iStorage®

DISKASHUR® 3 & DISKASHUR® PRO3

User Manual

This user manual is applicable to both diskAshur³ and diskAshur PRO³ and shall hereinafter be referred to as diskAshur³

Please make sure you remember your PIN (password), without it, there is no way to access the data on the drive.

If you are having difficulty using your diskAshur³ please contact our support team by email - support@istorage-uk.com or by phone on +44 (0) 20 8991 6260.

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Introduction

Thank you for purchasing the new iStorage diskAshur³/ diskAshur PRO³ drive, hereinafter referred to as diskAshur³.

The diskAshur³ is an easy to use, ultra-secure, password protected, hardware encrypted portable HDD/SSD drive with capacities of up to 5TB (HDD) and up to 16TB (SSD) and rising. The diskAshur³ encrypts data in transit and at rest using 256-bit full disk hardware encryption.

The diskAshur³ incorporates a Common Criteria EAL 5+ Hardware Certified secure microprocessor, which employs built-in physical protection mechanisms designed to defend against external tamper, bypass attacks and fault injections. Unlike other solutions, the diskAshur³ reacts to an automated attack by entering the deadlock frozen state, which renders all such attacks as useless. In plain and simple terms, without the PIN there's no way in!

Box Contents

- iStorage diskAshur³
- Protective carry case
- USB C & A Cables
- QSG - Quick Start Guide

diskAshur³ Layout

1. USB 3.2 (Gen 1) Type-C interface
   USB Type C & A cables included.
2. LED lights
   ***RED** - Locked/Standby mode. **SOLID GREEN** - Unlocked. **FLASHING GREEN** - Data transfer. **BLUE** - Admin mode.*
3. Epoxy coated, wear resistant, backlit (*user selectable*), alphanumeric keypad.
4. Tamper proof and tamper evident design
   All critical components are covered by a layer of super tough epoxy resin.
5. On-device crypto chip.
6. On-device Common Criteria EAL 5+ Certified Secure Microprocessor
7. SHIFT button.
8. UNLOCK button.
9. Desk Lock Slot
10. The depth of the 3TB-5TB HDD drive is 26.8mm instead of 20.8mm

1. LED indicators and their actions

LED	LED State	Description	LED	LED State	Description
	RED Solid	Locked drive (in either **Standby** or **Reset** states)		BLUE Solid	Drive in **Admin mode**
	RED Double blink	Incorrect PIN entry		RED, GREEN and BLUE Blinking together	Waiting for **User** PIN entry
	GREEN Solid	Drive **unlocked**		GREEN and BLUE Blinking together	Waiting for **Admin** PIN entry
	GREEN Blinking	Data transfer in progress			

2. LED States

To wake from Idle State

Idle state is defined as when the drive is not being used and all LEDs are off.

To wake diskAshur³ from the idle state do the following.

Connect the drive to a powered USB port on your computer		A solid RED LED switches on indicating the drive is in Standby State

To enter Idle State

To force diskAshur³ to enter Idle State, execute either of the following operations:

- Safely eject and disconnect drive from your computer, RED LED will switch off (idle state).

Power-on States

After the drive wakes from the Idle State, it will enter one of the following states shown in the table below.

Power-on State	LED indication	Encryption Key	Admin PIN	Description
Initial Shipment State	RED and GREEN Solid	✓	×	Waiting for configuration of an Admin PIN (First Time Use)
Standby	RED Solid	✓	✓	Waiting for Admin, User or Recovery PIN entry
Reset	RED Solid	×	×	Waiting for configuration of an Admin PIN

3. First Time Use

The iStorage diskAshur³ is supplied in the **'Initial Shipment State' with no pre-set Admin PIN**. A **8-64** digit Admin PIN must be configured before the drive can be used. Once an Admin PIN has been successfully configured, it will then not be possible to switch the drive back to the 'Initial Shipment State'.

PIN Requirements:

- Must be between 8-64 digits in length
- Must not contain only repetitive numbers, e.g. (3-3-3-3-3-3-3-3)
- Must not contain only consecutive numbers, e.g. (1-2-3-4-5-6-7-8), (7-8-9-0-1-2-3-4), (8-7-6-5-4-3-2-1)
- The SHIFT key can be used for additional combinations (e.g. **SHIFT** (⬆)**+1** is a separate value to just 1).

Password Tip: You can configure a memorable word, name, phrase or any other Alphanumerical PIN combination by simply pressing the button with the corresponding letters on it.

