



Cobra ODE Installation Manual v1.4

The Cobra ODE is the world's most advanced and feature rich ODE for PS3 which is also simple and easy to use!

The following consoles are supported:

FAT;

CECHA (PATA)

CECHB (PATA)

CECHC (PATA)

CECHE (PATA)

CECHG (PATA)

CECHH (PATA)

CECHK (PATA)

CECHL (SATA) (most consoles)***

SLIM;

CECH2XXX (SATA)

CECH21XX (SATA)

CECH25XX (SATA)

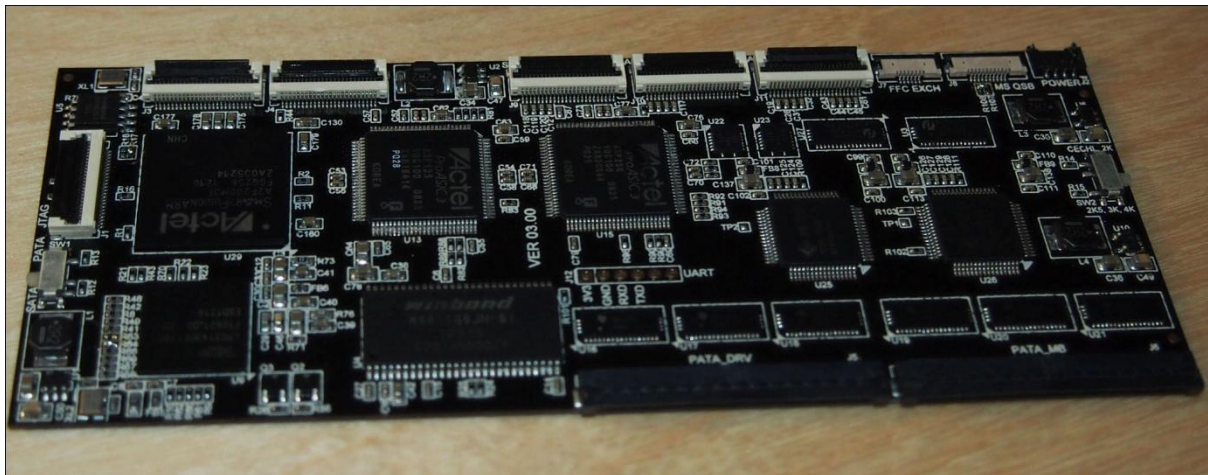
CECH3XXX (SATA)

SUPER SLIM;

CECH4XXX (SATA)

***FAT consoles (SATA) CECHL, CECHM, CECHP and CECHQ with drive controller BMD-21 will be supported in a future iteration of our hardware.

Installation of the Cobra ODE is quick and convenient.



The Cobra ODE pack includes:

1 x Cobra ODE Main board

1 x SATA QSB

1 x Clip on PCB

8 x plastic clips (4 of each of type A and B)

3 x power cables (1 PATA FAT, 1 SATA FAT, 1 SLIM/SUPER SLIM SATA)

3 x USB cables (1 x USB 2.0 Mini USB Y cable, 1 x USB 3.0 Y cable, 1 x USB extension cable) (Please refer to Cobra ODE user manual for details on usage)

1 x Double sided adhesive Cobra ODE sticker (acts as an insulation shield)

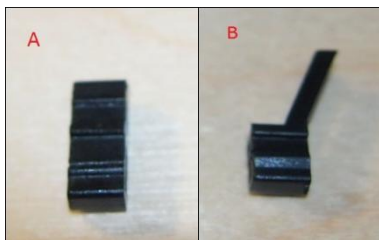
1 x each of the following FFC cables:

Cable Types

- Type A FFC Cable, 60 Positions, Same side contact, 320mm
- Type B FFC Cable, 60 Positions, Opposite side contact , 320mm
- Type C FFC LVDS Cable, 24 Positions, Same side contact, 300mm
- Type D FFC LVDS Cable, 24 Positions, Same side contact, 370mm
- Type E FFC LVDS Cable, 24 Positions, Same side contact, 350mm
- Type F FFC LVDS Cable, 24 Positions, Opposite side contact, 370mm

Allocation and positioning of plastic clips:

Console Model	Clip Position	Clip Type
CECHA	1,2 & 3	A
to		
CECHK		
CECHL	1,2 & 3	A
2K	4,5 & 7	B
2K5/3K	4,5 & 7	B
4K	4,5 & 6	B



Installation on PATA models (CECHA,CECHB,CECCHC,CECHE,CECHG and CECHK)

Please note the usage of cables from the table below:

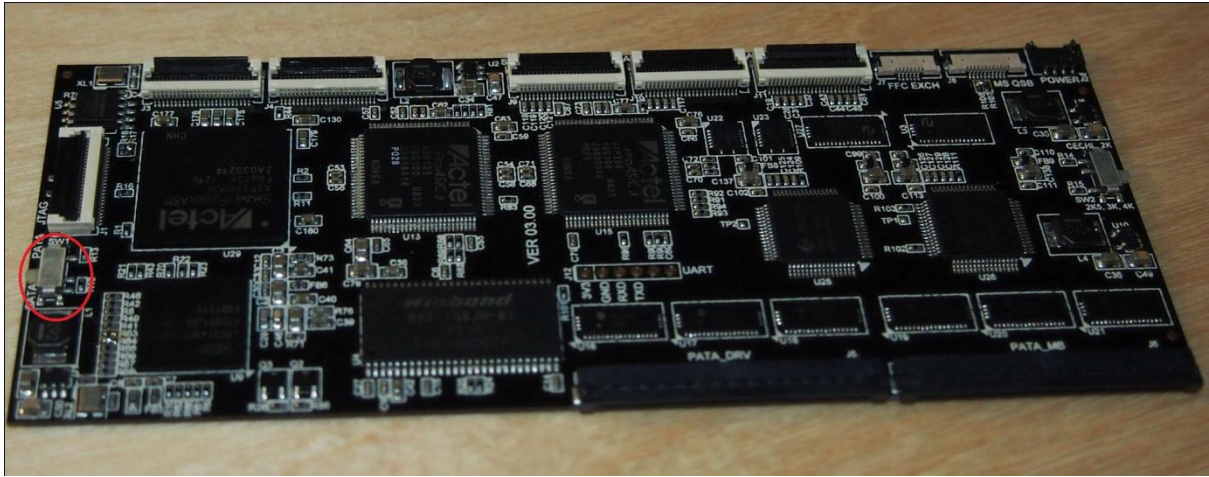
Model	Function	Cable for PCB v3.XX	Length	Cable Type
CECHA	Motherboard to ODE	FFC Cable, 60 Positions, Same side contact	320mm	A
to	Drive to ODE	FFC Cable, 60 Positions, Opposite side contact	320mm	B
CECHG	ODE to Clip on Board	FFC LVDS Cable, 24 Positions, Same side contact	300mm	C
CECHH	Motherboard to ODE	FFC Cable, 60 Positions, Same side contact	320mm	A
to	Drive to ODE	FFC Cable, 60 Positions, Opposite side contact	320mm	B
CECHK	ODE to Clip on Board	FFC LVDS Cable, 24 Positions, Same side contact	370mm	D

The 60 pin FFC cables used on v4.20 PCB and higher vary from those used on v3.00 PCB. Kindly refer to the table bellow.

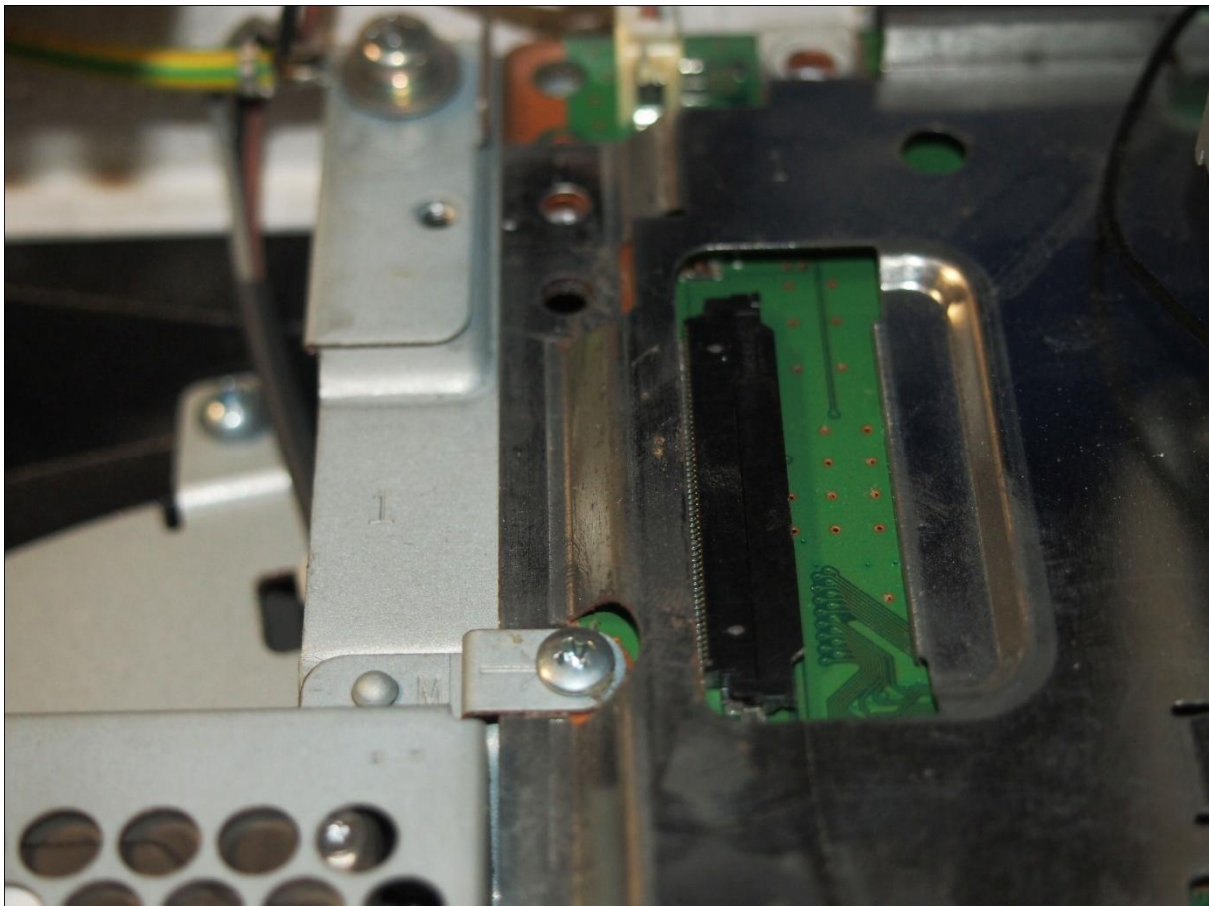
Model	Function	Cable for PCB v4.20 and higher	Length
CECHA	Motherboard to ODE	FFC Cable, 60 Positions, Same side contact	220mm
To CECHK	Drive to ODE	FFC Cable, 60 Positions, Same side contact	270mm

NOTE: From PCB revision 4.20 and higher, the mechanical switches on the PCB have been removed. On these versions of PCB, it is no longer necessary to select the model or drive type of your console, the process now use auto detection.

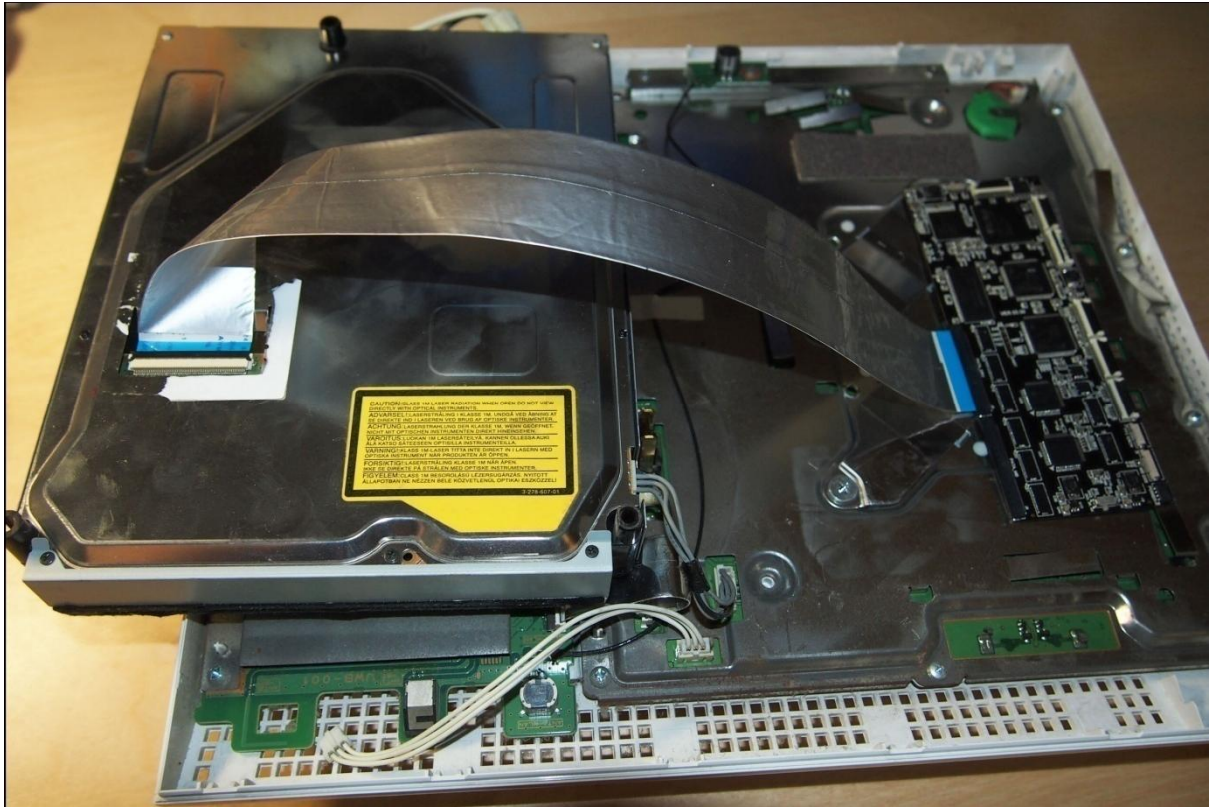
First, select PATA mode on the left hand side of the ODE board, This enables drive communication for your type of console. The switch on the right for 2k/CECHL and 2k5,3k and 4k is not relevant to your console type and can be left in any position.



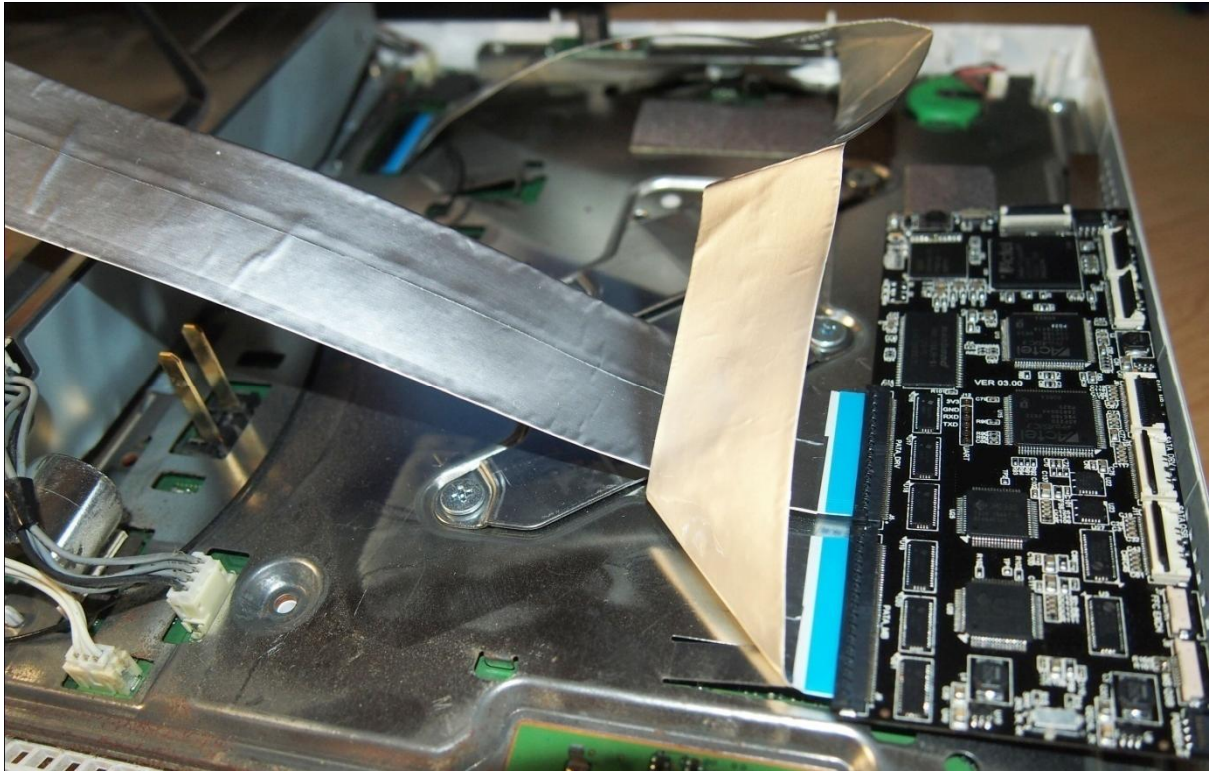
Disconnect the drive PATA cable from your drive and motherboard. This will be replaced with the bundled Cobra cables:



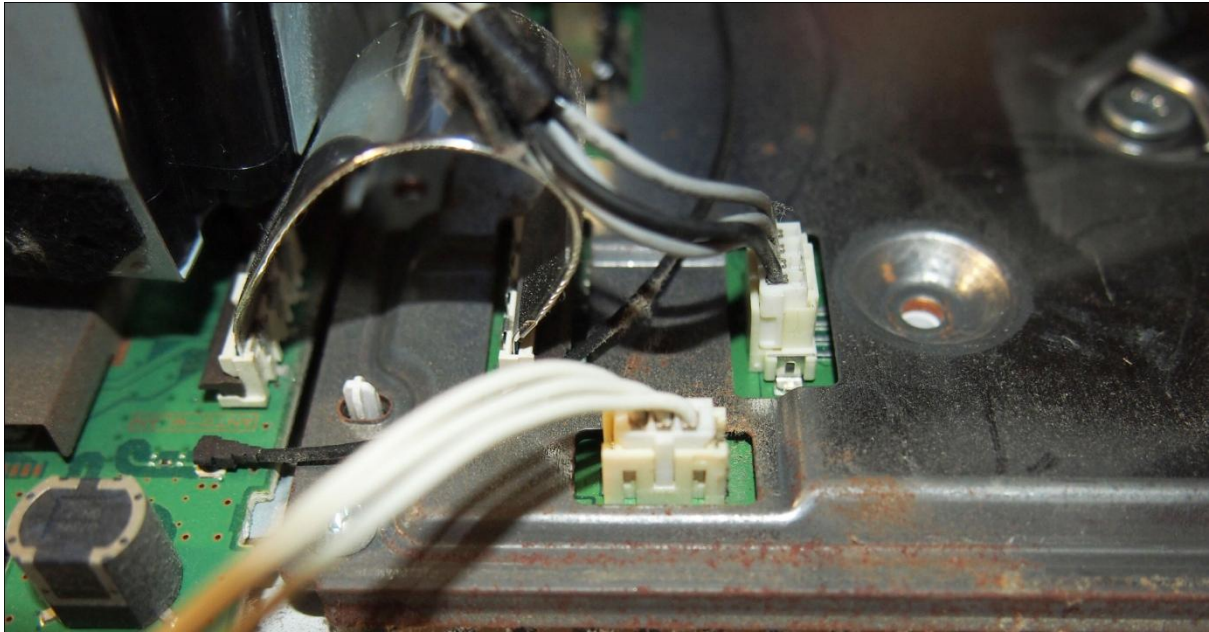
Then insert the respective 60 pin FFC cable (shown in the table above) between PATA_DRV on the ODE and 60 pin FFC connector on the console's drive (so cable B):



Next connect the correct cable type from table above between PATA-MB on the Cobra ODE main board and the 60 pin FFC connector on the console motherboard.

