Board and Relay Pin Connections

Connections	GPIO Pin
Ac-Power Detection	37
Hard Reset (Workstation platforms)	12
S4 State Detection (Workstation)	18
S3 State Detection (Workstation)	13
S0/S5 Sate Detection	16
Clear Cmos jumper	11
Hard Power On/Off(Reset same server)	15
Ground	39
Flashing Jumper Switch	32
AC Power ON/OFF (Primary)	31,33
AC Power ON/OFF (Secondary)	35,38
USB Switching	22,29,36

Relay power pin = 4 or 2 from raspberry pi board to relay power +V

Relay ground pin = 6 from Raspberry pi Board to Relay ground GND

AC-Power Detection Gpio Pin 37(G3 state or Alive)

This ac power detection pin from the platform (SUT) to raspberry pi via pin 37 is meant for measuring the platform is having the power or it is in completely in off state(G3)

Hard Reset (Front panel-reboot)

hard reset is to reboot the platform (SUT) via front-panel gpio pins.

From the raspberry pi via gpio pin12 will be connected to relay channel, from which closed(C) and normally opened (NO) will be connected. Once relay goes high it connects the closed(C) and normally opened (NO), which simulates the platforms jumpers to do a hard-reset in the platform (SUT).

Note:

In workstation platform hard-reset pins are separate from hard power on/off pins.

Only in server segment boards both the functionalities of hard power on/off and reset are in the same jumper.

S3(Sleep) State Detection

S3 State detection pin from the platform (SUT) to raspberry pi via pin 13 is meant for measuring the platform whether it has entered into sleep state or not.

S4(Hibernate) State Detection

S4 State detection pin from the platform (SUT) to raspberry pi via pin 18 is meant for measuring the platform whether it has entered into Hibernate state or not.

S0/S5 State Detection dc power detection in platform

S0/S5 State detection pin from the platform (SUT) to raspberry pi via pin 16 is meant for measuring the platform, whether it has DC power detected or not.

Clear CMOS Jumper

Clear wipes the configurational settings that was made in the bios to default settings. For this happens via raspberry pi gpio pin 11, which is connected to the relay channel. From the relay Normally Closed (NC) and Closed (C) are connected by default how the jumpers are present in the board. When relay goes high Closed(c) and Normally Open (No) get connected to make the clear cmos happen on the platform.

Hard DC Power On/Off (Reset same server)

Dc power OFF or ON this front panel pin acts if you hold the platform for more than 3 seconds it acts like dc power off, if it just gets connected for less than 3 seconds it acts has a reboot for the platform (SUT).

Note:

In workstation platform hard-reset pins are separate from hard power on/off pins.

Only in server segment boards both the functionalities of hard power on/off and reset are in the same jumper.

Ground

From the platform (SUT) ground pin is identified and get connected to the ground pin od the raspberry pi via pin 39, ground connection make sure all the state detections or happening properly or not.

Flashing Jumper switch

For flashing the IMA or BIN image to the chip volt line needs to be turned on, why this is required in the sometimes when 5v dc is passed to the board it will sometimes not allow the platform to boot when a reboot or shutdown to wake up is given. So in order to control this, we cut the volt via a relay when the flashing operation gets completed, turning the volt on when ever image needs to be flashed. For this we use gpio pin 32 on the raspberry pi.

AC Power ON/OFF (Primary)

To cut the AC power to the platform, this happens via relay, both phase and neutral gets cut. Signaling Gpio from the raspberry pi is 31 and 33 pins.

AC Power ON/OFF (secondary)

To cut the AC power to the platform, this happens via relay, both phase and neutral gets cut. Signaling Gpio from the raspberry pi is 35 and 38 pins.

Note: This is a special requirement in order to test the platform power adapter primary fails secondary sound work

USB Switching

In order to switch the usb device(Pendrive) from Host to SUT or from SUT to Host to perform various task like os installation, executing application in efi shell. For this raspberry pi gpio pin 22,29,36 are used to switch the relay, which makes the pendrive appear in SUT or in Raspberry pi.

