

KSZ8462HLL_LQFP Demo Board Revision 1.1

REVISION HISTORY

| DATE: | DESCRIPTION | REVISION |
|------------|--|----------|
| 12/17/2010 | Initial release | 1.0 |
| 11/16/2011 | 2.5V/1.8V regulator schematic is corrected | 1.1 |

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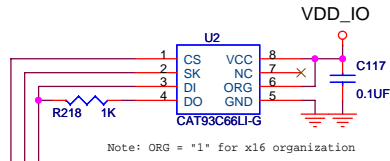
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| KSZ8462HLL DEMO BOARD | | |
| Size | Document Number | Rev |
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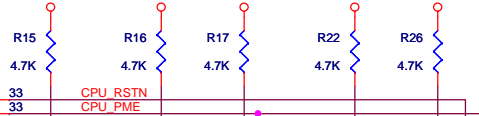
Serial EEPROM
MAC Address / User Data



NOTE: install jumper for bi-directional RSTN



VDD_IO VDD_IO VDD_IO VDD_IO VDD_IO



Note: ORG = "1" for x16 organization

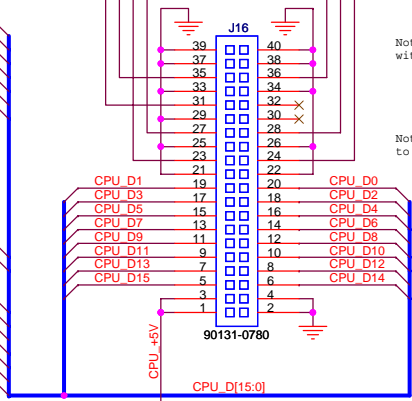
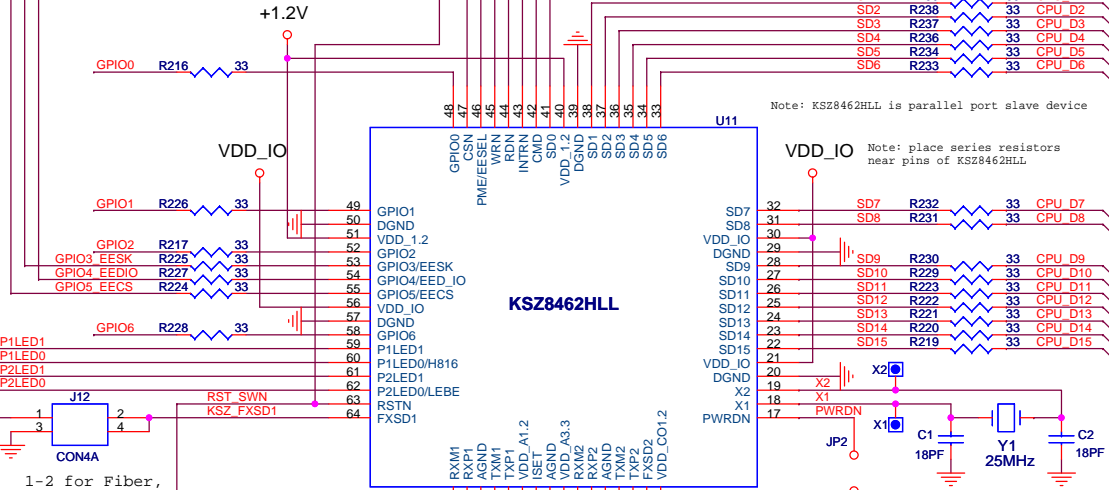
Note: VDD_IO must be compatible with master plugged into parallel port.

Note: CPU_D[15:8] must be tied to GND in 8-bit bus mode.

