

XENIUM

XeniumOS User Guide

Rev 2.0

NEMESIS



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.

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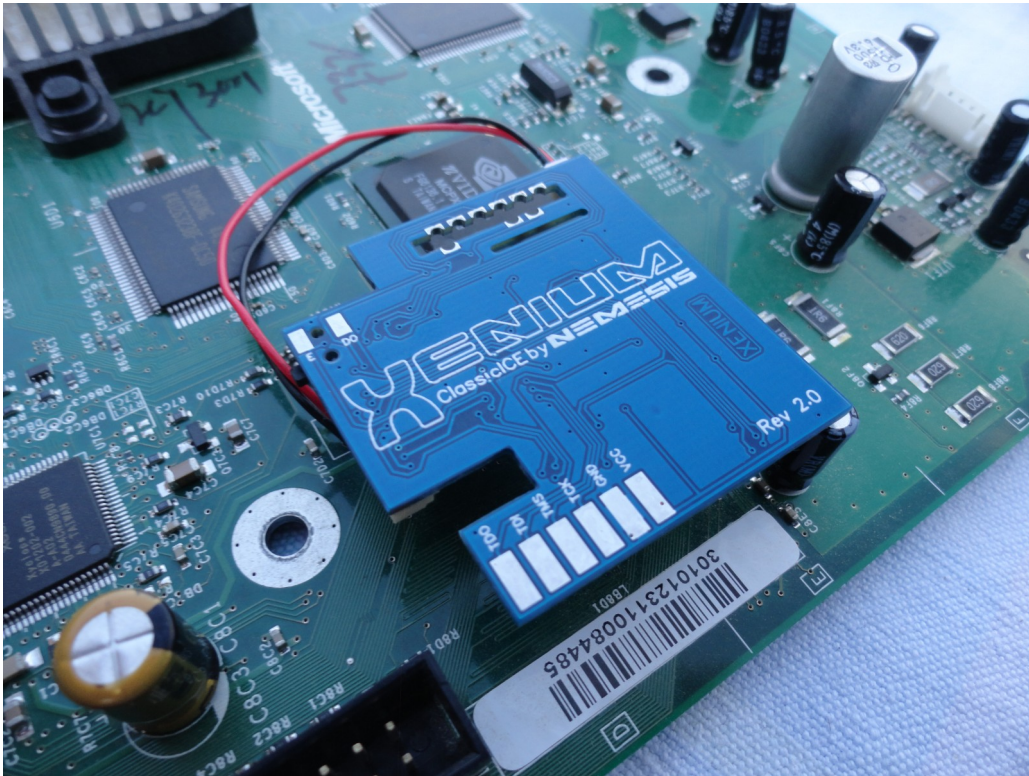
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Introducing The XeniumICE



The first chip to offer fully software controlled user interface that opens up possibilities and options never dreamed possible before! No longer is a chip limited to hardware controlled switching and countless add-ons and external devices.

Hardware Features:

1. No DIP switches.
2. Multiple install method, Quick-Solder, Pin Header, Wired and Solder-less
3. Dual SPI port for unlimited future add-on's.
4. Compatible with all known consoles.
5. Full colour Status/Bank LED
6. Hardware protected Emergency Recovery System.
7. Inbuilt Flash system. No more need for direct connection to computer.
8. With D0 control we ensure the minimal stress is applied to the D0 line by only pulsing D0 at reset time, all other times the D0 is left free..
9. Small compact design with no complicated forced extras for the unit to function.

Software Features:

Undoubtedly, one of the most unique and exciting new developments on the Xenium is the XeniumOS. With features and options too many to mention and many more possibilities still being explored it is no wonder we are branding this the chip of the future. Listed below are merely a few of the major ones for you wet your appetites!

Banking System:

Choose from : 1MB, 512/512k, 256/256/256/256k, 256/256/512k

Set through X-UI, the user can simply configure the bank operation mode of his Xenium through a simple onscreen menu, and the use of the controller.

Boot Bank Options:

User can choose to set a default boot bank ranging from any one of the banks mentioned in the Banking Systems above, to the stock onboard TSOP bios and even the in built Linux derived Cromwell. Once the default bank is set and the optional boot delay time set to 0sec, Xenium OS will boot to preset default bios with in under 4 sec from power up, every subsequent warm reset will not reboot Xenium OS, it will simply restart the preset bios.

Quick Boot:

The four color buttons of the joy pad (A , X, Y, B) can be pre-programmed. In the comfort and ease of X-UI you can boot into any one of the banks mentioned above (including fully disabling the chip), by simply booting the console and holding down any one of these buttons. The Xenium OS will sense your choice and in less than a 1/10th of a second make your selection real !

Instant Boot:

To complete our boot selection options, the Xenium can be configured to default boot to X-UI, where a boot bank clearly named in plain text can be chosen and booted into.

BIOS Naming:

In order to offer our customers the ultimate in comfort and control, we went into considerable trouble to implement the bios naming and auto-naming features. By using a standardised bios, XeniumOS has the ability to recognise and automatically name your banks for you. Even where you use a customised bios, you still have the option to manually name the bank through a virtual on-screen keyboard.

BIOS Flashing:

By stretching the bounds of current technology, the XeniumOS offers you the ease of flashing your BIOS by either simply browsing through your HDD, DVD or using a Pendrive with a specific file. By simply selecting the file you want and then the bank you want to flash to, you are one push of a button away from completing the flash of your bank. Yes it's that simple!