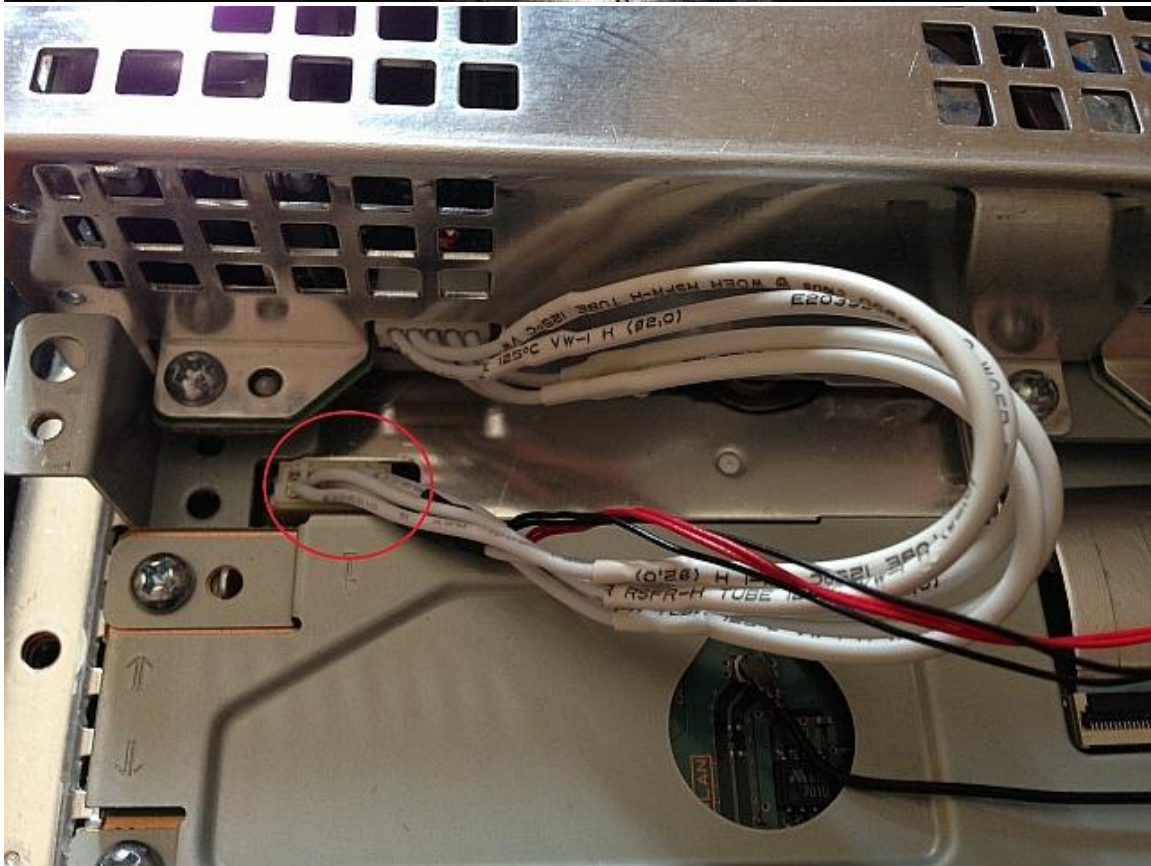
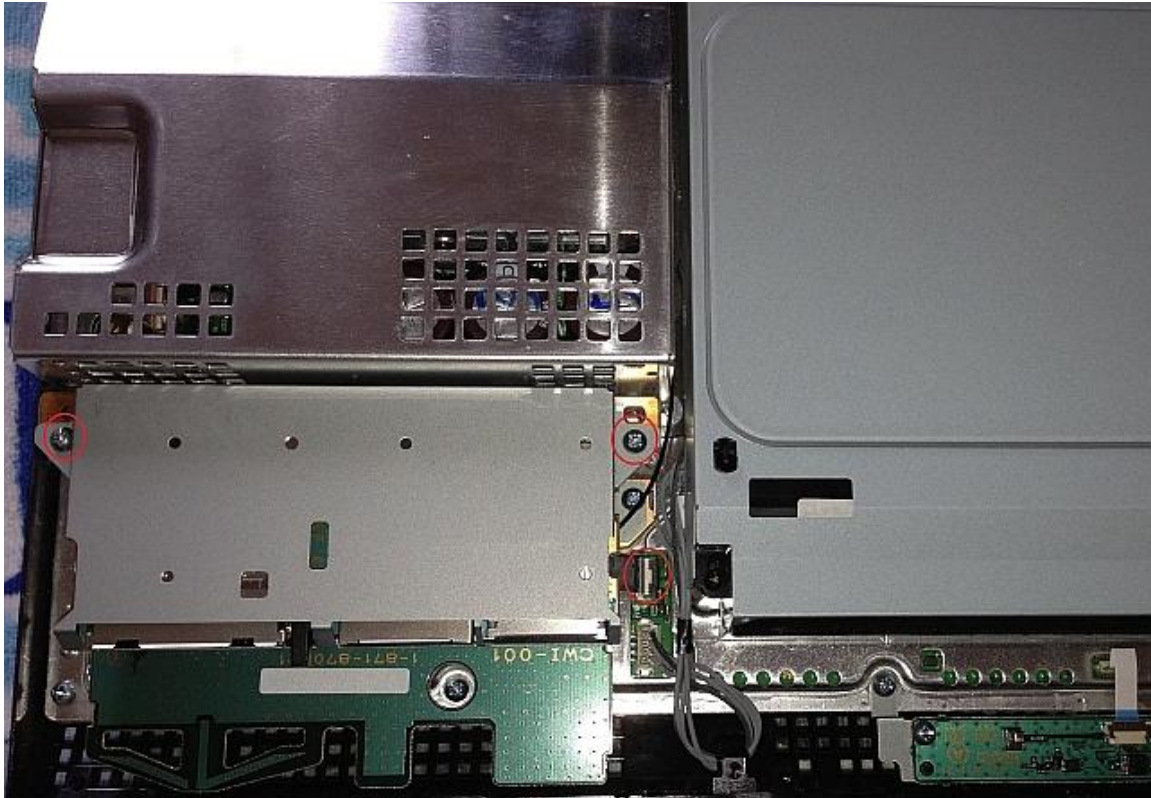


Disconnect the power cable between the console power supply and the console motherboard.
Please do so carefully as the solder on these console connectors becomes brittle over time:

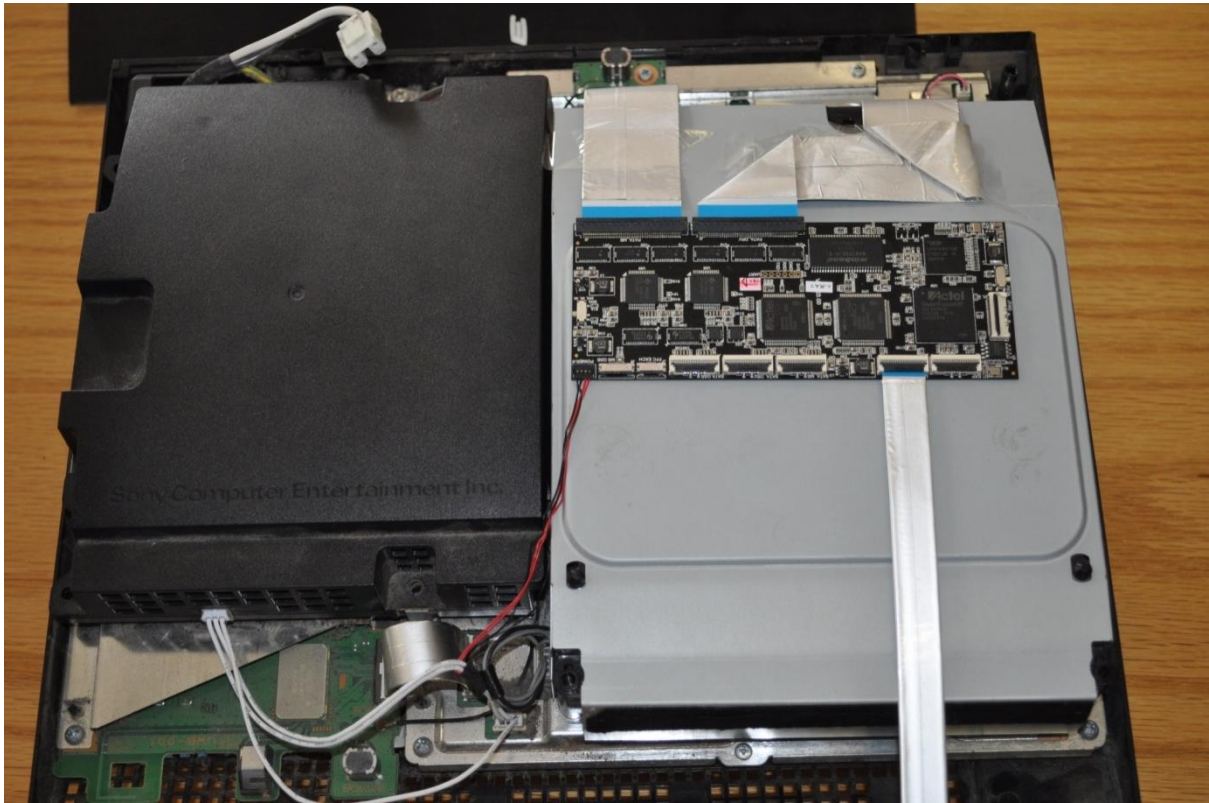


Replace the cable with the correct type which has the connector matching that of your console. Kindly, note carefully the orientation and direction of the cable, failure to do so could cause damage or malfunction.

On specific FAT model you may have to remove the SD reader to access the connectors. Carefully remove the flat cable and screws.

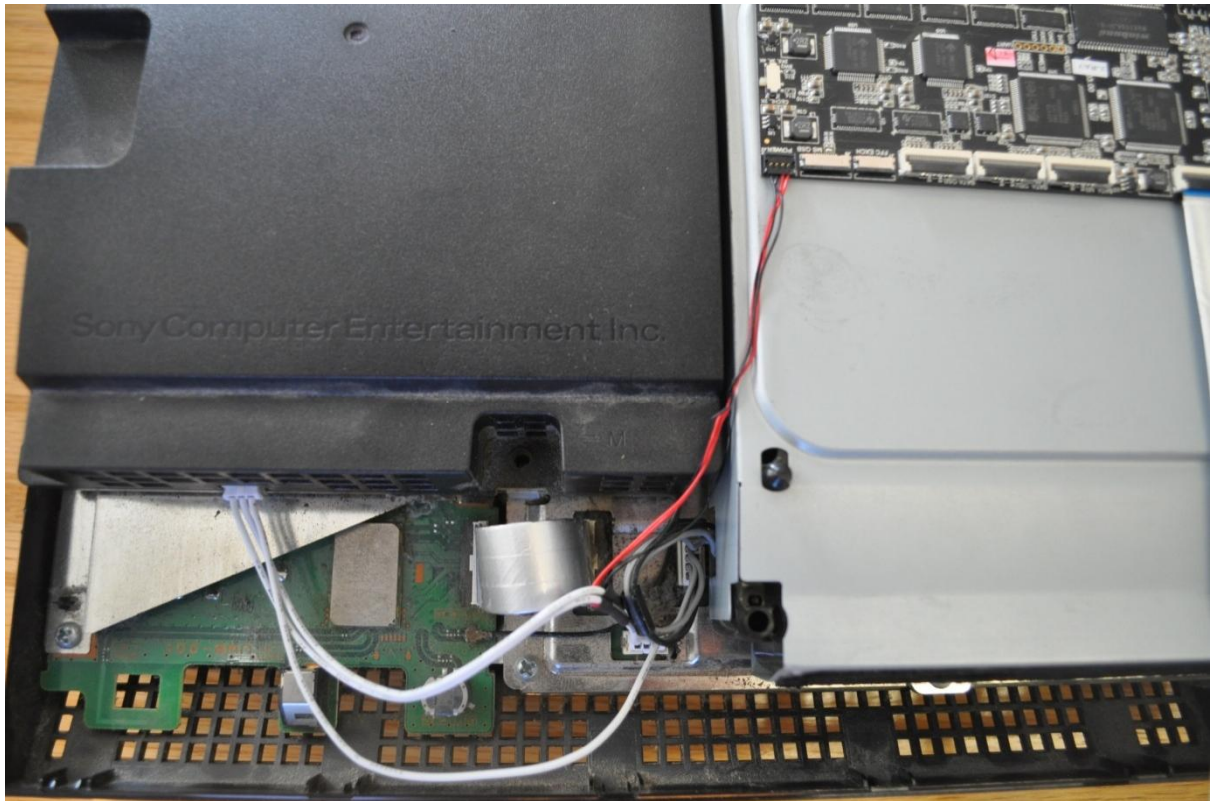


Make sure to connect the split part of replacement power cable in the appropriate connector as identified on picture. (Motherboard side)

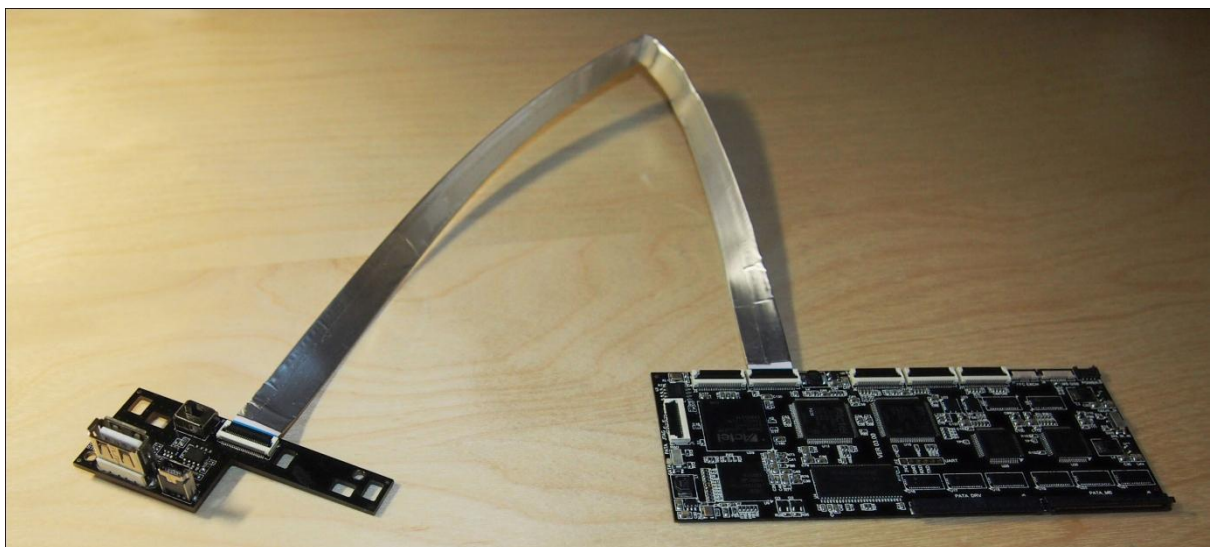


Please adhere the double sided adhesive Cobra ODE sticker between metal casing of drive and bottom of Cobra ODE main board to act as an insulating shield.

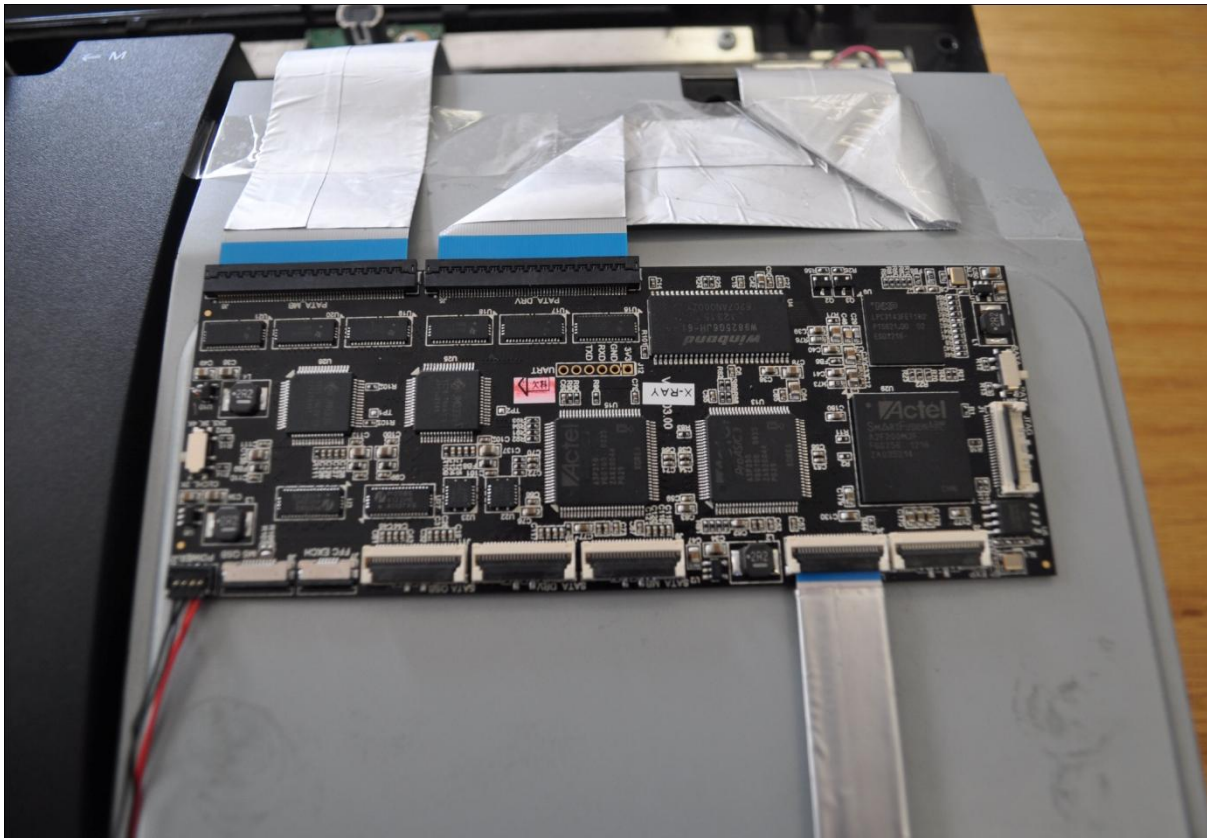
Insert the 4 pin low profile connector to your Cobra ODE board connector marked power as shown here (note that the connector is top down press fit, not slide in):



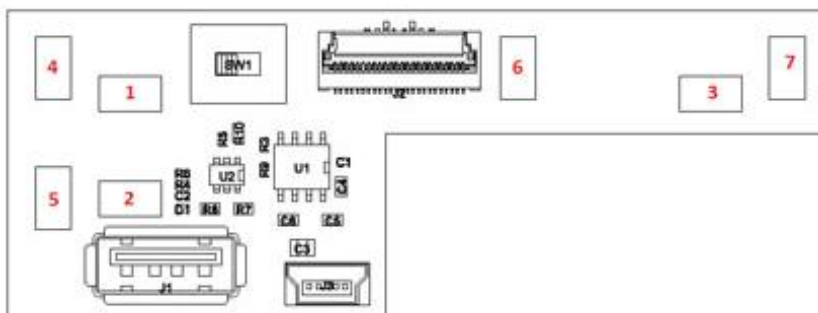
Finally, connect the clip on board between the FFC connector on the Cobra ODE marked UIF and FFC connector on the clip on PCB, using either cable C or D depending on your console type, demonstrated in the table above.

