1 Issue 0020539:

1.1 Test Report

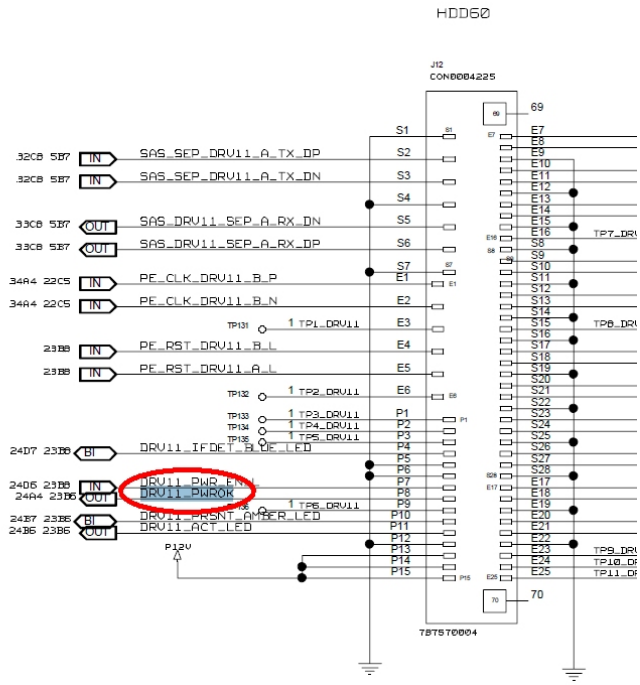
D-0020539: <EVT FW BB CPLD> DRIVE_xx_PWROK register couldn't reflect Drv[x]_PWR_EN_L signal state.

3/26/2015, BB CPLD V01.09:
1) Default value is FF 0F 00 00 00 which should be all 00 as design spec defined.
2) When DRIV_x_PWR_EN register is 1b and SAS HDD is inserted, the corresponding DRIVE_x_PWROK returns 0b which should be 1b to reflect the low active signal is asserted.

5/23/2015, BB CPLD V02.02 duyu
1) PCIE SSD's POWER_OK can be read correctly from 31h[7:4],32h,33h,34h[3:0]
2) SAS SSD's POWER_OK is always as '0b'

1.2 Root cause

PCIE SSD can output POWER_OK, but SAS HDD cannot output right POWER_OK, it is always "0b"



1.3 Solution

We can detect DRV*_IFDET_BLUE_LED and DRV*_PRSNT_AMBER_LED to check which type HDD inserted, PCIE SSD or SAS HDD.

a) If PCIE SSD has been inserted, then we use real POWER_OK signal for power ok register --- 31h[7:4]~34h
b) If SAS HDD has been inserted, then we use power enable for 31h[7:4]~34h
c) Always use power enable register value for 30h~31h[3:0]

The real hardware signal as below,

1) The slot which can support both PCIE and SAS, test at Slot HDD56:

HDD Type	DRV*_IFDET_BLUE_LED	DRV*_PRSNT_AMBER_LED
PCIE SSD	0.28v	3.25v
SAS HDD	0.28v	0.28v
N/A	3.25v	3.25v

2) The slot which only can support SAS, test at HDD6

HDD Type	DRV*_IFDET_BLUE_LED	DRV*_PRSNT_AMBER_LED
SAS HDD	0.3v	0.3v
N/A	3.25v	3.25v

Hudson Comments	
QA Comments	

1.4 New BB CPLD version

I will release 02.03 to fix this issue, please QA team help verify, thanks.

2 Issue 0020586

2.1 Test Report

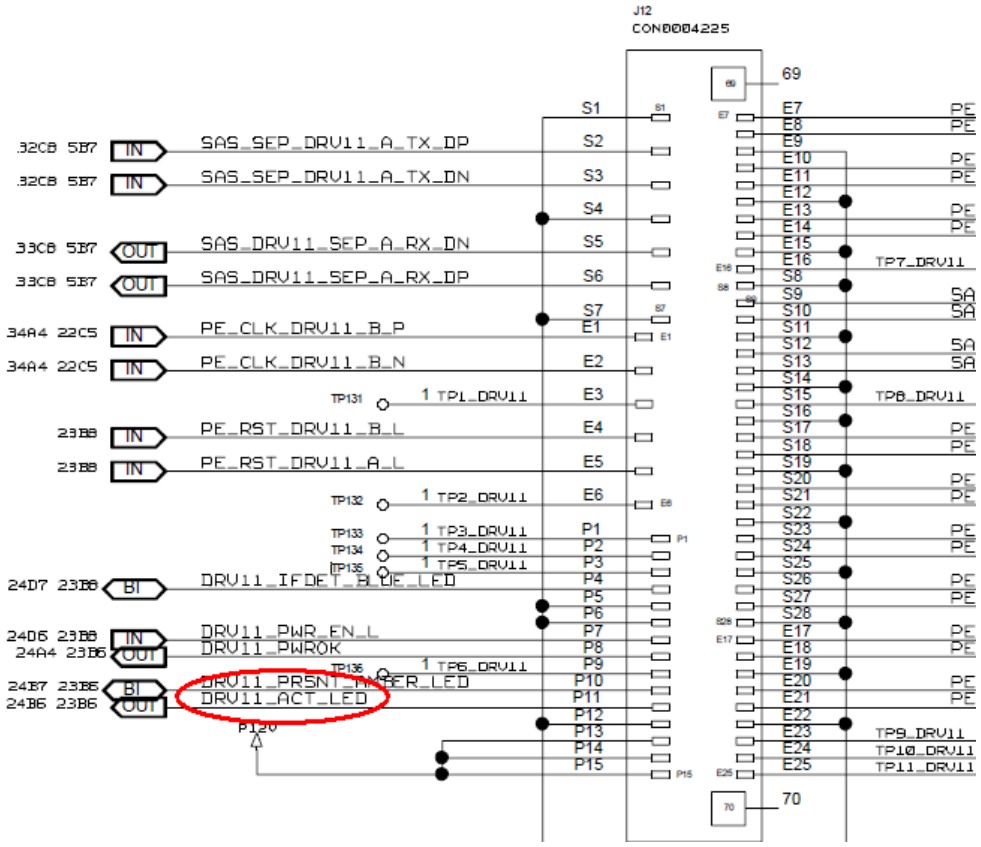
D-0020586 Priority 3-Normal
Title <EVT FW BB CPLD> Register A0h hasn't control SGPIO outputs enbale or disable.