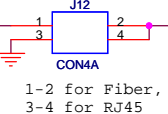
Note: KSZ8462HLL is parallel port slave device

Note: place series resistors near pins of KSZ8462HLL

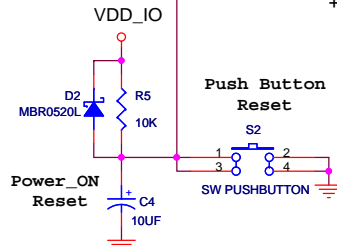
GPIO Header



Sh1.3 P1LED1
Sh1.3 P1LED0
Sh1.3 P2LED1
Sh1.3 P2LED0
Sh1.5 FXSD1

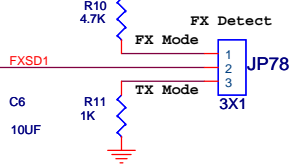


1-2 for Fiber,
3-4 for RJ45



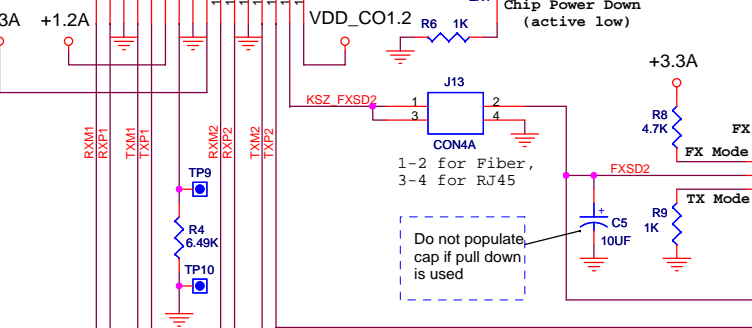
Power_ON Reset
SW PUSHBUTTON

+3.3A



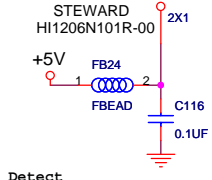
FX Detect
FX Mode
TX Mode

Do not populate, cap if pull down is used

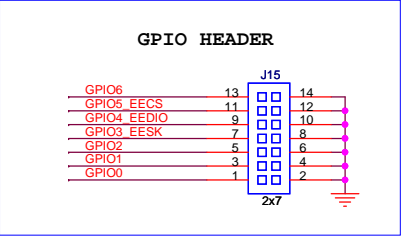


Chip Power Down (active low)