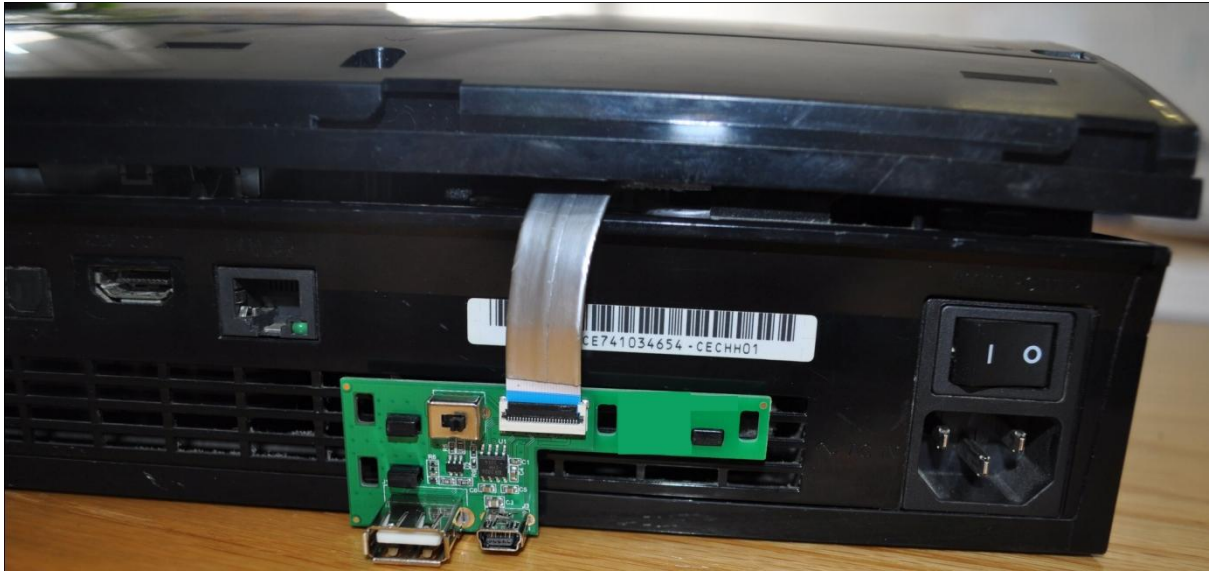


The Cobra ODE should be positioned inside the console as shown:



You can now attach the plastic clips to the clip on PCB as per drawing below and secure to the back of your console as shown here (Refer to table at the beginning of guide for usage/allocation of clips):





You can now re-assemble your console and get ready to play games....

Installation on FAT and SLIM SATA models (CECHL AND CECH 20XX/21XX)

Disassembly guide for 2XXX/21XX:

<http://www.ifixit.com/Teardown/PlayStation+3+Slim+Teardown/1121/1?singlePage>

Please note the usage of cables from the table below:

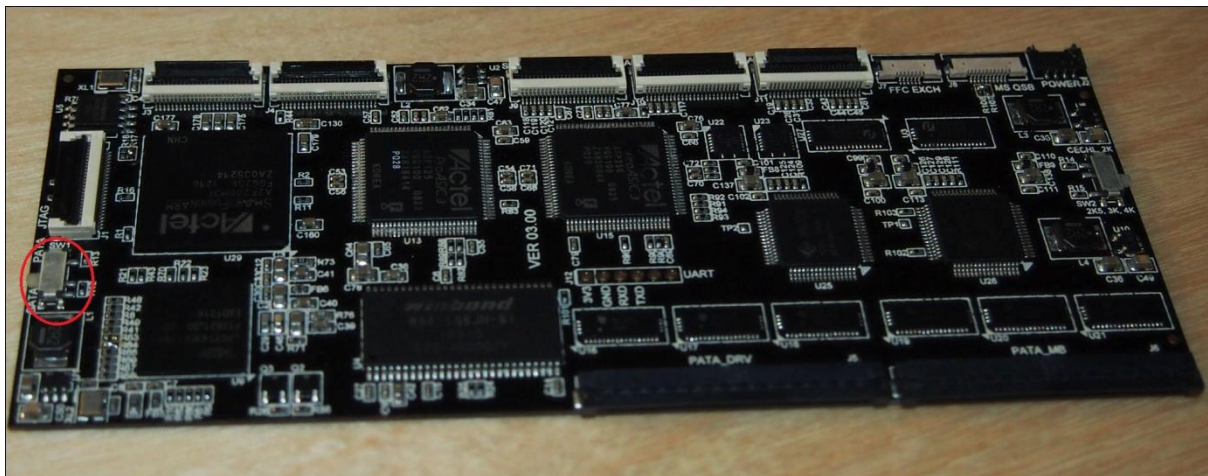
Model	Function	Cable	Length	Cable Type
CECHL	Motherboard to ODE	FFC LVDS Cable, 24 Positions, Same side contact	300mm	C
	Drive to ODE	FFC LVDS Cable, 24 Positions, Opposite side contact	370mm	F
	ODE to Clip on Board	FFC LVDS Cable, 24 Positions, Same side contact	350mm	E
2XXX & 21XX	Motherboard to ODE	FFC LVDS Cable, 24 Positions, Same side contact	300mm	C
	Drive to ODE	FFC LVDS Cable, 24 Positions, Same side contact	350mm	E
	ODE to Clip on Board	FFC LVDS Cable, 24 Positions, Same side contact	370mm	D

The 24 pin FFC LVDS Cable used on v4.30 PCB vary from those used on v3.00 PCB. Kindly refer to the table bellow.

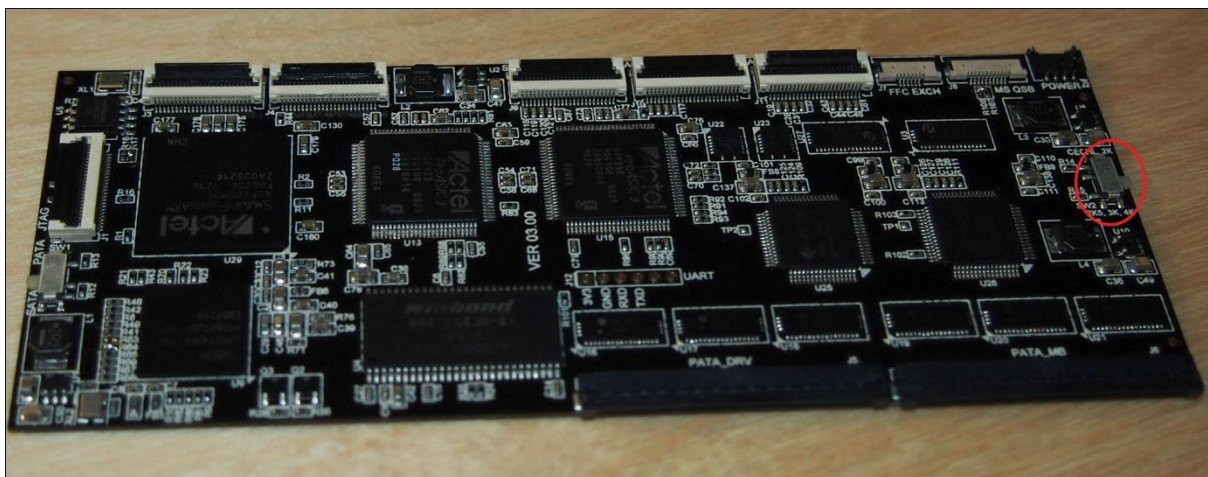
Model	Function	Cable for PCB v4.30	Length
CECHL , 2XXX & 21XX	Motherboard to ODE	FFC LVDS Cable, 24 Positions, Opposite side contact	150mm

NOTE: From PCB revision 4.20 and higher, the mechanical switches on the PCB have been removed. On these versions of PCB, it is no longer necessary to select the model or drive type of your console, the process now use auto detection.

Firstly select SATA mode on the left hand side of the ODE board, This enables drive communication for your type of console

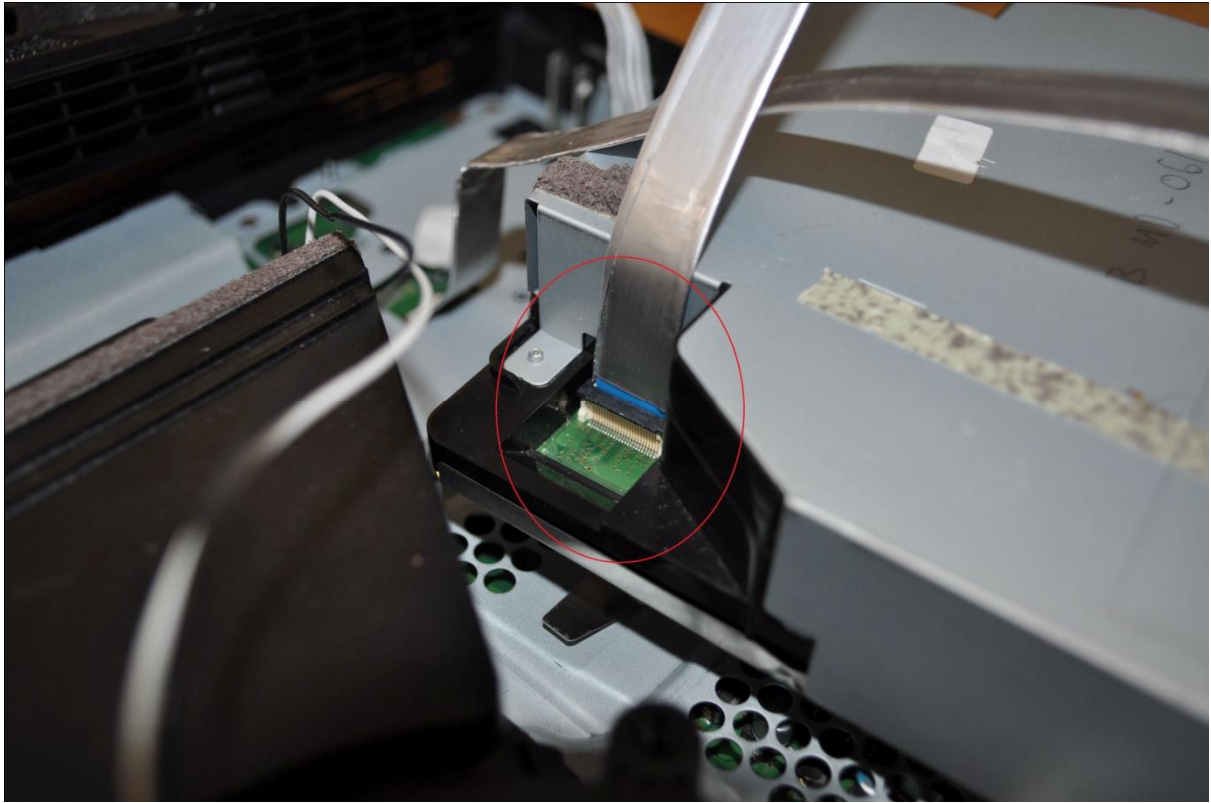


The switch on the right for 2k/CECHL and 2k5,3k and 4k is relevant to your console type should be set to the appropriate position.



Disconnect the drive FFC LVDS cable from your drive and motherboard. This will be replaced with the bundled Cobra cables. Then insert the respective 24 pin FFC LVDS cable (shown in the table above) between SATA_DRV on the ODE and 24 pin FFC LVDS connector on the console's drive:

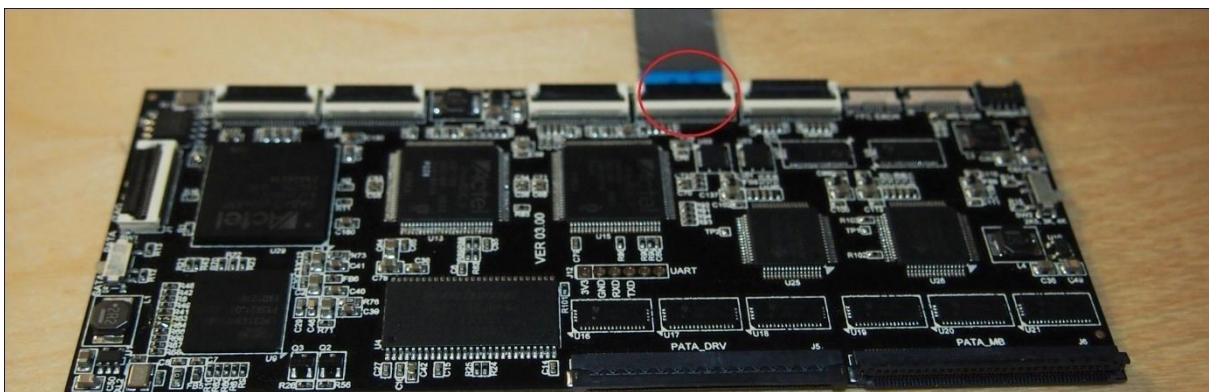
[2xxx/21xxx shown here:]



[CECHL shown here:]

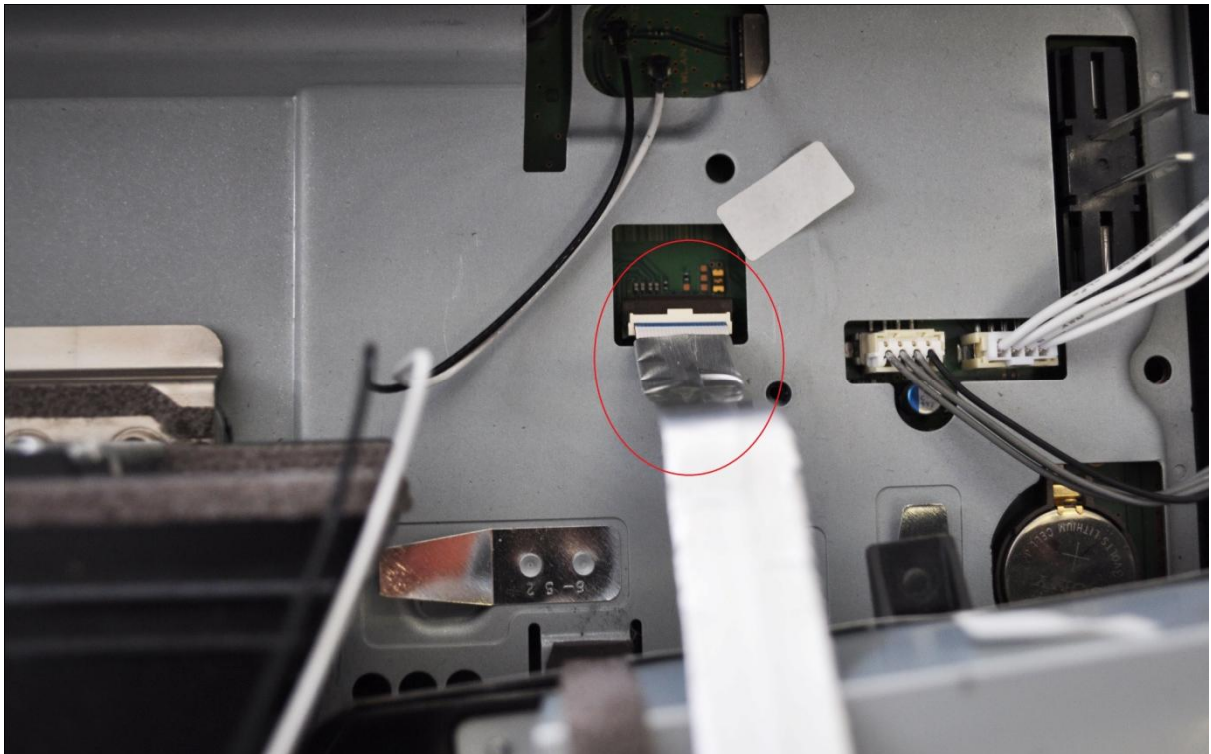


[Relevant connector on Cobra ODE shown here:]

