

# Tray Backplane

Version: 2012/10/23

PCB: DA0T6MTH8C0

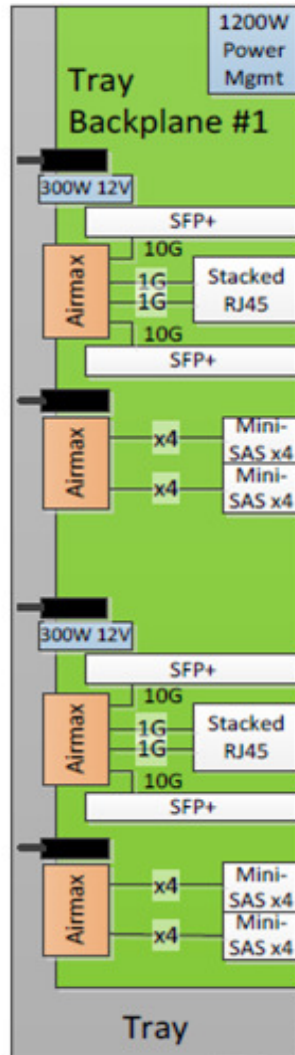
LAYER: 8 LAYERS



|   |                 |       |         |
|---|-----------------|-------|---------|
| Cloud Server Infrastructure Engineering |                 |       |         |
| Title                                   |                 |       |         |
| Tray Backplane Assembly V1              |                 |       |         |
| Size                                    | Document Number |       |         |
|   | Cover           |       |         |
| Date: Monday, January 27, 2014          |                 | Sheet | 1 of 11 |

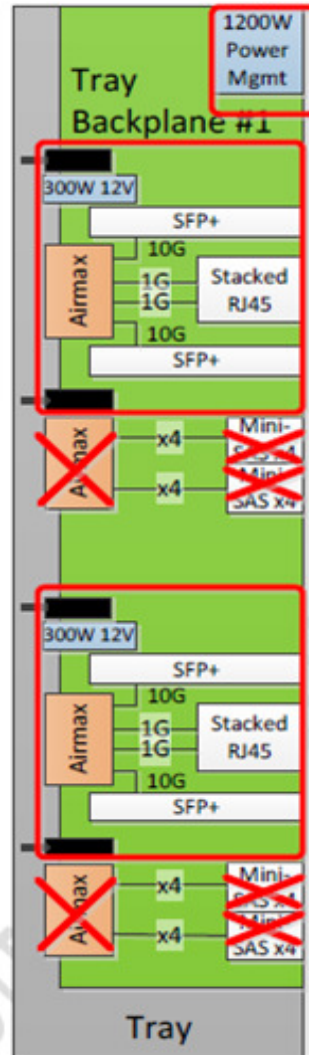
### Tray Design

- 1200W Power
- Capable of supporting 4xRJ45, 4xSFP+, 2xMini-SAS connectors



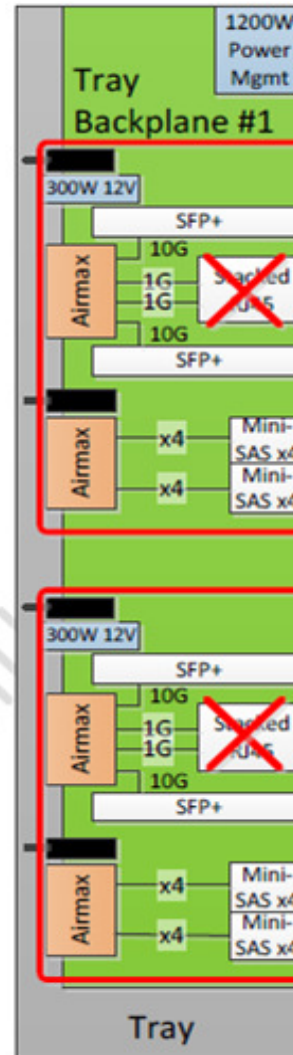
### Ethernet Tray

- 1200W Power
- Base blade connector
- 4xRJ45 populated
- 2xSFP+ populated



### SAS Tray

- 1200W Power
- Base blade connector
- 2xSFP+ populated
- 4xMini-SAS populated



|                |                             |
|----------------|-----------------------------|
| PWB PN:        | (Quanta Suggested 8 layers) |
| Program Name:  | Tray_BP                     |
| PWB Name:      |                             |
| PWB Revision:  | 0.4                         |
| PWB Thickness: | 63.6 mil                    |
| Last Updated:  | 2012/4/3                    |

|       |            |                |           |           |     | Smbus   | SAS                | SFI                | Breakout           | Default |
|-------|------------|----------------|-----------|-----------|-----|---------|--------------------|--------------------|--------------------|---------|
|       |            |                |           |           |     | Single  | Differential       | Differential       | Differential       | Single  |
|       |            |                |           |           |     | 50      | 100                | 100                |                    | 50      |
|       |            |                |           |           |     | +/- 10% | +/- 10%            | +/- 10%            |                    | +/- 10% |
| Layer | Lyr Type   | Finished Cu Wt | Thickness | Tolerance | Er  | Trace   | Trace/ Space/Trace | Trace/ Space/Trace | Trace/ Space/Trace | Trace   |
|       | Soldermask |                | 0.60      |           | 3.3 |         |                    |                    |                    |         |
| 1     | Top        | 0.5 oz+plating | 1.80      |           |     | 11.40   | 7.0 / 6.8 / 7.0    | 9.6 / 14 / 9.6     | 3.9 / 4.1 / 3.9    | 11.40   |
|       | Prepreg    |                | 6.00      | +/-0.5    | 3.5 |         |                    |                    |                    |         |
| 2     | GND        | 1 oz           | 1.30      |           |     | GND     | GND                | GND                | GND                | GND     |
|       | Core       |                |           | +/-0.5    | 3.5 |         |                    |                    |                    |         |
| 3     | IN1        | 1 oz           | 1.30      |           |     | 7.20    | 6 / 10 / 6         | NA                 | 3.9 / 4.1 / 3.9    | 7.20    |
|       | Prepreg    |                | 11.20     | +/-2      | 3.9 |         |                    |                    |                    |         |
| 4     | VCC        | 2 oz           | 2.60      |           |     | Vcc     | Vcc                | Vcc                | Vcc                | Vcc     |
|       | Core       |                | 4.00      | +/-0.5    | 3.4 |         |                    |                    |                    |         |
| 5     | VCC        | 2 oz           | 2.60      |           |     | Vcc     | Vcc                | Vcc                | Vcc                | Vcc     |
|       | Prepreg    |                | 11.20     | +/-2      | 3.9 |         |                    |                    |                    |         |
| 6     | IN2        | 1 oz           | 1.30      |           |     | 7.20    | 6 / 10 / 6         | NA                 | 3.9 / 4.1 / 3.9    | 7.20    |
|       | Core       |                | 6.00      | +/-0.5    | 3.5 |         |                    |                    |                    |         |
| 7     | GND        | 1 oz           | 1.30      |           |     | GND     | GND                | GND                | GND                | GND     |
|       | Prepreg    |                | 6.00      | +/-0.5    | 3.5 |         |                    |                    |                    |         |
| 8     | Bottom     | 0.5 oz+plating | 1.80      |           |     | 11.40   | 7.0 / 6.8 / 7.0    | 9.6 / 14 / 9.6     | 3.9 / 4.1 / 3.9    | 11.40   |
|       | Soldermask |                | 0.60      |           | 3.3 |         |                    |                    |                    |         |





