

Pin header Installation

Xenium Pin Header Installation Manual



WARNING

The installation of your Xenium will void your console's warranty and may cause damage to your console if not installed correctly. Please ensure that power is not applied to your XBox during this installation procedure.

If you have any concerns regarding the installation of the Xenium please seek advise in our message forums (<http://www.ozxodus.com>) or on the IRC at #ozxodus on EF Net.

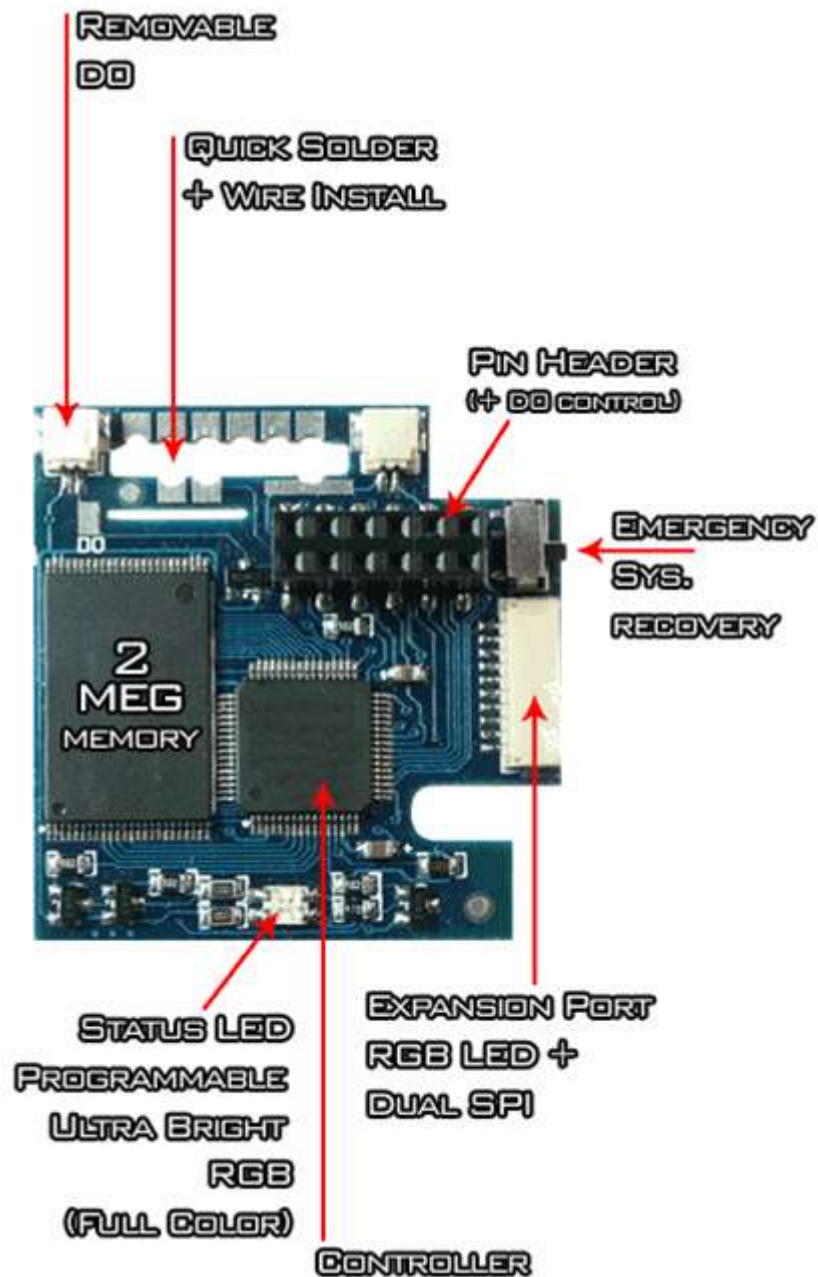
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Part 1. The features of the Xenium

The Xenium has been designed to cater for a variety of installation options including Pin Header, Quick Solder, Wire and solderless methods. The photo below labels the hardware on the Xenium

The Xenium hardware



Part 2. Disassembling the XBox.