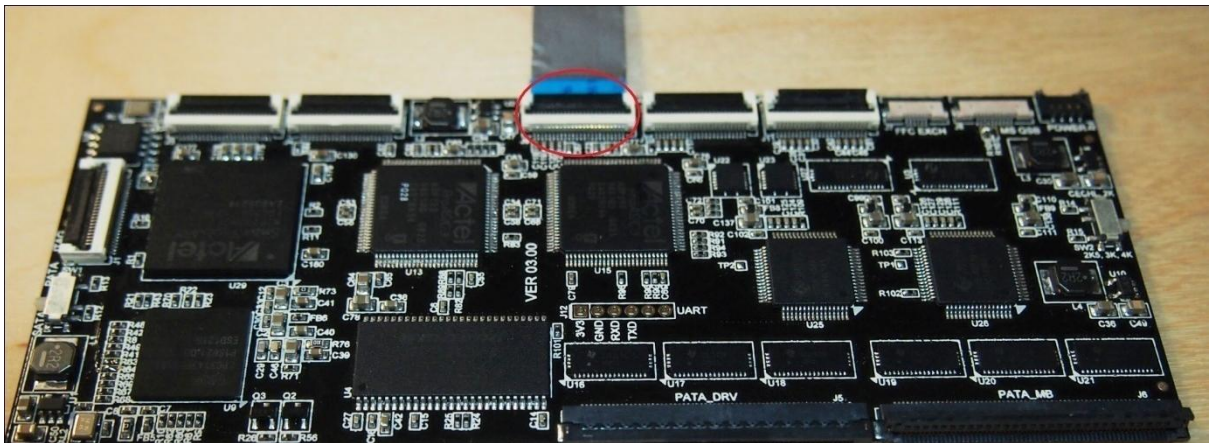


Next connect the correct cable type from table above between SATA-MB and the 24 pin FFC LVDS connector on the console motherboard:

[2xxx/21xx shown here:]

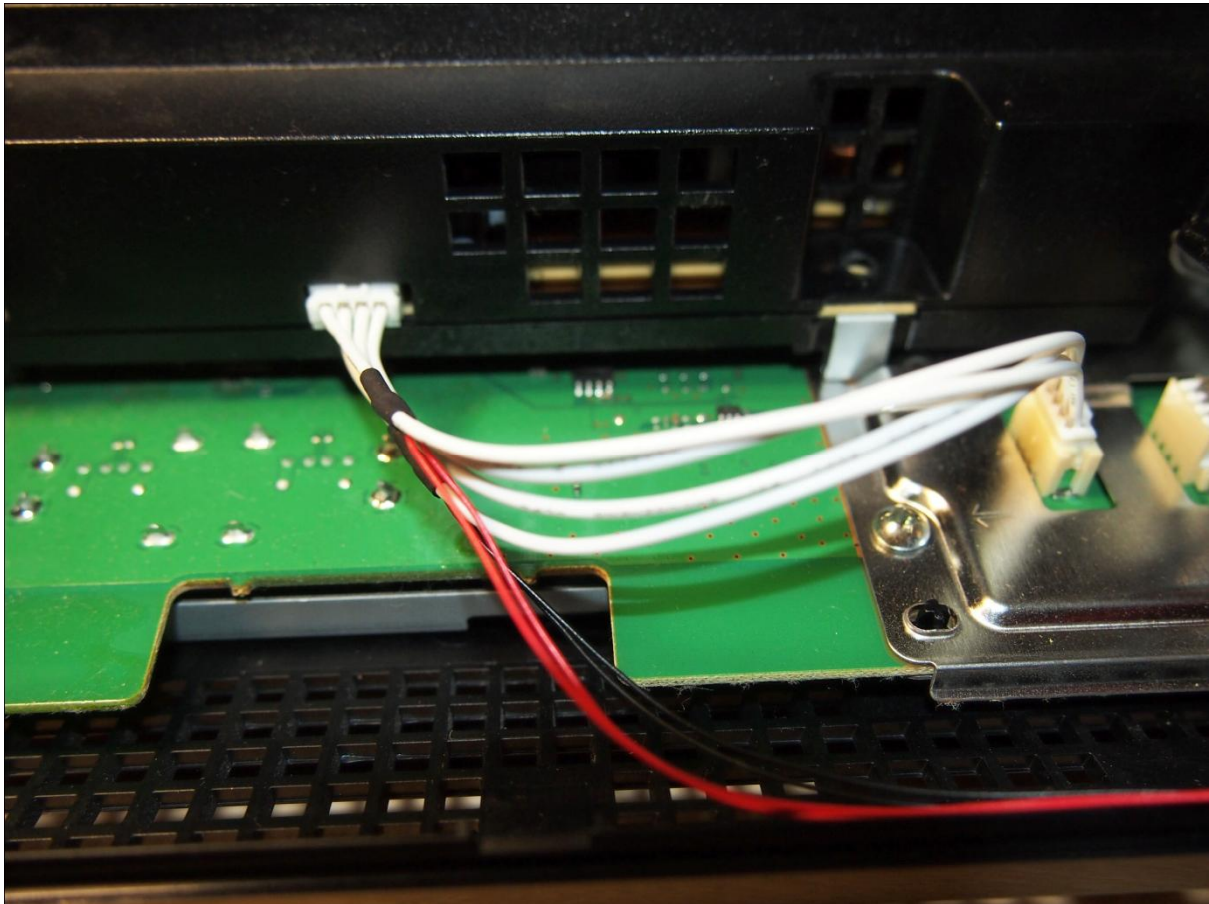


[CECHL shown here:]

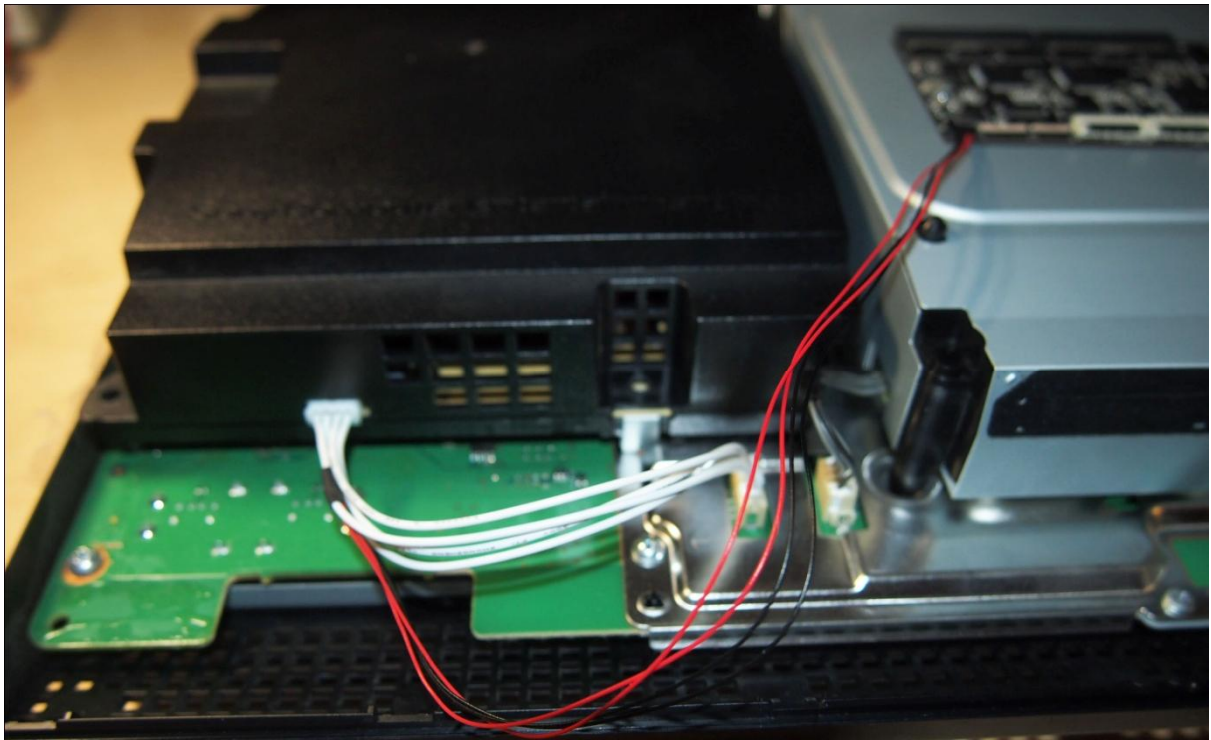


Disconnect the power cable between the console power supply and the console motherboard. Please do so carefully as the solder on these console connectors becomes brittle over time. Replace the cable with the correct type which has connector matching that of your console. Insert the 4 pin low profile connector to your Cobra ODE board connector marked power as shown here (note that the connector is top down press fit, not slide in). Kindly, note carefully the orientation and direction of the cable, failure to do so could cause damage or malfunction:

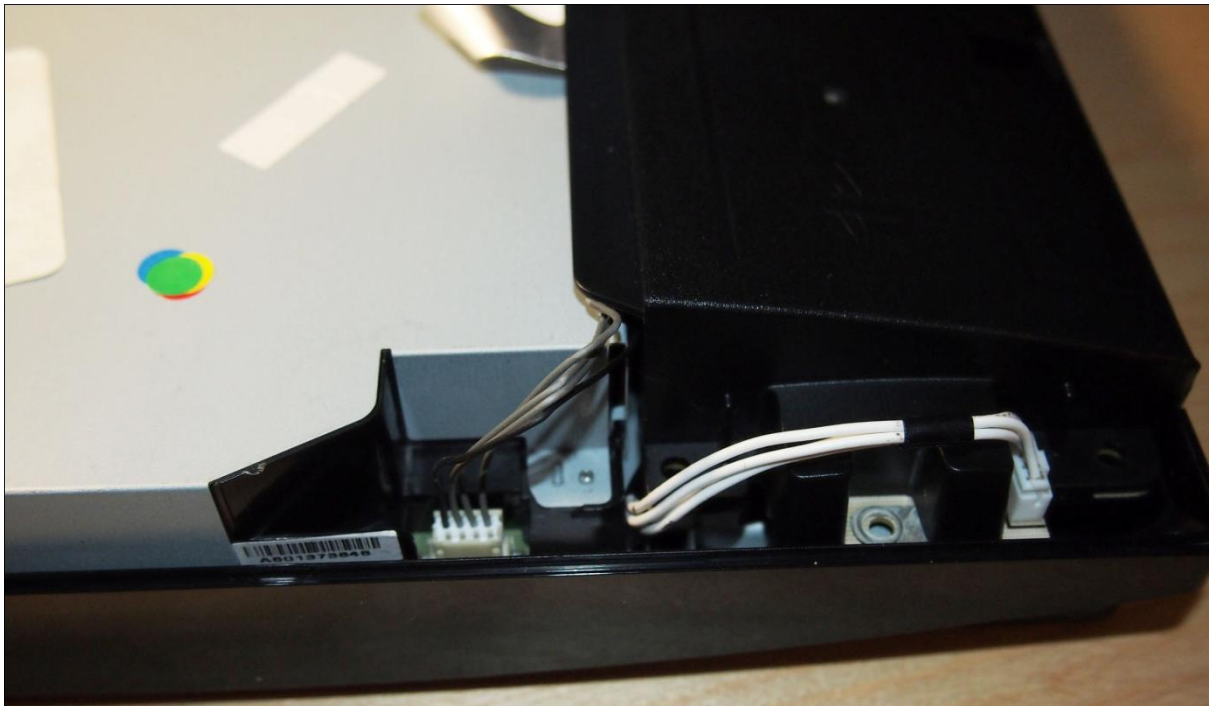
[CECHL shown here:]

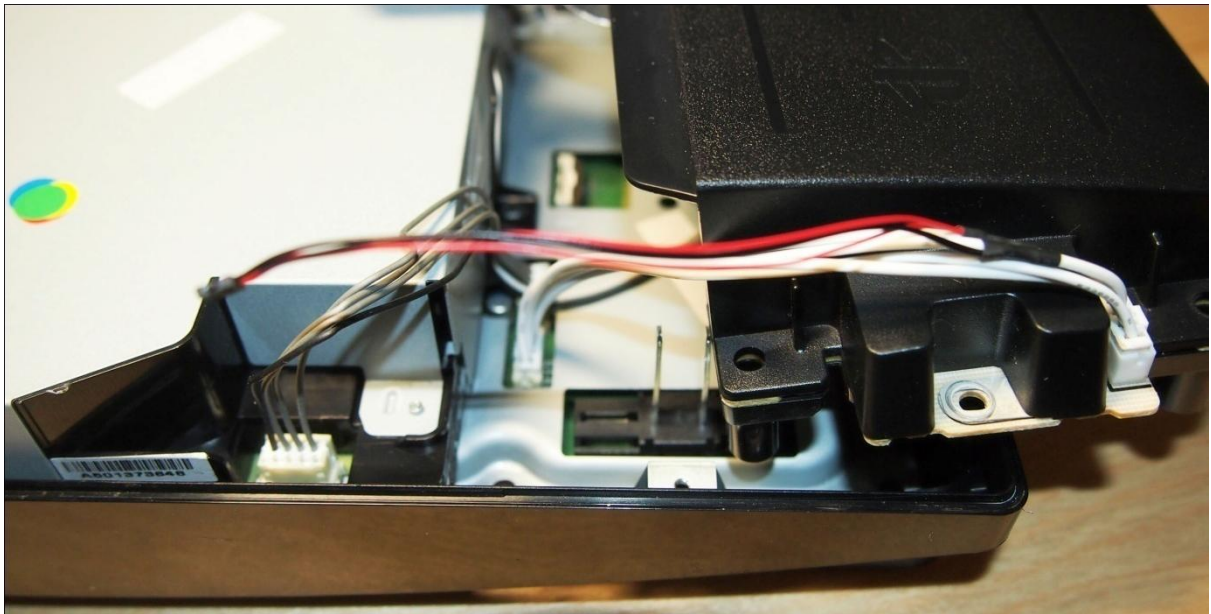
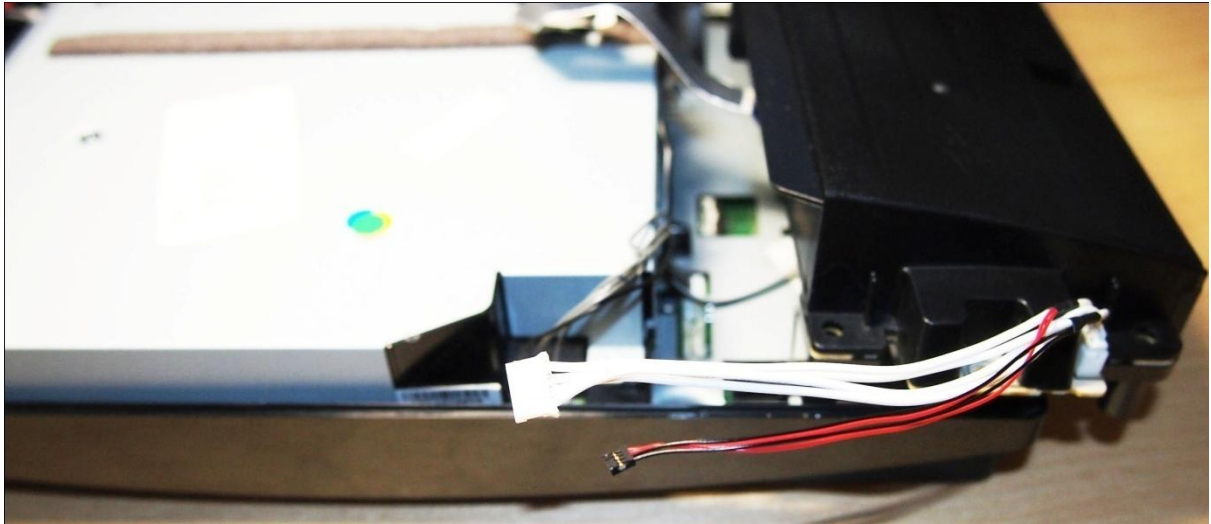


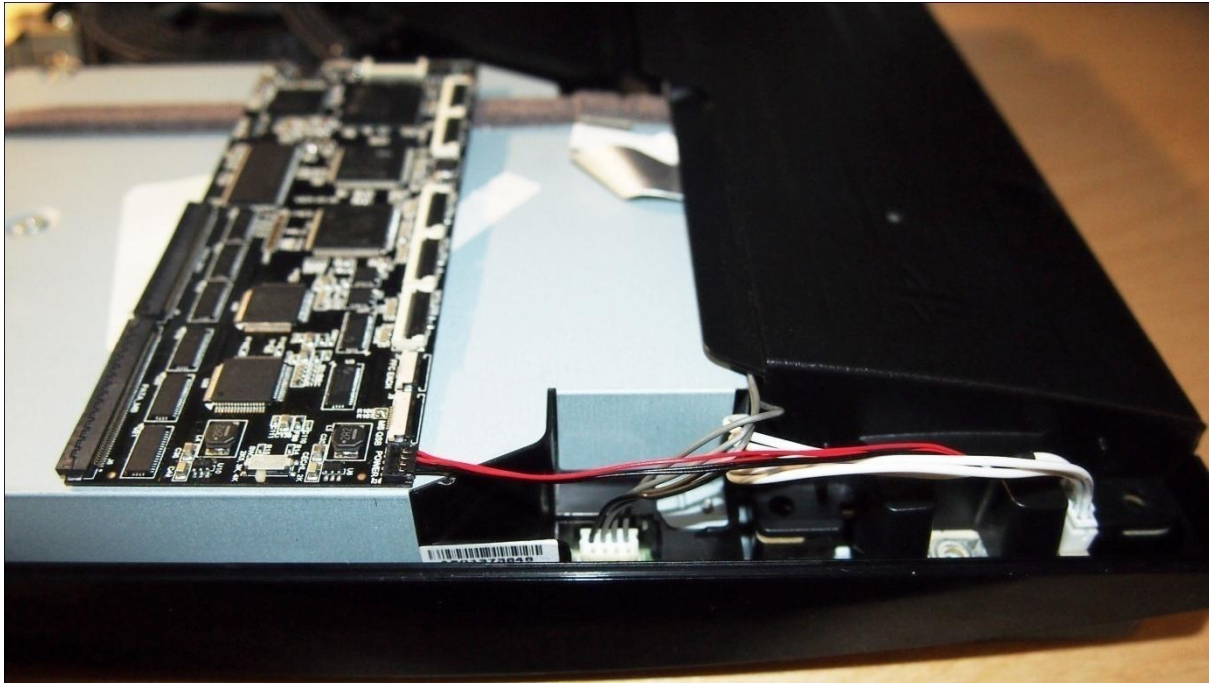
[CECHL shown here:]



