ST Engineering

DISKCRYPT M100

USER MANUAL

Version 1.0.0

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Disclaimer

Thank you for purchasing DISKCRYPT M100.

DISKCRYPT M100 has been designed to be compliant with the SATA hard drive operating specifications as well as USB 3.0 operating specifications. DISKCRYPT M100 is also backward compatible with USB 2.0 machines.

ST Engineering accepts no liability for any loss of data or the inability of DISKCRYPT M100 to work with equipment that are not compatible with the above operating specifications. Nor can ST Engineering accept any liability or responsibility for software which is also non-compliant.

Contents

1 About this Guide

This guide is designed to provide step-by-step instructions for the installation of DISKCRYPT M100 and as a reference for its operation and usage.

PLEASE READ AND FOLLOW THE INSTRUCTIONS PROVIDED IN THIS GUIDE CAREFULLY AND THOROUGHLY.
FAILURE TO DO SO MAY RESULT IN DAMAGE TO DISKCRYPT M100 AND ANY OR ALL OF THE CONNECTED DEVICES.

2 Introduction

2.1 About DISKCRYPT M100

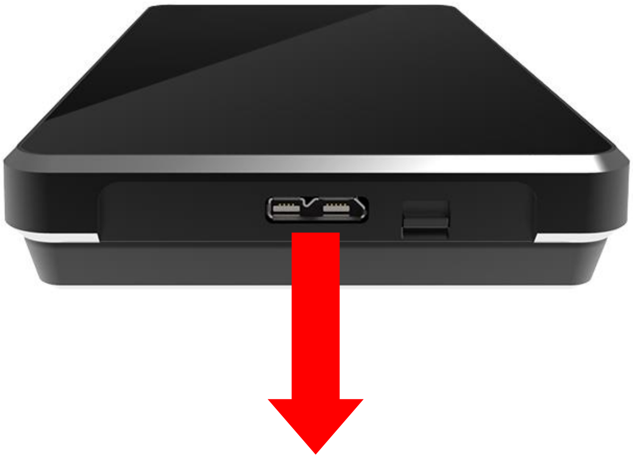
Congratulations on your purchase of ST Engineering DISKCRYPT M100. DISKCRYPT M100 represents the most advanced secure mobile storage solution today, utilizing smart card authentication technology and AES 256 bits full disk encryption. With DISKCRYPT M100, you can enjoy mobile storage with the speed and convenience of USB 3.0 in a compact form factor and be assured that your data is safe from prying eyes.

DISKCRYPT M100 is a secure portable hard drive enclosure consisting of a 2.5" SATA hard drive enclosure and a hardware-based encryption module that performs full disk encryption, i.e. it encrypts every byte and every sector of data that is written into the hard drive. The device is designed to fit standard 2.5" hard drives with a SATA interface, and communicates with the computer via standard USB 2.0 or 3.0 ports. DISKCRYPT M100 is operating system independent and does not require any software drivers. It encrypts every single byte and sector that includes all temporary files, as well as areas that would normally be missed and left "in the clear" by software encryption products. Encryption and decryption occurs transparently without any loss in disk performance. Users simply use their computers as usual with the assurance and complete peace of mind that their data is fully protected in the unfortunate event that their hard drives are stolen or lost.

DISKCRYPT M100 stores the hard drive encryption key securely in smart cards (two are provided per device). Smart card technology is well understood and represents the highest level of security possible for secure data storage. It is vastly more secure than other solutions that use hardware tokens, where the encryption key is stored in insecure memory that can be easily read and duplicated. In contrast, smart cards store the encryption key securely within, and can only be accessed upon presentation of a valid PIN. The user will need both the smart card as well as knowledge of its PIN to be able to access the data in the connected hard drive. By doing so, DISKCRYPT M100 enforces two-factor authentication, which is a higher security protection by ensuring that the user possesses both the physical smart card and the knowledge of its PIN.

The user is required to authenticate each time DISKCRYPT M100 is plugged into the computer. After authentication, the drive presents itself to the operating system and the user is granted normal drive access.

2.2 Connection Ports



Micro-B USB 3.0 receptacle

2.3 Checklist

The following items are included with DISKCRYPT M100. If you discover any missing items, please contact your local reseller/distributor.