EEprom Tools:

The XeniumOS comes prepacked with an inbuilt set of EEPROM tools. Apart from firstly being able to backup your VERY important eeprom data onto the onboard flash rom of the Xenium. XeniumOS gives you the ability to easily and quickly alter the following factory settings of your console:

1. PAL/NTSC Video Mode
2. Game Region
3. DVD Region

Of course you can always restore your eeprom data from a previously saved copy. These are only a few of the major features you can enjoy immediately. Naturally there are a great deal more that we are working on.

Navigation



The following table shows the functions of the controller's buttons when navigating the XeniumOS

Function	Controller
Move Up	D-Pad Up
Move Down	D-Pad Down
Move Left	D-Pad Left
Move Right	D-Pad Right
Select	"A" Button
Previous Menu	"B" Button
Select Folder	"Y" Button
Scroll Up Quickly	Left Trigger
Scroll Down Quickly	Right Trigger

Main Menu

The XeniumOS Main Menu as shown in the image below allows you to select virtual BIOS bank to start within the "Launch Menu", use the "Disk" or "EEProm Tools", change your Xenium's settings, "Reboot" your console, enter the "Recovery" mode to update or repair the XeniumOS or "Power Off" your console.



The selected menu item is highlighted by a blue bar and can be changed by using the directional pad on your controller or the triggers. A menu item can be selected by pressing the "A" button on your controller, pressing "B" button will return to the previous menu.

Launch Menu

The XeniumOS has a Launch Menu to control the 4 virtual banks which can be used to boot the original BIOS from the TSOP, customised kernels such as Cromwell from "Flash" or media based kernels from the HDD.

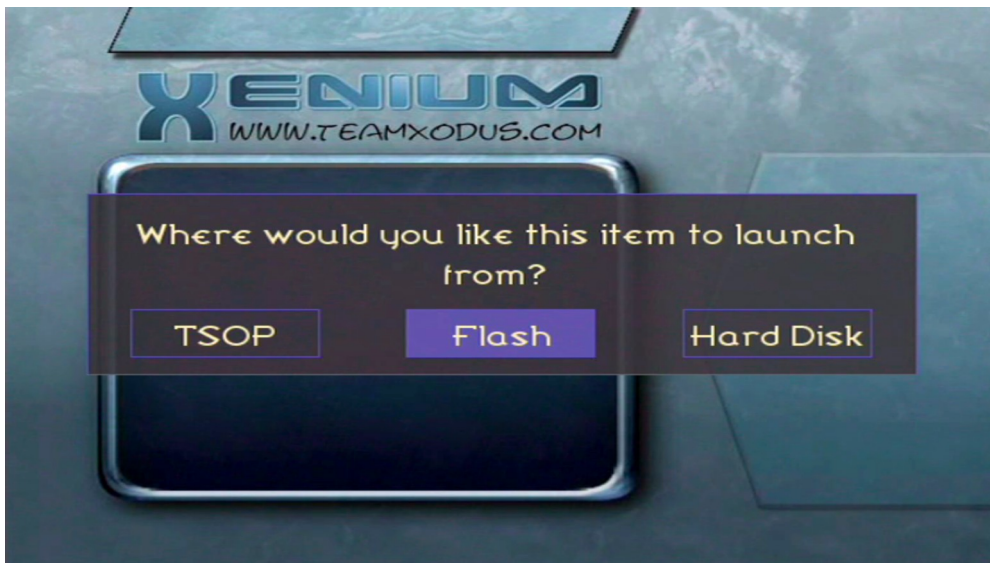


Adding a New Launch Item:

A new Xenium or one that has recently had an OS update performed will need to have the virtual BIOS banks configured. The screenshot above shows an unconfigured "Launch Menu".

By selecting the "Add A New Item" option from the "Launch Menu" you are presented with a dialog box to select the location of where you wish to boot the BIOS from. The available options include "TSOP" to load kernel off the console, "Flash" to boot a BIOS from the Xenium's flash memory and "Hard Disk" for BFM based BIOS.

By selecting "TSOP" a virtual bank will be setup to use the kernel off your console, the name of this bank can be changed by using the XeniumOS onscreen keyboard. Console versions 1.0 and 1.1 have a 1024k TSOP kernel where versions 1.2 to 1.5 have 256k TSOP kernels.

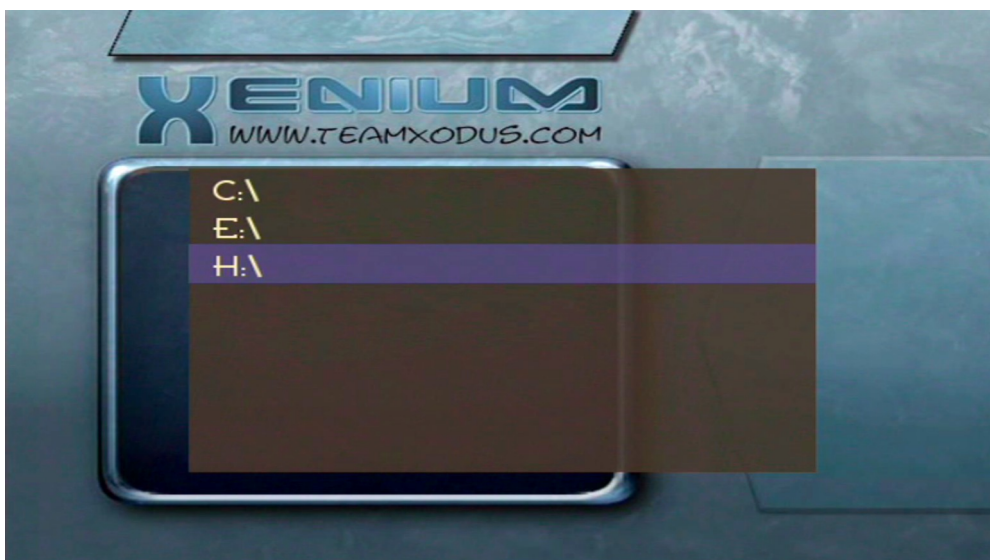


When the "Flash" options is selected you can select the file to use from any of your console's HDD partitions, a USB Pendrive represented as partition "H" or via a Samba share (refer to the Using Samba section of this guide). The Xenium flash space is compatible with 256k, 512k and 1024k BIOS in the following combinations:

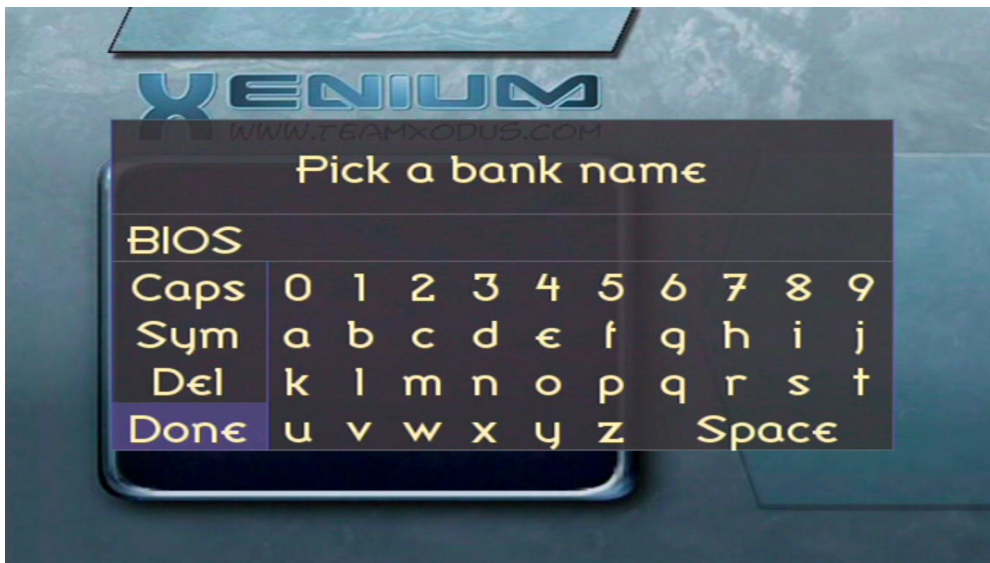
- * 1x 1024k
- * 2x 512k
- * 2x 256k and 1x 512k
- * 4x 256k

You can navigate the XeniumOS file browser by using the controllers D-Pad and the "A" button to select a drive, folder or file as shown below.

Note: That F, G and cache partitions may not be visible on SATA drives



Once a file has been selected the XeniumOS will attempt to auto-detect the name of the BIOS, you can then modify the BIOS name or enter a new name if the auto-detection failed by using the onscreen keyboard.



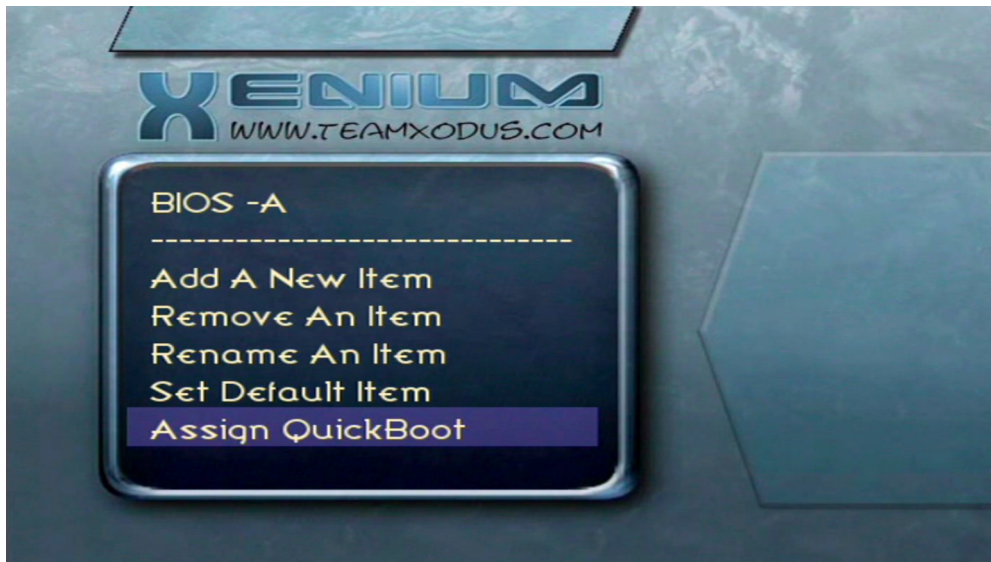
From within the onscreen keyboard, Uppercase, Lowercase and Symbols can be toggled by selecting the options from within the keyboard menu or alternatively you can use the Left Trigger to toggle the Uppercase and Right Trigger to toggle Symbols.

Once the BIOS bank has been named you are presented with a dialog box to assign a LED colour to the Launch Item you are creating.

The XeniumOS allows you to change the colour of the Xenium's LED to indicate which bank has been selected.



Once you have selected the LED colour for the BIOS the XeniumOS will attempt to add the New Item to the Launch Menu. Should the file you have selected be too large for the Xenium's flash space you will receive a "Error: File doesn't fit" message otherwise the file should be flashed to the Xenium and the dialog box as shown below will be displayed. Do not turn off your console whilst a Launch Item is being added.



