



StrongBox and other VIA PadLock Security software can be downloaded for free from the support section of www.via.com.tw.

Introduction



The [VIA PadLock Security initiative](#), when applied to the [VIA C7-M processor](#) is designed to bring much needed security actually integrated into netbook and notebook designs. VIA PadLock comprises several key features, an overview of which can be found [here](#). VIA StrongBox employs the use of one of those features, the [Advanced Encryption Standard](#), to create a secure virtual hard drive.

VIA PadLock security takes AES encryption algorithms used by the US government (and others) and implements them in extra opcodes or functions in the C7-M processor. When software like StrongBox is programmed to use these functions, data can be made totally unreadable via the data encryption. AES encryption reputedly cannot be hacked. It is estimated that the AES 256-bit encryption would require 100000000000 years for a supercomputer to break the encryption.

Because VIA Padlock is a hardware security feature, it is vastly more secure than other software based security measures that are often performed between the operating system and other software resources, which can be hacked. Hackers often gain access to primer data used to encrypt information that is stored in the system processor or memory. The VIA PadLock Security Engine in the VIA C7-M is separate. The added bonus is that your processor is free to be used for what ever the user wants to use the system for whilst the co-processor takes care of security.



The Gartner group has reported that 10% of notebooks are stolen annually. The data on most notebooks is not secured in any way. Neither are the many wireless networks often tapped into by netbook and notebook users in public or corporate spaces. Corporate espionage can be as simple as grabbing a confidential presentation off a stolen or non-secured notebook. It was with those thoughts in mind that VIA developed StrongBox. Although the technology of VIA PadLock and AES encryption sounds complicated, putting it to good use in day to day mobile computing is very simple. A StrongBox is basically just like a new hard drive, only it's not literally a new physical drive but a virtual drive. It appears on your computer just like an extra drive except that it requires a password to access. Anything in the virtual drive is also impervious to virus attack. Anyone trying to access the StrongBox over a network hasn't got a hope when it's locked. Furthermore your data is protected in the unfortunate event that your notebook is lost or stolen.

Installation and initial setup



Installation of the StrongBox software is easy and reminiscent of the installation of any small utility. Double click on the exe file and follow the prompts.



Setting up the drive is also simple. Choose where you want it stored, assign the virtual drive a letter (just like an extra new hard drive would be assigned a letter) and choose the size (depending on how much space you think you require for data you want secured).



Create a StrongBox (Step 2 of 2)

Let's create a password for your StrongBox

Please enter a password:

Please confirm the password:

(4-20 characters, case sensitive)

Your reminder question:

Your answer:

Your password hint:

(1-30 characters)

Note: Your password never be retrieved once the StrongBox has been created, so please ensure your password hint is an effective reminder of your password.

YK

Help

<< Back Next >> Finish

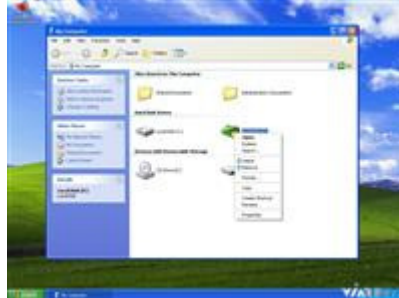
Next, set up a password as well as a reminder question and password hint.



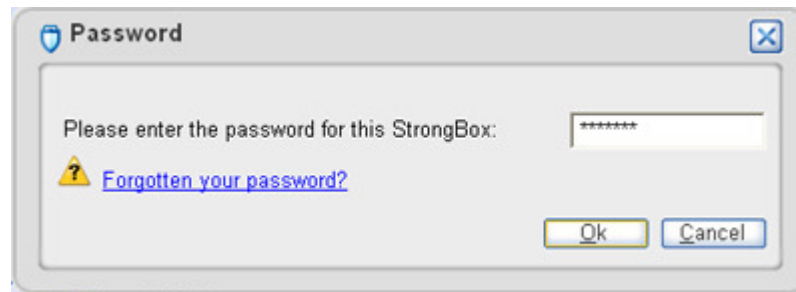
Done!