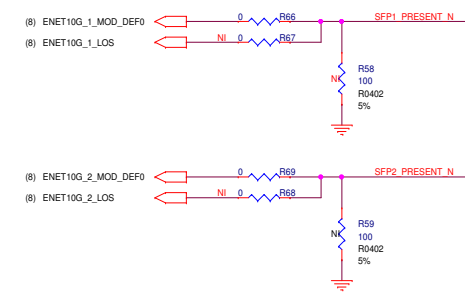
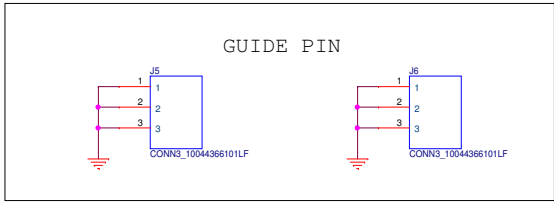
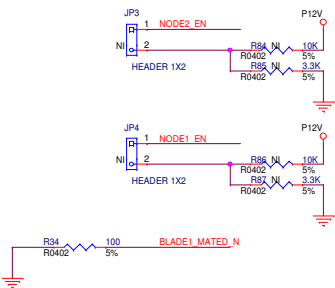
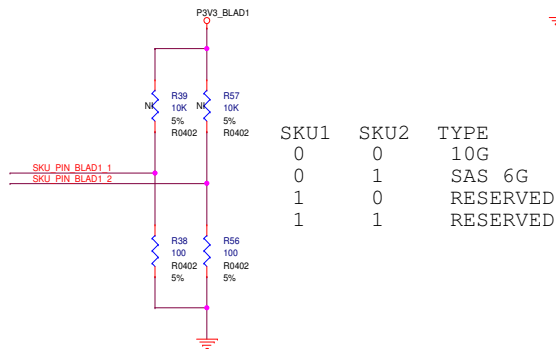
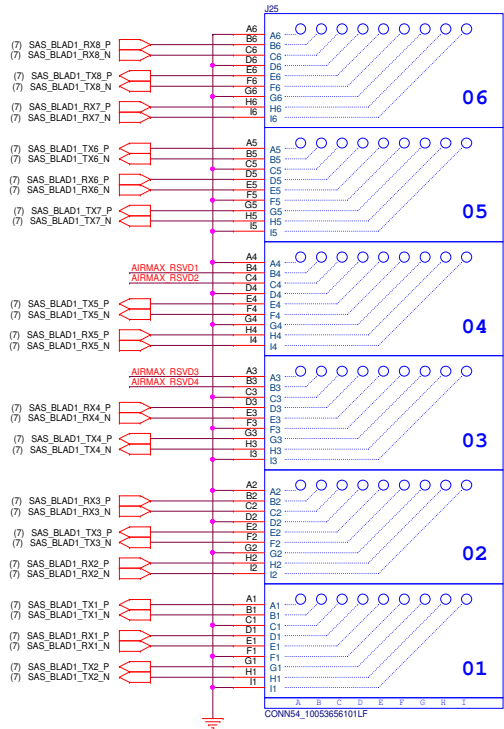
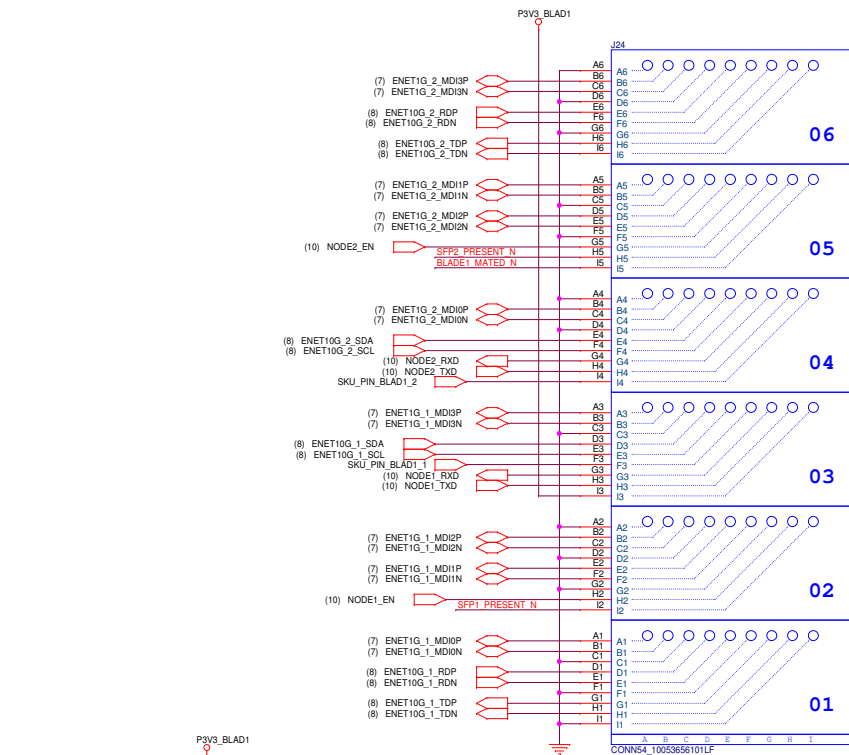
Cloud Server Infrastructure Engineering

|                                |                 |                            |         |
|--------------------------------|-----------------|----------------------------|---------|
| Title                          |                 | Tray Backplane Assembly V1 |         |
| Size                           | Document Number | Rev                        |         |
| C                              | Blank           | 1A                         |         |
| Date: Monday, January 27, 2014 |                 | Sheet                      | 4 of 11 |

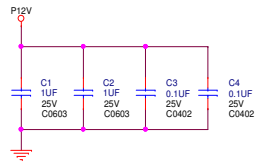
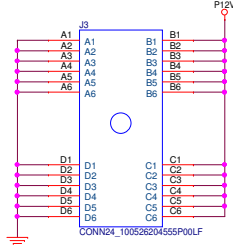
AIRMAX CONNECTOR - BLADE1