Removing a Launch Item:

To remove a launch item you select the "Remove An Item" option from the Launch menu and then select the virtual bank you wish to delete.

Renaming a Launch Item:

To rename a launch item that has already been created select the "Rename An Item" option from the Launch Menu and then select the virtual bank you wish to rename. The onscreen keyboard is then displayed and you can make the necessary changes.

Setting the Default Launch Item:

To use the "Instant Boot" feature of the XeniumOS you will need to specify a default bank from within the Launch Menu. Simply select the "Set Default Item" option from the Launch Menu and then select the virtual bank you wish to use as your default Launch Item. Instant Boot will also need to be enabled from within the "Xenium Settings" menu to use this feature.

Assigning a QuickBoot Button:

You can either assign or remove a "QuickBoot" button by selecting the "Assign QuickBoot" option, you will be presented with the available buttons that can be assigned. Select the button you wish to use and the BIOS you wish to assign the button to.

Disk Tools

The XeniumOS includes a "Disk Tools" menu that is available from the XeniumOS "Main Menu".

WARNING: Incorrect use of the Disk Tools may damage your console, Disk Tools may not work with SATA drives...



The screenshot above displays the option available in the Disk Tools menu. The following is a brief description of each option:

Lock/Unlock Hard Drive:

Depending on the current state of your console's hard disk either an option to Lock or Unlock your HDD will be available.

Drive Upgrade Wizard:

Upgrade your HDD within XeniumOS by replacing your DVD-rom with a new HDD set as Slave for the duration of the cloning process.

Copy Partition:

Copy a HDD's partition to another HDD. Supports partitions C, E, F, G, X, Y and Z. (Requires destination HDD to be installed as Slave in place of the DVD-rom)

Format Partition:

Individually format your C, E, F, G, X, Y and Z partitions.

EEprom Tools

The XeniumOS includes a "EEprom" menu that is available from the XeniumOS "Main Menu".

WARNING: Incorrect use of the EEprom Tools may damage your console.



A range of EEprom editing tools can be used to change your console's Video, Game and DVD Regions.

By highlighting the Video Standard Option and pressing the "A" button on your controller you can switch your console's video mode between NTSC or PAL.

The DVD Region setting for your console is also configurable with 9 available options.

To set your console's gaming region to US/Canada, Japan or Europe/Australia highlight the Game Region option then select the region from the menu is presented.

The facility to backup and Restore your EEprom is available in the "EEprom Tools" menu. The XeniumOS is capable of booting even with a damaged EEprom.

Settings Menu

The XeniumOS "Settings menu" as shown below allows you to customise the operation of your Xenium.



The Setting Menu offers the following selections.

Xenium Settings:

This menu allows you to configure the way your Xenium works, the "Instant Boot" feature is configured within this menu.

Network Settings:

Select this item to change the networking settings for the XeniumOS, you can configure your TCP/IP settings to use DHCP or a specified Static IP address.

FTP Settings:

The XeniumOS features a built-in FTP server. This server can be enabled or disabled from within the FTP Settings menu. You can also specify the username and password which your FTP client will use to connect to the Xenium's FTP server.

Telnet Settings:

A Telnet server is one of the features of the XeniumOS. This server can be enabled or disabled from within the Telnet Settings menu. A username and password can be specified to reflect the credentials your Telnet client will use to connect to the Xenium's Telnet server.

Webserver Settings:

Enabling the webservice will allow you to Launch, Flash, Reboot or Shutdown you Xenium/Console via web browser.

SMB Settings:

The XeniumOS has Samba support to allow your console's hard disk partitions to be accessible over a network with your PC, the XeniumOS will also allow you to connect to network shares on PC or any device with Samba support. Your XeniumOS Samba settings can be configured from within this menu.

Reset to Factory Default:

This option will reset your XeniumOS back to factory defaults.

Xenium Settings

The "Xenium Setting" menu presents you with a number of options to customise the appearance and functionality of the XeniumOS.



The Xenium Setting menu offers the following selections.

Choose Skin:

Here you can select from a variety of different skin options for XeniumOS. Skins should be placed in their own sub-directories at "E:\XeniumOS\Skins\"

Choose LEDs:

XeniumOS supports custom LED PWM patterns. The PWM test patterns are only persistent within XeniumOS so aren't particularly useful, however are documented here anyway. LED scripts should be in "E:\XeniumOS\LEDs\"

Instant Boot:

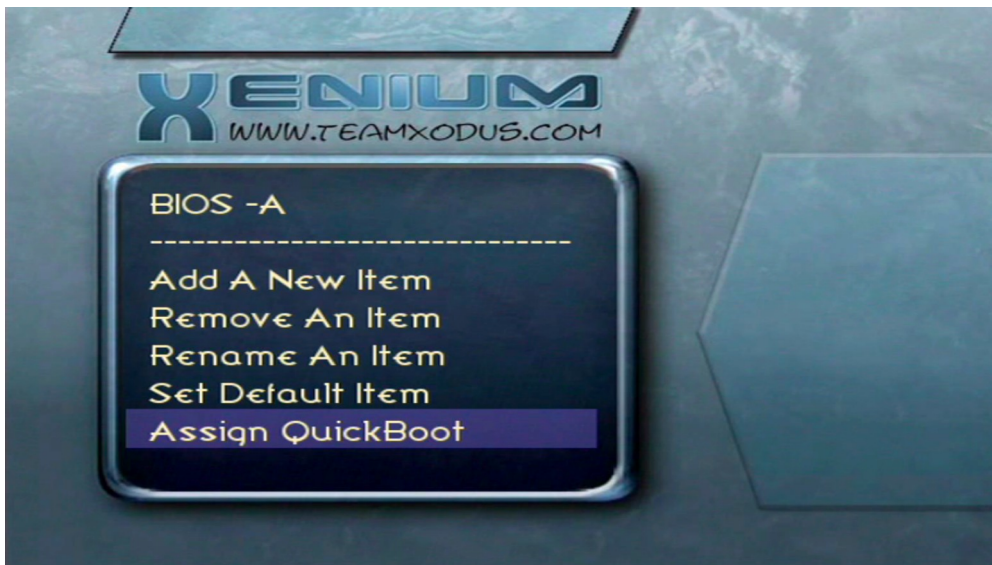
The Xenium's "Instant Boot" option enables you to automatically boot to the default BIOS by powering on your console with the "Power" button, when the console is powered on using the "Eject" button the XeniumOS is loaded.