- 1 x DISKCRYPT M100
- 1 x USB 3.0 cable
- 2 x Smart cards
- 1 x Black pouch
- 1 x Anti-fingerprint screen protector
- 1 x Quick start guide
- 1 x User manual

2.4 Specifications

BUS INTERFACE	• USB 3.0 (backward compatible with USB 2.0 machines)
PHYSICAL	• USB 3.0 micro-B receptacle • Smart card slot • SATA 22 pin connector (internal)
HARD DISK	• Any 2.5" hard disk with 9.5mm thickness
DIMENSIONS	• 150mm (L) x 85mm (W) x 20mm (H)
POWER	• Approx 5V 300mA max (excluding power drawn by the HDD)
AUTHENTICATION	• Supports two-factor authentication via smart card and PIN
SMART CARD	• Supports Common Criteria certified smart cards
ENCRYPTION	• AES hardware cipher engine • Supported key strength: 256 bits
KEY MANAGEMENT	• User-configurable smart card PIN • Admin password for Administrative mode
CERTIFICATIONS AND STANDARDS	• FCC, CE • RoHS compliant
OPERATING SYSTEMS	• Operating System independent • Tested with Windows® 10, Windows® 8, Windows® 7, Windows® XP, Windows® Server 2012, Windows® Server 2008, Windows® Server 2003, Mac OS and Linux

3 Using DISKCRYPT M100

3.1 Authentication

DISKCRYPT M100 comes with the 2.5” hard drive installed. You are ready to use it with your computer anytime. If the hard drive is not installed, simply approach your local reseller/distributor.

DISKCRYPT M100 requires users to authenticate themselves via two-factor authentication before they are granted access to the installed drive. In order to do so, users must have the included smart card (something you have) and its associated PIN (something you know). The authentication process involves inserting the correct smart card into DISKCRYPT M100, followed by PIN entry. Upon completion of these two steps, the connected drive will present itself to the operating system and can be used like a normal drive.

To connect DISKCRYPT M100 to your computer via USB, follow these easy steps:

1. **Insert the USB cable to your computer’s USB port with the other thinner micro-B end to DISKCRYPT M100.**

   Ensure correct connector orientation to obtain a snug fit.

2. **Insert the smart card with the contacts facing up.**

   You may insert the card before or after connecting DISKCRYPT M100 to your computer. Once a valid card is inserted, the keypad will turn on to allow key entry. If an invalid card is inserted, the **ERROR** LED will light up.

3. **Enter your PIN.**

   Once DISKCRYPT M100 recognizes that a valid card is inserted, you may proceed to enter your **8-digit PIN**. The default factory PIN is **“12345678”**. At the end of your PIN entry, press the **ENTER** button.

   (For Enterprise deployment, the default PIN will be provided by the Administrator.)

Insert the smart card into the smart card slot with the contacts facing up.

Enter your **8-digit PIN**, followed by the **ENTER** button.

NOTE:
DO NOT force the smart card into the device. DISKCRYPT M100 is designed with the smart card half inserted with a purpose to remind users to remove the smart card after use.

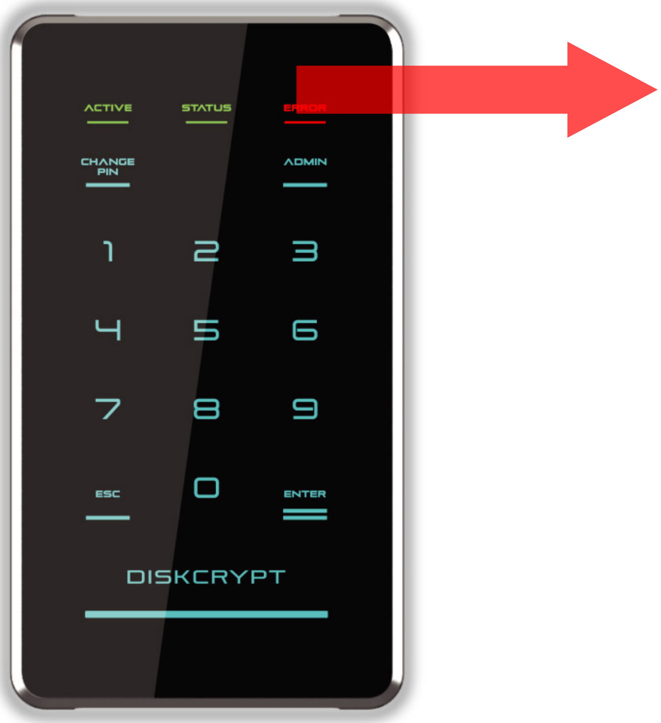
IMPORTANT:

- It is recommended that the default PIN is changed for each smart card. Refer to Section 4.1 for details.
- The default mode is the "Lockout" mode. This is the recommended (higher security) mode of usage.
- In Lockout mode, DISKCRYPT M10 is automatically disconnected from the host PC upon card removal. **Do NOT** remove the smart card while DISKCRYPT M10 is being accessed as this may cause unrecoverable data loss/corruption.
- If an incorrect PIN is entered, the **ERROR** LED will blink continuously. Press the **ESC** button to restart DISKCRYPT M100. If you think you have mistyped your PIN, press the **ESC** button at any time to restart the entire authentication process.
- You will be locked out of your smart card after 8 consecutive incorrect PIN attempts. Due to security implementations, it is not possible to unlock the smart card. Please ensure that you have the correct PIN to the smart card.
- Each DISKCRYPT M100 comes with two smart cards. It is recommended that you use only one card and keep the other in a secure place. In the event that one card is stolen/lost, you may authenticate with the other card.
- Please always remove the smart card when the device is not in use or unattended.
- Please perform preliminary visual inspection of the device for tamper signs before usage.
- The continuous blinking of the **ERROR** LED upon device boot up indicates Power-On-Self-Test failure. Please contact your local reseller/distributor.
- Users should not leave the device unattended.

3.2 Using the built-in keypad

The built-in keypad allows you to enter or change your PIN (refer to Section 4.1 on Change Smart Card PIN) and perform other Administrative functions. It works on the principle of capacitive sensing to provide a better user experience and can detect the presence of a touch on the button.

Note:
The keypad turns on only when the user inserts the smart card.



Status LED indicators

4 Smart Card Security Features

You can perform certain smart card related security functions with DISKCRYPT M100. These functions are only available before authentication. The following functions are available.

CAUTION:
Smart card security and Administrative functions must be performed carefully as they cause changes in smart cards and associated PIN. Please read the following instructions carefully and follow them when performing Administrative functions.

4.1 Change Smart Card PIN

You can change your **8-digit smart card PIN** with DISKCRYPT M100. It is recommended that you change the default factory PIN to one that only you know.

Follow these steps to change your **8-digit smart card PIN**.

1. Insert smart card into DISKCRYPT M100. The keypad should turn on to allow key entry.
2. Press the **CHANGE PIN** button, followed by the **'1'** button.
3. Press **ENTER**. The **STATUS** LED will blink three times.
4. Enter the **current 8-digit smart card PIN** and press **ENTER**. The **STATUS** LED blinks twice.
5. Enter the **new 8-digit smart card PIN** and press **ENTER**. The **STATUS** LED blinks twice.
6. Repeat the **new 8-digit smart card PIN** and press **ENTER**. While the PIN change process is taking place, the **STATUS** LED will continue to blink. DISKCRYPT M100 will provide three 'beep' sounds to indicate that this operation is successful.

Upon a successful PIN change, DISKCRYPT M100 will proceed to connect the drive. If the PIN change is not successful, the **ERROR** LED will blink continuously.

Note:
- Smart card PIN are specific to the physical smart card. Please be aware that you may have different PIN for each of the two included smart cards.
- The user is responsible to remember his/her smart card PIN. The smart card will be locked after 8 consecutive incorrect PIN attempts. Due to security implementation, it is not possible to unlock the smart card PIN.
- DISKCRYPT M100 only accepts 8-digit PIN. If a shorter or longer PIN is entered, the **ERROR** LED will blink continuously. Press the **ESC** button to restart the authentication process again. You will need to restart the entire PIN Change process from step 2.
- Pressing the **ESC** button restarts the entire authentication process.

4.2 Administrative Functions

(Note that this section is not applicable to Enterprise Users. Enterprise Users may approach their Administrators.)

DISKCRYPT M100 provides the following Administrative functions:

1. Initialize a smart card to use it with DISKCRYPT M100
2. Enable/disable the smart card Lockout mode.
3. Admin smart card initialization
4. Change the **Admin PIN**

Additional smart cards may be purchased from your local reseller/distributor. You will need a supported smart card and the **8-digit Admin PIN** to enter the mode. The default factory Admin PIN is "**87654321**". To exit Administrative mode, remove and reconnect the USB cable.

Note:

- It is recommended to change the **default 8-digit Admin PIN.** Refer to Section 4.2.4 for details.
- You are responsible to remember the Admin PIN. The Administrative functions will be locked after **8 consecutive incorrect PIN** attempts.
- It is **NOT** possible to connect to the hard disk via ANY of the above Administrative modes. To do so, remove and reconnect the USB cable to exit the Administrative mode and proceed to enter the smart card PIN to authenticate to DISKCRYPT M100.