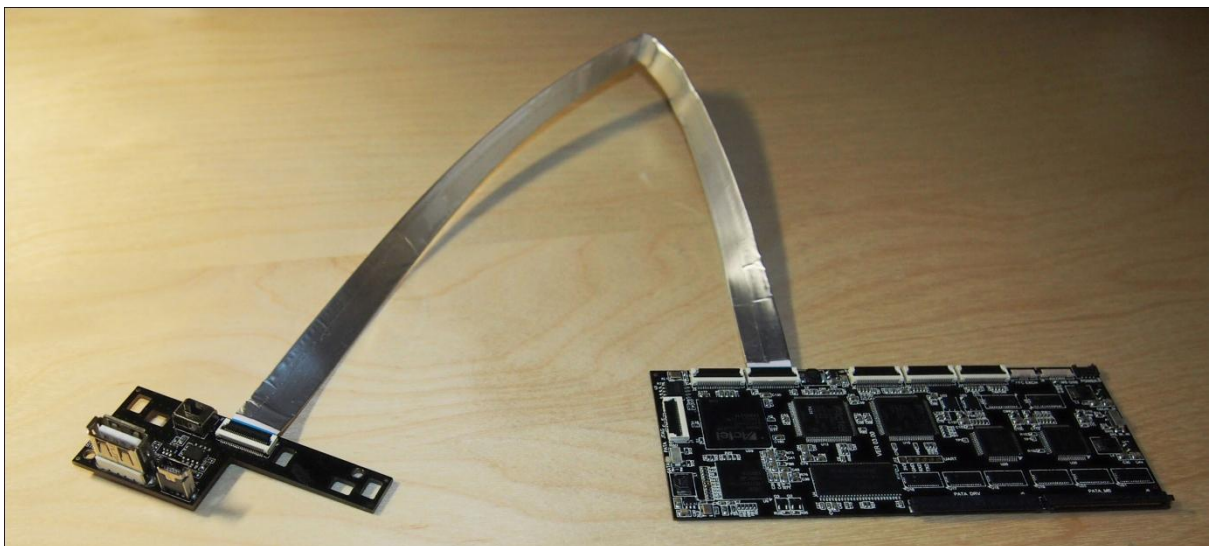
[2XXX/21XX shown here:]





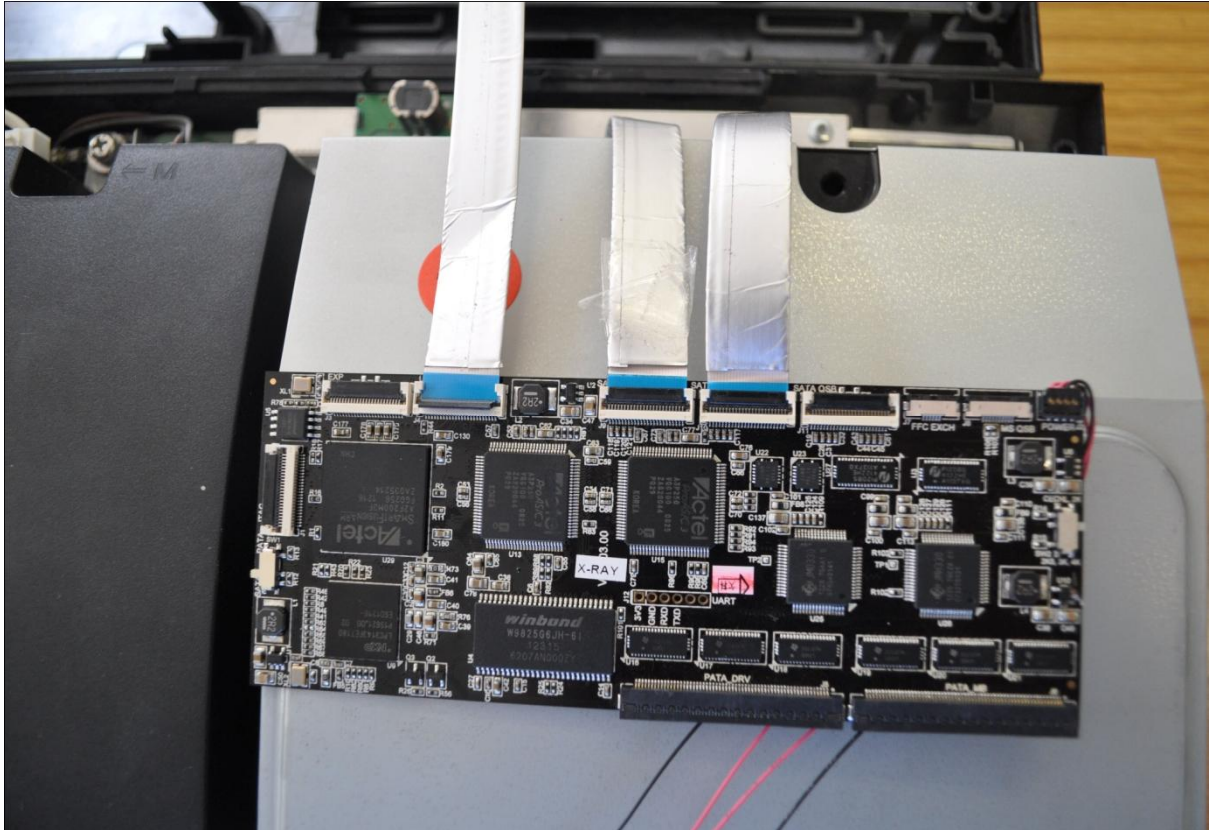


Finally, connect the clip on board between the FFC connector on the Cobra ODE marked UIF and FFC connector on the clip on PCB, using either cable D or E depending on your console type, demonstrated in the table above.



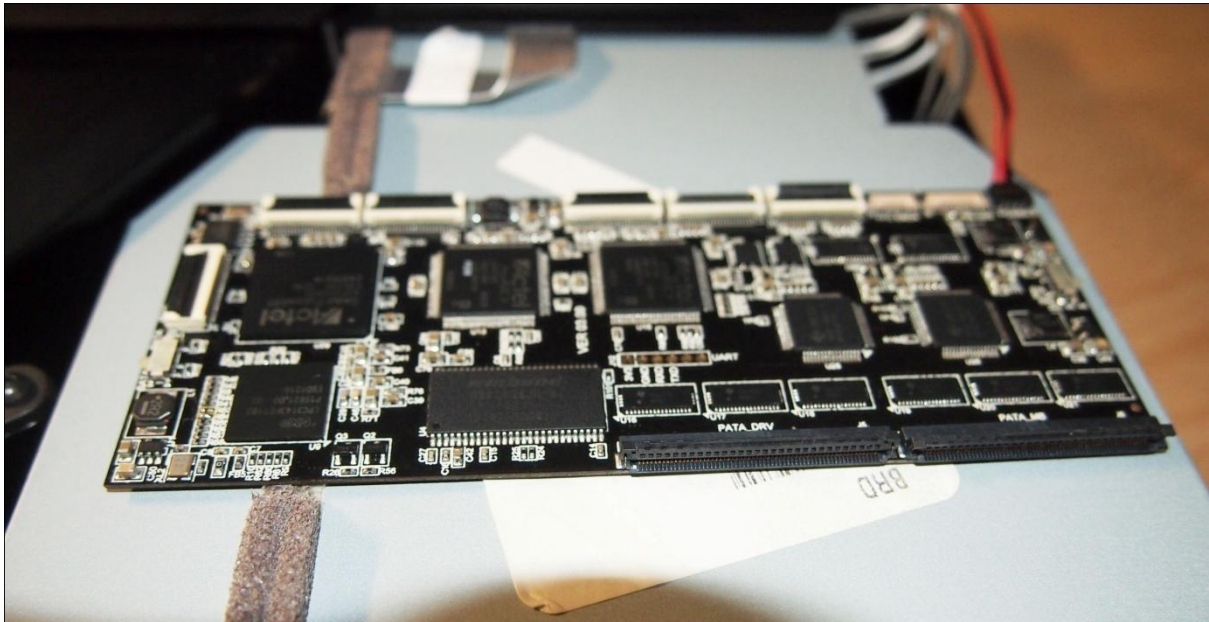
The Cobra ODE should be positioned inside the console as shown (SATA FAT/CECHL):

Please adhere the double sided adhesive Cobra ODE sticker between metal casing of drive and bottom of Cobra ODE main board to act as an insulating shield.

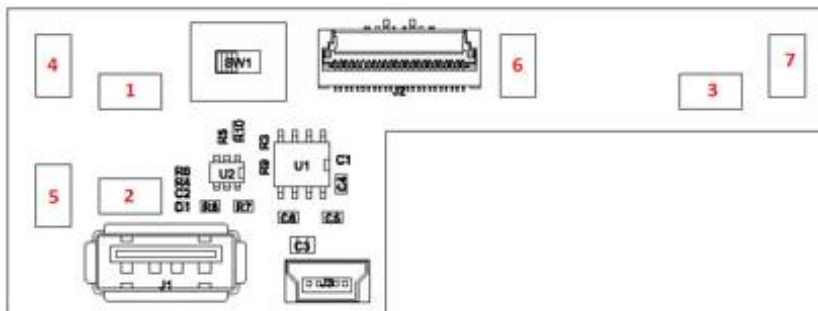


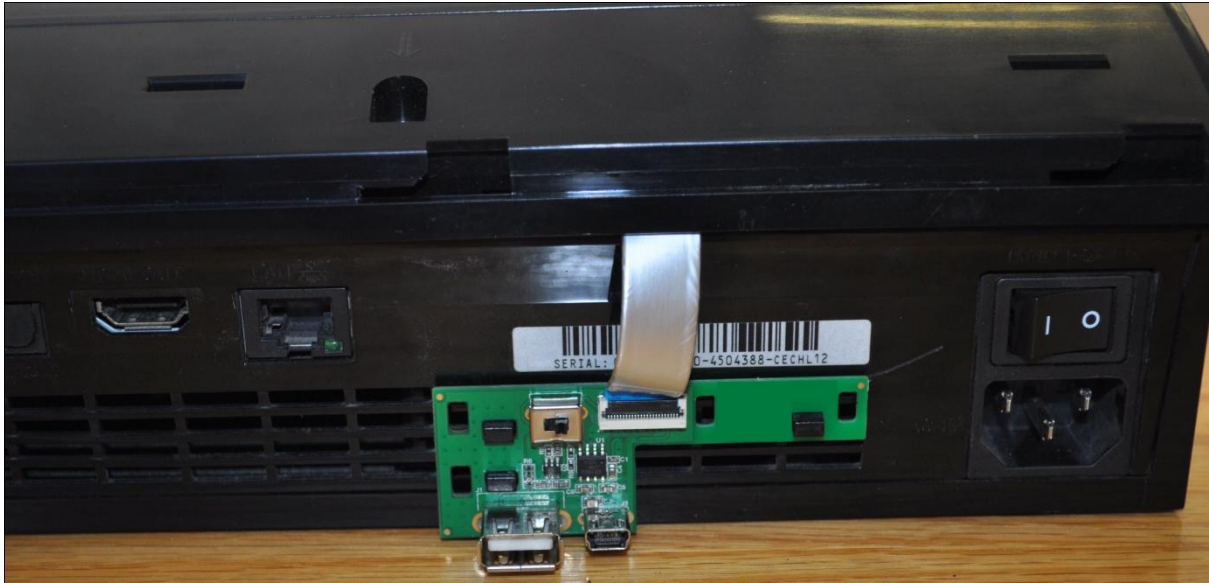
The Cobra ODE should be positioned inside the console as shown (CECH 2XXX/21XX):

Please adhere the double sided adhesive Cobra ODE sticker between metal casing of drive and bottom of Cobra ODE main board to act as an insulating shield.

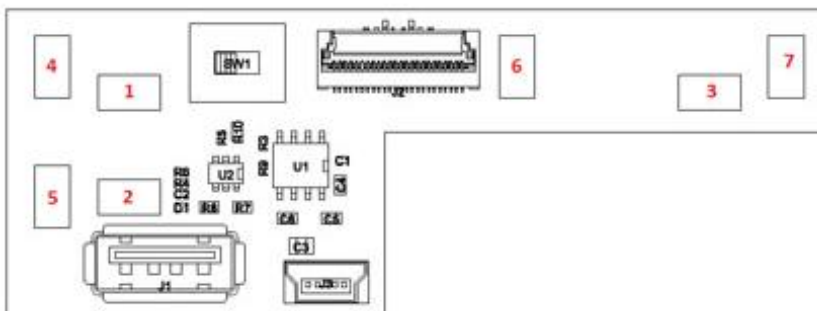


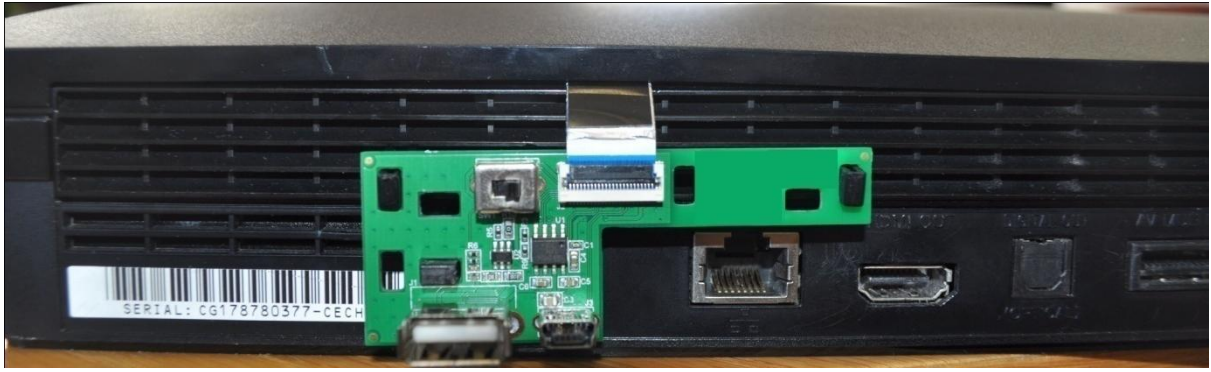
You can now attach the plastic clips to the clip on PCB as per drawing below and secure to the back of your console as shown here (SATA FAT) (Refer to table at the beginning of guide for usage/allocation of clips):





You can now attach the plastic clips to the clip on PCB as per drawing below and secure to the back of your console as shown here (CECH 2XXX/21XX) (Refer to table at the beginning of guide for usage/allocation of clips):





You can now re-assemble your console and get ready to play games....

Installation on newer SLIM and SUPER SLIM SATA models (CECH 25XX, CECH 3XXX and CECH 4XXX)

Disassembly guide for 4XXX:

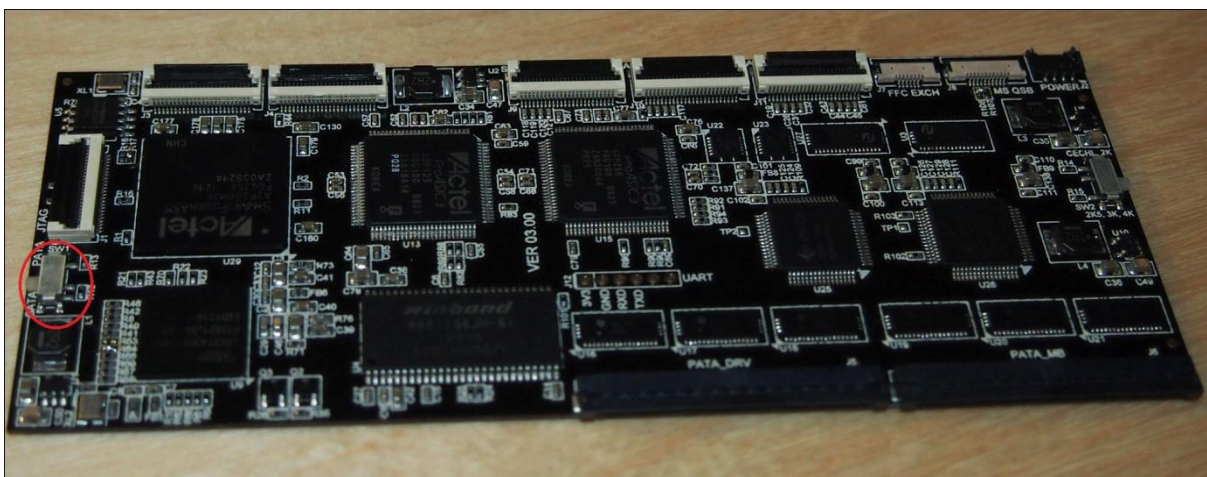
<http://www.ifixit.com/Teardown/PlayStation+3+Super+Slim+Teardown/10670/1?singlePage>

Please note the usage of cables from the table below:

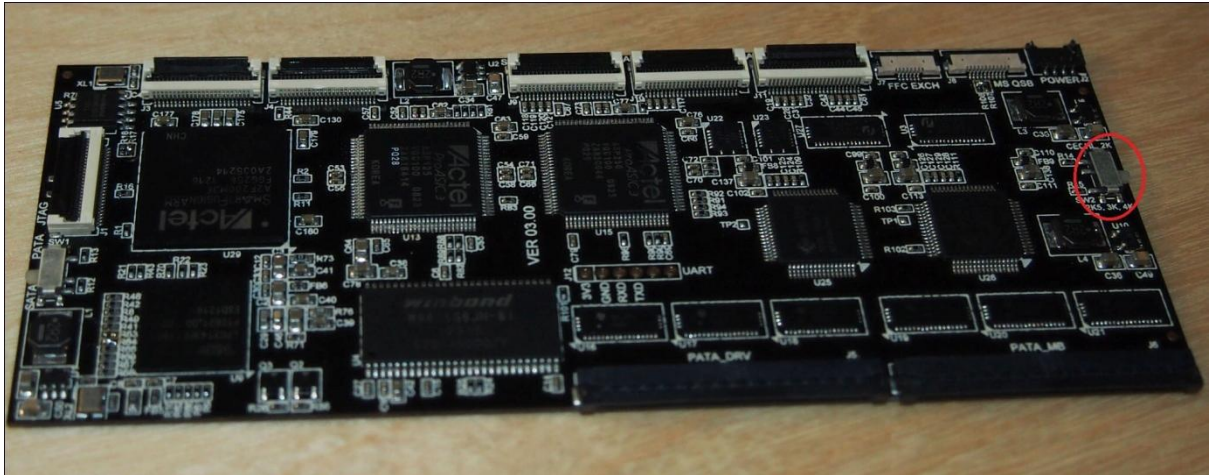
Model	Function	Cable	Length	Cable Type
25XX , 3XXX & 4XXX	QSB to ODE	FFC LVDS Cable, 24 Positions, Opposite side contact	370mm	F
	ODE to Clip on	FFC LVDS Cable, 24 Positions, Same side contact	300mm	C

NOTE: From PCB revision 4.20 and higher, the mechanical switches on the PCB have been removed. On these versions of PCB, it is no longer necessary to select the model or drive type of your console, the process now use auto detection.

Firstly select SATA mode on the left hand side of the ODE board, This enables drive communication for your type of console.