Once your Xenium's virtual BIOS banks have been configured and default BIOS has been selected within the "Launch Menu" you can enable "Instant Boot" mode by entering the "Xenium Settings" menu, selecting the "Instant Boot" option and turning the feature "On" or "Off" as shown above.

Quick Boot:

The Xenium's "Quick Boot" option enables you to boot one of the four virtual BIOS banks with "A", "B", "X" and "Y" buttons much like a shortcut key during boot.

Once your Xenium's virtual BIOS banks have been configured and having assigned a "Quick Boot" to one or more BIOS banks from the "Launch Menu" as shown in the below screenshot. You can now enable the "Quick Boot" option. Keep in mind that "Instant Boot" may need to be disabled as this could override the "Quick Boot" selection menu.



Quick B/R Timeout:

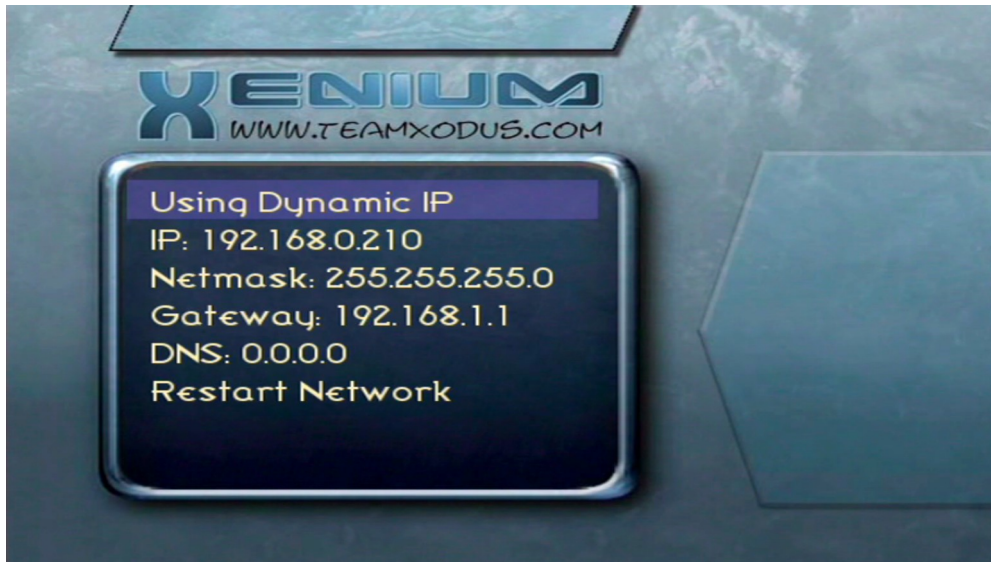
The "Quick Boot Timeout" option is the time in seconds that you have to select an assign "Quick Boot" button before it automatically boots the default BIOS.

Quick Region:

There's not any information that I could find that can confirm what the "Quick Region" option is actually for, I can only speculate that this would be either EEPROM or DVD related.

Network Settings

The networking feature of XeniumOS require the TCP/IP to be configured correctly to suit your LAN.



The XeniumOS is compatible with DHCP servers for assigning a dynamic IP address and this mode is enabled when "Using Dynamic IP" is selected, to manually specify your TCP/IP settings you can toggle to the "Using Static IP" setting and then configure the networking settings. Once you have made changes to the network settings please ensure you select the "Restart Network" option to enable the new settings.

FTP Settings

The FTP server is built into the XeniumOS allows you to connect your personal computer (or another Xbox) to your console and transfer files.



This is particularly useful for transferring BIOS files onto your console's hard disk when performing the initial setup of your Xenium. The XeniumOS FTP server can be enabled or disabled by selecting the "FTP Server" option from within the "FTP Settings" menu. By default the XeniumOS uses the username "xbox" and the password "xbox", should you wish to use different user credentials with your FTP client the username/password can be changed by selecting the "Set FTP Username" or "Set FTP Password" options from this menu.