4.2.1 Smart Card Initialization

This procedure allows a smart card to be used with the particular DISKCRYPT M100 device. To initialize a smart card, follow these steps:

1. Insert the new smart card into DISKCRYPT M100. The keypad will turn on to allow key entry.
2. The **ERROR** LED will light up indicating an invalid card has been inserted. Ignore the LED and continue with the steps.
3. Press the **ADMIN** button, followed by the '**0**' button.
4. Press **ENTER**. The **STATUS** LED will blink three times.
5. Enter the **8-digit Admin PIN** and press **ENTER**.
6. DISKCRYPT M100 will proceed to initialize the smart card to be used with that particular DISKCRYPT M100 device. While the initialization process is taking place, the **STATUS** LED will continue to blink. At the end of the process, DISKCRYPT M100 will provide three 'beep' sounds to indicate that this operation is successful.
7. Remove and reconnect the USB cable to exit the Administrative mode.

Note:
Once a new smart card is initialized, you will need to repartition/reformat any existing drive, as the encryption key will be different. The existing data in the drive will be lost with the new card.

4.2.2 Smart Card Lockout mode

This mode controls the behavior of DISKCRYPT M100 when the smart card is removed after authentication. DISKCRYPT M100 allows the user to choose between two smart card Lockout modes. There are two supported modes:

1. Lockout (default) – DISKCRYPT M100 is automatically disconnected from the host PC upon smart card removal.
   (The **STATUS** LED is **GREEN** in authenticated mode.)
2. No Lockout – DISKCRYPT M100 remains connected to the host PC upon smart card removal.
   (The **STATUS** LED is **RED** in authenticated mode.)

To toggle the smart card Lockout mode, follow these steps:

1. Insert the smart card into DISKCRYPT M100. The keypad will turn on to allow key entry.
2. Press the **ADMIN** button, followed by the '**1**' button.
3. Press **ENTER**. The **STATUS** LED will blink three times.
4. Enter the **8-digit Admin PIN** and press **ENTER**. DISKCRYPT M100 will proceed to change the settings. While the change process is taking place, the **STATUS** LED will continue to blink. At the end of the process, DISKCRYPT M100 will provide three 'beep' sounds to indicate that this operation is successful.
5. Remove and reconnect the USB cable to exit the Administrative mode.

Note:

- The default mode is **Lockout** mode. This is the recommended (higher security) mode of usage.

- In Lockout mode, DISKCRYPT M100 is automatically disconnected from the host PC upon card removal. Do NOT remove the smart card while DISKCRYPT M100 is being accessed as this may cause unrecoverable data loss/corruption.

4.2.3 Admin Smart Card Initialization

(Note that this section is applicable only to Enterprise User. This function shall be invoke by Administrators during DISKCRYPT M100 setup and provisioning. Administrators may refer to the DiskCrypt key Management System Guide on preparation of the Admin smart card)

This procedure allows a supported Admin smart card to be initialized with DISKCRYPT M100 device. This function injects a Disk Key into DISKCRYPT M100. The Disk Key is used in conjuncture with the User Key (stored in User smart card) to deduce a Symmetric Key used for cryptographic functions of DiskCrypt M100. To initialize the Admin smart card, follow these steps:

1. Insert the Admin smart card into DISKCRYPT M100. The keypad will turn on to allow key entry.
2. The **ERROR** LED may light up indicating an untagged card has been inserted. Ignore the LED if it lights up.
3. Press the **ADMIN** button, followed by the '**5**' button.
4. Press **ENTER**. The **STATUS** LED will blink three times.
5. Enter the **8-digit Admin PIN** and press **ENTER**. The **STATUS** LED will blink continuously. Proceed to the next step.
6. Enter the **8-digit Admin smart card PIN** and press **ENTER**
7. DISKCRYPT M100 will proceed to initialize the Admin smart card with the DISKCRYPT M100 device. While the initialization process is taking place, the **STATUS** LED will continue to blink. At the end of the process, DISKCRYPT M100 will provide three 'beep' sounds to indicate that this operation is successful.
8. Remove and reconnect the USB cable to exit the Administrative mode.

Note:
The Admin smart card shall be stored in a secure location as it contains the Disk Key.

4.2.4 Change Admin PIN

The **Admin PIN** provides a layer of protection around your DISKCRYPT M100 device to deter others from unauthorized access of the Administrative functions. It is recommended that you change the default factory **Admin PIN** to another one that only you know. To change your **Admin PIN**, follow these steps:

1. Insert the smart card into DISKCRYPT M100. The keypad will turn on to allow key entry.
2. Press the **CHANGE PIN** button, followed by the **'0'** button.
3. Press **ENTER**. The **STATUS** LED blinks three times.
4. Enter the **current 8-digit Admin PIN** and press **ENTER**. The **STATUS** LED blinks twice.
5. Enter the **new 8-digit Admin PIN** and press **ENTER**. The **STATUS** LED blinks twice.
6. Repeat the **new 8-digit Admin PIN** and press **ENTER**. While the Admin PIN change process is taking place, the **STATUS** LED will continue to blink. DISKCRYPT M100 will provide three 'beep' sounds to indicate that this operation is successful.
7. Remove and reconnect the USB cable to exit the Administrative mode.