LAN SIGNAL

SAS SIGNAL

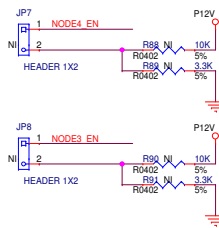
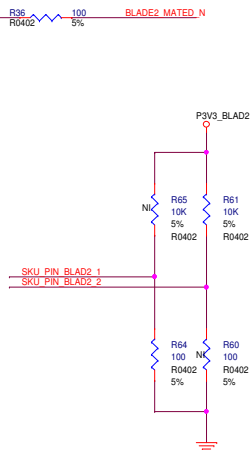
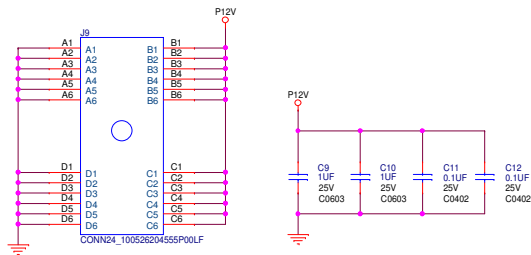
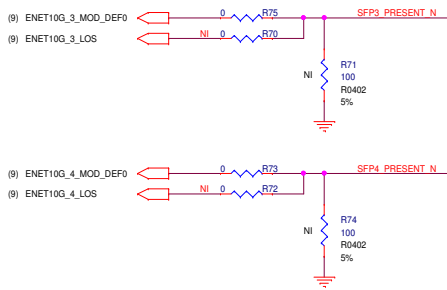
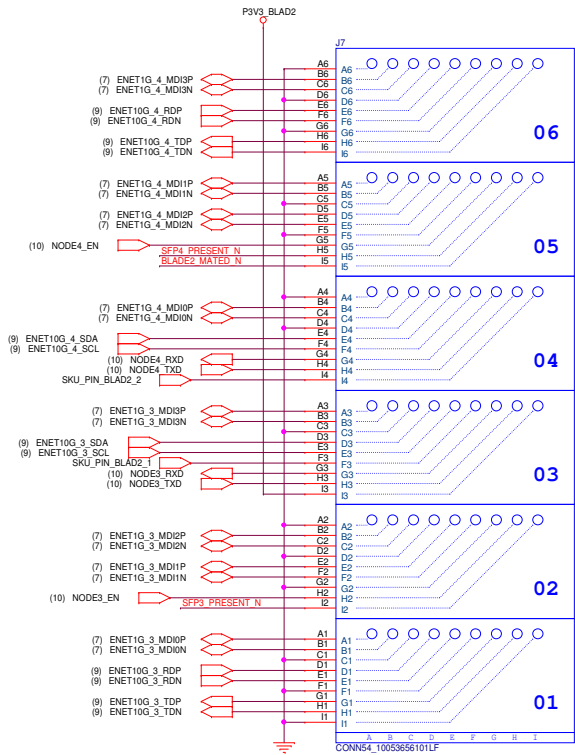


CHECK WITH MOTHER BOARD POWER PIN DEFINE



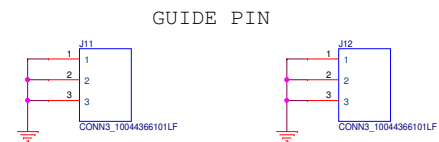
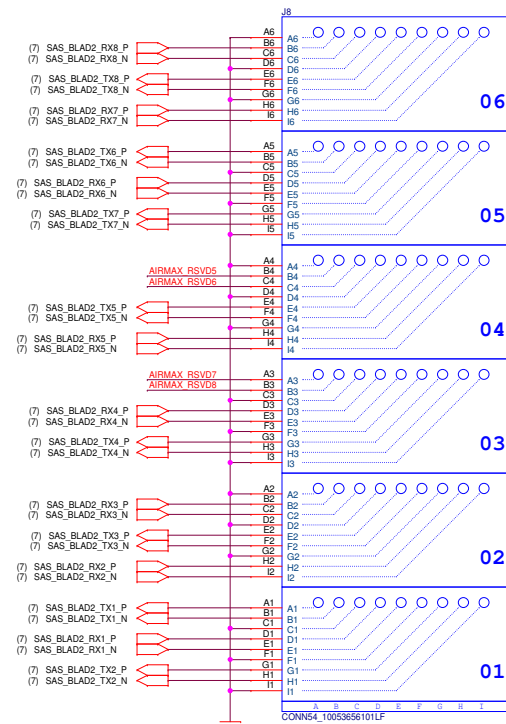
AIRMAX CONNECTOR - BLADE2

LAN SIGNAL



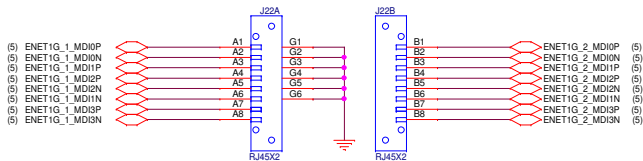
| SKU1 | SKU2 | TYPE     |
|------|------|----------|
| 0    | 0    | 10G      |
| 0    | 1    | SAS 6G   |
| 1    | 0    | RESERVED |
| 1    | 1    | RESERVED |

SAS SIGNAL

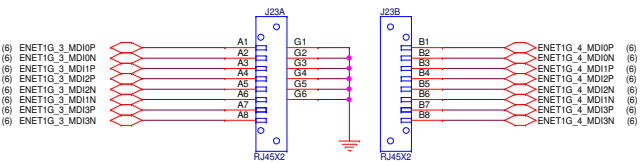


IO CONNECTOR - BLADE1

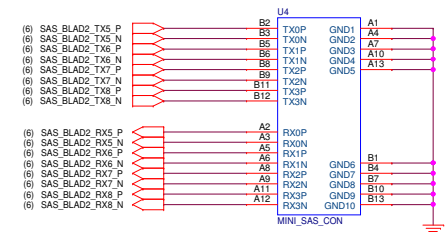
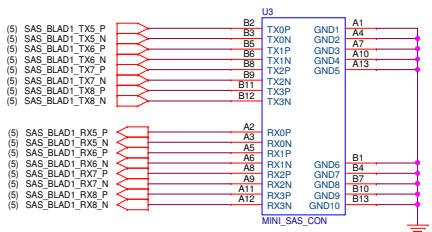
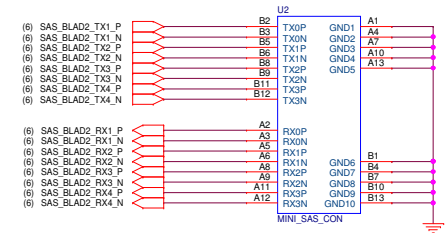
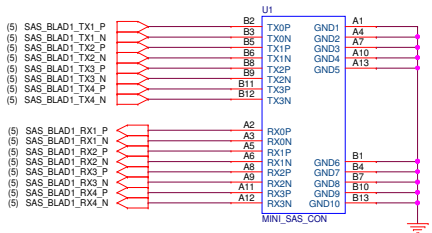
LAN SIGNAL