Do not populate, cap if pull down is used



STEWARD HI1206N101R-00
+5V
FB24
FBEAD
C116



GPIO HEADER

GPIO6 13
GPIO5_EECS 11
GPIO4_EEDIO 9
GPIO3_EESK 7
GPIO2 5
GPIO1 3
GPIO0 1

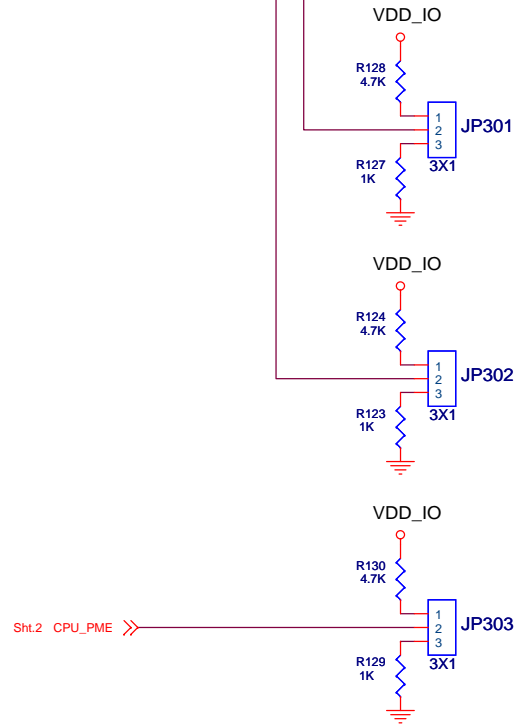
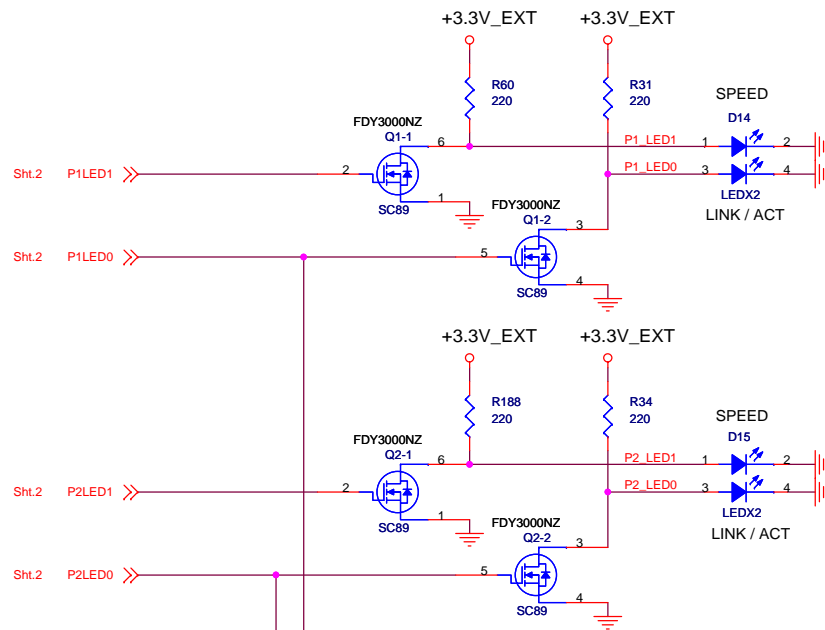
| Shared Data Bus | 8-Bit Bus Mode | | 16-Bit Bus Mode | | |
|-----------------|----------------|-------|-----------------|-------|-----|
| | CMD=0 | CMD=1 | CMD=0 | CMD=1 | |
| SD0 | D0 | A0 | A8 | D0 | x |
| SD1 | D1 | A1 | A9 | D1 | x |
| SD2 | D2 | A2 | A10 | D2 | A2 |
| SD3 | D3 | A3 | x | D3 | A3 |
| SD4 | D4 | A4 | x | D4 | A4 |
| SD5 | D5 | A5 | x | D5 | A5 |
| SD6 | D6 | A6 | x | D6 | A6 |
| SD7 | D7 | A7 | x | D7 | A7 |
| SD8 | GND | GND | GND | D8 | A8 |
| SD9 | GND | GND | GND | D9 | A9 |
| SD10 | GND | GND | GND | D10 | A10 |
| SD11 | GND | GND | GND | D11 | x |
| SD12 | GND | GND | GND | D12 | BE0 |
| SD13 | GND | GND | GND | D13 | BE1 |
| SD14 | GND | GND | GND | D14 | BE2 |
| SD15 | GND | GND | GND | D15 | BE3 |

Note: X is "Don't care" bit



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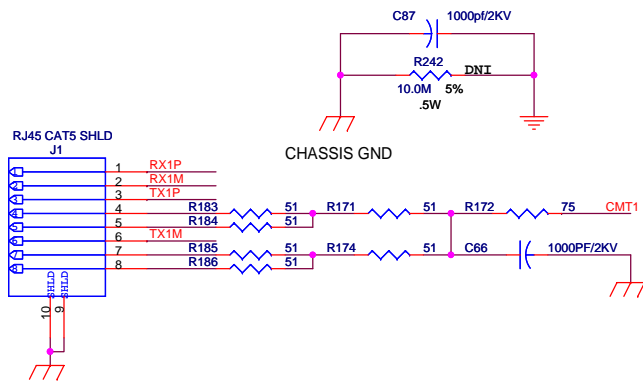
Strapping / Configuration Options

| | |
|-------|--|
| JP301 | Parallel Bus Width Select |
| | 1 = 16-bit Bus Width (default) 0 = 8-bit Bus Width |
| JP302 | Parallel Bus Endian Mode Select |
| | 1 = Little Endian (default) 0 = Big Endian |
| JP303 | EEPROM Select |
| | 1 = EEPROM Present 0 = EEPROM Not Present (default) |



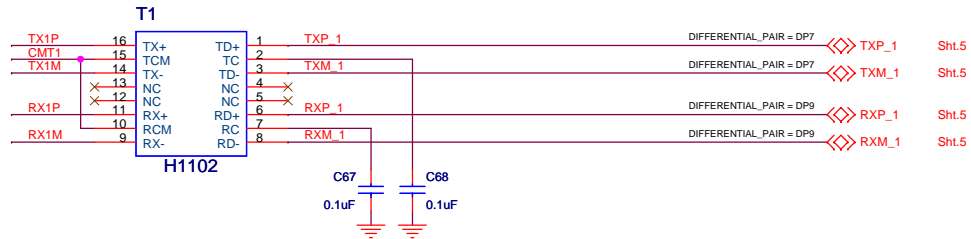
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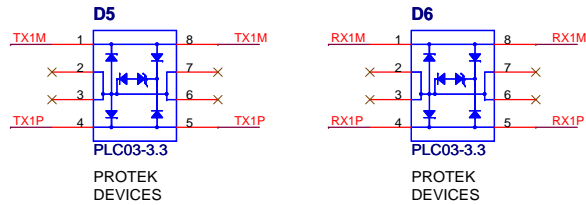
Compatible Isolation Transformers