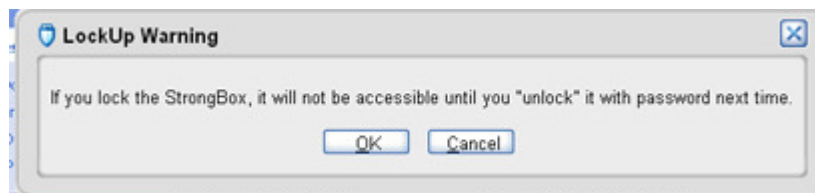
Working with the secure drive

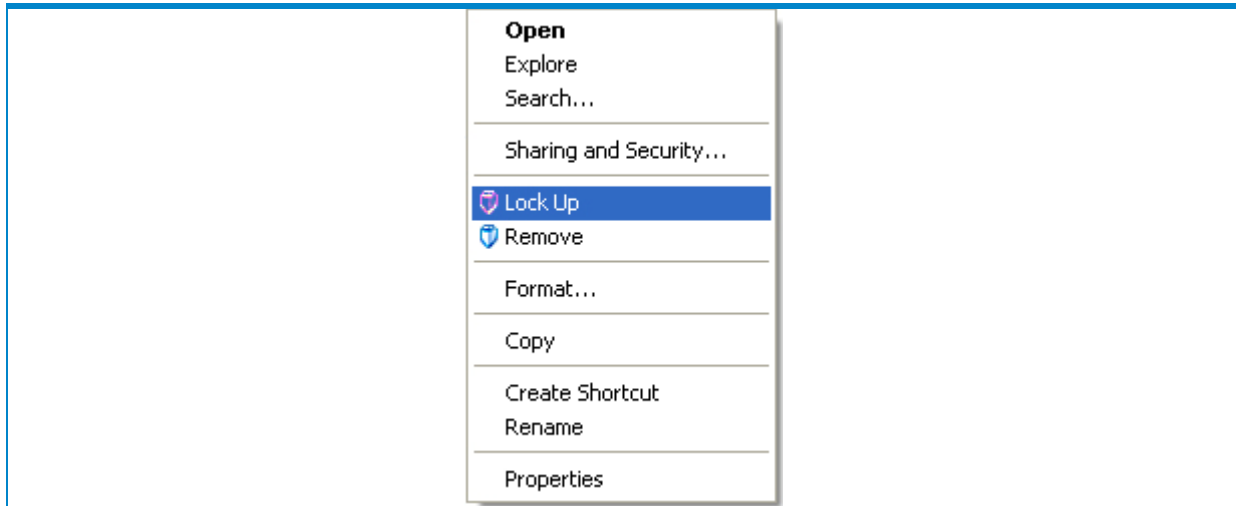


The StrongBox virtual drive is shown under My Computer as a green folder with a gold PadLock that is shown as locked when the drive is locked or unlocked when the password has been correctly entered.



Right click on the drive and choose unlock to enter your password and unlock the drive.



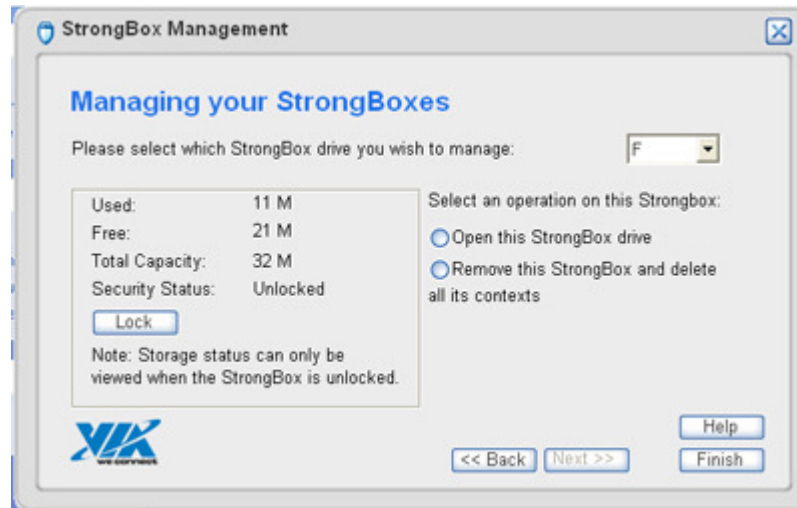


Right click on the virtual drive again and select Lock Up to re-enter the password to secure it back up.