To disassemble your XBox console you must first remove the cover, you will need a Torx 20 screwdriver to do this and the image below indicates the location of six torx screws that must be removed.



You will need to lift the consoles feet up as displayed in the picture below to access four of the torx screws. The green circles above indicate the location of two torx screws that are hidden under stickers, remember that breaking these stickers will void your warranty but it is the only way that you can install the Xenium.



Firmly remove the console's cover and you will reveal the contents of the Xbox!



Now remove the IDE cable (marked in orange) and the power cable (blue) from the hard disk drive.
A torx 10 screw as indicated in green needs to be removed to allow the hard disk to be removed from the console.



With the hard disk removed you must now remove two torx 10 screws as indicated by the yellow circles.



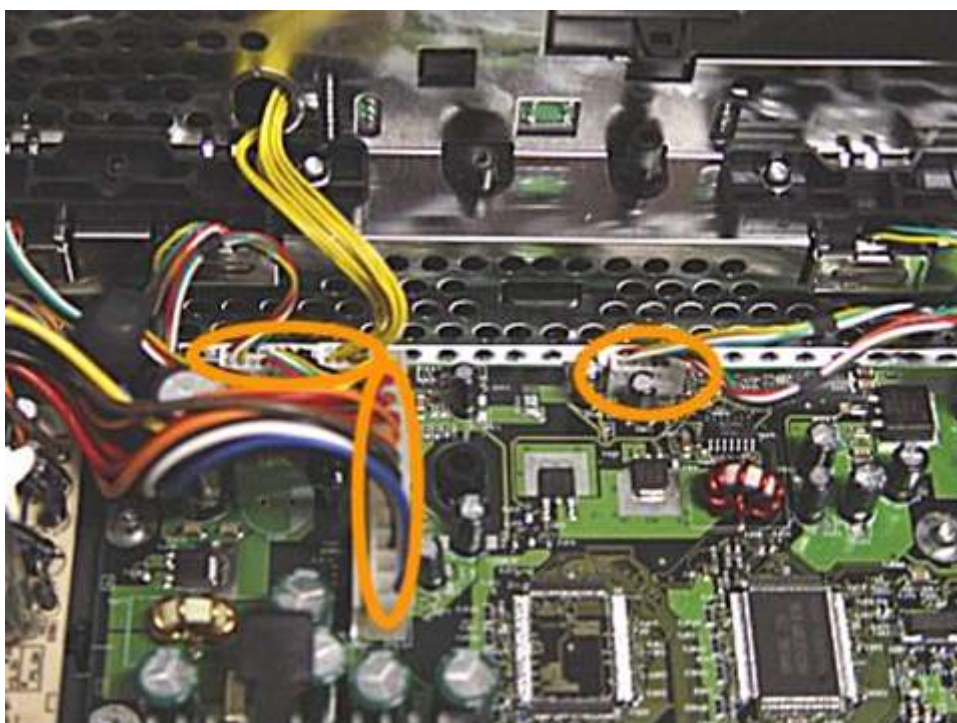
Remove the IDE and power cables from the DVD-Rom drive as indicated by the red and blue circles. You can then remove the DVD-Rom unit and the IDE & Power cables.



You can now clearly see the Xbox's motherboard, to remove the motherboard you need to unscrew the eleven torx 10 screws as indicated by the orange circles. The fan on the GPU heatsink indicates a version 1.0 motherboard.