Telnet Settings

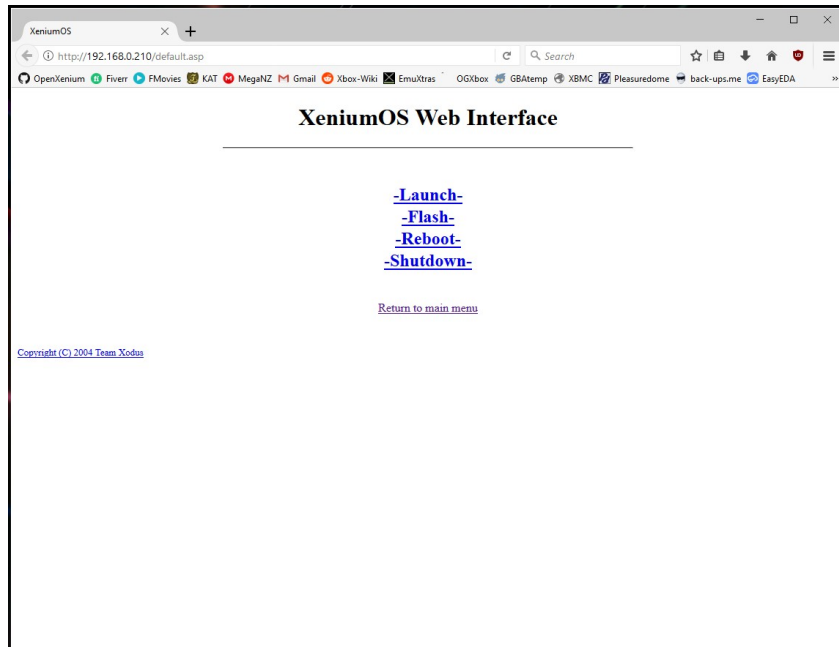
The Telnet server that is built into the XeniumOS allows you to connect to your console by using any Telnet client.



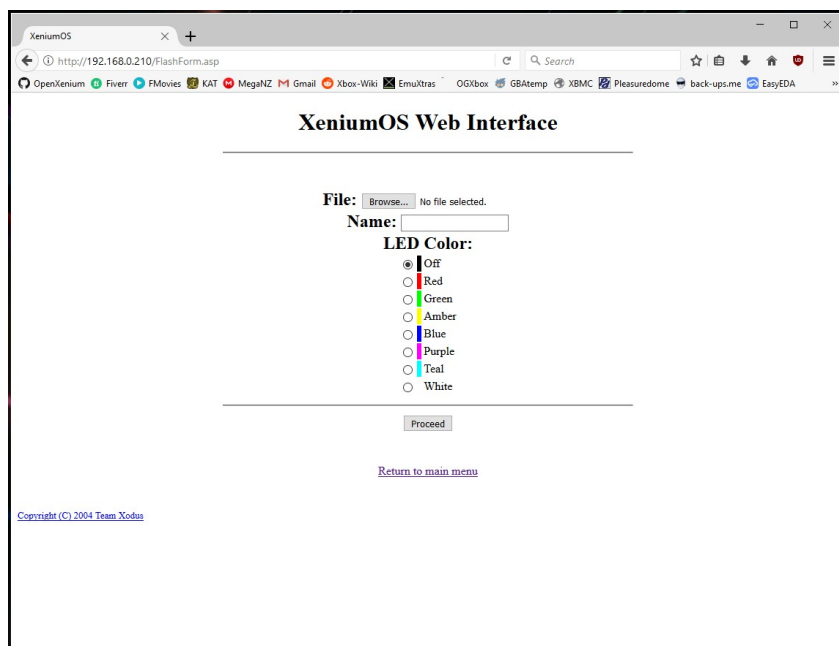
To enable or disable the Telnet server within the XeniumOS just select the "Telnet Server" options from within the "Telnet Settings" menu and set its status. The XeniumOS uses the username "xbox" and the password "xbox" by default, different user credentials can be specified by selecting "Set Telnet Username" or "Set Telnet Password" options from this menu.

WebServer Settings

With the "Webserver" enabled and your Network setup you can access basic functions of the XeniumOS via a web browser.



Entering your Xenium's IP address into a web browser will present you with basic functions to "Launch" or "Flash" a BIOS and to either "Reboot" or "Shutdown" your console as shown in the above screenshot. This also makes flashing a BIOS to your Xenium a breeze as shown in the screenshot below.

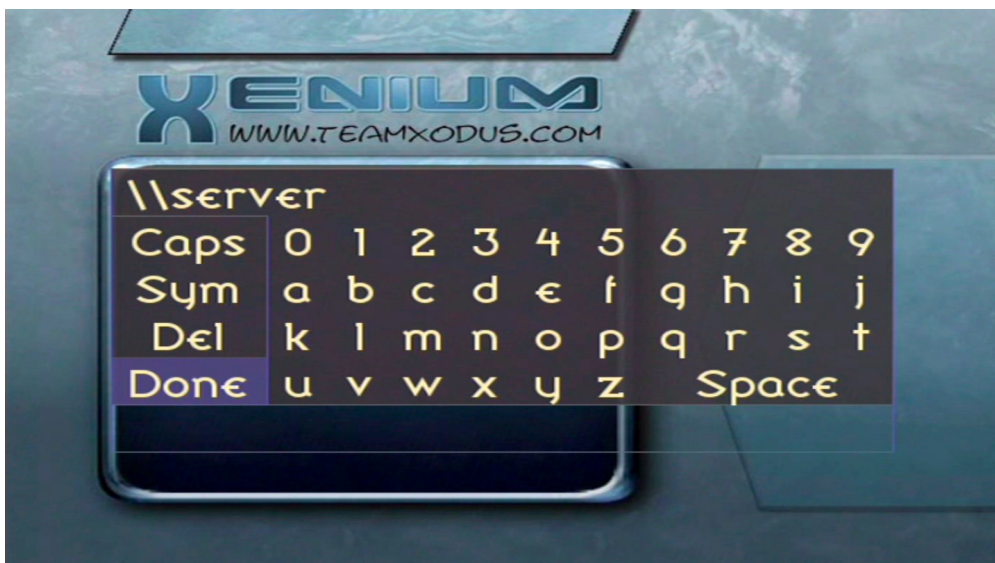


Samba Settings

The Samba client and server features of the XeniumOS allow you to configure your console as a network device.