- Pulse H1102
- Transpower HB726
- Bel Fuse S558-5999-U7
- LanKom LF-H41S
- DELTA LF8505

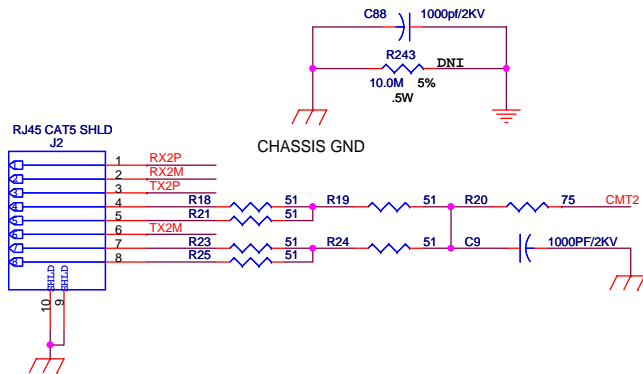
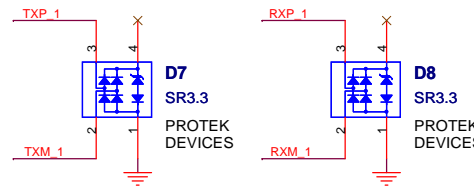


Line Side Protection (test option)

Place near RJ-45 connector

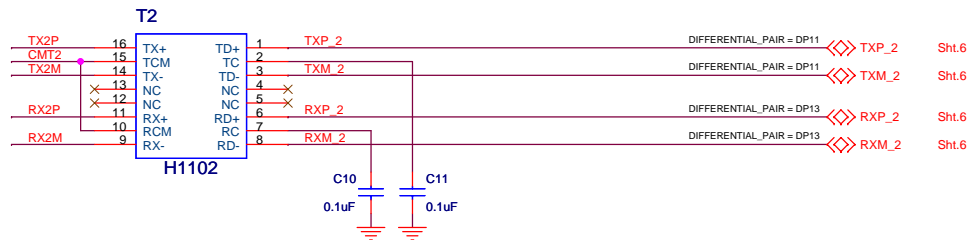


Chip Side Protection (test option)



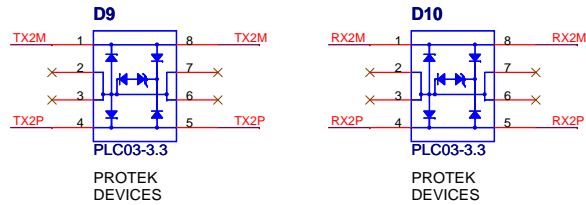
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- LanKom LF-H41S
- DELTA LF8505

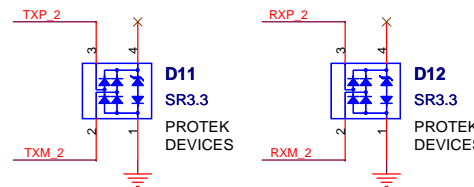


Line Side Protection (test option)

Place near RJ-45 connector

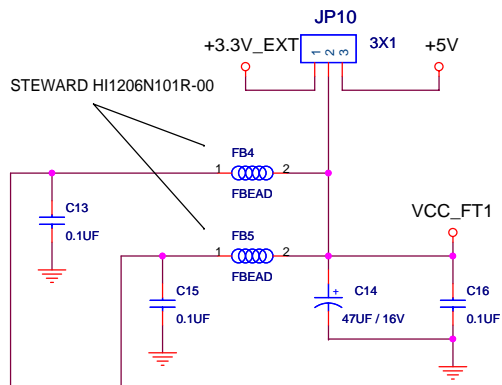


Chip Side Protection (test option)