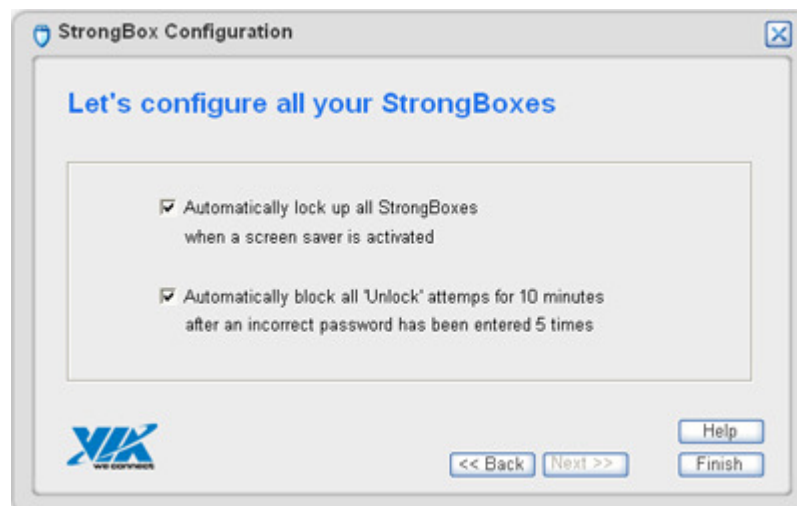


The Strong Box control center

The Strong Box control center is accessible via Start Up > Program Files > Strong Box just like any other program.



You can review the size of the drive and lock or unlock the drive in the Control Center. You can also see how much of the drive space has been used.



Under the configuration section you can choose to have your StrongBox automatically lock up when a screen saver is activated. This means that if you have your screen saver set to start when ever the PC has been inactive for 5 minutes (for example) your StrongBox would also be locked at that time. You can also secure against more than 5 attempts at access with the wrong password. StrongBox automatically locks the virtual drive any time the PC is shut down or restarts.



Conclusion

When you think about applying StrongBox to your data, you can think of it like putting anything confidential onto one drive and then setting it up so that only you can delete, view, copy or move that drive or anything on it. The rest of your computer, including My Documents, your program files and software that you use and how they interact with data on your computer remains unchanged. To edit a word document, for example, that is on the virtual secure drive, unlock the drive first and then simply edit the document and save changes as you normally would. When finished you can then lock the drive up again or have StrongBox lock the drive according to your predetermined settings (upon shut down or at the commencement of a screen saver). Just don't forget your password!



StrongBox represents world class, hardware level, virtually unhackable security brought to mobile computing in a very simple user interface. Confidential data can be secured from outside attack, unsecure wireless networks as well as copying, deleting and moving files by anyone other than a user who knows the password. Any netbook or notebook with a VIA C7-M processor can take advantage of the unique PadLock security integrated into the processor with this highly effective and usable tool.





Trialling StrongBox

StrongBox was designed to target the lack of security options available to notebook computer users, first being released in 2005 as VIA C7-M based notebooks first became available.



StrongBox does however also work on any C5P C3 processor. The following [VIA EPIA models](#) feature the VIA C5P C3 processor core which supports StrongBox:

- TC10000 (C3 C5P 1GHz)
- MII12000 (C3 C5P 1.2GHz)
- MII8000E (Eden C5P 800MHz)
- MS12000 (C3 C5P 1.2GHz)
- MS10000E (Eden C5P 1GHz)
- MS10000 (C3 C5P 1GHz)
- MS8000E (Eden C5P 800MHz)
- SP13000 (C3 C5P 1.3GHz)
- SP8000E (Eden ESP8000 C5P 800MHz)
- N10000E (Eden-N C5P Nehemiah core 1GHz)
- N8000E (Eden-N C5P Nehemiah core 800MHz)
- N5000E (Eden-N C5P Nehemiah core 533MHz)

The only tricky one is M10000, because early models used the C5XL core whilst later versions used the C5P core such as the M10000 (C3 C5XL/C5P 1GHz). C5XL does not feature the AES encryption.

Although StrongBox was pioneered to address security concerns in the mobile market, the software works in the same way on any desktop system that features the C5P C3 processor or C7 processor.

StrongBox, as of version 4.0, is supported for Microsoft Windows 2000, XP and Vista.

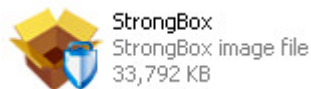
Load and Unload

Version 2.1 of the VIA StrongBox software released on November 15 2005. This version brought 3 extra features to the software.

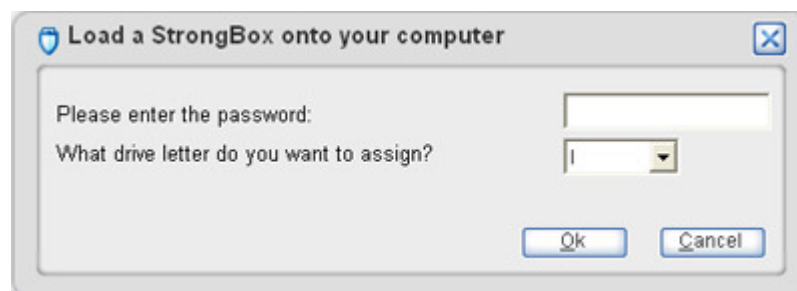


Firstly, users could choose to install the software in either English, Simplified Chinese or German.