The "SMB Settings" menu shown above allows you to configure your console to join a network. To configure your console as a Samba client select the "Set Client Share Path" option from the menu, using the onscreen keyboard enter the UNC path of the PC to connect your console to. The example screenshot below shows the XeniumOS configured to network with the PC named "server". Please ensure you enter \\ in front of the PC name.



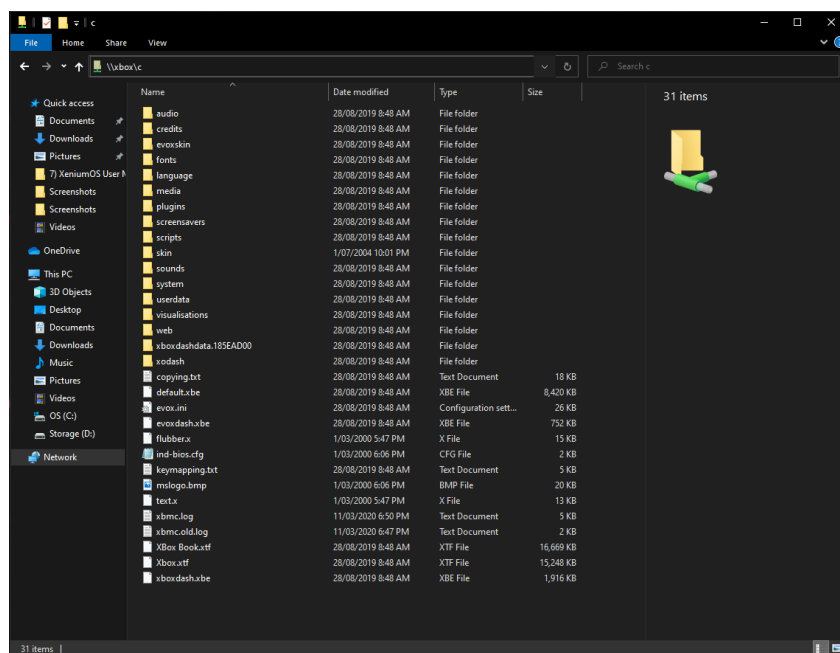
The XeniumOS Samba client uses the default username of "xbox" and password of "xbox" but it can be customised by selecting the "Set Client Username" or "Set Client Password" options from this menu. You will also need to ensure that the PC you wish to connect to as a network device allows sufficient network privileges for the user specified in these Client settings.

When configured correctly the network PC will be accessible from within the Launch Menu's file browser to enable you to select a BIOS file located on the network PC.

To configure the Samba server feature of XeniumOS the "SMB Server" option within the "SMB Settings" menu needs to be set to "On", this setting can be changed by highlighting the menu option and pressing the controller's "A" button. The default Workgroup name for your console is "xbox" and the default PC name is "\\xbox" although these settings can be changed within the "Set Server Workgroup" and "Set Server Name" menu options.

Your console's hard disk partitions are automatically shared as network resources and can be accessed with either a web or file browser using the following path "\\server_name\partition"

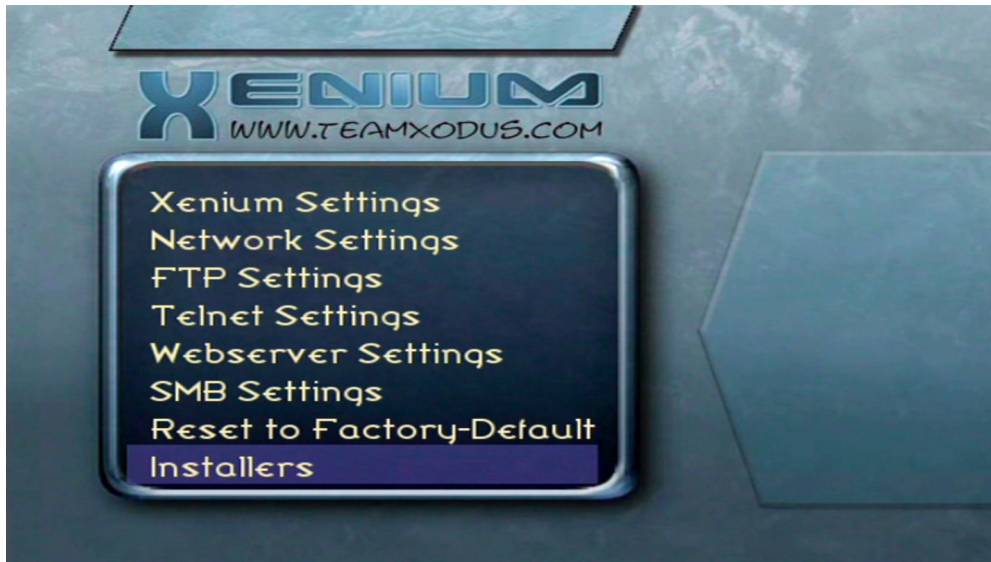
For example the default path is "\\xbox\c" for "C" partition, as shown in the screenshot below. Note that Samba may need to be enabled on your version of Windows or Linux.



The use of the Samba server feature of the XeniumOS can be very useful for users who want to upload BIOS and other files to the console's hard disk for the Xenium's initial configuration procedure.

Installers Menu

The "Installers Menu" is used to backup and restore your Xenium's BIOS virtual bank configuration.