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Place components in dotted box close to fiber transceiver

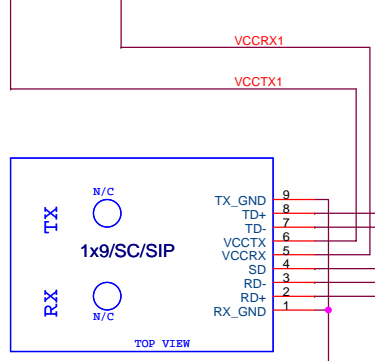
Refer to fiber transceiver's reference design for the actual values of these resistors

These components are DNI regardless the Fiber Transceiver is used or not

Route TX pairs on component side

Route RX pairs on solder side

Route TX & RX differential pairs close together, 8mil/8mil parallel spacing, and keep other signals 20 mil (minimum) away

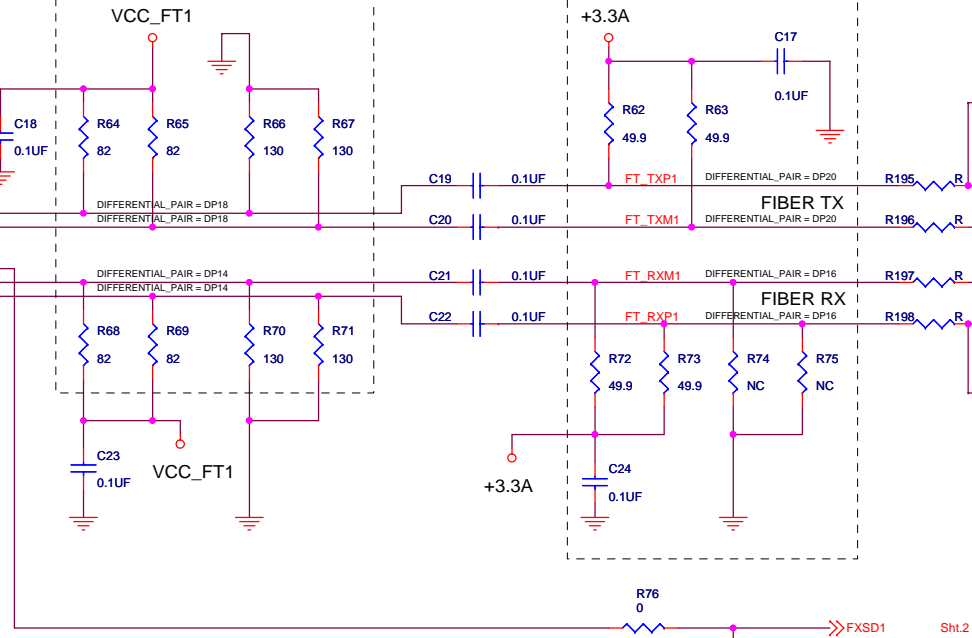


U6 FIBER TRANSCEIVER
HFBR-5803Z (+3.3V)

Layout will support direct and 1x9 SIP Socket mounting for U6

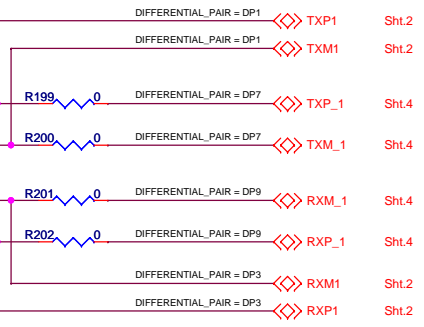
Compatible Fiber Transceivers

- Agilent HFBR-5803 (+3.3V)
- Agilent HFBR-5205 (+5V)
- Agilent HFBR-5103 (+5V)
- DELTA OPT-155A1H1 (+5V)
- LUMINENT B-13/15-155-T3-SSC3 (+3.3V)
- LUMINENT B-13/15-155-T-SSC3 (+5V)