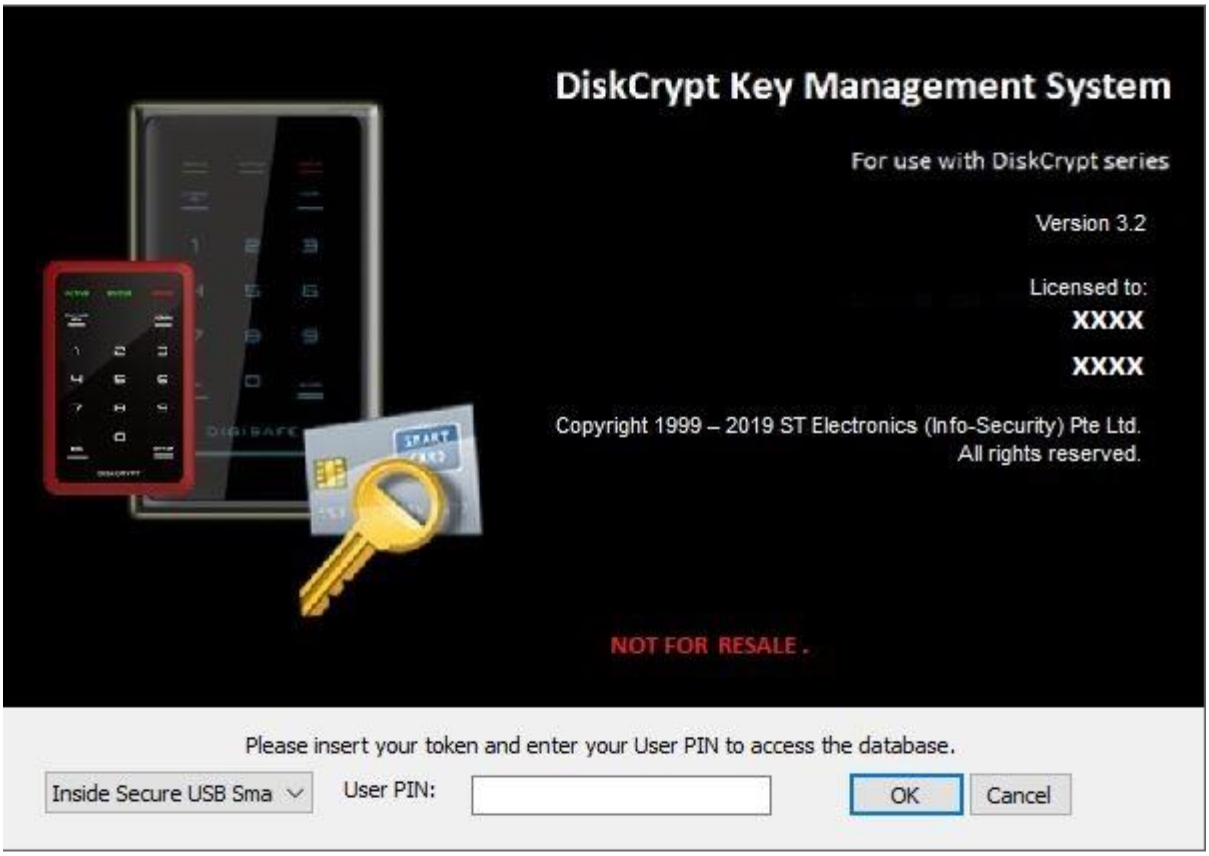
If you have mistyped your PIN, press the **ESC** button at any time to restart the entire authentication process.

Note:
Like the smart card user PIN, DISKCRYPT M100 only accepts 8-digit ADMIN PIN. If a shorter or longer PIN is entered, the **ERROR** LED will blink continuously. Press the **ESC** button to restart the authentication process again. You will need to restart the entire PIN Change process from step 2.

5 Optional Accessories

5.1 DiskCrypt key Management Software (DMS)

DMS provides a way for enterprises to provision their own smart cards for usage with DISKCRYPT M100. System administrators may also use this software to back up the encryption keys that are pre-loaded in the two smart cards that come with DISKCRYPT M100.