Examples of these types of Alphanumerical PINs are:

- For "**Password**" press the following buttons:
  7 (pqrs) **2** (abc) **7** (pqrs) **7** (pqrs) **9** (wxyz) **6** (mno) **7** (pqrs) **3** (def)
- For "**iStorage**" press the following buttons:
  4 (ghi) **7** (pqrs) **8** (tuv) **6** (mno) **7** (pqrs) **2** (abc) **4** (ghi) **3** (def)

Using this method, long and easy to remember PINs can be configured.

To configure an Admin PIN and unlock the diskAshur³ for the first time, please follow the simple steps in the table below.

Instructions - First Time Use	LED	LED State
1. Connect the diskAshur³ to a powered USB port on your computer		Solid RED and GREEN LEDs switch on indicating the drive is in the Initial Shipment State
2. Press and hold down both **Unlock (🔓) + 1** buttons		LEDs turn to blinking GREEN and solid BLUE
3. Enter a **New Admin PIN** (8-64 digits) and press the **Unlock (🔓)** button once		Blinking GREEN and solid BLUE LEDs switch to a GREEN blink then back to Blinking GREEN and solid BLUE LEDs
4. Re-enter your **New Admin PIN** and press the **Unlock (🔓)** button once		BLUE LED rapidly blinks then switches to a solid BLUE LED and finally to a solid GREEN LED indicating the Admin PIN has been successfully configured and the drive is unlocked and ready to be used

Locking the diskAshur³
To lock the drive, safely eject from your host operating system and then unplug from the USB port. If data is being written to the drive, ejecting the diskAshur³ will result in incomplete data transfer and possible data corruption.

4. Unlocking diskAshur³ with the Admin PIN

To unlock the diskAshur³ with the Admin PIN, please follow the simple steps in the table below.

1. Connect the diskAshur³ to a USB port on your computer		A solid RED LED switches on indicating the drive is in Standby State
2. In Standby State (solid RED LED) press the **Unlock (🔓)** button once		GREEN and BLUE LEDs blink together
3. With the GREEN and BLUE LEDs blinking together, enter the **Admin PIN** and then press the **Unlock (🔓)** button once		The GREEN LED blinks several times and then switches to a solid GREEN LED indicating the drive has been successfully unlocked as Admin and is ready to be used

5. How to enter Admin Mode

To Enter Admin Mode, do the following.

1. Connect the diskAshur³ to a powered USB port on your computer		A solid RED LED switches on indicating the drive is in Standby State
2. In Standby State (solid RED LED) Press and hold down both **Unlock (🔓) + 1** buttons		GREEN and BLUE LEDs blink together
3. Enter your **Admin PIN** and press the **Unlock (🔓)** button once		A solid BLUE LED switches on indicating the drive is in Admin mode

To Exit Admin Mode

To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

6. Changing the Admin PIN

PIN Requirements:

- Must be between 8-64 digits in length
- Must not contain only repetitive numbers, e.g. (3-3-3-3-3-3-3-3)
- Must not contain only consecutive numbers, e.g. (1-2-3-4-5-6-7-8), (7-8-9-0-1-2-3-4), (8-7-6-5-4-3-2-1)
- The SHIFT key can be used for additional combinations (e.g. **SHIFT** (⬆)**+1** is a separate value to just 1).

Password Tip: You can configure a memorable word, name, phrase or any other Alphanumerical PIN combination by simply pressing the button with the corresponding letters on it.

Examples of these types of Alphanumerical PINs are:

- For "**Password**" press the following buttons:
  7 (pqrs) **2** (abc) **7** (pqrs) **7** (pqrs) **9** (wxyz) **6** (mno) **7** (pqrs) **3** (def)
- For "**iStorage**" press the following buttons:
  4 (ghi) **7** (pqrs) **8** (tuv) **6** (mno) **7** (pqrs) **2** (abc) **4** (ghi) **3** (def)

Using this method, long and easy to remember PINs can be configured.

To change the Admin PIN, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both the **Unlock (🔓) + 2** buttons		Solid BLUE LED will change to blinking GREEN and solid BLUE LEDs
2. Enter **NEW Admin PIN** and then press the **Unlock (🔓)** button once		Blinking GREEN and solid BLUE LEDs will switch to a single GREEN LED blink and then back to blinking GREEN and solid BLUE LEDs
3. Re-enter the **NEW Admin PIN** and then press the **Unlock (🔓)** button once		Blinking GREEN and solid BLUE LEDs change to a rapidly blinking BLUE LED and finally to a solid BLUE LED indicating the Admin PIN has been successfully changed

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

7. Setting a User PIN Policy

The Administrator can set a restriction policy for the User PIN. This policy includes setting the minimum length of the PIN (from 8 to 64 digits), as well as requiring or not the input of one or more '**Special Characters**'. The "Special Character" functions as both the '**SHIFT** (⬆) + **digit**' buttons pressed down together.