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IFWI/BMC FLASHING CONNECTION PINS:

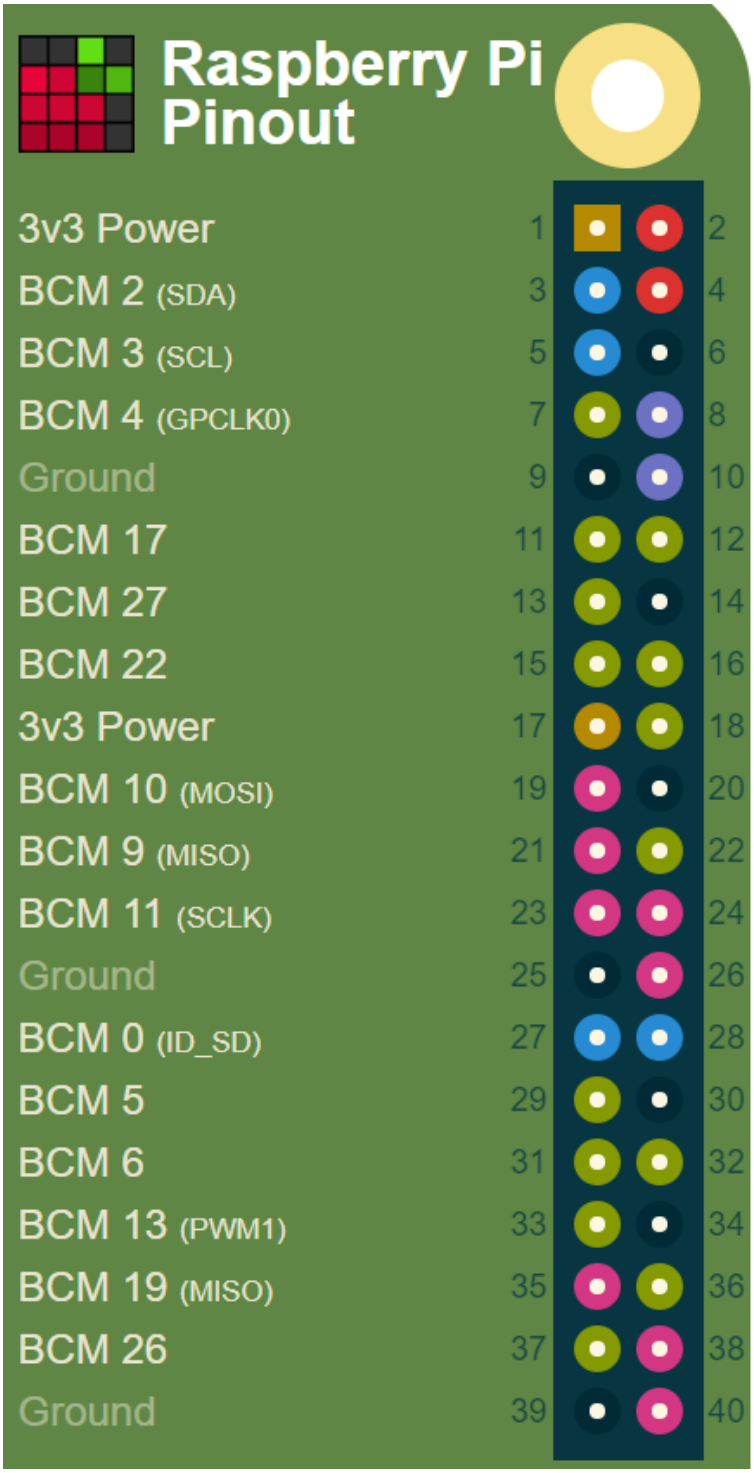
MISO	21
MOSI	19
GROUND	25
SCLK	23
VCC	17
CEO	24

ADC MODULE FOR ACTUAL VOLT MEASURING:

VCC	2
GND	20
SCL	5
SDA	3
ADD(GND)	30

POST CODE LPG GLIDER CARD:

SDA	**3**
SCL	**5**
GROUND	**9**



Don’t refer BCM numbers for mapping. All Those Numbers mentioned in the table means 1 to 40.

