

# intel® Technical Advisory

TA-718-1

5200 NE Elam Young Parkway  
Hillsboro, OR 97124

September 2nd, 2004

## Intel® Server Board SE7520BD2 SuperI/O & R1H9 resistor PCB rework

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### Products Affected

Product Code	MM #
SE7520BD2SCSI	858594
SE7520BD2V	863222
SE7520BD2	858586
BBDBBSCSI	861103
BBDVBB	858578
BBDBBSATA	863169

### Description

Production printed circuit boards (PCB) originally contained a potential current flow issue between the Front Panel LEDs and to the Super I/O controller.

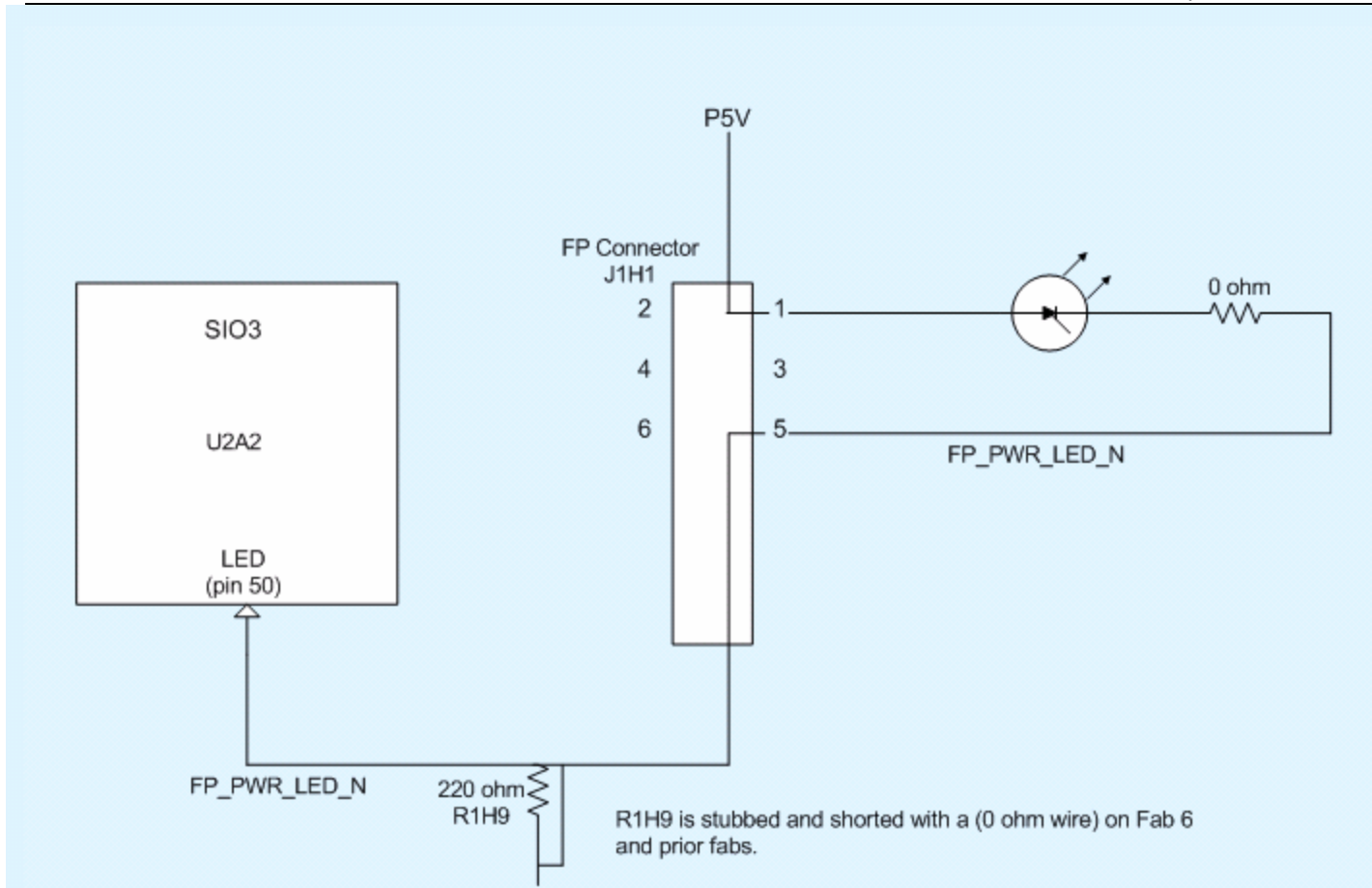
Specifically, the front panel LED off of the Super I/O controller (SIO3 - silkscreen U2A2) was incorrectly set to operate at 50mA of current instead of operating at 15mA designed for the Super I/O controller. This circuit was not initially connected correctly on all Fab6 production boards. In other words, the 220 ohm R1H9 resistor was not connected in series between pin 5 of the J1H1 connector and pin 50 of the National\* SIO3 Super I/O chip. As a result, the circuit incorrectly allows 50mA of current to flow. **Figure 1** below shows how the circuit was initially incorrectly connected on Fab6 boards. Notice in **figure 1** that only one half of the R1H9 resistor is connected and the other half is left as an open instead of being correctly connected to the FP\_POWER\_LED\_N signal. If it had been connected correctly in series the circuit would correctly operate at 15mA of current. If said circuit runs at 50mA for an unspecified amount of time it is possible the Front Panel Power LED will eventually fail due to excess current.