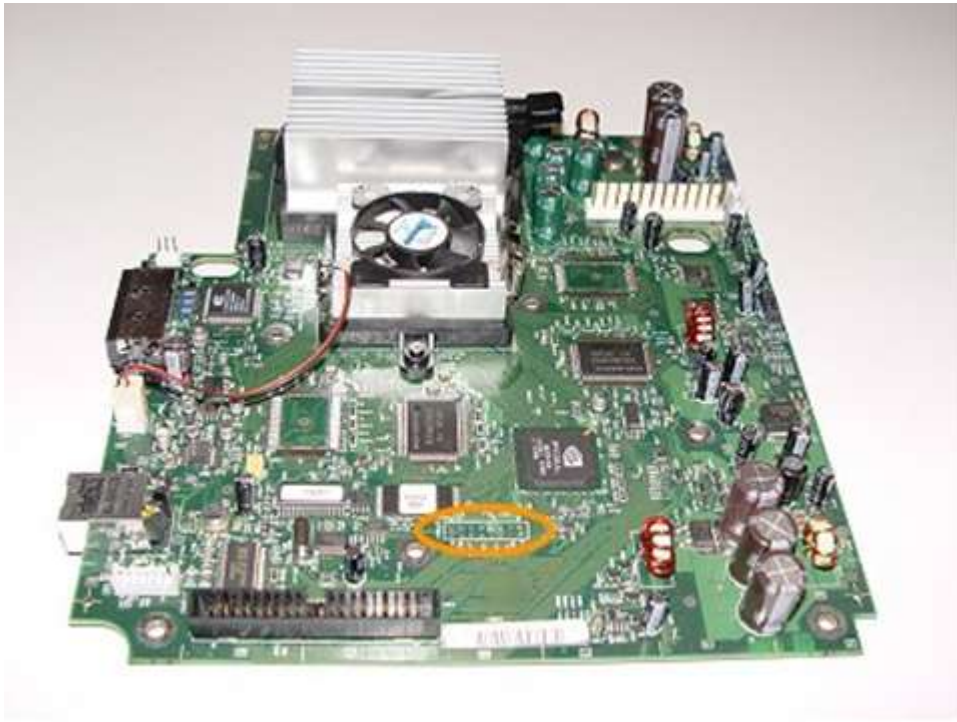


Once the screws have been removed you will need to remove the power supply connector and controller ports from the motherboard. In a version 1.0 motherboard the controller ports are connected to a daughter board that needs to be removed. The picture below shows a version 1.1+ motherboard.

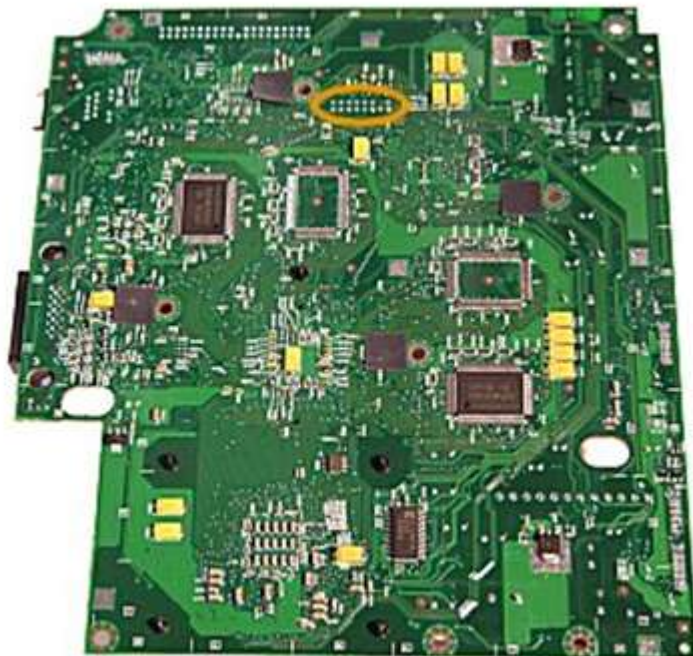


Part 3. Locating the LPC port and d0 point.

The following picture shows the location of the LPC port on the top side of the motherboard.