Setup GUIDANCE:

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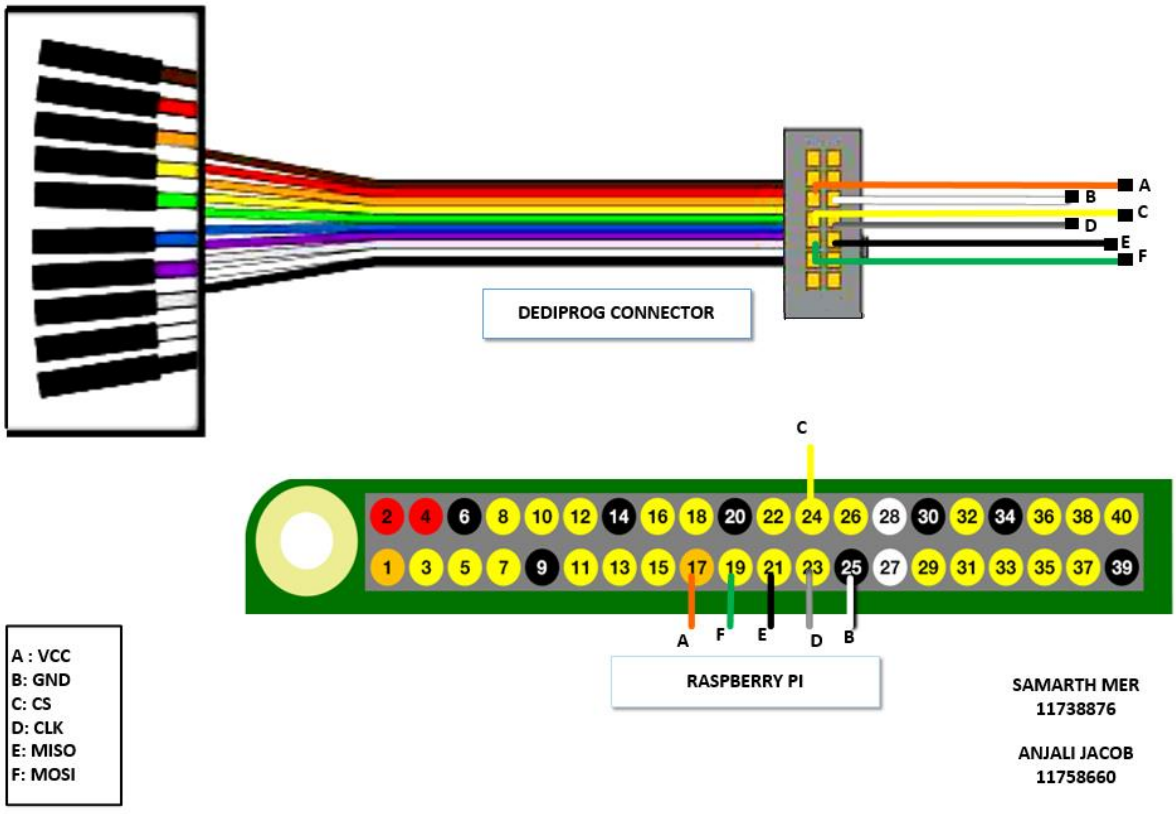
1. Check it a 5V relay 10A
2. Insulate back side of the relay using Insulating tape, so it is safe.
3. Make sure continuity is present in the GPIO wires, when connection is given.
4. USB SWITCHING REWORK Refer Diagram
5. IFWI/BMC Image FLASHING Refer Diagram
6. CONNECTION FROM RASPBERRY PI TO SUT(FOR S0/S5 STATE,AC POWER DETECTION) Refer Diagram.