Nominal termination and DC biasing for LVPECL and PECL Fiber Transceivers

| VCC_FT | R64, R65 R68, R69 | R66, R67 | R70, R71 | R76 | R77 |
|--------|----------------------|----------|----------|----------|----------|
| +3.3V | 82 Ohms | 130 Ohms | 130 Ohms | 0 Ohm | 130 Ohms |
| +5V | 68 Ohms | 191 Ohms | 270 Ohms | 4.75K 1% | 5.62K 1% |



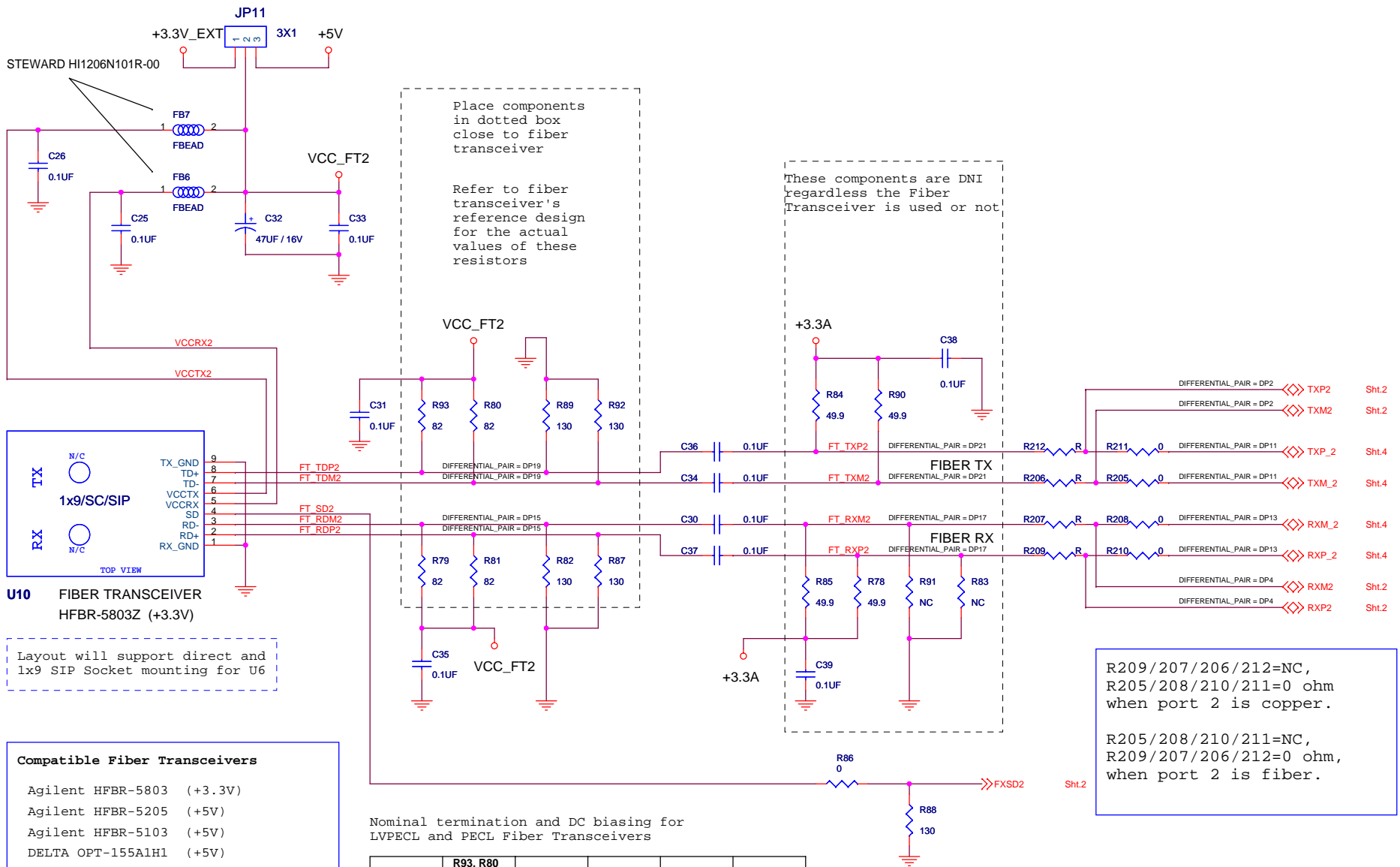
R195/196/197/198=NC,
R199/200/201/202=0 ohm
when port 1 is copper.