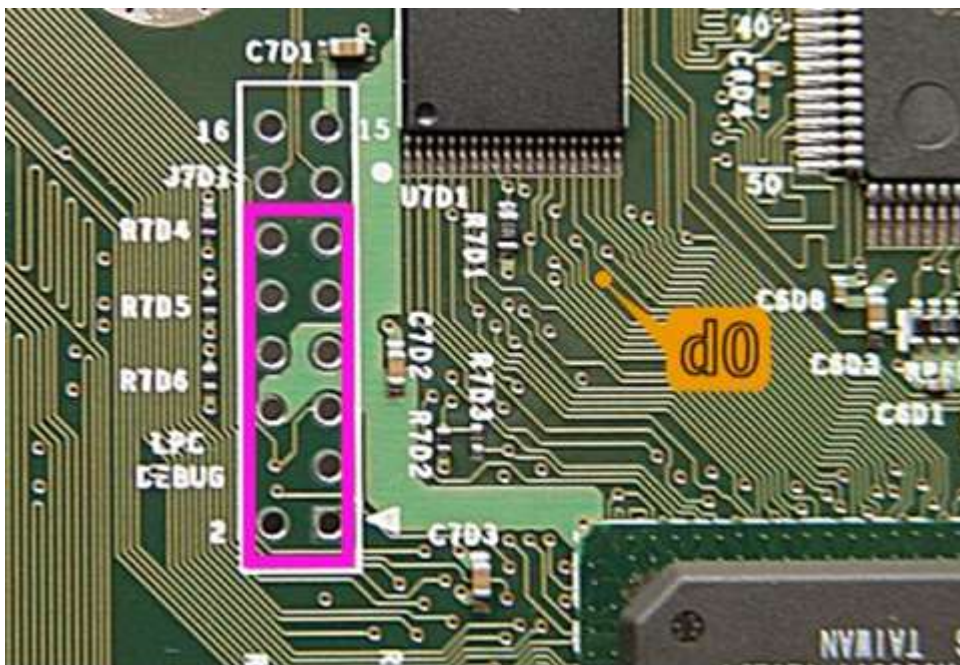


The picture below shows the location of the LPC port on the underside of the motherboard.

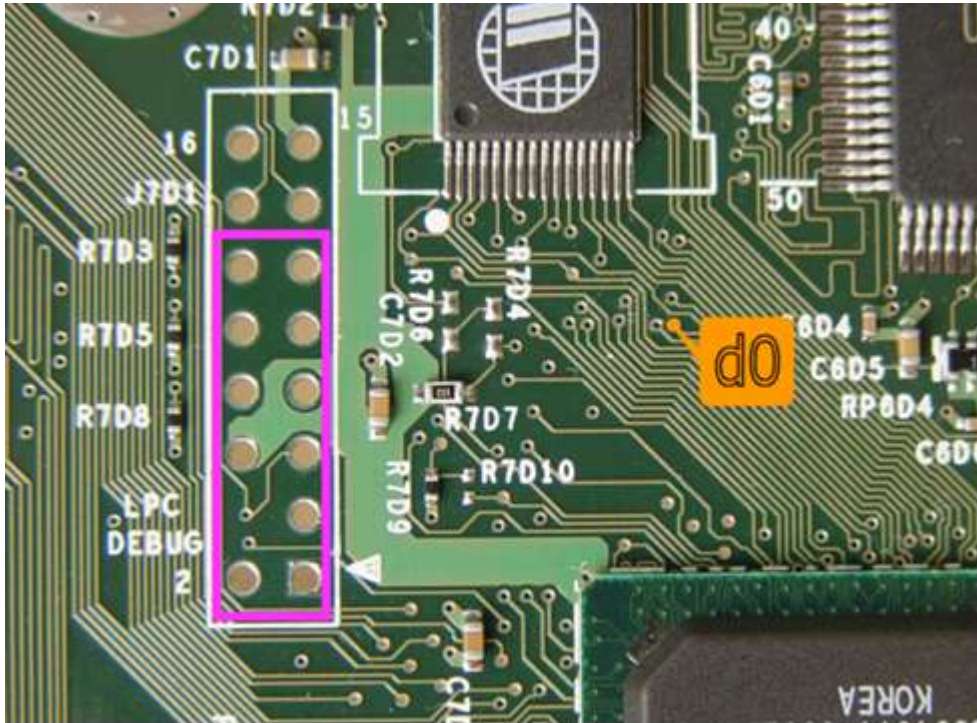


You also need to locate the d0 point on your motherboard, there is a d0 point located on both the top and bottom of the motherboard. The location of the upper d0 point will differ for motherboard versions 1.0-1.1 and 1.2-1.5. The underside (and slightly larger) d0 point is the same for all motherboard revisions. Either the upper or underside d0 is needed for the installation of the Xenium, OzXodus recommends the underside d0 point for those who have limited soldering skills.