Greenlow_Rpi-Connectn.pdf



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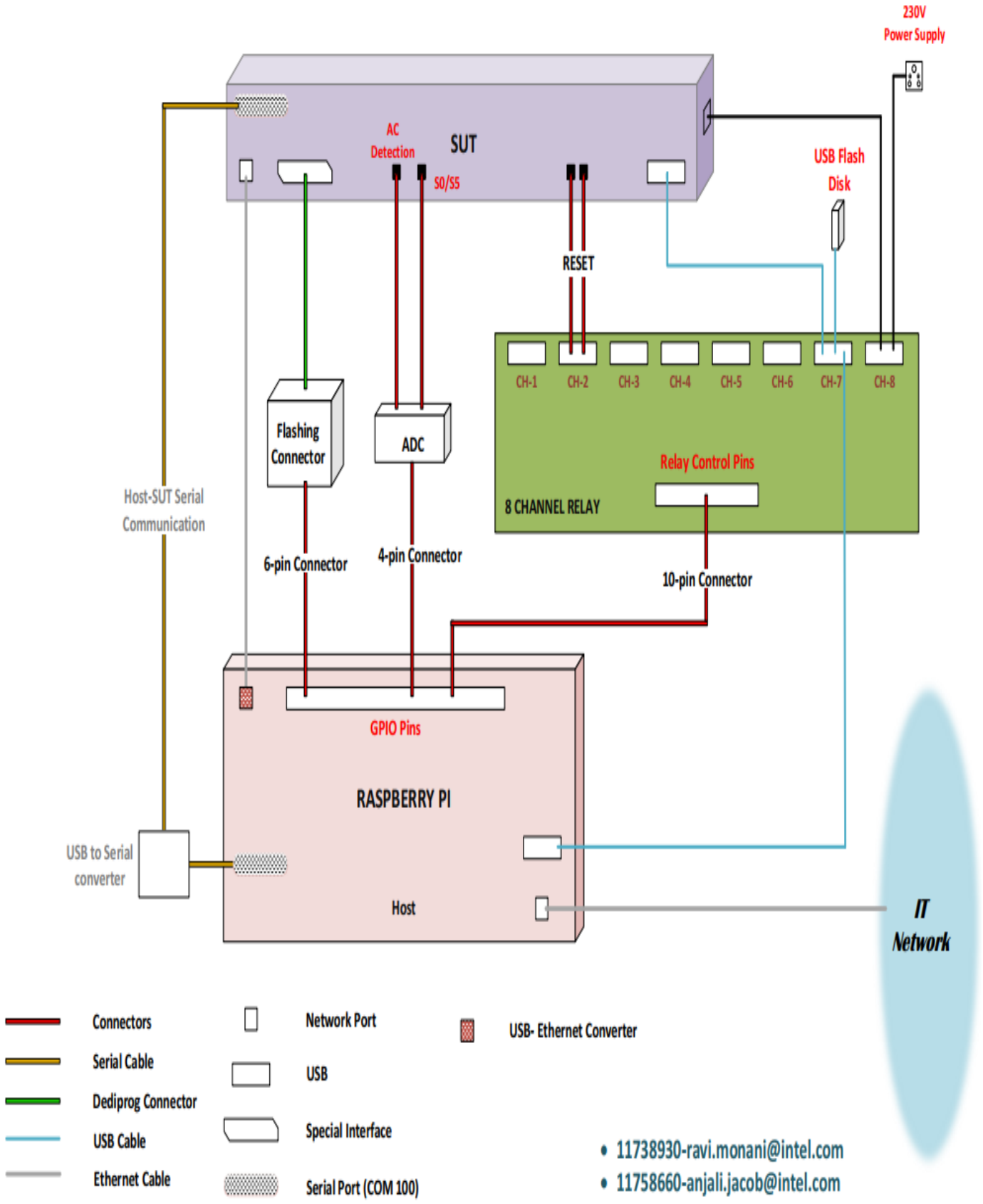

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