To set a User PIN Policy (restrictions), you will need to enter 3 digits, for instance '**091**', the first two digits (**09**) indicate the minimum PIN length (in this case, **9**) and the last digit (**1**) denotes that one or more 'Special Characters' must be used, in other words '**SHIFT** (⬆) + **digit**'. In the same way, a User PIN Policy can be set without the need of a 'Special Character', for instance '**120**', the first two digits (**12**) indicate the minimum PIN length (in this case,**12**) and the last digit (**0**) meaning no Special Character is required.

Once the Administrator has set the User PIN Policy, for instance '**091**', a new User PIN will need to be configured - see section 10, 'Adding a New User PIN in Admin Mode'. If the Administrator configures the User PIN as '**247688314**' with the use of a '**Special Character**' (**SHIFT** (⬆) **+ digit** pressed down together), this can be placed anywhere along your 8-64 digit PIN during the process of creating the User PIN as shown in the examples below.

A. '**SHIFT** (⬆) **+ 2**', '4', '7', '6', '8', '8', '3', '1', '4',

B. '2', '4', '**SHIFT** (⬆) **+ 7**', '6', '8', '8', '3', '1', '4',

C. '2', '4', '7', '6', '8', '8', '3', '1', '**SHIFT** (⬆) **+ 4**',

Note:

- If a 'Special Character' was used during the configuration of the User PIN, for instance, example '**B**' above, then the drive can only be unlocked by entering the PIN with the 'Special Character' entered precisely in the order configured, as per example '**B**' above - ('2', '4', '**SHIFT** (⬆) **+ 7**', '6', '8', '8', '3', '1', '4').
- More than one 'Special Character' can be used and placed along your 8-64 digit PIN.
- Users are able to change their PIN but are forced to comply with the set 'User PIN Policy' (restrictions), if and when applicable.
- Setting a new User PIN Policy will automatically delete the User PIN if one exists.
- This policy does not apply to the 'Self-Destruct PIN'. The complexity setting for the Self-Destruct PIN and Admin PIN is always 8-64 digits, with no special character required.

To set a **User PIN Policy**, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both **Unlock (🔓) + 7** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Enter your **3 digits**, remember the first two digits denote minimum PIN length and last digit (0 or 1) whether or not a special character has been used.		Blinking GREEN and BLUE LEDs will continue to blink
3. Press the **SHIFT** (⬆) button once		Blinking GREEN and BLUE LEDs will change to a solid GREEN LED and finally to a solid BLUE LED indicating the User PIN Policy has been successfully set.

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

8. How to delete the User PIN Policy

To delete the **User PIN Policy**, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both **Unlock (🔓) + 7** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Enter **080** and press the **SHIFT** (⬆) button once		Blinking GREEN and BLUE LEDs will change to a solid GREEN LED and finally to a solid BLUE LED indicating the User PIN Policy has been successfully deleted

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

9. How to check the User PIN Policy

The Administrator is able to check the User PIN Policy and can identify the minimum PIN length restriction and whether or not the use of a Special Character has been set by noting the LED sequence as described below.

To check the User PIN Policy, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **SHIFT** (⬆) **+ 7** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press the **Unlock (🔓)** button and the following happens; a. All LED's (RED, GREEN & BLUE) become solid for 1 second. b. A RED LED blink equates to ten (10) units of a PIN. c. Every GREEN LED blink equates to a single (1) unit of a PIN d. A BLUE blink indicates that a 'Special Character' was used. e. All LED's (RED, GREEN & BLUE) become solid for 1 second. f. LEDs return to solid BLUE		

The table below describes the LED behaviour whilst checking the User PIN Policy, for instance if you have set a 12 digit User PIN with the use of a Special Character (**121**), the RED LED will blink once (**1**) and the GREEN LED will blink twice (**2**) followed by a single (**1**) BLUE LED blink indicating that a **Special Character** must be used.