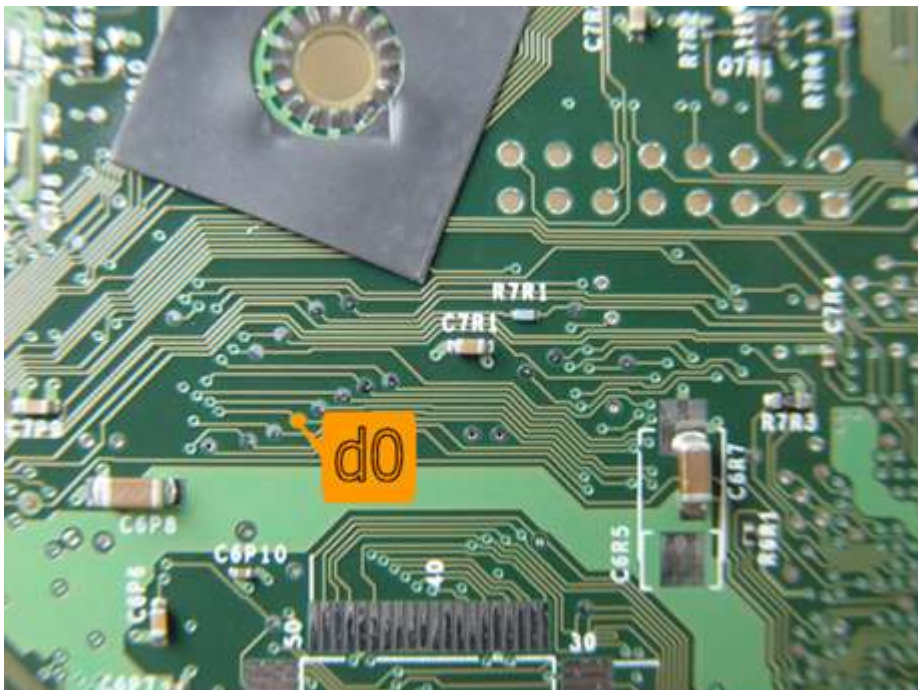
Upper d0 point on Version 1.0 and 1.1 Motherboard



Upper d0 point on Version 1.2, 1.3, 1.4 and 1.5 Motherboard



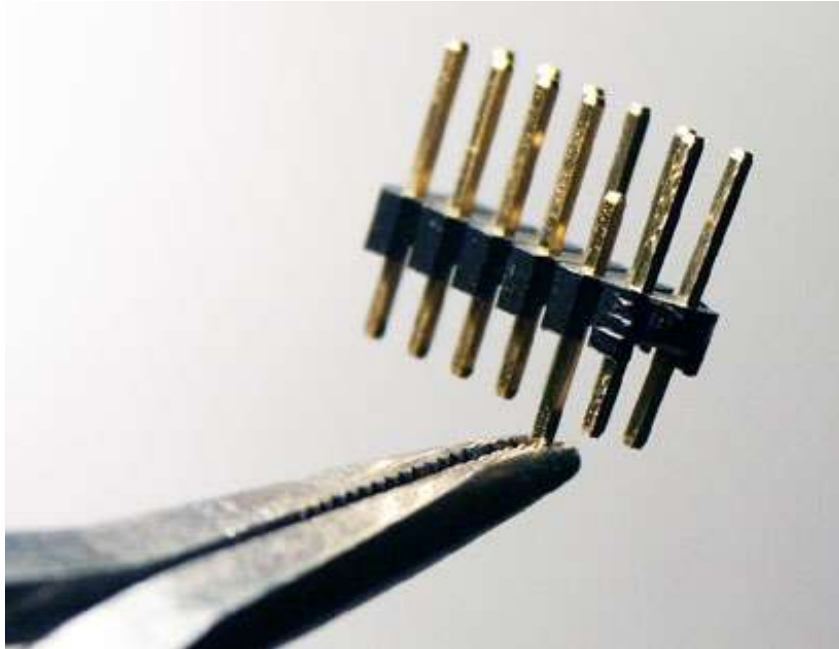
Underside d0 point on all Version Motherboards