R195/196/197/198=0 ohm,
R199/200/201/202=NC
when port 1 is fiber.



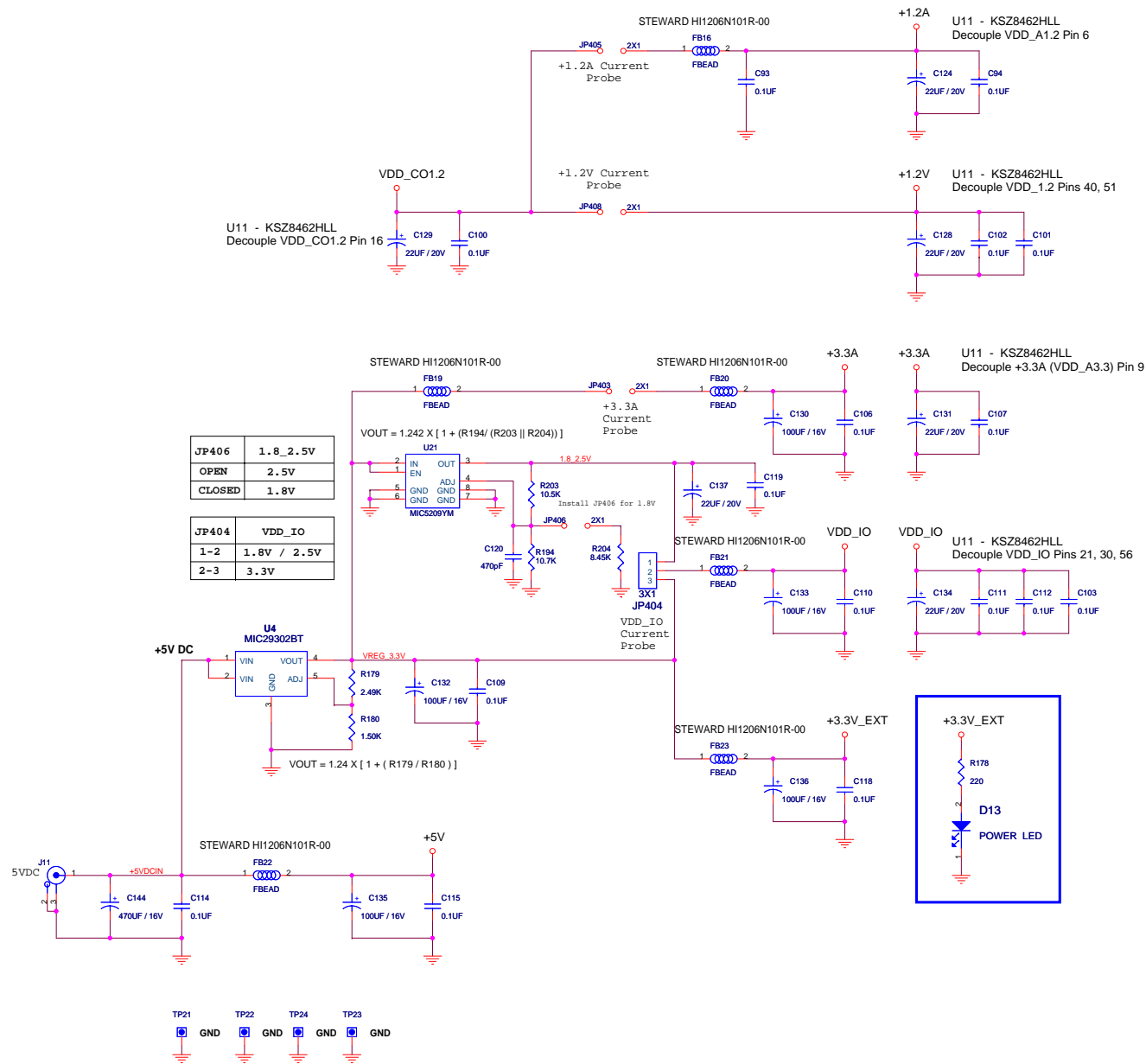
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