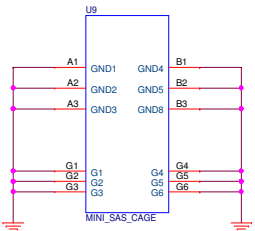
LAN SIGNAL



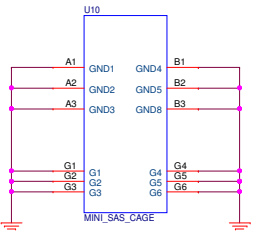
SAS SIGNAL



MINI SAS CAGE



MINI SAS CAGE



Cloud Server Infrastructure Engineering

|       |                          |                            |         |
|-------|--------------------------|----------------------------|---------|
| Title |                          | Tray Backplane Assembly V1 |         |
| Size  | Document Number          | RJ45 & Mini SAS Connector  |         |
| C     |                          | Rev 1A                     |         |
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**SFP+ CONNECTOR - BLADE1**

The diagram illustrates the internal circuitry of the SFP+ Connector - Blade1, showing two connector types (U5 and U6) and their connections to the SFP Connector. The diagram is labeled "DIRECT TOUCH CABLE ONLY".

**Connector U5 (Left):**

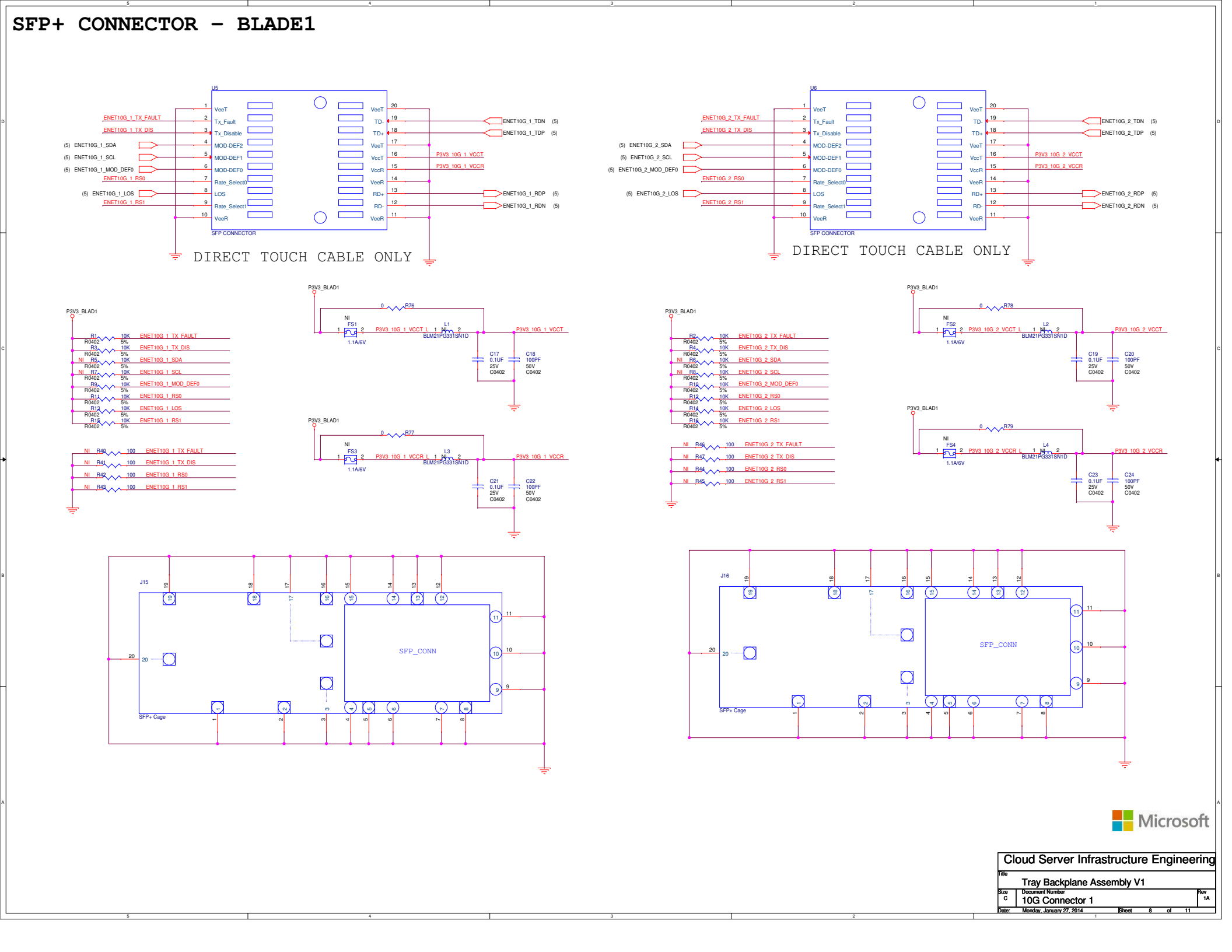
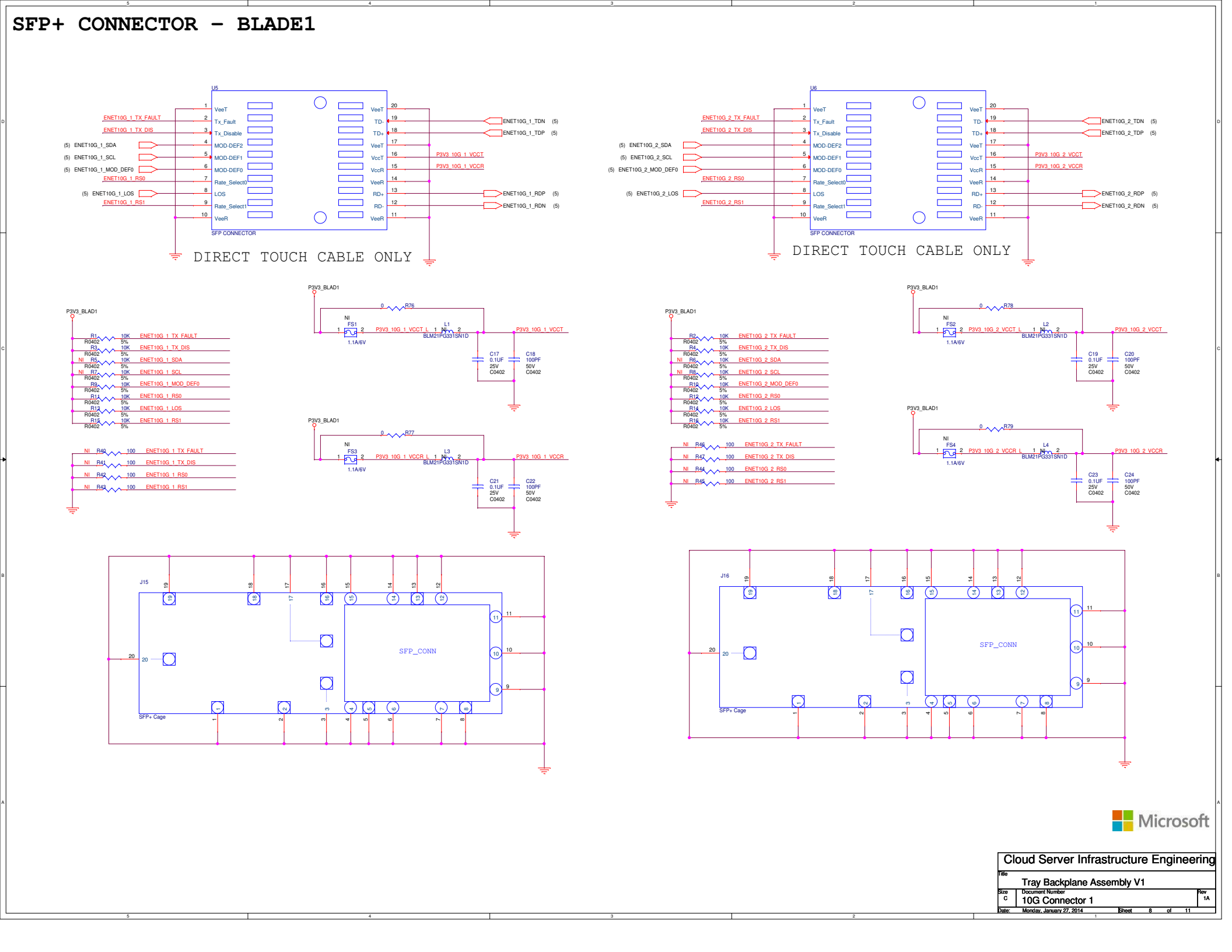
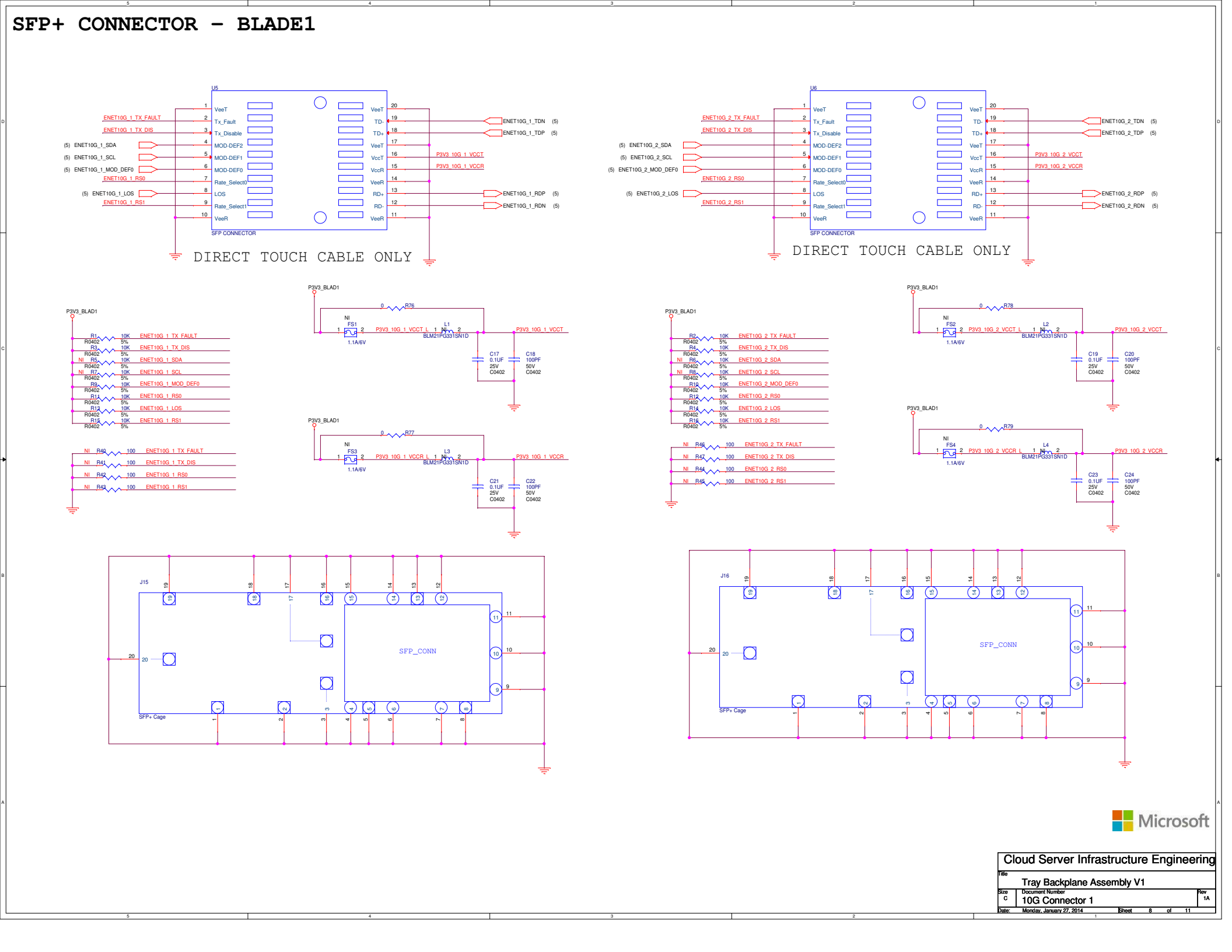
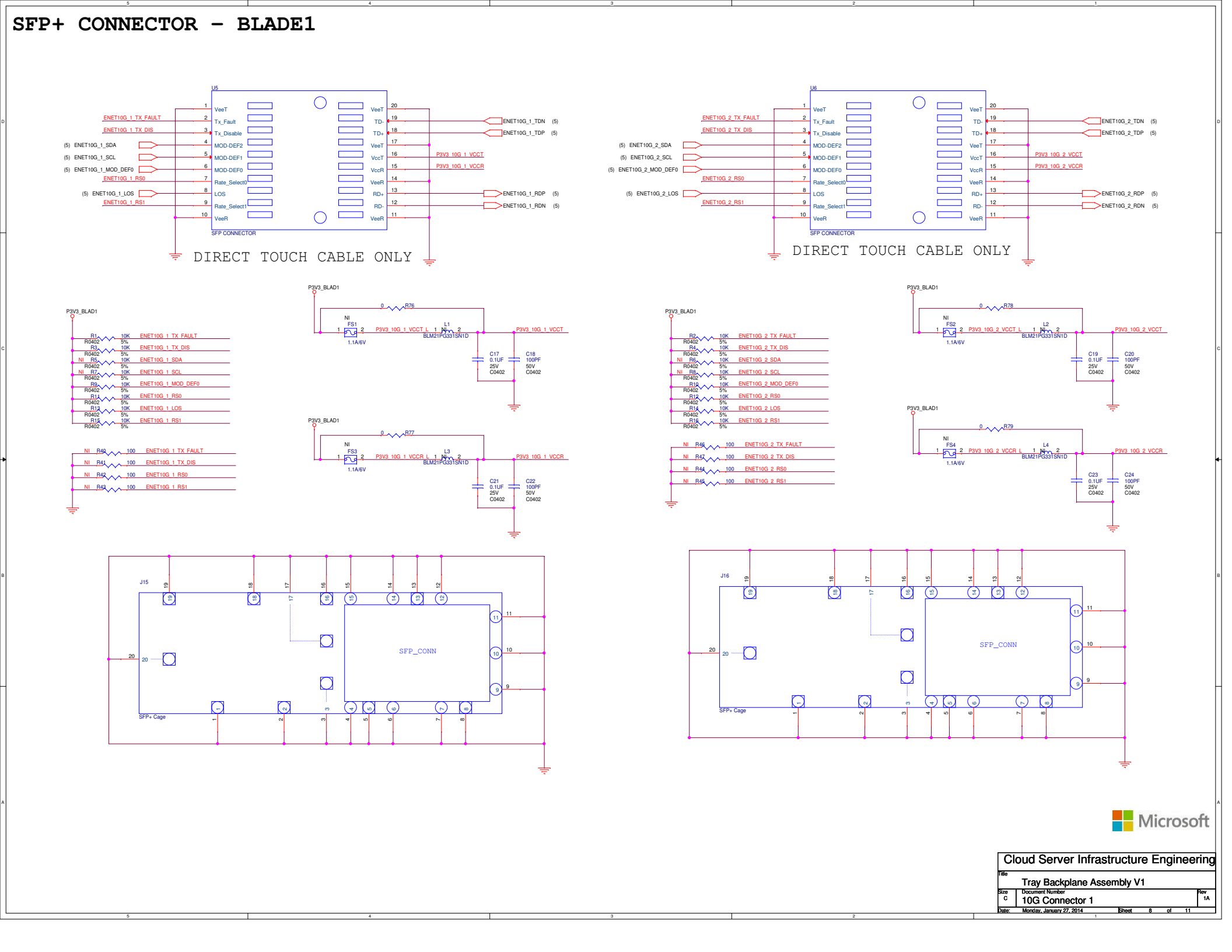
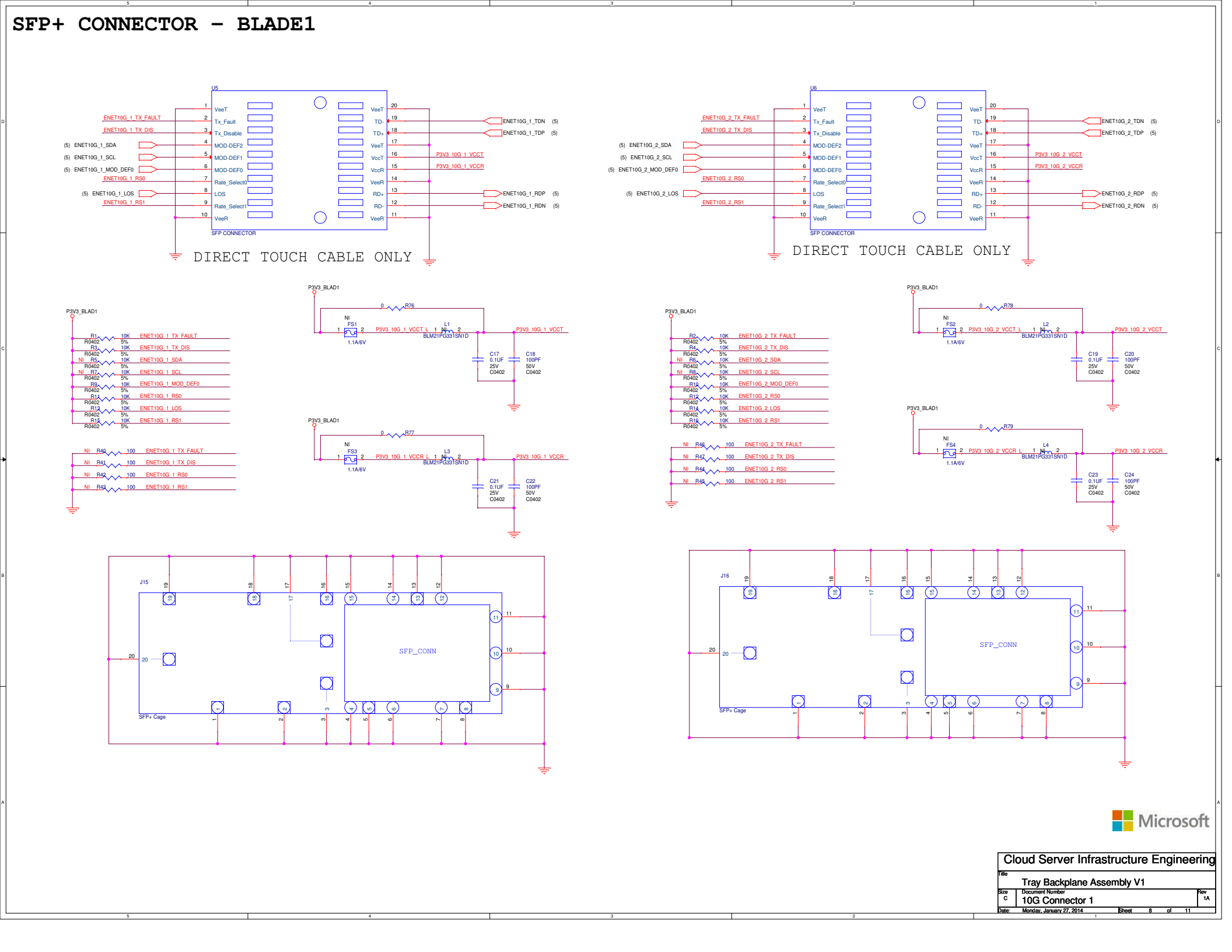