DiskCrypt Key Management System

For use with DiskCrypt series

Version 3.2

Licensed to:
XXXX
XXXX

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All rights reserved.

NOT FOR RESALE.

Please insert your token and enter your User PIN to access the database.

Inside Secure USB Sma

User PIN:

DMS comes with the general features:

1. Generation and loading of encryption key into a smart card
2. Duplication of smart card with the same encryption key
3. Editing smart card record
4. Reading smart card and backup of encryption keys
5. Delete smart card record

(For Enterprise users, please refer to DMS guide document for details)

> **Note**:
> Please contact your reseller/distributor for any enquiries or purchase of the software and/or additional smart cards.

6 Helpful Information

6.1 Partitioning and formatting your hard drive

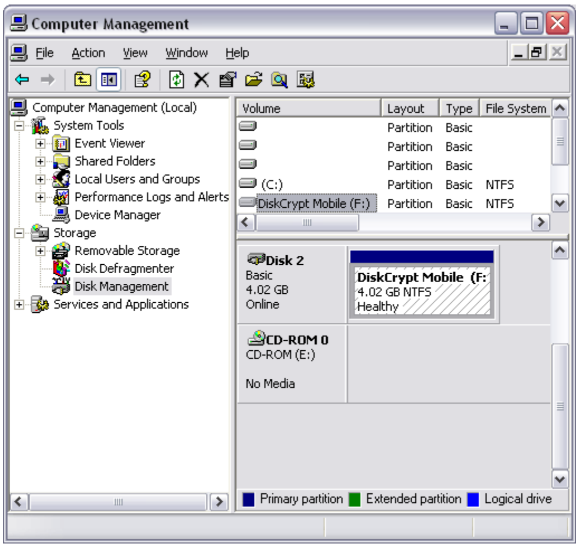
Note that in most cases, it is not necessary to do this because the hard drive will be shipped, completely formatted.

In any case, if you wish to partition and format the drive, simply follow these steps.

CAUTION:
Performing partition and format operations will erase all data in the drive.

Windows XP and above

1. Connect and authenticate into DISKCRYPT M100.
2. Right click on **My Computer** and Select **Manage**.
3. From the **Computer Management** window, select **Disk Management**.
4. Right click on the drive and choose **Initialize**.
5. Right click on the drive and select **New Partition**.
6. Follow the New Partition Wizard to create as many partitions as desired.
7. Right click on each partition and select **Format** to format the drive.
8. The drive is ready to be used once formatting completes.



Volume	Layout	Type	File System
	Partition	Basic	
	Partition	Basic	
	Partition	Basic	
(C:)	Partition	Basic	NTFS
DiskCrypt Mobile (F:)	Partition	Basic	NTFS

Disk 2
Basic
4.02 GB
Online

DiskCrypt Mobile (F:
4.02 GB NTFS
Healthy

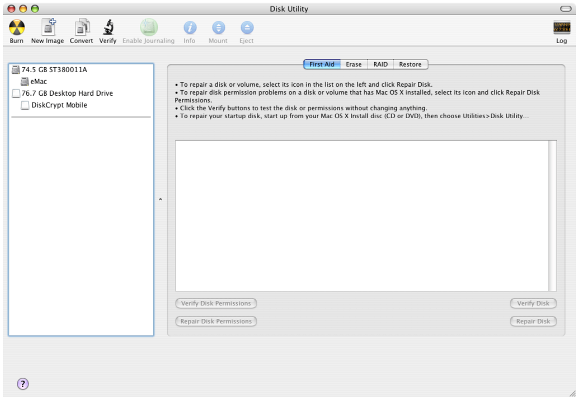
CD-ROM 0
CD-ROM (E:)

No Media

Note:
You must have Administrator privileges to use the Disk Management utility.

Mac

1. Connect and authenticate into DISKCRYPT M100.
2. Enter the **Applications** folder, followed by the **Utilities** folder
3. Run **Disk Utility**.
4. Select DISKCRYPT M100 on the left hand column and click on the **Partition** tab.
5. Choose the number, size and names of the desired partitions.
6. Mac OS will then format the drives automatically.
7. The drive is ready to be used once formatting completes.