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**Figure 1: Incorrect placement of the 220 R1H9 resistor (bottom half should be connected to pin 5 in series).**

## Root Cause

Incorrectly connected trace route on Fab6 Printed Circuit Boards for the R1H9 220 ohm resistor.

## Corrective Action / Resolution

On all fab 604 boards the 220 ohm resistor (R1H9) will be correctly serially connected with the following 3 changes:

- 1) Cut the PCB top layer trace that connects the FP\_POWER\_LED\_NP signal (pin 5 of J1H1) to the R1H9 resistor
- 2) Cut the PCB top layer trace between pin1 to pin2 of the R1H9.
- 3) Add an external black wire to the PCB connecting pin 5 of the J1H1 connector to the R1H9 220 ohm resistor. The wire will be added prior to attaching the J1H1 Front Panel Connector and will be mounted in a manner to not interfere with the Front Panel Connector.

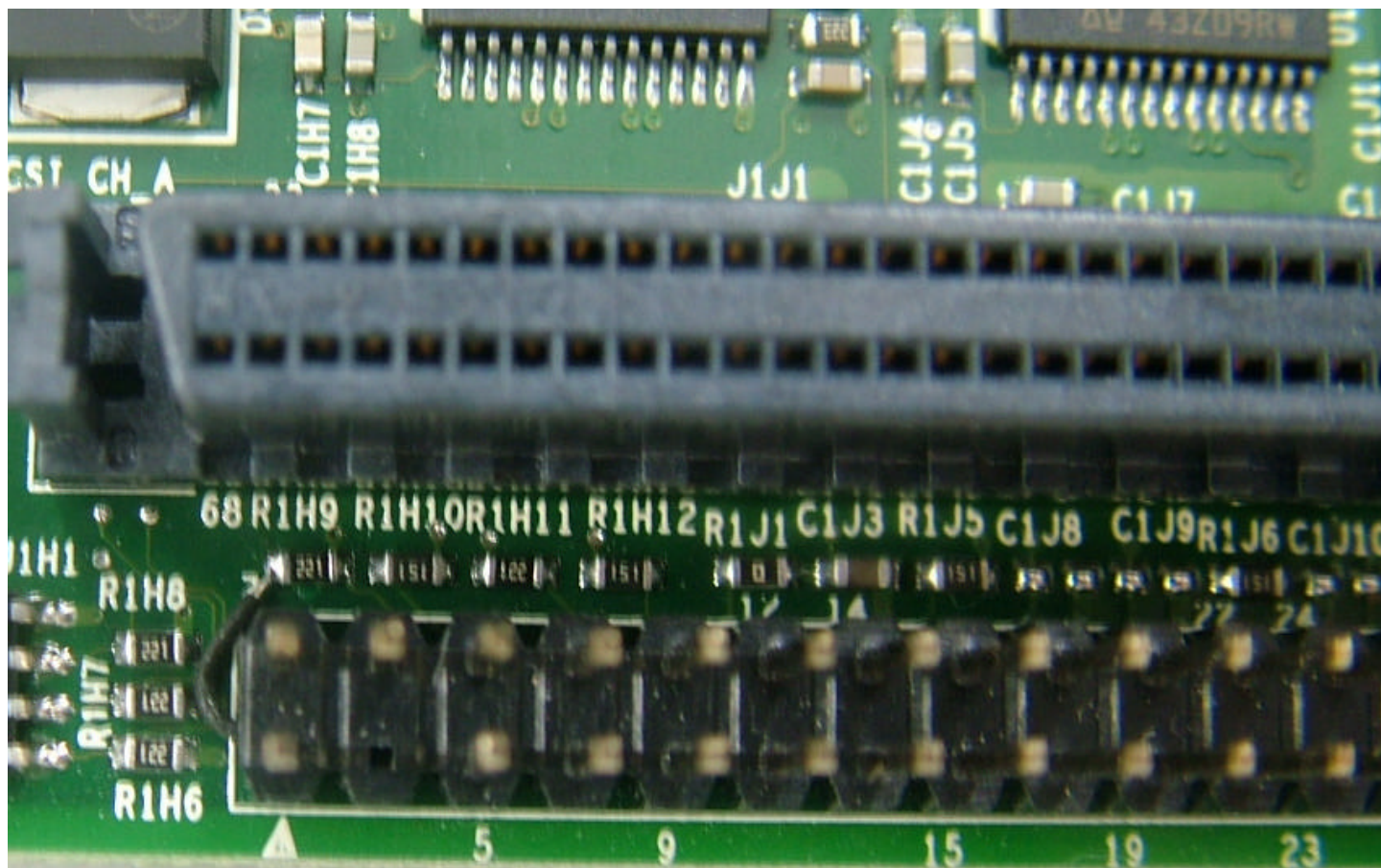
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A permanent fix will be incorporated in the Intel® Server Board SE7520BD2 Fab7 version and neither a black wire nor PCB cuts will be included. This permanent fix will be corrected on the PCB which be completed in a future ECO targeted for Q4 2004.



**Figure 2:** Completed picture including the Front panel connector and the wire rework (note: final wire color will be black).

Please contact your Intel Sales Representative if you require more specific information about this issue.

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