PIN Description	3 digit Setup	RED	GREEN	BLUE
12 digit PIN with use of a Special Character	121	1 Blink	2 Blinks	1 Blink
12 digit PIN with NO Special Character used	120	1 Blink	2 Blinks	0
9 digit PIN with use of a Special Character	091	0	9 Blinks	1 Blink
9 digit PIN with NO Special Character used	090	0	9 Blinks	0

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

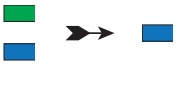
10. Adding a New User PIN in Admin Mode

Important: The creation of a New User PIN must comply with the 'User PIN Policy' if one has been configured as described in section 7, which imposes a minimum PIN length and whether a 'Special Character' has been used. The Administrator can Refer to section 9 to check the user PIN restrictions.

PIN requirements:

- Must be between 8-64 digits in length
- Must not contain only repetitive numbers, e.g. (3-3-3-3-3-3-3-3)
- Must not contain only consecutive numbers, e.g. (1-2-3-4-5-6-7-8), (7-8-9-0-1-2-3-4), (8-7-6-5-4-3-2-1)
- The **SHIFT** (⬆) button can be used for additional PIN combinations - e.g. **SHIFT** (⬆) **+ 1** is a different value than just 1. See section 7, 'Setting a User PIN Policy'.

To add a **New User PIN**, first enter "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **Unlock (🔓) + 3** buttons		Solid BLUE LED will change to blinking GREEN and solid BLUE LEDs
2. Enter **New User PIN** and press **Unlock (🔓)** button		Blinking GREEN and solid BLUE LEDs will switch to a single GREEN LED blink and then back to blinking GREEN and solid BLUE LEDs
3. Re-enter the **New User PIN** and press **Unlock (🔓)** button again		Blinking GREEN and solid BLUE LEDs change to a rapidly blinking GREEN LED and finally to a solid BLUE LED indicating a New User PIN has been successfully configured

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

11. Changing the User PIN in Admin Mode

Important: Changing the User PIN must comply with the 'User PIN Policy' if one has been configured as described in section 7, which imposes a minimum PIN length and whether a 'Special Character' has been used. The Administrator can refer to section 9 to check the user PIN restrictions.

To change an existing **User PIN**, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **Unlock (🔓) + 3** buttons		Solid BLUE LED will change to blinking GREEN and solid BLUE LEDs
2. Enter **New User PIN** and press **Unlock (🔓)** button once		Blinking GREEN and solid BLUE LEDs will switch to a single GREEN LED blink and then back to blinking GREEN and solid BLUE LEDs
3. Re-enter the **New User PIN** and press **Unlock (🔓)** button once		Blinking GREEN and solid BLUE LEDs change to a rapidly blinking GREEN LED and finally to a solid BLUE LED indicating the User PIN has been successfully changed

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

12. Deleting the User PIN in Admin Mode

To delete an existing **User PIN**, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **SHIFT** (⬆) **+ 3** buttons		Solid BLUE LED will change to a blinking RED LED
2. Press and hold down both **SHIFT** (⬆) **+ 3** buttons again		Blinking RED LED will change to a solid RED LED and then to a solid BLUE LED indicating the User PIN has been successfully deleted

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

13. How to unlock diskAshur³ with User PIN

To unlock the diskAshur³ with the **User PIN,** proceed with the following steps.

1. In a standby state (solid RED LED) Press and hold down both the **SHIFT** (⬆) **+ Unlock (🔓)** buttons		RED LED switches to all LEDs, RED, GREEN & BLUE blinking on and off
2. Enter **User PIN** and press the **Unlock (🔓)** button once		RED, GREEN and BLUE blinking LEDs will change to a blinking GREEN LED then to a solid GREEN LED indicating drive successfully unlocked in User Mode

14. Changing the User PIN in User Mode

Important: Changing the User PIN in User mode (GREEN LED) must comply with the 'User PIN Policy' if one has been configured as described in section 7, which imposes a minimum PIN length and whether a 'Special Character' has been used.

To change the **User PIN**, first unlock the diskAshur³ with the User PIN as described in section 13. Once the drive is in **User Mode** (solid GREEN LED) proceed with the following steps.