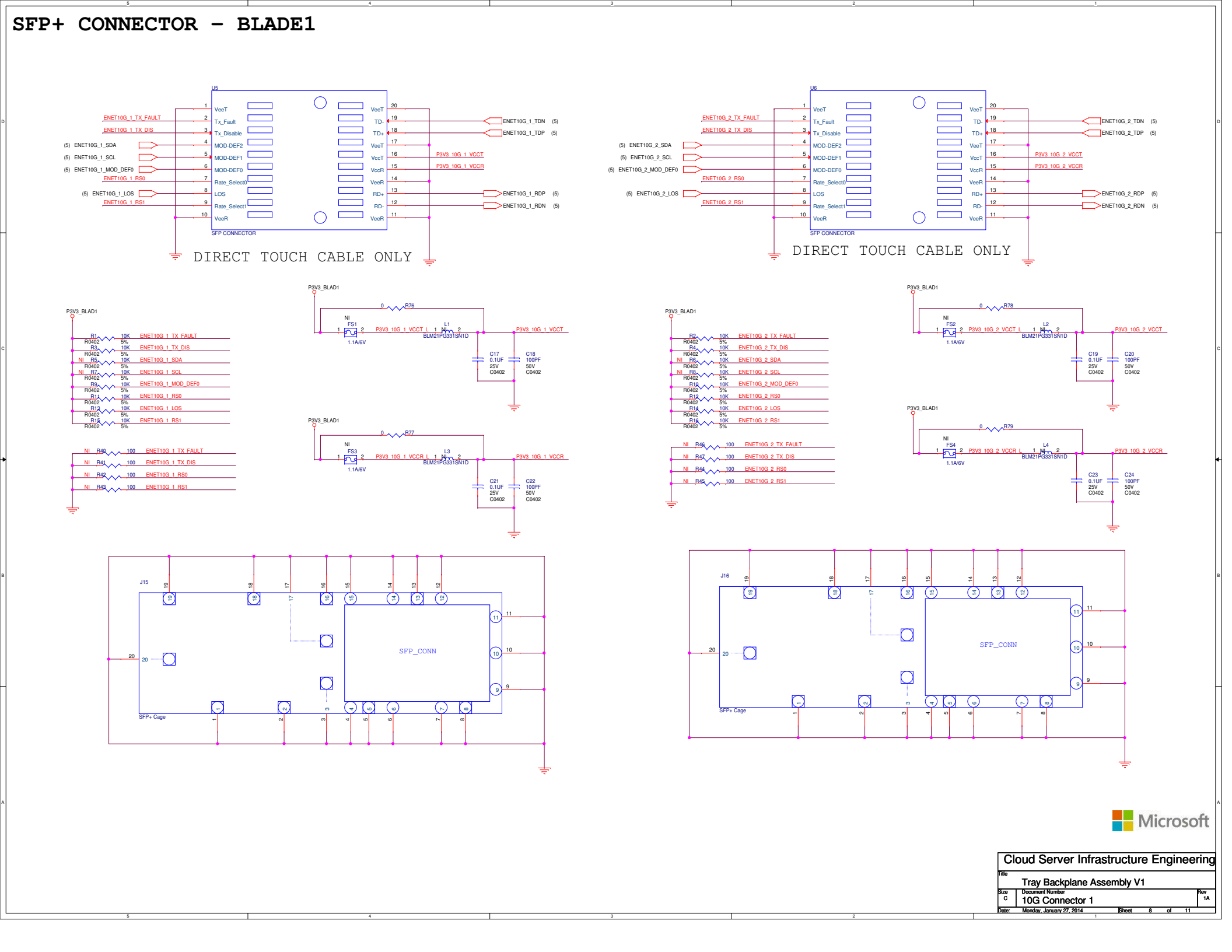
- Pin 1: VeeT
- Pin 2: Tx\_Fault
- Pin 3: Tx\_Disable
- Pin 4: MOD-DEF2
- Pin 5: MOD-DEF1
- Pin 6: MOD-DEF0
- Pin 7: Rate\_Select0
- Pin 8: LOS
- Pin 9: Rate\_Select1
- Pin 10: VeeR
- Pin 11: VeeR
- Pin 12: RD-
- Pin 13: RD+
- Pin 14: VccR
- Pin 15: VccT
- Pin 16: VccT
- Pin 17: VccT
- Pin 18: TD+
- Pin 19: TD+
- Pin 20: VeeT