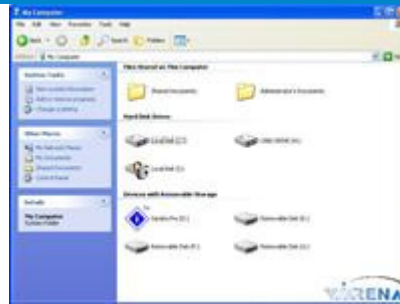
Secondly, the software now came with a load and unload feature. Essentially, this has two main functions. A loaded drive can be seen as a virtual drive with an assigned driver letter under My Computer and it can also be copied to another hard drive or USB drive. An unloaded drive is not visible as a drive with an assigned letter under My Computer. It is only visible as an image file where the user chose to save it when they first created the virtual drive. The drive also cannot be copied when it is unloaded.



When you first create a drive with v2.1 of StrongBox, it is unloaded until you load it. That means that you will not see the drive with a drive letter under My Computer. Instead you will only see a StrongBox image file in the location where you created it, which by default is c:\Strongboximg1.img



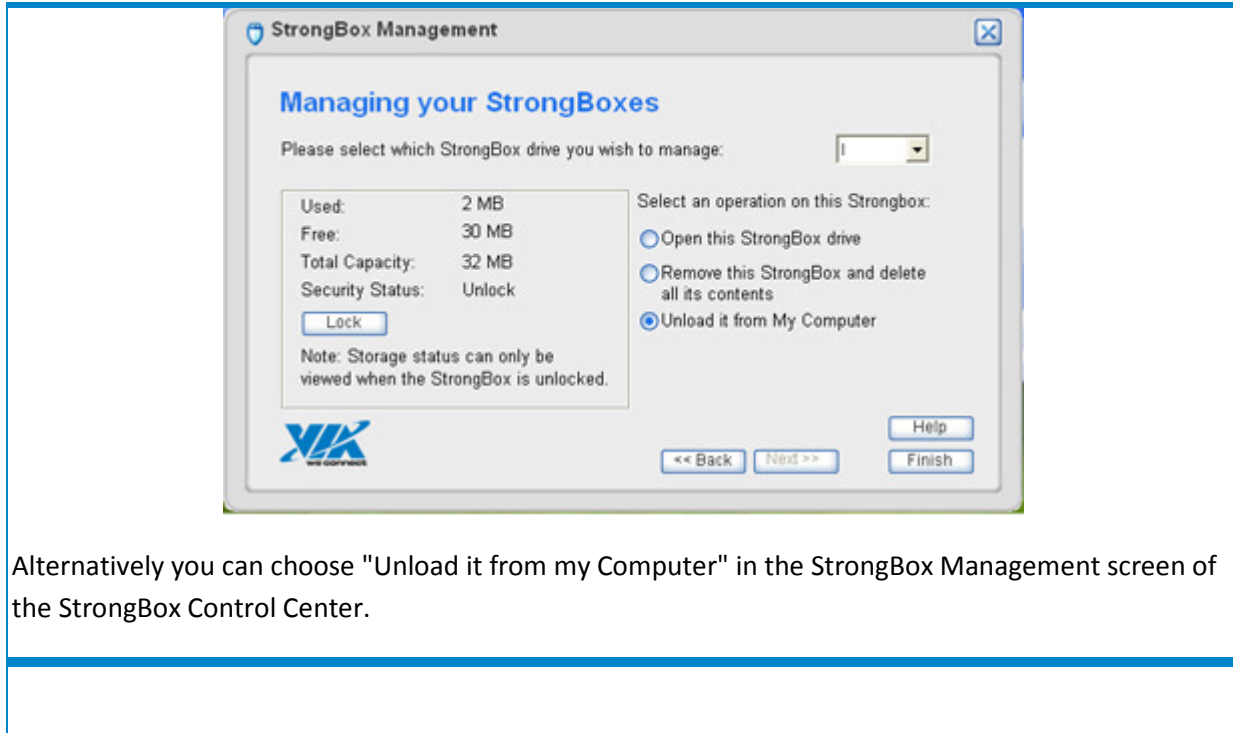
To load the StrongBox you can right click on the img file icon, enter the password and assign it a drive letter.



Once the StrongBox is loaded it will appear under My Computer. When it is loaded it can also be copied.



To unload the drive you can right click on the drive's icon under My Computer and choose Unload.



Alternatively you can choose "Unload it from my Computer" in the StrongBox Management screen of the StrongBox Control Center.