1. In User mode (GREEN LED) press and hold down both **Unlock (🔓) + 4** buttons		Solid GREEN LED will change to all LEDs, RED, GREEN & BLUE blinking on and off
2. Enter your **Existing User PIN** and press the **Unlock (🔓)** button once		LEDs will switch to a single GREEN LED blink and then back to blinking GREEN and solid BLUE LEDs
3. Enter **New User PIN** and press the **Unlock (🔓)** button once		Blinking GREEN and solid BLUE LEDs will switch to a single GREEN LED blink and then back to blinking GREEN and solid BLUE LEDs
4. Re-enter **New User PIN** and press the **Unlock (🔓)** button once		Blinking GREEN and solid BLUE LEDs will switch to a rapidly blinking GREEN LED and then to a solid GREEN LED indicating the User PIN has been successfully changed

15. Switching on the backlit LED keypad

To aid with low-light visibility, the diskAshur³ is equipped with an LED backlit keypad. To switch on the LED backlit keypad, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **2 & 6** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press **Unlock (🔓)** button		Blinking GREEN and BLUE LEDs will switch to a solid GREEN LED and then to a solid BLUE LED indicating the backlit keypad has been activated and will switch on the next time the drive is plugged in to a powered USB port.

Note: After setting the diskAshur³ to switch ON the LED backlit keypad, the drive must be first unplugged from the powered USB port and then plugged back in again to activate. To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

16. Switching off the backlit LED keypad

To switch off the LED backlit keypad, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **2 & 3** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press **Unlock (🔓)** button		Blinking GREEN and BLUE LEDs will switch to a solid GREEN LED and then to a solid BLUE LED indicating the backlit keypad has been deactivated and will switch off the next time the drive is plugged in to a powered USB port.

Note: After setting the diskAshur³ to switch OFF the LED backlit keypad, the drive must be first unplugged from the powered USB port and then plugged back in again to activate. To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

17. Creating a One-Time User Recovery PIN

The User Recovery PIN is extremely useful in situations where a user has forgotten their PIN to unlock the diskAshur³.
To activate the recovery mode, the user must first enter the correct One-Time Recovery PIN, if one has been configured. The user PIN recovery process does not impact the data, encryption key and Admin PIN, however the user is forced to configure a new 8-64 digit User PIN.

To configure a One-Time 8-64 digit User Recovery PIN, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **Unlock (🔓) + 4** buttons		Solid BLUE LED will change to blinking GREEN and solid BLUE LEDs
2. Enter a **One-Time Recovery PIN** and press **Unlock (🔓)** button		Blinking GREEN and solid BLUE LEDs will switch to a single GREEN LED blink and then back to blinking GREEN and solid BLUE LEDs
3. Re-enter your **One-Time Recovery PIN** and press **Unlock (🔓)** button again		Blinking GREEN and solid BLUE LEDs change to a rapidly blinking GREEN LED and finally to a solid BLUE LED indicating the One-Time Recovery PIN has been successfully configured

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

18. Deleting the One-Time User Recovery PIN

To delete the One-Time User Recovery PIN, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **SHIFT** (⬆) **+ 4** buttons		Solid BLUE LED will change to blinking RED LED
2. Press and hold down both **SHIFT** (⬆) **+ 4** buttons again		Blinking RED LED will become solid RED and then switch to a solid BLUE LED indicating that the One-Time User Recovery PIN has been successfully deleted

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

19. Activating Recovery Mode and Creating New User PIN

The User Recovery PIN is extremely useful in situations where a user has forgotten their PIN to unlock the diskAshur³.
To activate the recovery mode, the user must first enter the correct One-Time Recovery PIN, if one has been configured. The user PIN recovery process does not impact the data, encryption key and Admin PIN, however the user is forced to configure a new 8-64 digit User PIN.

To activate the Recovery process and configure a new User PIN, proceed with the following steps.

1. In **Standby State** (RED LED) press and hold down both **Unlock (🔓) + 4** buttons		Solid RED LED will change to blinking RED and GREEN LEDs
2. Enter the One-Time **Recovery PIN** and press the **Unlock (🔓)** button		GREEN and BLUE LEDs alternate on and off then to a solid GREEN LED and finally to blinking GREEN and solid BLUE LEDs
3. Enter a **New User PIN** and press the **Unlock (🔓)** button		Blinking GREEN and solid BLUE LEDs change to a single GREEN LED blink then back to blinking GREEN and solid BLUE LEDs
4. Re-enter your **New User PIN** and press the **Unlock (🔓)** button again		GREEN LED blinks rapidly then becomes solid GREEN indicating the recovery process has been successful and a new user PIN configured

Important: The creation of a new User PIN must comply with the 'User PIN Policy' if one has been configured as described in section 7, which imposes a minimum PIN length and whether a special character has been used. Refer to section 9 to check the user PIN restrictions.