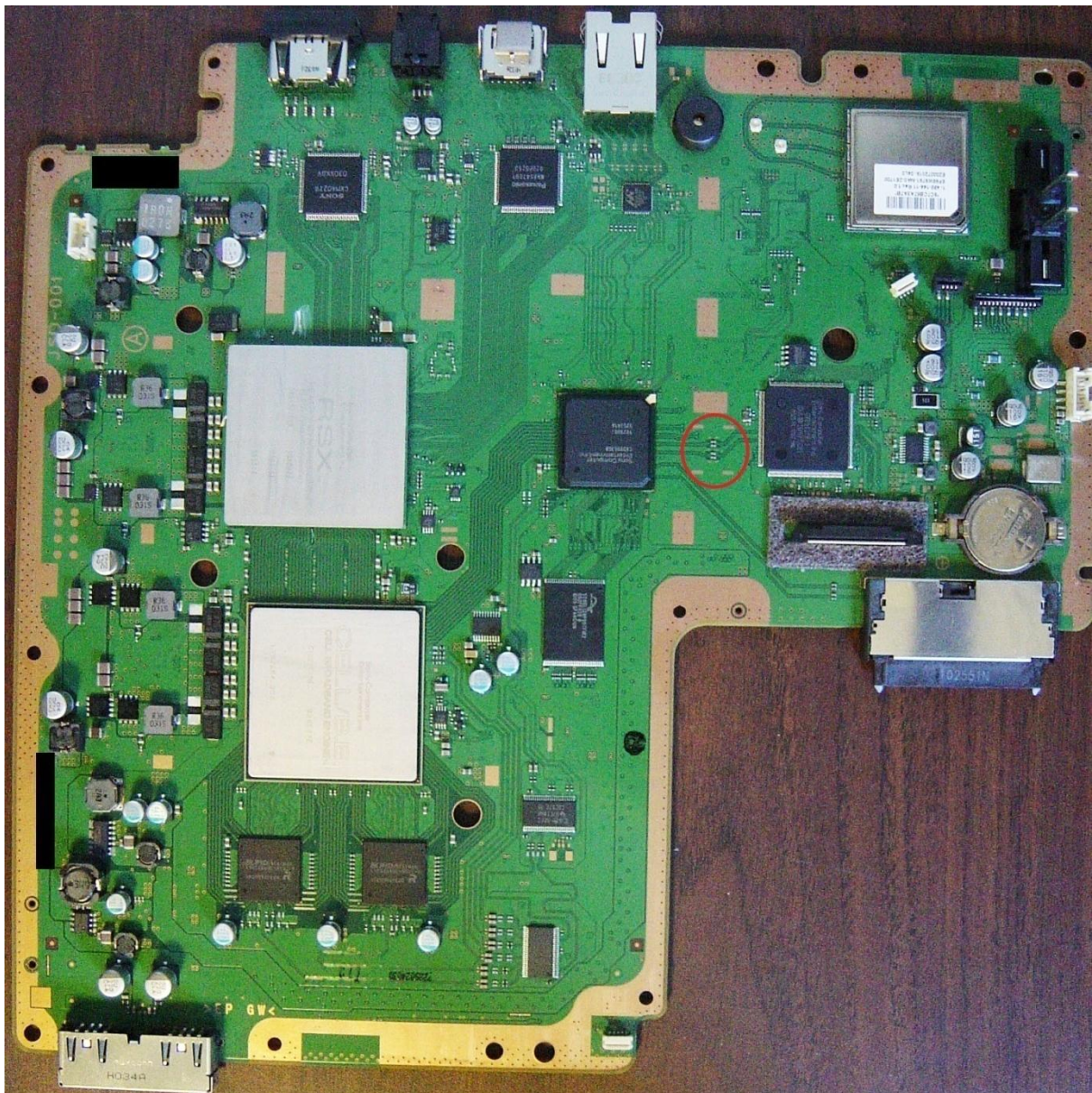


The switch on the right for 2k/CECHL and 2k5,3k and 4k is relevant to your console type should be set to 2K5,3K,4K position:

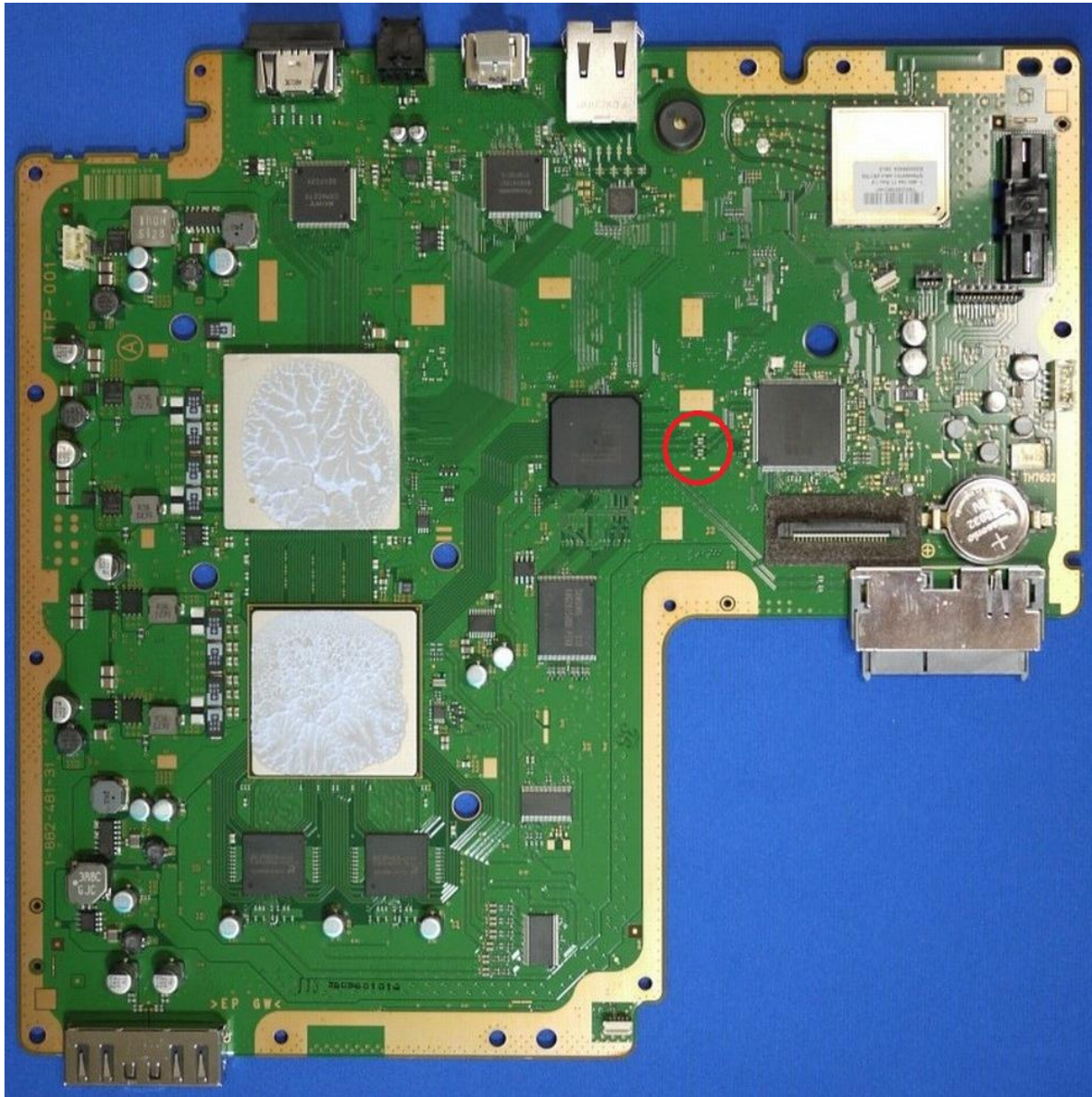


Carefully remove the capacitors in the SATA signals area highlighted in the red circle in the pictures below, for your respective console model, using a fine tip low power soldering iron. Please take absolute care when doing so, as these traces are essential for the console and ODE to function:

[25XX JSD-001 Motherboard shown here:]



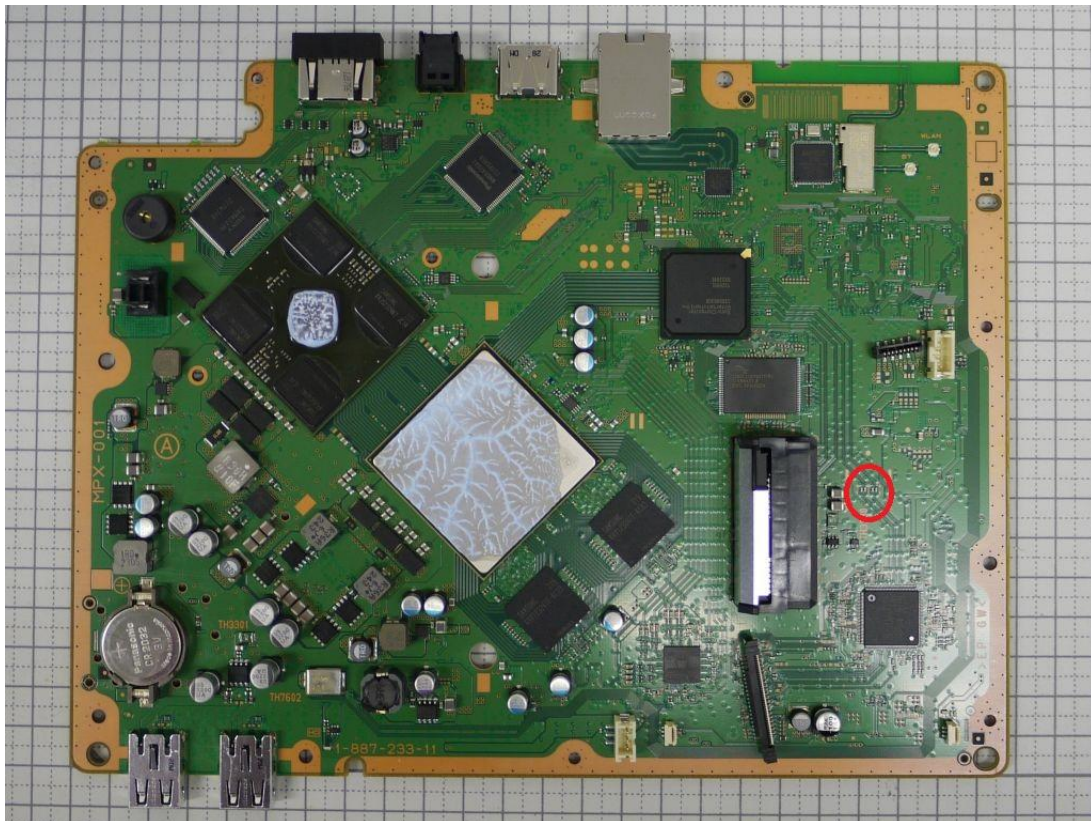
[25XX JTP-001 Motherboard shown here:]



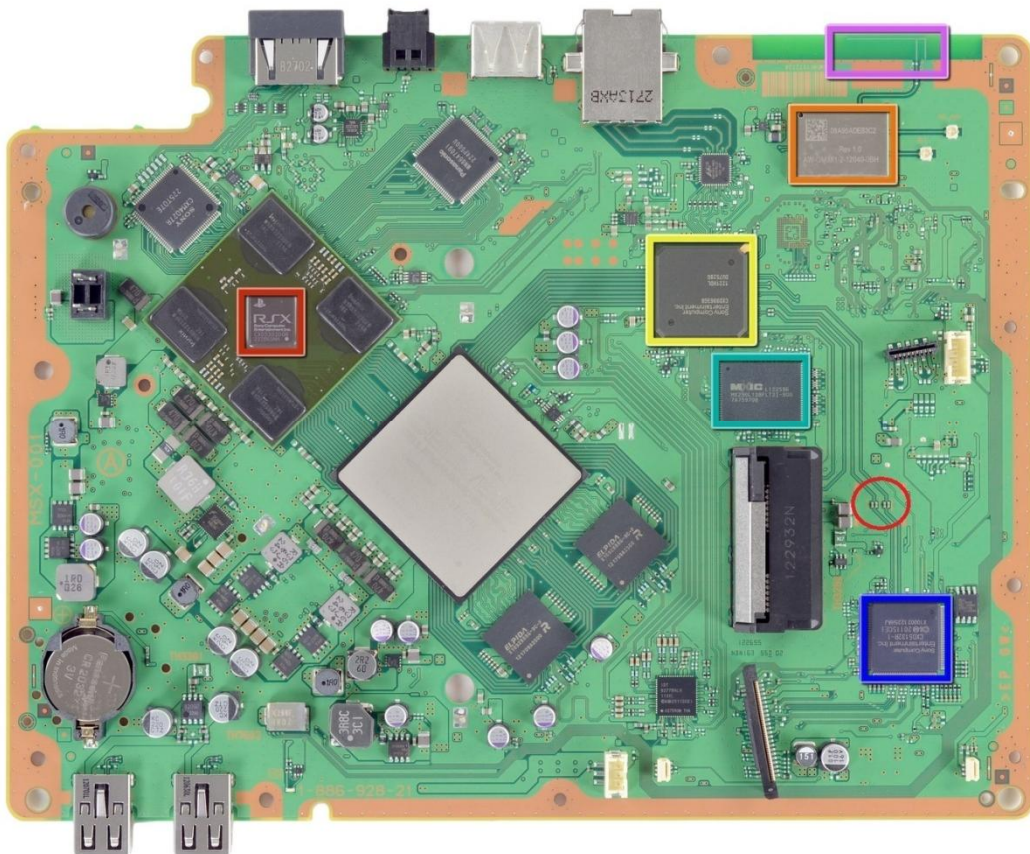
[3XXX KTE-001 Motherboard shown here:]



[4XXX MPX-001 Motherboard shown here:]

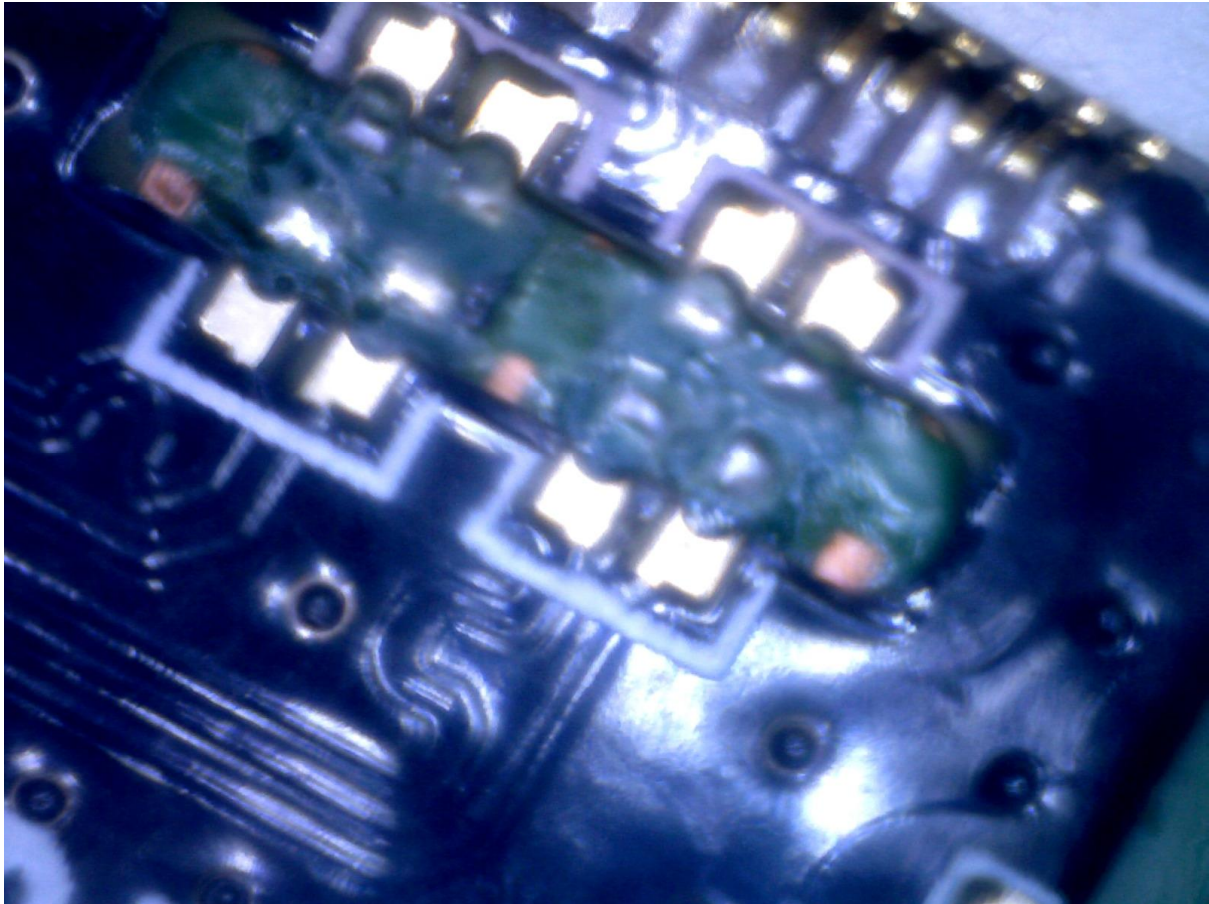


[4XXX MSX-001 Motherboard shown here:]



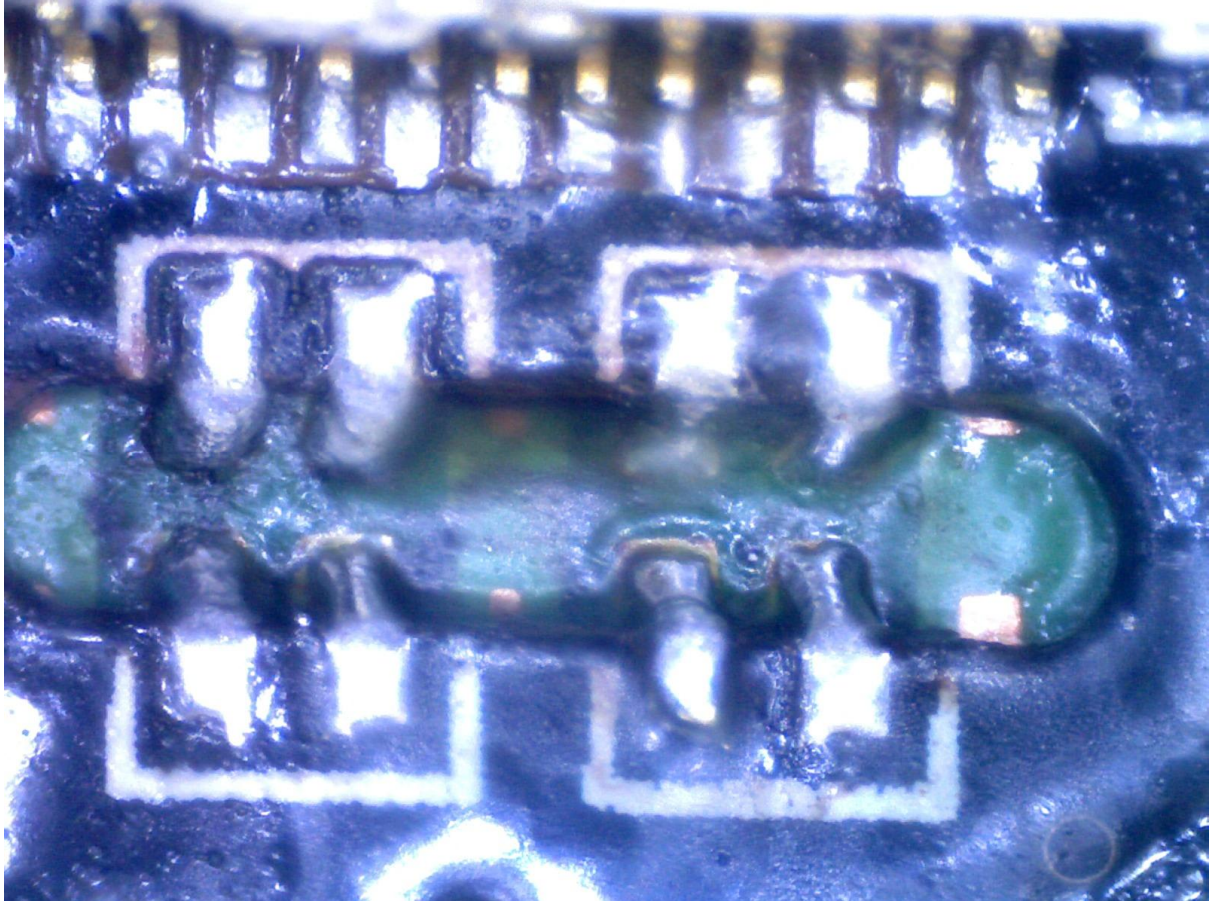
***Credit to PS3 Dev Wiki for Motherboard images shown.