**Connector U6 (Right):**

- Pin 1: VeeT
- Pin 2: Tx\_Fault
- Pin 3: Tx\_Disable
- Pin 4: MOD-DEF2
- Pin 5: MOD-DEF1
- Pin 6: MOD-DEF0
- Pin 7: Rate\_Select0
- Pin 8: LOS
- Pin 9: Rate\_Select1
- Pin 10: VeeR
- Pin 11: VeeR
- Pin 12: RD-
- Pin 13: RD+
- Pin 14: VccR
- Pin 15: VccT
- Pin 16: VccT
- Pin 17: VccT
- Pin 18: TD+
- Pin 19: TD+
- Pin 20: VeeT

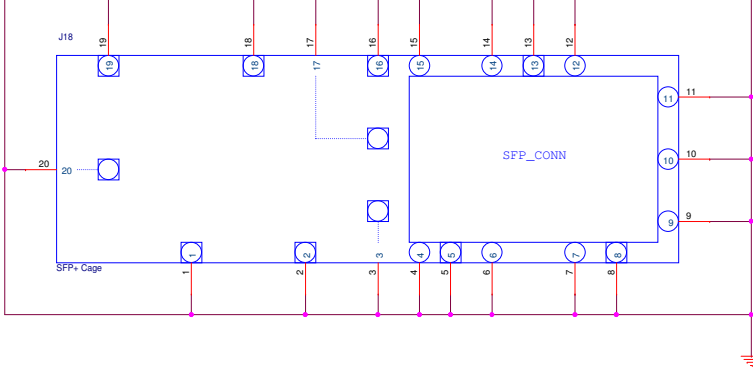
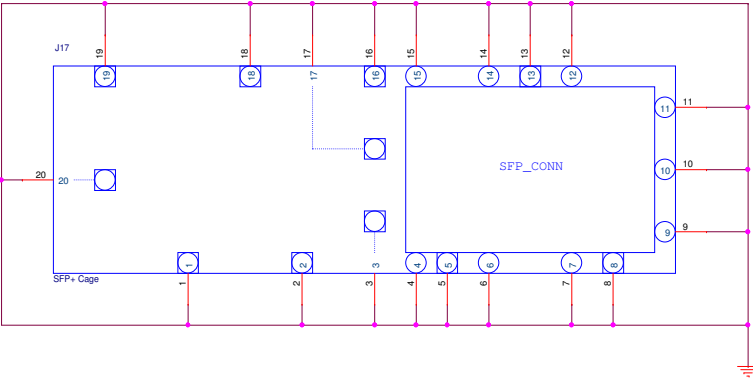
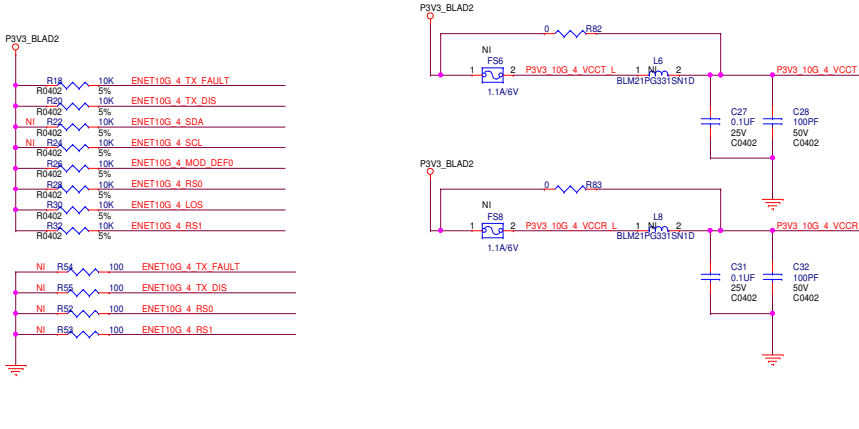
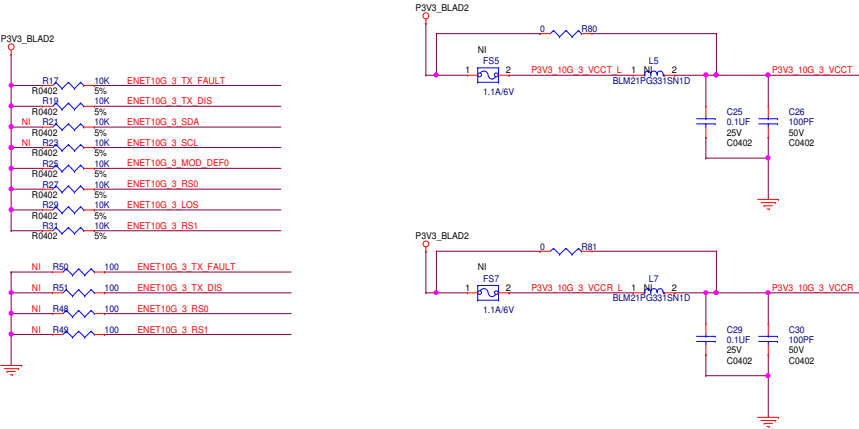
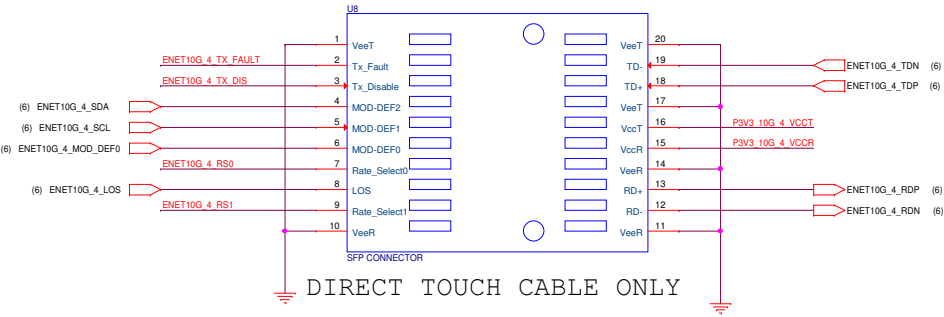
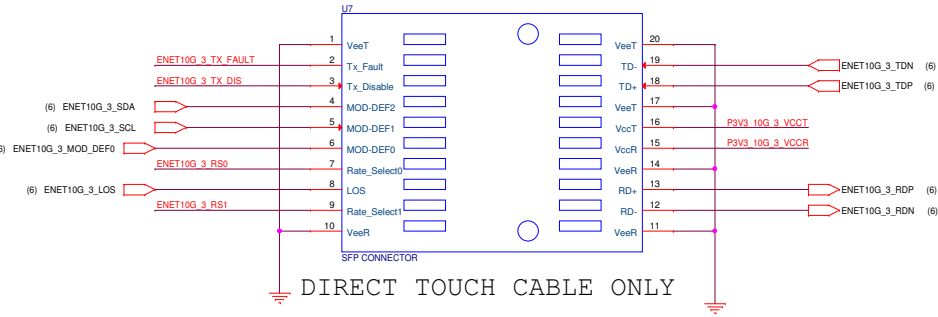
**Internal Circuitry (Bottom):**

- U5 Internal:** Shows the internal circuitry for U5, including resistors (R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100) and capacitors (C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100).
- U6 Internal:** Shows the internal circuitry for U6, including resistors (R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100) and capacitors (C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100).

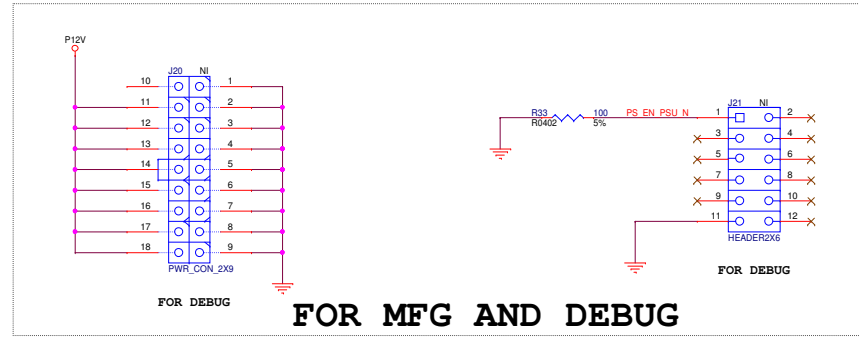
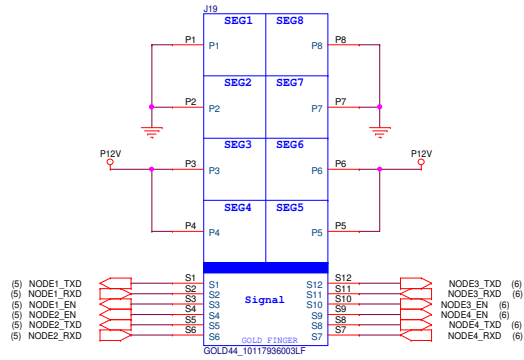




SFP+ CONNECTOR - BLADE2



# Gold finger



FOR MFG AND DEBUG