20. Set User Read-Only in Admin Mode

With so many viruses and Trojans infecting USB drives, the Read-Only feature is especially useful if you need to access data on the USB drive when used in a public setting. This is also an essential feature for forensic purposes, where data must be preserved in its original and unaltered state that cannot be modified or overwritten.

When the Administrator configures the diskAshur³ and restricts User access to Read-Only, then only the Administrator can write to the drive or change the setting back to Read/Write as described in section 21. The User is restricted to Read-Only access and cannot write to the drive or change this setting in user mode.

To set the diskAshur³ and restrict User access to Read-Only, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both "**7 + 6**" buttons.		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press the **Unlock (🔓)** button once		GREEN and BLUE LEDs will change to a solid GREEN LED and then to a solid BLUE LED indicating the drive has been configured and restricts User access to Read-Only

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

21. Enable User Read/Write in Admin Mode

To set the diskAshur³ back to Read/Write, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both "**7 + 9**" buttons.		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press the **Unlock (🔓)** button once		GREEN and BLUE LEDs change to a solid GREEN LED then to a solid BLUE LED indicating the drive is configured as Read/Write

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

22. Set Global Read-Only in Admin Mode

When the Administrator configures the diskAshur³ and restricts it to Global Read-Only, then neither the Administrator nor the User can write to the drive and both are restricted to Read-Only access. Only the Administrator is able to change the setting back to Read/Write as described in section 23.

To set the diskAshur³ and restrict Global access to Read-Only, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both "**5 + 6**" buttons.		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press **Unlock (🔓)** button		GREEN and BLUE LEDs will change to a solid GREEN LED and then to a solid BLUE LED indicating the drive has been configured and restricts Global access to Read-Only

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

23. Enable Global Read/Write in Admin Mode

To set the diskAshur³ back to Read/Write from the Global Read-Only setting, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both "**5 + 9**" buttons.		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press **Unlock (🔓)** button		GREEN and BLUE LEDs change to a solid GREEN LED then to a solid BLUE LED indicating the drive is configured as Read/Write

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

24. How to configure a Self-Destruct PIN

You can configure a self-destruct PIN which when entered performs a Crypto-Erase on the drive (encryption key is deleted).This process deletes all configured PINs and renders all data stored on the drive as inaccessible (lost forever), the drive will then show as unlocked GREEN LED. Running this feature will cause the self-destruct PIN to become the New User PIN and the drive will need to be formatted before it can be reused.

To set the Self-Destruct PIN, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both **Unlock (🔓) + 6** buttons		Solid BLUE LED will change to blinking GREEN and solid BLUE LEDs
2. Configure and enter a 8-64 digit **Self-Destruct PIN** and press the **Unlock (🔓)** button		Blinking GREEN and solid BLUE LEDs will switch to a single GREEN LED blink and then back to blinking GREEN and solid BLUE LEDs
3. Re-enter your **Self-Destruct PIN** and press the **Unlock (🔓)** button		GREEN LED will rapidly blink and then change to a solid BLUE LED to indicate the Self-Destruct PIN has been successfully configured

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

25. How to Delete the Self-Destruct PIN

To delete the Self-Destruct PIN, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both **SHIFT (⬆) + 6** buttons		Solid BLUE LED will change to a blinking RED LED
2. Press and hold down **SHIFT (⬆) + 6** buttons again		Blinking RED LED will become solid and then change to a solid BLUE LED indicating the Self-Destruct PIN was successfully deleted

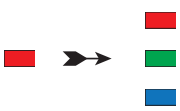
Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

26. How to unlock with the Self-Destruct PIN

Warning: When the Self-Destruct mechanism is activated, all data, the encryption key and the Admin/User PINs are deleted. **The Self-Destruct PIN becomes the User PIN.** No Admin PIN exists after the Self-Destruct mechanism is activated. The diskAshur³ will need to be reset (see 'How to perform a complete reset' Section 36, on page 26) first in order to configure an Admin PIN with full Admin privileges including the ability to configure a new User PIN.

When used, the self-destruct PIN will **delete ALL data, the encryption key, Admin/User PINs** and then unlock the drive. Activating this feature will cause the **Self-Destruct PIN to become the New User PIN** and the diskAshur³ will need to be formatted before any new data can be added to the drive.

To activate the Self-Destruct mechanism, the drive needs to be in the standby state (solid RED LED) and then proceed with the following steps.