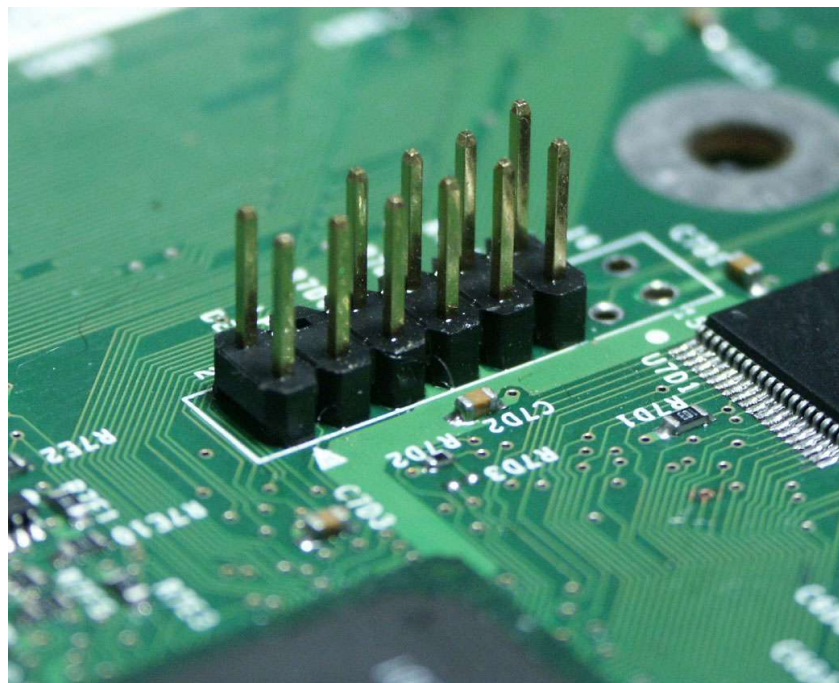
Part 4a. Installation of the Xenium.

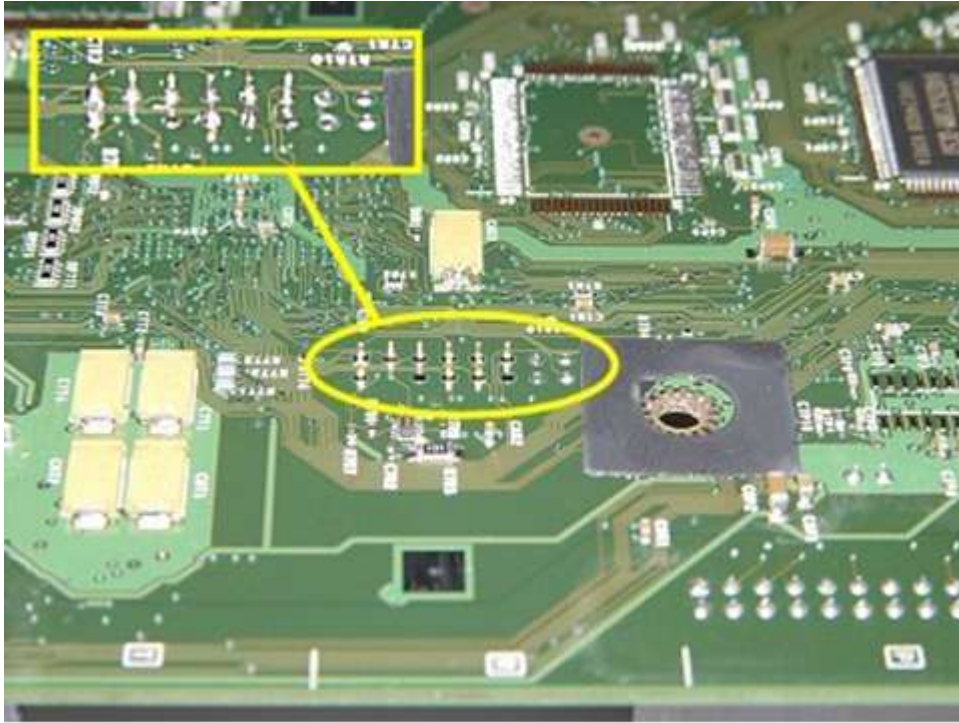
Please Note: If you are installing the Xenium using the pin header installation method on a V1.0 motherboard you will need to remove the LPC ports solder using a solder sucker or desolder braid.