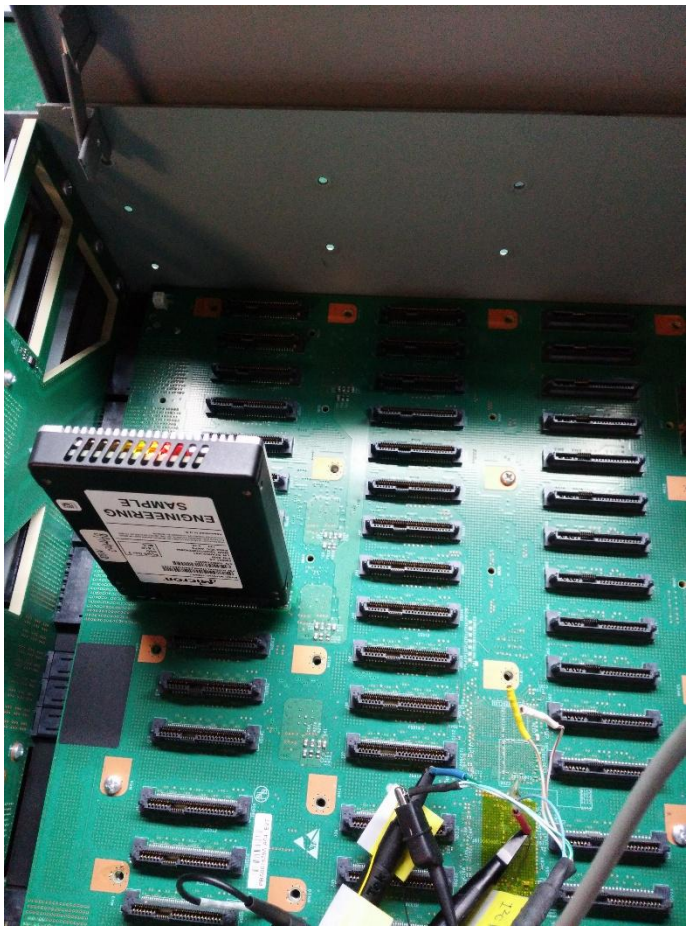
On Fri, Mar 20, 2015 at 3:50 AM EDT, Sharron Yang wrote:
3/20/2015, V0107:
A0 could control SPGIO, but when system power on, all 72 Drive Activity LEDs are solid on, even no HDD is inserted.

5/23/2015, BB CPLD V02.02 and SSM CPLD V01.06 duyu
SAS HDD LED can blink and ON, the function is ok.
PCIE can not blink, because it can not active under OS.

2.2 Duyu's comments

CPLD use the same DRV*_ACT_LED signal for PCIE SSD and SAS HDD, so, if SAS HDD's LED can work well, The PCIE SSD should be OK. I also verify latest CPLD on David's test bench, the PCIE LED can be lighted. Please refer to below picture. So, I suggest that we can close this issue on saleforces. Please help verify, thanks.


J12
CON0004225
SAS_SEP_DRV11_A_TX_DP
SAS_SEP_DRV11_A_TX_DN
SAS_DRV11_SEP_A_RX_DN
SAS_DRV11_SEP_A_RX_DP
PE_CLK_DRV11_B_P
PE_CLK_DRV11_B_N
PE_RST_DRV11_B_L
PE_RST_DRV11_A_L
DRV11_IFDET_BLUE_LED
DRV11_PWR_EN_L
DRV11_PWROK
DRV11_PRSNT_AMBER_LED
DRV11_ACT_LED
TP1_DRV11
TP2_DRV11
TP3_DRV11
TP4_DRV11
TP5_DRV11
TP6_DRV11
TP7_DRV11
TP8_DRV11
TP9_DRV11
TP10_DRV11
TP11_DRV11
P120


ENGINEERING SAMPLE