1. In **Standby State** (solid RED LED), press and hold down both the **SHIFT** (⬆) + **Unlock (🔓)** buttons		RED LED switches to all LEDs, RED, GREEN & BLUE blinking on and off
2. Enter the **Self-Destruct PIN** and press the **Unlock (🔓)** button		RED, GREEN and BLUE blinking LEDs will change to a blinking GREEN LED and then to a solid GREEN LED indicating the diskAshur³ has successfully self-destructed

27. How to configure an Admin PIN after a Brute Force attack or Reset

It will be necessary after a Brute Force attack or when the diskAshur³ has been reset to configure an Admin PIN before the drive can be used.

PIN Requirements:

- Must be between 8-64 digits in length
- Must not contain only repetitive numbers, e.g. (3-3-3-3-3-3-3-3)
- Must not contain only consecutive numbers, e.g. (1-2-3-4-5-6-7-8), (7-8-9-0-1-2-3-4), (8-7-6-5-4-3-2-1)
- The SHIFT key can be used for additional combinations (e.g. **SHIFT** (⬆)**+1** is a separate value to just 1).

If the diskAshur³ has been brute forced or reset, the drive will be in standby state (solid RED LED). to configure an Admin PIN proceed with the following steps.

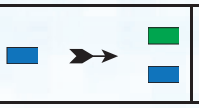
1. In Standby state (solid RED LED), press and hold down both **SHIFT** (⬆) **+ 1** buttons		Solid RED LED will change to blinking GREEN and solid BLUE LEDs
2. Enter **New Admin PIN** and press **Unlock (🔓)** button		Blinking GREEN and solid BLUE LEDs will switch to a single GREEN LED blink and then back to blinking GREEN and solid BLUE LEDs
3. Re-enter the **New Admin PIN** and press **Unlock (🔓)** button		Blinking GREEN LED and solid BLUE LED change to a blinking BLUE LED and then to a solid BLUE LED indicating the Admin PIN was successfully configured.

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

28. Setting the unattended Auto-Lock

To protect against unauthorised access if the drive is unlocked and unattended, the diskAshur³ can be set to automatically lock after a pre-set amount of time. In its default state, the diskAshur³ unattended Auto Lock time-out feature is turned off. The unattended Auto Lock can be set to activate between 5 - 99 minutes if and when the drive is inactive (no data being written/read).

To set the unattended Auto Lock time-out feature, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both **Unlock (🔓) + 5** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Enter the amount of time that you would like to set the Auto Lock time-out feature for, the minimum time that can be set is 5 minutes and the maximum being 99 minutes (5-99 minutes). For example enter: **05 for 5 minutes (press '0' followed by a '5')** **20 for 20 minutes (press '2' followed by a '0')** **99 for 99 minutes (press '9' followed by another '9')**		
3. Press the **SHIFT** (⬆) button		Blinking GREEN and BLUE LEDs will change to a solid GREEN for a second and then finally to a solid BLUE LED indicating the Auto Lock time-out is successfully configured

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

29. Turn off the unattended Auto-Lock

To turn off the unattended Auto Lock time-out feature, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both **Unlock (🔓) + 5** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Enter **00** and press the **SHIFT** (⬆) button		Blinking GREEN and BLUE LEDs will change to a solid GREEN for a second and then finally to a solid BLUE LED indicating the Auto Lock time-out has been successfully disabled

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

30. How to check the unattended Auto-Lock

The Administrator is able to check and determine the length of time set for the unattended Auto Lock time-out feature by simply noting the LED sequence as described in the table below.

To check the unattended auto-lock, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down **SHIFT** (⬆) **+ 5**		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press the **Unlock** (🔓) button and the following happens; a. All LED's (RED, GREEN & BLUE) become solid for 1 second. b. Each RED LED blink equates to ten (10) minutes. c. Every GREEN LED blink equates to one (1) minute. d. All LED's (RED, GREEN & BLUE) become solid for 1 second. e. LEDs return to solid BLUE		

The table below describes the LED behaviour whilst checking the unattended auto-lock, for instance if you have set the drive to automatically lock after **25** minutes, the RED LED will blink twice (**2**) and the GREEN LED will blink five (**5**) times.

Auto-Lock in minutes	RED	GREEN
5 minutes	0	5 Blinks
15 minutes	1 Blink	5 Blinks
25 minutes	2 Blinks	5 Blinks
40 minutes	4 Blinks	0

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

31. Set Read-Only in User Mode

To set the diskAshur³ to Read-Only, first enter the "**User Mode**" as described in section 13. Once the drive is in **User Mode** (solid GREEN LED) proceed with the following steps.