The Xenium is supplied with a 2x6 way male pin header, remove “pin 4” with some small pliers.



Place the pin header into the LPC port as shown below and then solder the header's pins from the underside of the motherboard.





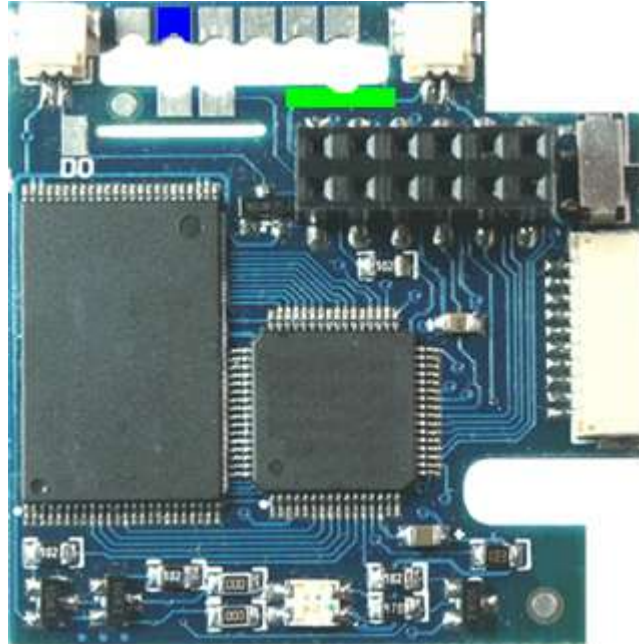
Once you have soldered the pin header into position determine which d0 point you wish to use for your installation, then solder a piece of single strand wire (Kynar 30AWG) from this d0 point to the d0 solder pad located on the Xenium as shown below.



When performing an installation using the underside d0 we suggest that you route your wire thru an empty thru-hole on the LPC port to reduce it's length.

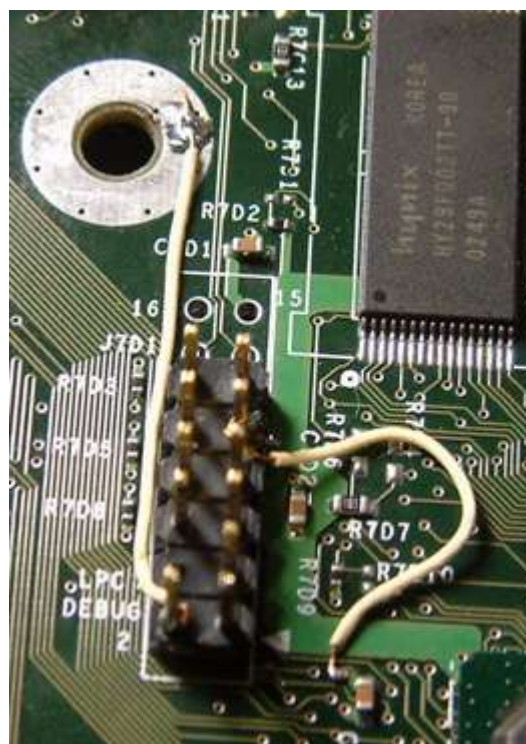
V1.5 Installation Method 1

Solder a piece of wire between the blue point shown in the photo above and the solder pad marked in blue in the photo below. This will provide the Xenium with the 3.3 volts it needs. Also solder a piece of wire between the screw-hole as shown above in green and the pad on the Xenium that is marked in green for the Xenium's Ground connection.