Once you have removed the capacitors from the SATA lines and placed the QSB on top of your Motherboard in alignment with solder pads, it should look something like this:



Please ensure that the soldering is done cleanly and avoiding any excess solder. Also ensure that the board sits symmetrically so as to avoid signal issues on SATA lines.

The soldering of the pads should be done one at a time resulting in something like the image below:

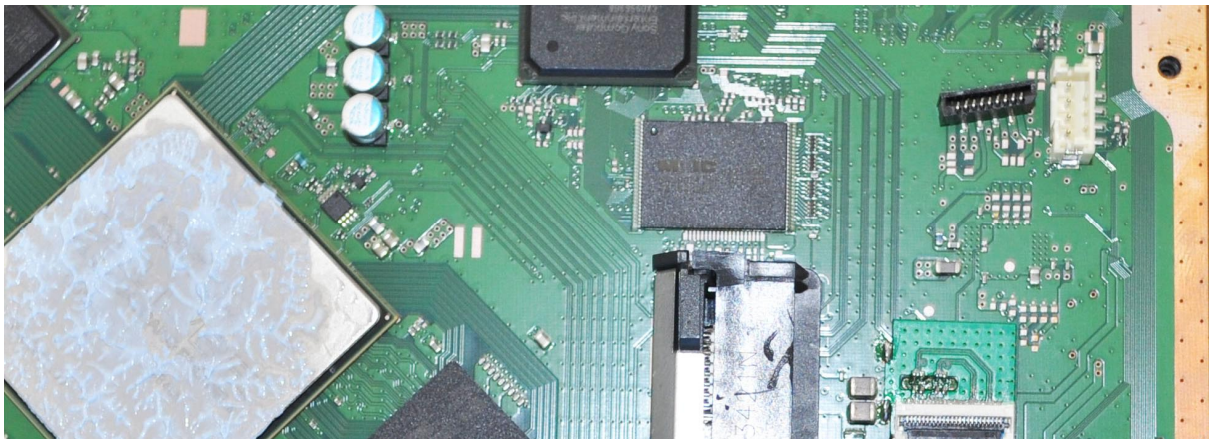


Once you have soldered the SATA QSB to your console Motherboard, it should look similar to the image below:

[25xx/3xxx shown here:]



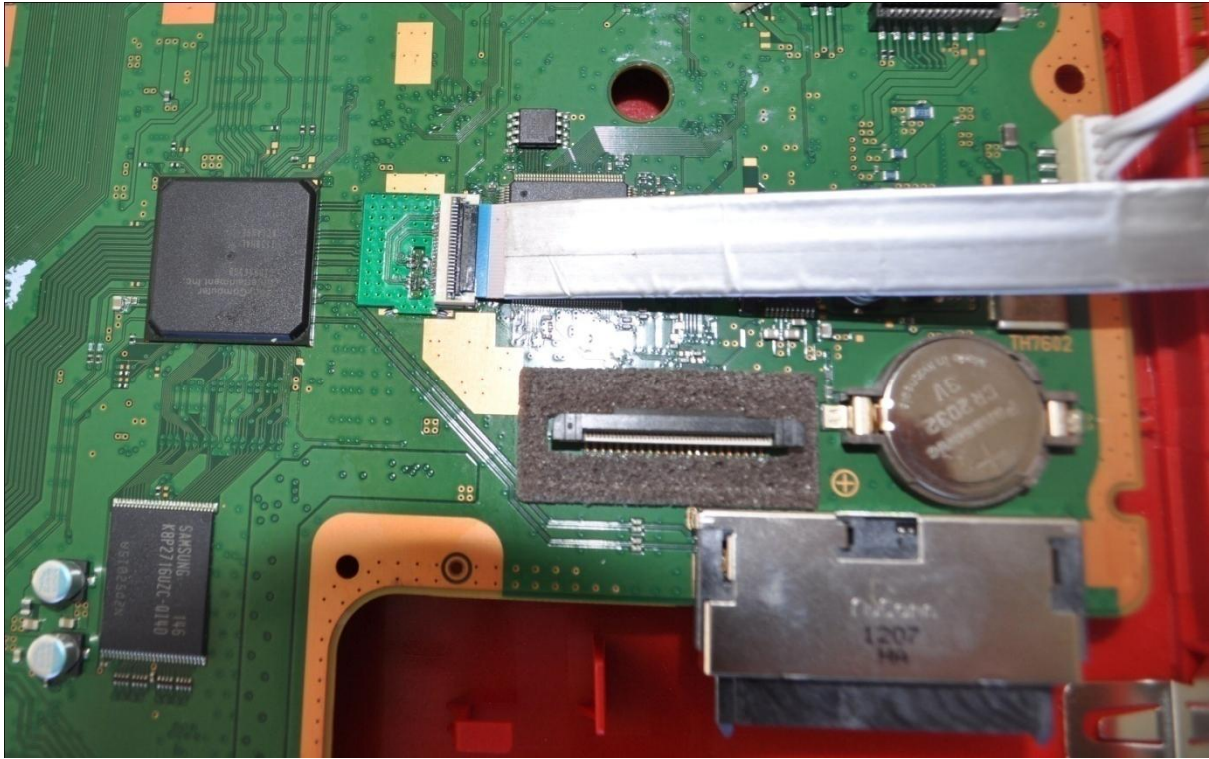
[4xxx shown here:]



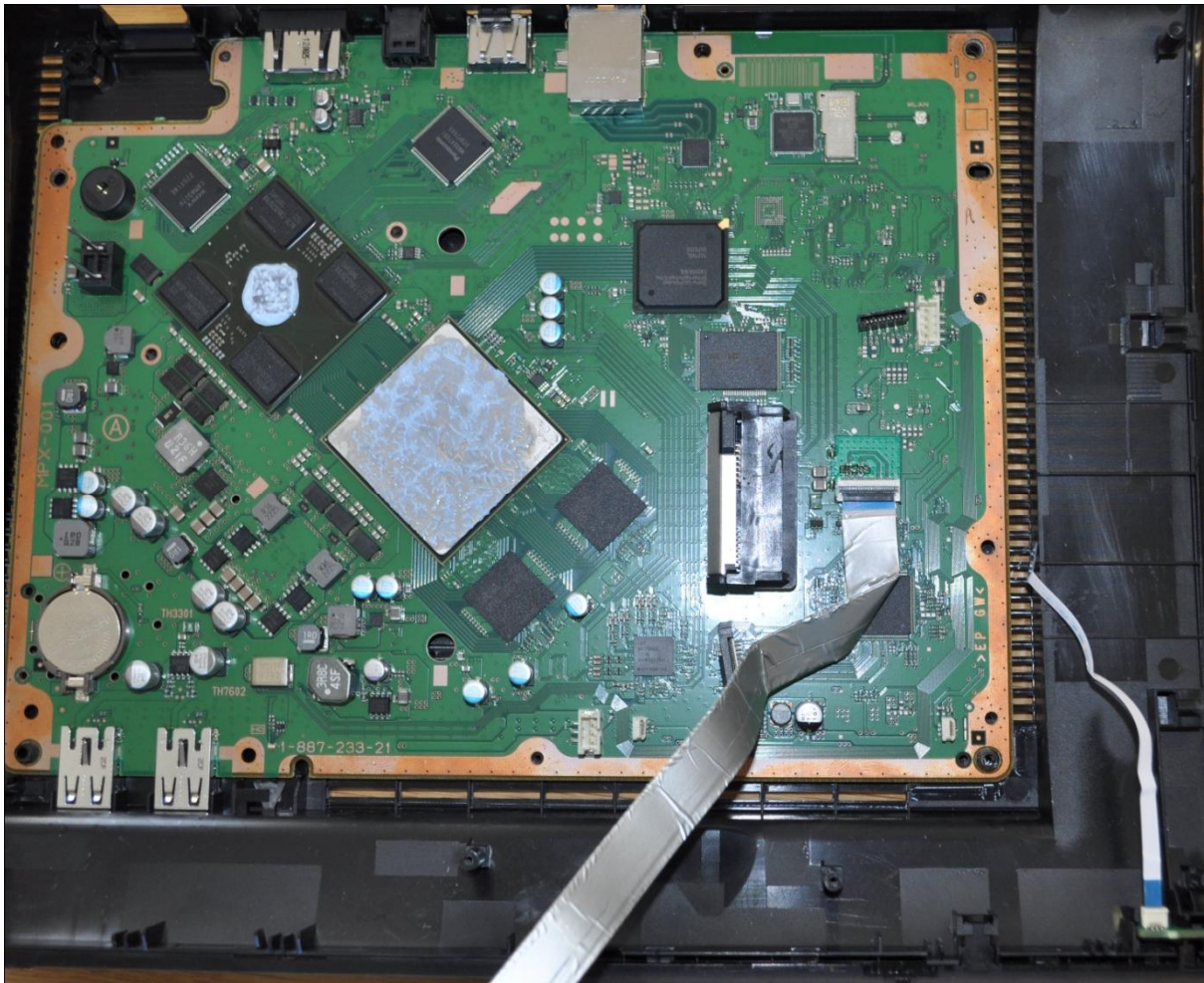
Should you wish to restore you motherboard to it original state, carefully de-solder de QSB then clean up the solder traces and re-solder the original capacitors or replacement capacitors (10nf)

Then insert the 24 pin FFC LVDS cable (Marked as F the table above) between SATA QSB on the ODE and 24 pin FFC LVDS connector on the QSB which you soldered to the console motherboard.

[25xx/3xxx shown here:]

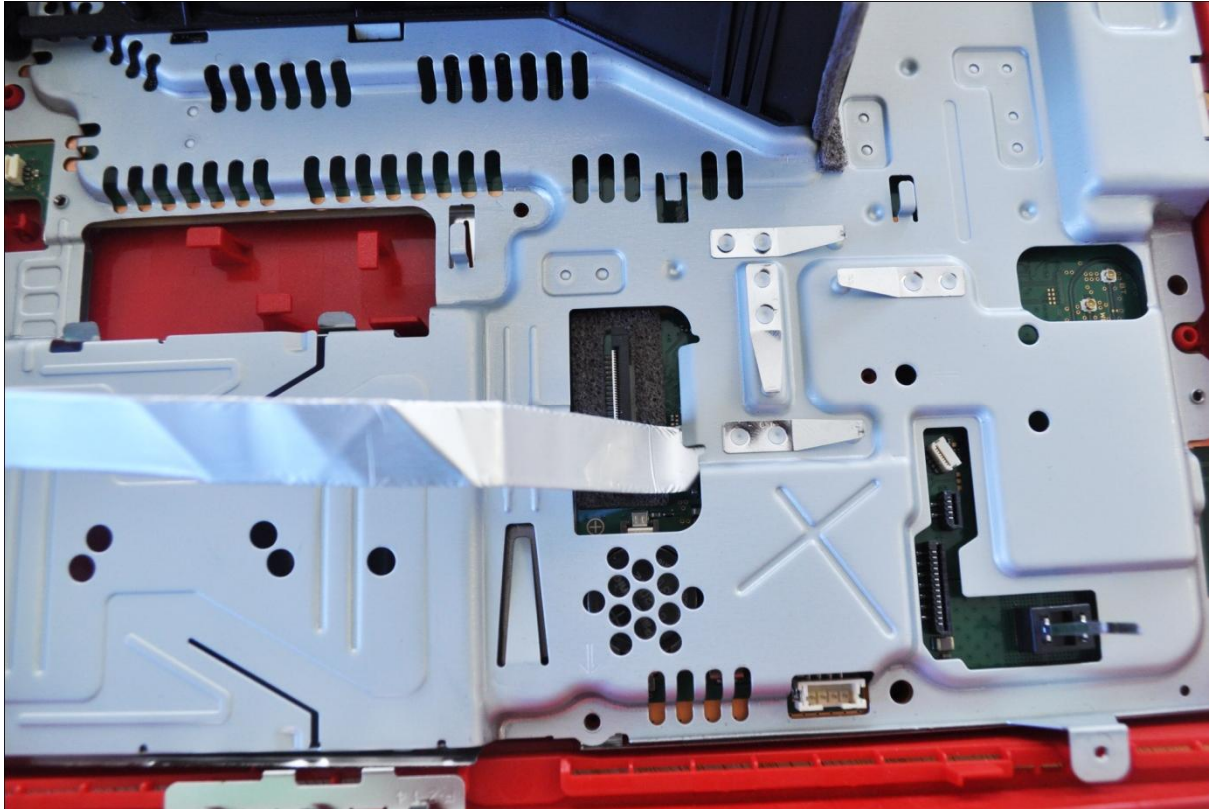


[4xxx shown here:]

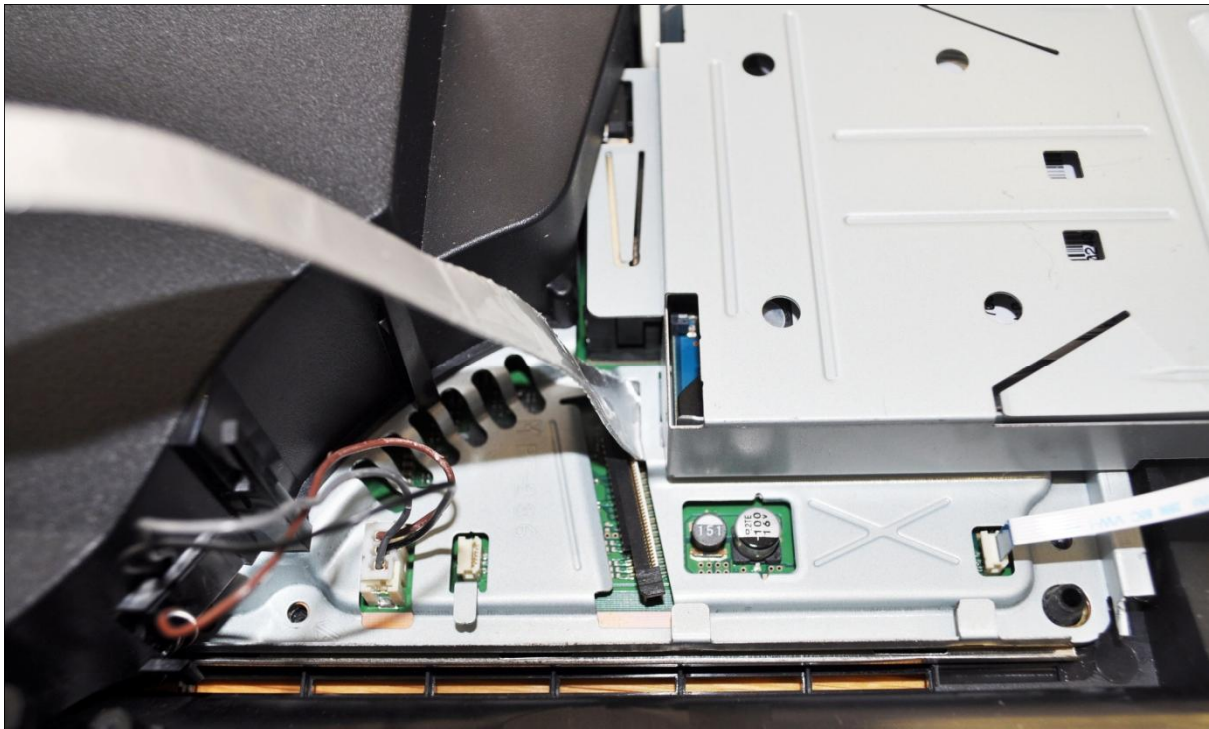


Route the FFC cable out of the shielding as shown:

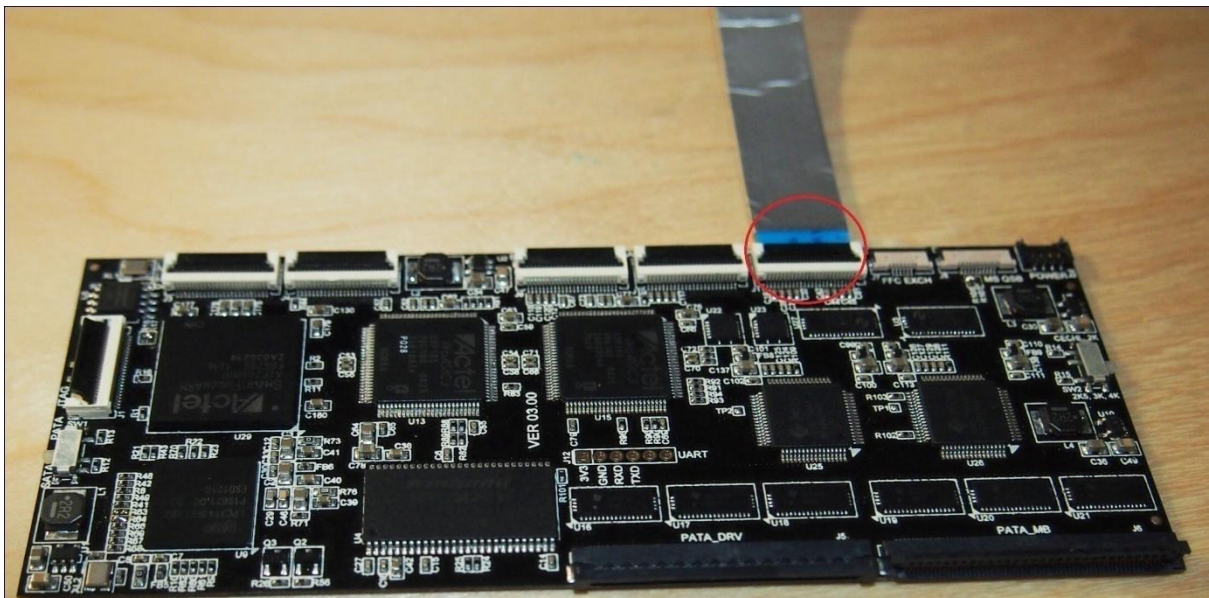
[25xx/3xxx shown here:]