To access the additional menu feature you will need to press and hold your "Left Thumbstick" button when selecting the "Settings Menu" with the "A" button. If done correctly the "Installers" menu should be visible in the "Settings Menu". You can backup your BIOS banks by selecting the "Save Settings To File" option. The installers configuration file can be loaded by selecting the "Install From File" option within the "Installers" menu and selecting the saved file from within the XeniumOS file browser.



Using a USB Pendrive

When a USB Pendrive is connected to the Xbox the drive/partition "H" will then become available in the file browser of the XeniumOS



The XeniumOS is compatible with FAT formatted USB Pendrives, this means that you can copy your BIOS files onto a Pendrive using your PC and then flash these BIOS files onto your Xenium by connecting your Pendrive to your console with an XeniumUSB adaptor.

XeniumUSB Adapter:

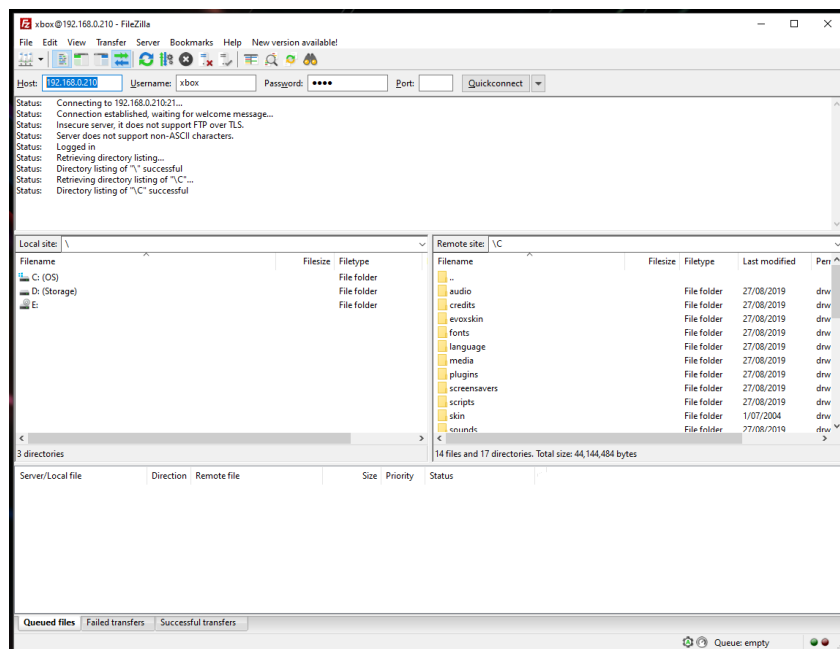
Is another accessory to the Xenium product line, the USB controller port adaptor simply plugs into any empty controller port and then you plug a USB device into the adaptor such as a keyboard, mouse or pendrive. You can connect a hub to the adaptor or you can use up to four adaptors (one in each controller port) to attach multiple USB devices.

Keep in mind that the original Xbox uses USB v1.1 root hub, which means even if a high speed USB interface is used it will still operate at the slower USB v1.1 speed.

Using Filezilla FTP Client

Now that your FTP server is running and with your network setup, you can begin using that connection to transfer files to and from your hard drive. This means you will not have to burn a disk to install additional BIOS, XeniumOS updates, Emulators, Games, Applications and Dashboards.

It is recommended that you use a FTP client instead of a web browsers built-in FTP client. There are more options and you will get better speeds and data throughput using a standalone FTP client. Filezilla is a free and open source FTP client that is available on most operating systems.



Whilst using the default FTP settings and DHCP IP address, enter the consoles IP within the "Host" tab which in this example is "192.168.0.210". Also fill in the username and password with "xbox" with the "Port" set to "21".

From here you can now navigate through your PC on the left hand side and the Xbox console on the right hand side. It is recommended that you set Filezillas' transfer type to binary by navigating through the "Transfer" tab then to "Transfer Type" and by selecting "Binary". You can either drag across files/folders or right click on the files/folders your want to transfer and either "Upload" or "Add to Que" and transfer.

Known Issues

While quoting "Ryzee119" git-hub page, below are a couple of known issues with the XeniumOS.

XeniumOS hangs without DVD drive:

XeniumOS 2.3.1 can hang when attempting to flash a BIOS when you don't have a DVD drive connected, this can also impact FTP browsing as it will fail to retrieve a directory listing. As the source code for the XeniumOS is not available, this type of thing is tricky to fix but the issue is documented here for information. The current work around is to ensure you have a DVD drive connected to setup XeniumOS. No DVD drive is needed to just boot into pre-flash bioses

XeniumOS graphical issue on v1.6 consoles:

On some v1.6 consoles when booting into XeniumOS, there is a graphical issue which results in vertical lines across the screen. It is suspected this is a bug in Cromwell's Xcalibur or GPU initialisation code. This issue is present on my Genuine Xenium and my OpenXenium boards running XeniumOS 2.3.1. There have been instances of a reflow of the LPC resolving this issue but it is unclear what the root cause is. No functionality is impacted and once booted into a v1.6 compatible BIOS the issue is no longer present.

Note: That this only occurs whilst using a component or HDMI cable!

Disclaimer

By purchasing an Xenium you agree that the usage of this product is strictly your responsibility. XeniumMods is 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 or as a device to perform certain repairs and is shipped with blank bios banks so that the end user is able to install their own bios. XeniumMods is aware that various hacked bios versions are available that may contain copyrighted code and can be used for piracy. The primary purpose of this device is to encourage users to exploit the full capabilities of their Original Xbox Console.

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