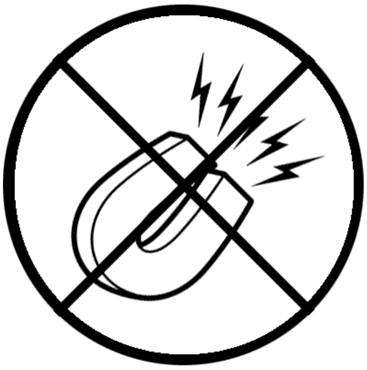
74.5 GB ST380011A
eMac
76.7 GB Desktop Hard Drive
DiskCrypt Mobile

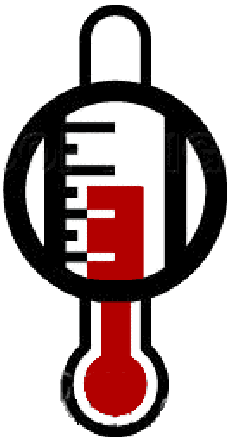
- To repair a disk or volume, select its icon in the list on the left and click Repair Disk.
- To repair disk permission problems on a disk or volume that has Mac OS X installed, select its icon and click Repair Disk Permissions.
- Click the Verify buttons to test the disk or permissions without changing anything.
- To repair your startup disk, start up from your Mac OS X Install disc (CD or DVD), then choose Utilities>Disk Utility...

7 Care and Handling

The following are some important information on the proper care and handling of DISKCRYPT M100. Please take a moment to review these instructions.

- As with any storage solution, it is recommended that the data of the connected drive be backed up regularly.
- Ensure that you follow the proper removal procedure to disconnect DISKCRYPT M100.
- Do not move or disconnect this device from your computer while it is reading or writing data. This may cause damage to DISKCRYPT M100 and it is possible that the data that is read from or written to the device becomes corrupted.
- Do not place this device near a heat source or expose to direct flame or heat.
- Do not place the device near to equipment generating strong electromagnetic fields. Exposure to strong electromagnetic fields may cause the device to malfunction or data to be corrupted.
- Do not drop or cause shock to your DISKCRYPT M100.
- Do not expose DISKCRYPT M100's internals to water.
- Do not attempt to disassemble and service DISKCRYPT M100 yourself.





8 Frequently Asked Questions

What is DiskCrypt M100?

DISKCRYPT M100 is a USB 3.0 encryption hard disk enclosure for 2.5” SATA hard drives. It provides access control via two-factor authentication using a smart card and data-at-rest security via hardware-based full disk encryption.

How easy it is to use DiskCrypt M100?

It is very simple and straightforward. After installing the hard drive into DISKCRYPT M100, it is as simple as connecting DISKCRYPT M100 to your computer, inserting your smart card and entering a PIN. You may access your data just like any other normal USB enclosures. No software installation is required at all.

What are the advantages of using DiskCrypt M100 over other USB drive enclosures?

DISKCRYPT M100 provides state of the art security via two-factor authentication and hardware-based full disk encryption. It utilizes smart card technology for two-factor authentication through a built-in keypad to enter smart card PIN, hence, it is very secure.

Unlike other solutions, encryption keys are stored inside the smart card, not in memory based tokens or hard disk. Other than security, it also means if DISKCRYPT M100 really malfunctions, simply remove the hard disk and install in the replacement device and you may continue accessing your data using that smart card. This point highlights the next advantage of DISKCRYPT M100 – the hard disk is easily replaceable or upgradeable.

DISKCRYPT M100 is also operating system (OS) independent, unlike some existing solutions which only work on certain OS.

What are the advantages of smart card authentication over hardware keys/tokens?

Smart cards are a proven technology for secure storage of information. DISKCRYPT M100 stores the encryption key in smart cards. While other encrypted drive enclosures make use of hardware keys to store the encryption key, these keys are not secure, and can be easily duplicated if they are lost/stolen, hence compromising the encryption key and the data within the hard drive. Smart cards however require a PIN to access data within. Even if the cards and enclosure are both lost or stolen, your data is still secure as the PIN is only known to you.

What is two-factor authentication?

Two-factor authentication is an authentication protocol that requires two independent methods to establish one’s identity and privileges. DISKCRYPT M100 implements two-factor authentication by requiring that the user have the associated smart card (something you have) and knowledge of the PIN (something you know). This offers stronger security than traditional password or hardware key only security.

What are the advantages of two-factor authentication?

Two-factor authentication offers stronger security than traditional password, biometric or hardware key/token only systems. Should your smart card be stolen/lost along with your DISKCRYPT M100, your data will still be secure as long as the PIN is only known to you.

What are the advantages of hardware-based full disk encryption over software encryption solutions?

- Unlike existing software solutions, DISKCRYPT M100 encrypts every single byte and sector of the hard drive. This means all temporary files, all partitions and even the boot sector is encrypted.
- One major disadvantage of existing software disk encryption products is that they are Operating System (mostly Windows) dependent. DISKCRYPT M100 is independent of the OS or the host system BIOS and thus supports any OS.
- DISKCRYPT M100 does not involve any tedious and error-prone software installation and configuration. Just plug DISKCRYPT M100 in the computer, authenticate yourself and you are ready to go.
- Once installed, DISKCRYPT M100 does not require any maintenance or patches thus reducing the total cost of ownership of the product.
- There are also no performance overheads due to encryption/decryption of data, unlike software-based solutions.