[4xxx shown here:]



[Relevant connector on Cobra ODE shown:]

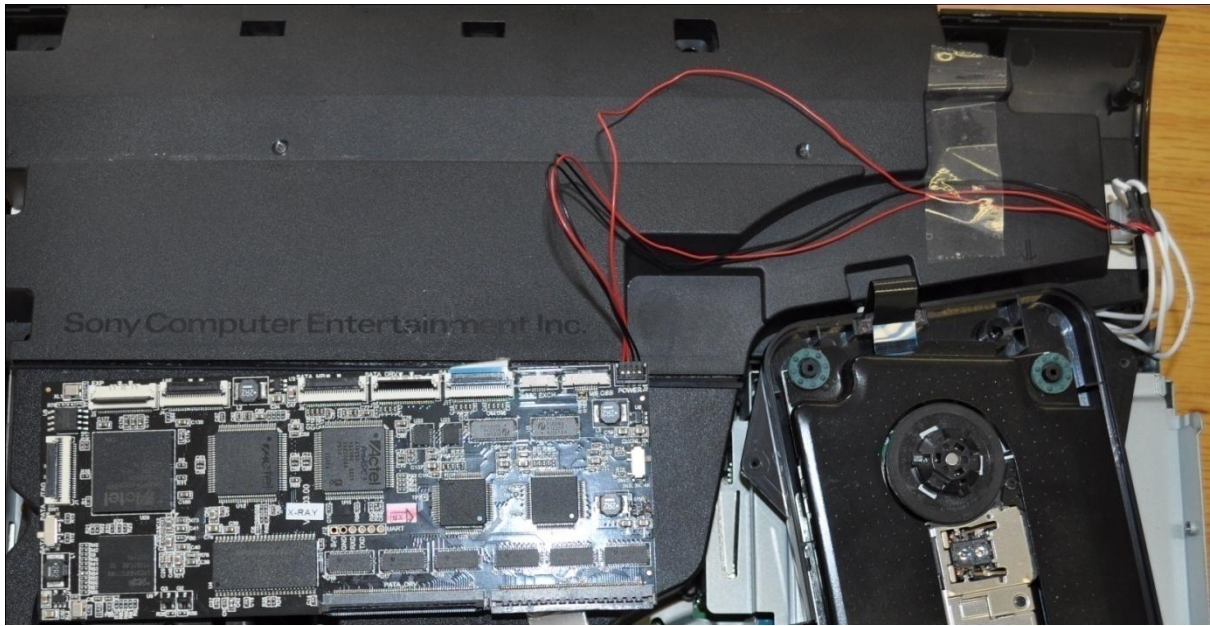


Disconnect the power cable between the console power supply and the console motherboard. Replace the cable with the correct type which has connector matching that of your console. Insert the 4 pin low profile connector to your Cobra ODE board connector marked power as shown here (note that the connector is top down press fit, not slide in) Kindly, note carefully the orientation and direction of the cable, failure to do so could cause damage or malfunction:

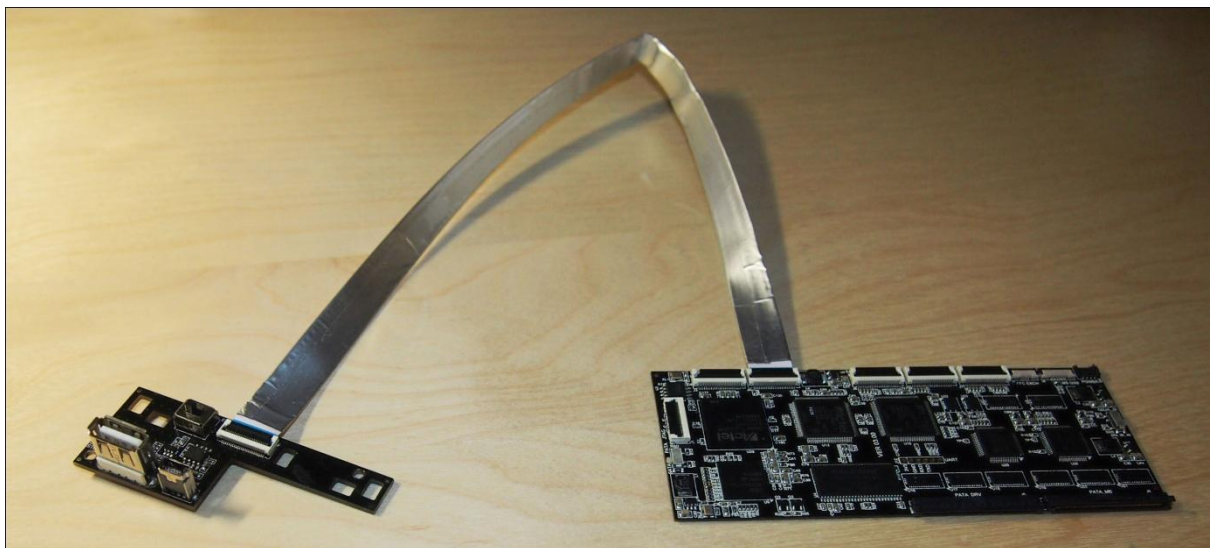
[25xx/3xxx shown:]



[4xxx shown:]

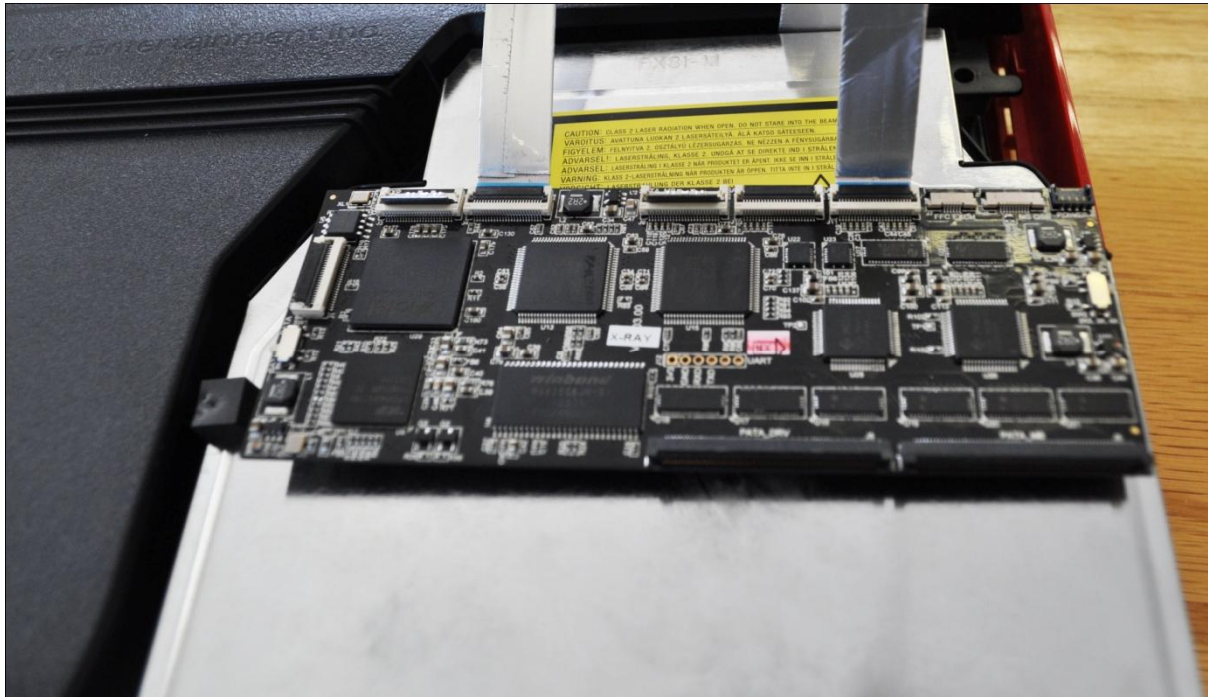


Finally, connect the clip on board between the FFC connector on the Cobra ODE marked UIF and FFC connector on the clip on PCB, using cable C, demonstrated in the table above (CECH25XX/3XXX) & (CECH4XXX).

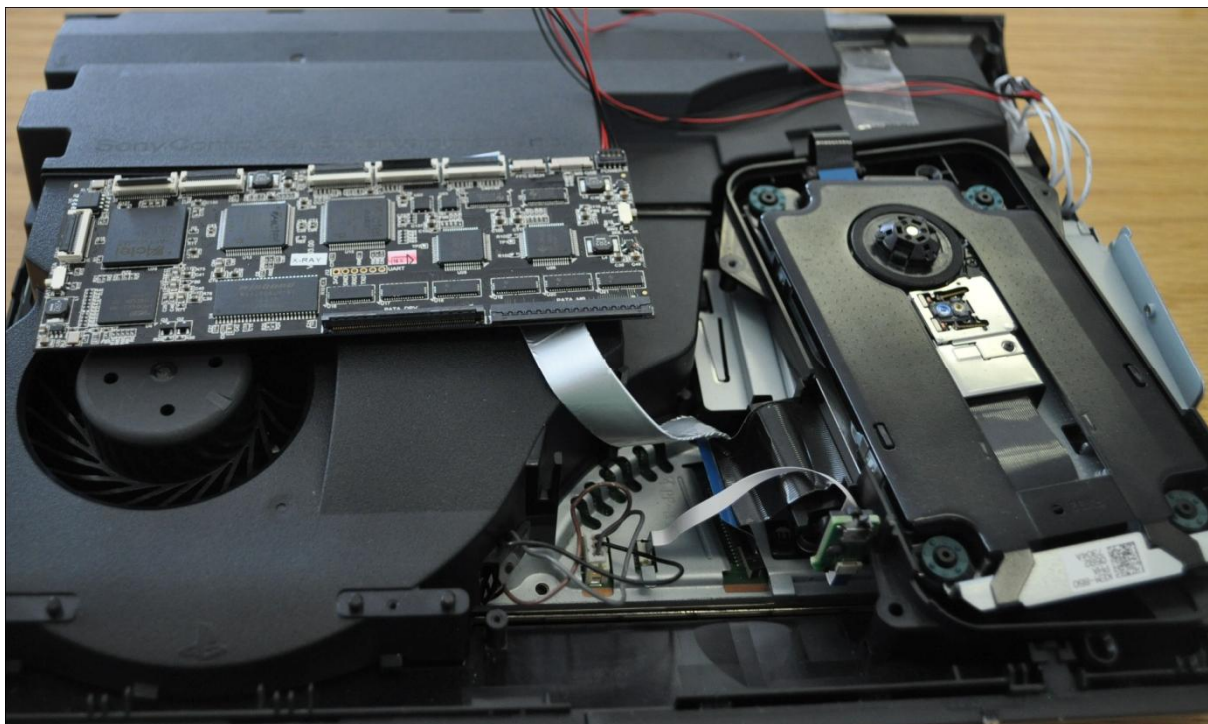


The Cobra ODE should be positioned inside the console as shown (CECH25XX/3XXX):

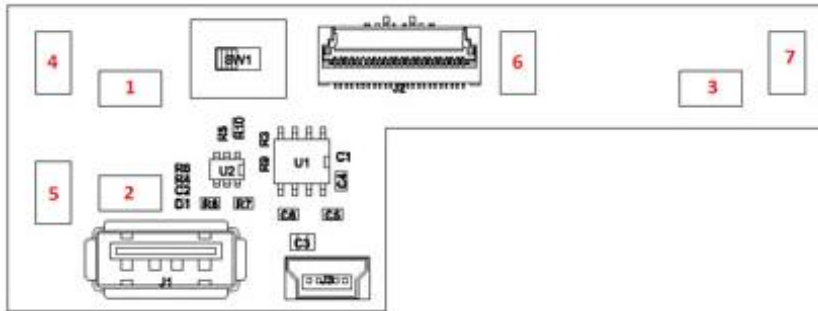
Please adhere the double sided adhesive Cobra ODE sticker between metal casing of drive and bottom of Cobra ODE main board to act as an insulating shield.



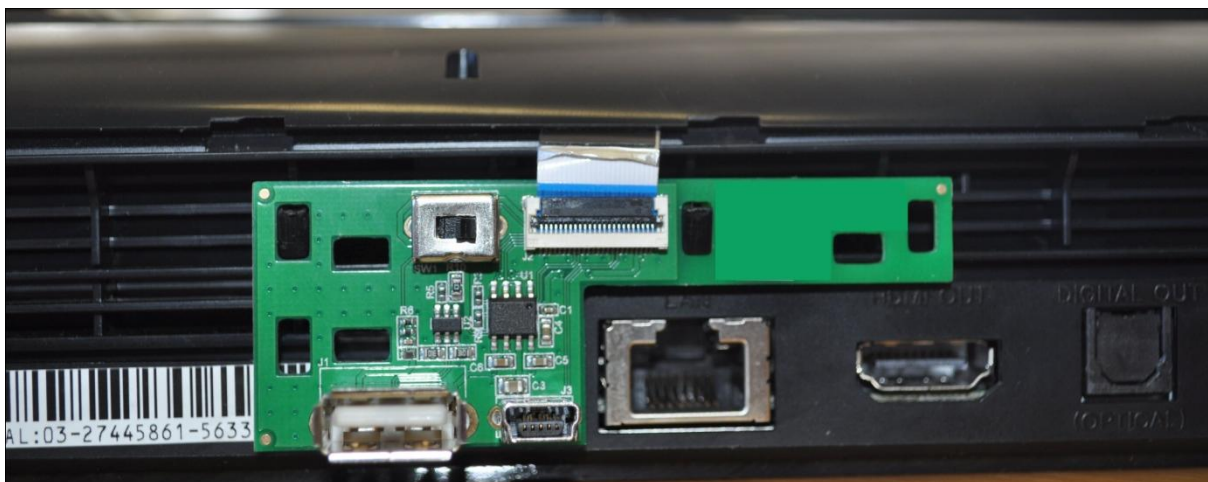
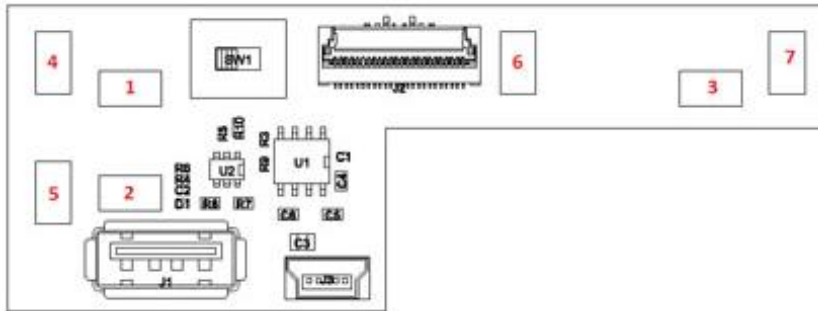
The Cobra ODE should be positioned inside the console as shown (CECH4XXX):



You can now attach the plastic clips to the clip on PCB as per drawing below and secure to the back of your console as shown here (CECH25XX/3XXX) (Refer to table at the beginning of guide for usage/allocation of clips) :



You can now attach the plastic clips to the clip on PCB as per drawing below and secure to the back of your console as shown here (CECH4XXX) (Refer to table at the beginning of guide for usage/allocation of clips) :



You can now re-assemble your console and get ready to play games....

Thanks for purchasing the Cobra ODE!

CHECKLIST

- * Make sure you used the right cables, the length may not matter but pay attention to the same-side contacts and opposite-side contacts cables, where same-side contacts has the blue side on the same side of the cable, and opposite-side contacts have the blue side on opposite sides of the cable.
- * Make sure all the cables are connected with the blue side on the top.
- * Make sure you pushed the cables all the way through, and they are securely in place. The cable must not come from an angle that would tilt the cable out of its connector.
- * Make sure the power cable is connected in the right direction. The white cable can be plugged in both directions between the power supply and the PS3 motherboard, but only one direction will work. Refer to the pictures in the installation manual for the way to install it properly.
- * Make sure the ODE board is isolated from the drive. The COBRA ODE bundle comes with a sticker with the COBRA ODE logo on it, that's a double-sided sticker and must be used to isolate the board to avoid shorts which can cause failure or instability.
- * Make sure the PATA/SATA and CECHL,2K/2k5,3k,4k switches on the ODE are set to the correct position.
- * Make sure the QSB is soldered correctly, that all 8 contacts are soldered properly and there are no shorts between them.
- * If using NTFS, make sure that NTFS partition is using a 4096 cluster size, and that all the files are correctly placed in the COBRA directory.
- * If using FAT32, make sure the FAT32 partition is the first partition on the drive.
- * Make sure you always "safely remove hardware" or eject in Windows before removing your HDD from your PC. Not doing that could cause the partition to be corrupted when you remove the HDD and may not work with the ODE until the partition is repaired.
- * If the HDD is using too much power, make sure you connect it properly with the USB Y cable provided for that purpose. Connect the USB Y cable to a USB wall charger or a PC nearby.

TROUBLESHOOTING GUIDE :

Q: When I connect the power, the PS3's LED turns off

A: If on a SATA model, make sure you used the right side cables between the motherboard and the ODE and the ODE and the drive. Also make sure you connected the power cable in the right direction for the ODE. If an HDD is inserted, try using the USB Y Cable. Also make sure the ODE is properly isolated using the double sided sticker.

Q: PT works, but not EMU:

A: You used the wrong cable, for PATA, invert the two cables, for the QSB, use the opposite-side cable between the QSB and the ODE.

Q: EMU works, but not PT:

A: You are probably using the QSB and one of the pins on the QSB was not soldered correctly.

Q: When I insert the HDD, the PS3 shuts down:

A: The HDD uses too much power, use the USB Y Cable to provide it with additional power.

Q: I use the USB Y cable but the PS3 still shuts down when I insert the HDD:

A: Alternatively, you can connect a mini-usb cable to the mini-usb port on the clip-on PCB and use a wall charger to power the board.

Q: There is no disc icon when I boot the PS3:

A: Your cables are not connected correctly, or you used the wrong type of cable, or the QSB was not soldered properly.

Q: I get error 8001003E when I try to run a game :

A: You generated the iso with an old version of genps3iso tool. Download the latest version from www.cobra-ode.com and regenerate your iso file.

Q: When I run the game, it shows error 80010007 or returns to the XMB directly:

A: You generated your iso using a modified rip. DUPLEX releases will modify the EBOOT.BIN which makes them invalid, there will usually be a EBOOT.BIN.ORIG file in the rip, simply replace the EBOOT.BIN with the original file and regenerate your iso.