V1.5 Installation Method 2

As shown in the photo below you can also install a wire from the 3.3v point (marked in blue) to Pin 9 on the pin header to supply the Xenium with power. A piece of wire between the Ground point (marked in green) and Pin 2 on the pin header is also required for this installation method.



Part 5. Troubleshooting

After disassembling your Xbox there are a number of things that can prevent your console from operating correctly. You may experience trouble when booting the console and you would be presented with either a flashing Eject LED or a Service Code on screen. The following are a description of these errors and some hints that may assist you rectify the problem.

Flashing LED Error Codes.

Flashing RED & GREEN (FRAG): Probably a bad chip or bad installation, FRAG indicates that your d0 wire is installed correctly.

- Check that the Xenium is installed correctly and that it's LED is lit Red. If your Xenium's LED is not lit then you may have a V1.5 console (See Part 4b of this manual).
- Resolder the LPC points.

SOLID GREEN/No EJECT/No AUDIO/No VIDEO: Probably a bad solder point or overheated console.

- Check all your solder points again.
- It could also be a heat problem, make sure your fan is connected and don't put your xbox near heat sources. You can also try to open the top of the xbox and check if it goes better.

SOLID GREEN/No AUDIO/No VIDEO: This is probably a problem with your audio settings. Try to boot your Xbox with a standard A/V pack instead of a HD pack.

ORANGE/GREEN Flashing: No AUDIO/VIDEO (A/V) pack. This may be caused by solder splash on the motherboard or a damaged track.

ORANGE Flashing: This may also be down to a solder splash on the board or a damaged track. May also be due overheating.

SOLID RED: System overheated, hardware failure!

Service Error Codes.

- 5 - kernel - HDD not locked
(retail bioses require the HDD to be locked)
- 6 - kernel - Cannot unlock HDD
- 7 - kernel - HDD timeout
- 8 - kernel - No HDD found
- 9 - kernel - HDD parameters (PIO/DMA/or size { debug} , certain size minimum is required for debug)
- 10 - kernel - DVD timeout
- 11 - kernel - No DVD Found
- 12 - kernel - DVD parameters (PIO/DMA)
- 13 - kernel - Dashboard launch fail (due to missing/bad key, or anything else that would prevent it from running) and the dashboard didn't specify why it failed.
- 14 - dashboard - Error loading dashboard (dashboard generic error)
- 16 - dashboard - Other files to do with dashboard / dashboard settings (specific dashboard error)
- 20 - kernel - The dashboard was attempted to load and failed; It was a cold boot, and the dashboard didn't specify why it failed, but it (for some reason) needed to be noted that the DVD passed the challenge/response authentication

Credit goes to Superfr0 for his interpretation of these service codes and his awesome contribution to the XBox scene.

Part 6. Disclaimer

By purchasing a Xenium you agree that the usage of this product is strictly your responsibility. OzXodus are not responsible for any damage or loss of data caused during the installation or use of the Xenium.

The Xenium is designed for use as a development tool and is shipped with blank bios banks so that the end user is able to install their own bios. The developers of the Xenium are aware that various hacked bios versions are available that contain copyrighted Microsoft code and can be used for piracy and in no way do we endorse or condone the use of such bioses. Our primary purpose for the development of this device is to encourage users to exploit the full capabilities of their console through the use of the legal Linux bios. For further information regarding Linux on the XBox we encourage you to visit

For more information please check out our website at <http://www.ozxodus.com>