What happens when DISKCRYPT M100 malfunctions?

Every DISKCRYPT M100 is subjected to a stringent quality assurance process prior to shipment. However, hard drives installed in DISKCRYPT M100 still have a limited lifetime. As such, users are advised to backup their data regularly. The encryption key is stored securely in the included smart cards. In the event that DISKCRYPT M100 malfunctions, the data in the drive will still be readable as long as the smart cards are present. Simply approach your local reseller/distributor to help you install your drive in another DISKCRYPT M100 of the **same encryption key length**, initialize your card(s), and you may use the new DISKCRYPT M100 as per normal.

Is the boot sector also encrypted?

Yes, DISKCRYPT M100 employs full disk encryption (FDE), meaning every single byte and sector of your hard drive is encrypted.

How strong is the encryption of DISKCRYPT M100?

DISKCRYPT M100 offers AES encryption scheme with a key-strength of 256 bits.

Can the PIN be changed later without data loss?

Yes, the smart card PIN may be easily changed during the time of authentication without any data loss. Please note that PIN are smart card specific so changing the PIN with one smart card does NOT automatically change the PIN of another.

Can I use DiskCrypt M100 with my operating system?

Yes! Because DISKCRYPT M100 uses hardware for the authentication and encryption processes, it is **operating system independent**. As long as your choice of operating system supports the USB Mass Storage class specification, you may use DISKCRYPT M100 with it.

What happens if I lose my smart card?

The smart cards included contain the encryption key of the installed drive. The key is protected by your PIN, and hence it is inherently secure as long as your PIN is not compromised. If you lose your 1st card, please continue to use the 2nd card to access your drive. You may wish to purchase additional cards, and/or our DiskCrypt key Management System to duplicate cards. As the new cards will come with new encryption keys, please backup your data with your existing card before using the new cards.

How do I unlock the smart card if I exceed 8 consecutive incorrect PIN attempts?

Due to security implementations, it is not possible to unlock the smart card. Please ensure that you have the correct PIN to the smart card. Hence, we encourage customers to keep one smart card with default factory PIN in a secured location as a backup.

9 Troubleshooting

In the event that your DISKCRYPT M100 does not function properly, please refer to the following checklist to find out what the problem is. If further technical support is required, please contact your local DISKCRYPT M100 reseller/distributor immediately.

Problem	Query	Possible reason and remedy
The keypad is inactive	*Is the device's backlight on?*	Ensure that the USB connector is firmly connected to your computer's USB port.
	Is the ERROR LED lighted?	Ensure that a valid smart card is inserted and the card orientation is correct with the contacts facing up.
	Has a smart card been inserted?	Insert a valid smart card into DISKCRYPT M100.
Authentication fails	*Are both the ACTIVE and ERROR LED lighted?*	The smart card has not initialize with DISKCRYPT M100. Refer to 4.2.1 Smart Card Initialization for more information.
	Is the ERROR LED blinking?	A wrong password has been entered. Press the ESC button to restart the authentication process.
The drive is not recognized.	*Does the STATUS LED stay on all the time?*	Ensure that the USB connector is firmly connected to your computer's USB port.
	Does the drive's icon appear on the computer?	Check for the drive icon in your operating system. If it does not appear, remove the USB cable, reinsert and perform the authentication process again.
	Is the hard drive new?	A new drive that has not been previously partitioned and formatted will need to be done so. Refer to 6.1 Partitioning and formatting your hard drive for more information.
	Is the file system supported by the operating system?	When using an existing drive in a new operating system, ensure that the file system used by the drive is compatible with the new operating system.
	Is your DISKCRYPT M100 connected to a USB port?	Ensure that the DISKCRYPT M100 is plugged into a USB port directly rather than an extension cable or hub. If the drive isn't recognized when plugged into

		the front USB ports, try the rear USB ports.

Problem	Query	Possible reason and remedy
The drive is performing very slowly	*Is your DISKCRYPT M100 connected to a USB 3.0 or 2.0 port?*	To get USB 3.0 performance, ensure that your DISKCRYPT M100 is connected to a USB 3.0 port. The port is normally indicated with a "SS" by the side. If not, you may get a USB 2.0 performance.
	Is DISKCRYPT M100 plugged into a USB hub?	Connect the DISKCRYPT M100 directly to USB 3.0 ports on your computer