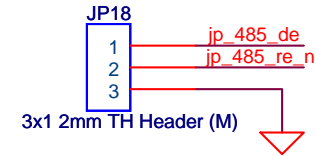


ED555/4DS
4x1 Terminal Block



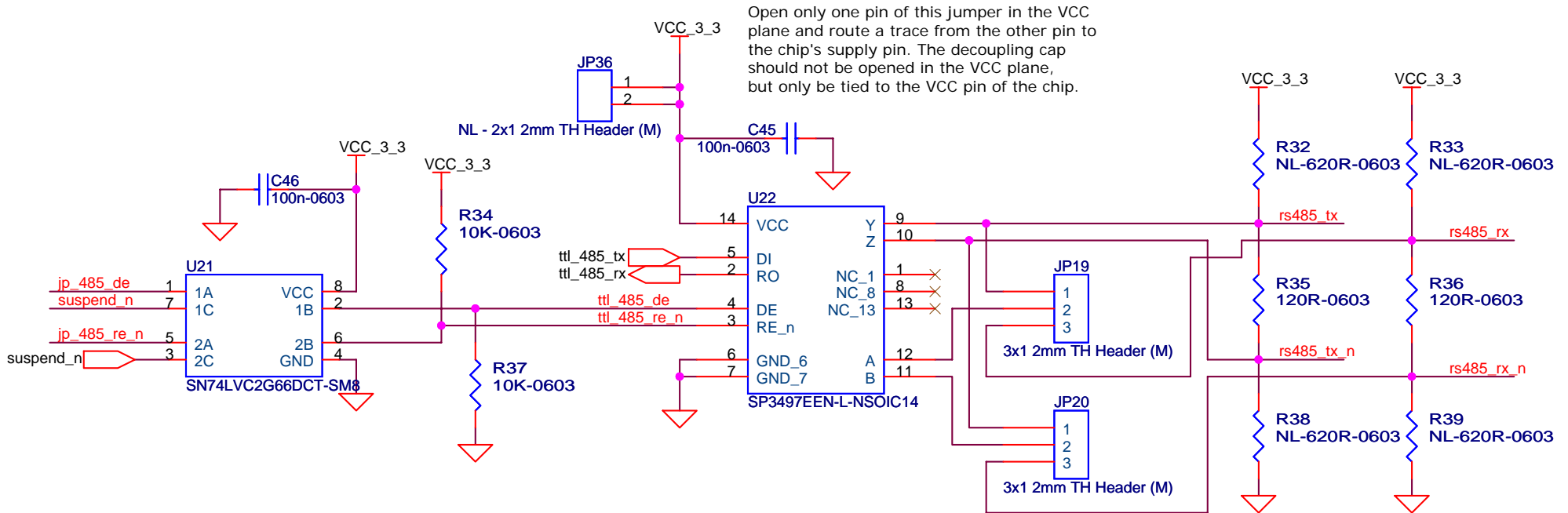
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- [2] Short pins 2-3 for DTR based direction control for TX (Default)



Notes:

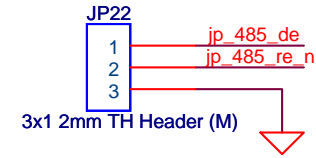
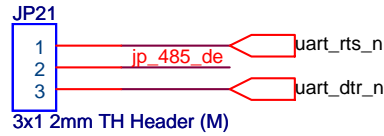
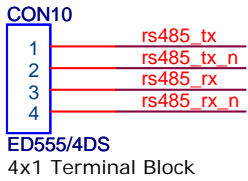
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Notes:

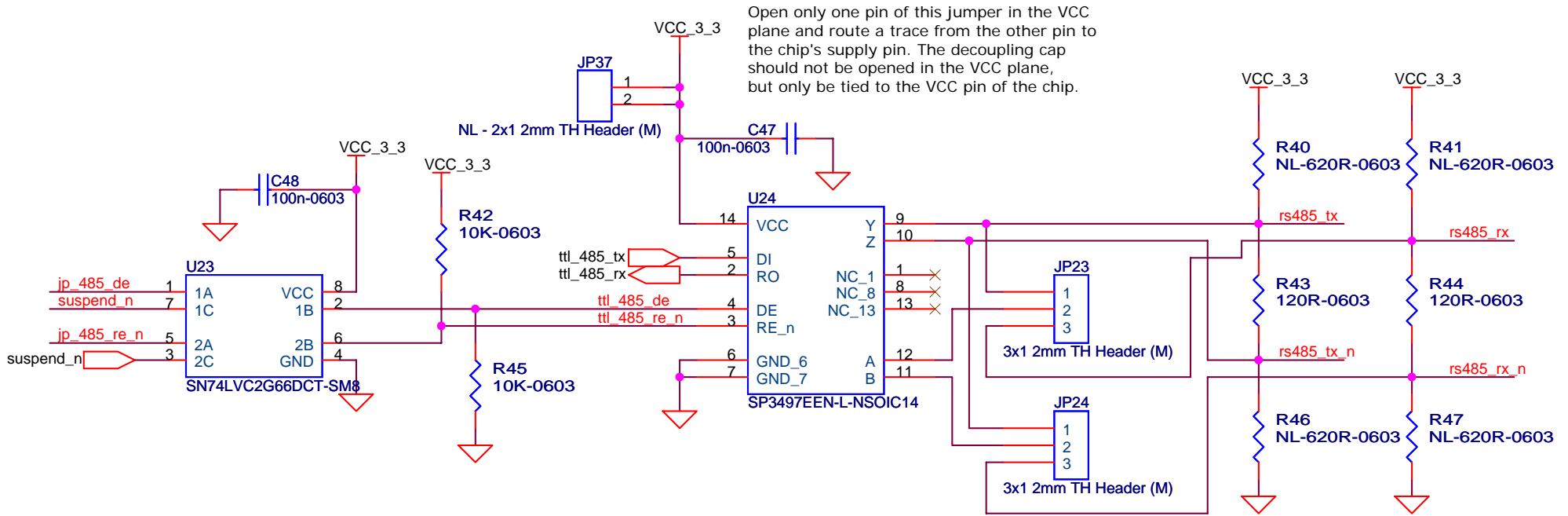
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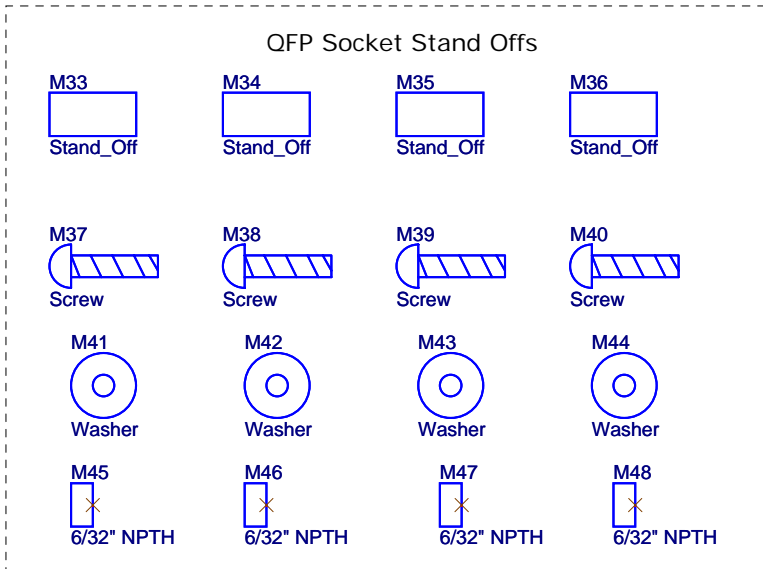
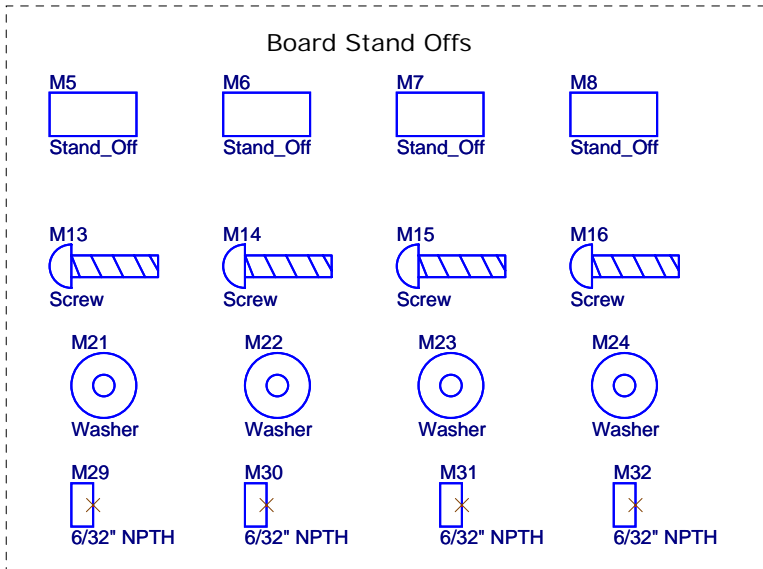
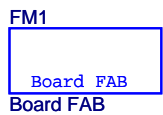
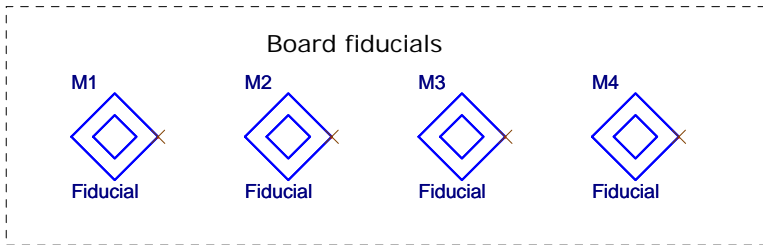
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Notes:
 [1] Short pins 2-1 for common direction control for RX and TX (Default)
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Notes:
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