1. In User mode, press and hold down both "**7 + 6**" buttons. (7=**R**ead + 6=**O**nly)		Solid GREEN LED will change to blinking GREEN and BLUE LEDs
2. Press **Unlock** (🔓) button		GREEN and BLUE LEDs will change to a solid GREEN LED indicating the drive is configured as Read-Only

Note: 1. If a User set the drive as Read-Only, Admin can override this by setting the drive as Read/Write in Admin mode.

2. If Admin set the drive as Read-Only, the User cannot set the drive as Read/Write.

32. Enable Read/Write in User Mode

To set the diskAshur³ to Read/Write, first enter the "**User Mode**" as described in section 13. Once the drive is in **User Mode** (solid GREEN LED) proceed with the following steps.

1. In User mode, press and hold down "**7 + 9**" buttons. (7=**R**ead + 9=**W**rite)		Solid GREEN LED will change to blinking GREEN and BLUE LEDs
2. Press **Unlock (🔓)** button		GREEN and BLUE LEDs will change to a solid GREEN LED indicating the drive is configured as Read/Write

Note: 1. If a User set the drive as Read-Only, Admin can override this by setting the drive as Read/Write in Admin mode.

2. If Admin set the drive as Read-Only, the User cannot set the drive as Read/Write.

33. Brute Force Hack Defence Mechanism

The diskAshur³ incorporates a defence mechanism to protect the drive against a Brute Force attack. By default, the brute force limitation for **Admin PIN** and **User PIN** is set to **10** consecutive incorrect PIN entries, for the **Recovery PIN** it is **5**. Three independent brute force counters are used to record the incorrect attempts for each PIN authorisation. If a user enters an incorrect Admin PIN ten consecutive times, (broken down into 5,3,2, clusters as described below) the drive will be reset and all data will be lost forever. If a user enters an incorrect Recovery PIN or User PIN and exceed the respective brute force limitation, the corresponding PINs will be cleared but the data will still exist on the drive.

Note: The brute force limitation is programmed to initial values when the drive is completely reset or self-destruct feature is activated. If Admin changes the User PIN, or a new User PIN is set when activating recovery feature, the User PIN brute force counter is cleared but the brute force limitation is not affected. If Admin changes the Recovery PIN, the Recovery PIN brute force counter is cleared.

Successful authorisation of a certain PIN will clear the brute force counter for that particular PIN, but not affect the other PINs brute force counter. Failed authorisation of a certain PIN will increase the brute force counter for that particular PIN, but not affect the other PINs brute force counter.

- If a user enters an **incorrect User PIN** 10 consecutive times, the User PIN will be deleted but the data, Admin PIN and Recovery PIN remain intact and accessible.
- If an **incorrect Recovery PIN** is entered 5 consecutive times, the Recovery PIN is deleted but the data and Admin PIN remain intact and accessible.
- The **Admin PIN** uses a more sophisticated defence mechanism in comparison to the User and Recovery PINs. After **5 consecutive incorrect Admin PIN entries**, the drive will lock and the **RED**, **GREEN** and **BLUE** LEDs will light up solid. At this point the following steps need to be taken in order to allow the User a further **3** PIN entries.

- Enter PIN "**47867243**" and press the **KEY (🔑)** button, **GREEN** and **BLUE** LEDs blink together. The drive is now ready to accept a further **3** Admin PIN entries
- After a total of 8 consecutive incorrect Admin PIN entries, the drive will lock and the **RED**, **GREEN** and **BLUE** LEDs will blink alternately. At this point the following steps need to be taken in order to get the final **2** PIN entries (10 in total).
- Enter PIN "**47867243**" and press the **KEY (🔑)** button, **GREEN** and **BLUE** LEDs blink together, the drive is now ready to accept the final **2** PIN entries (10 in total).
- After a total of 10 incorrect Admin PIN attempts, the encryption key will be deleted and all data and PINs stored on the drive will be lost forever.

The table below assumes that all three PINs have been set up and highlights the effect of triggering the brute force defence mechanism for each individual PIN.

PIN used to unlock drive	Consecutive incorrect PIN enteries	Description of what happens
User PIN	10	• The User PIN is deleted. • The Recovery PIN, the Admin PIN and all data remain intact and accessible.
Recovery PIN	5	• The Recovery PIN is deleted. • The Admin PIN and all data remain intact and accessible.
Admin PIN	5 3 2 (10 in total)	• After **5** consecutive incorrect Admin PIN entries, the drive will lock and all LEDs light up solid. • Enter PIN "**47867243**" and press the **KEY (🔑)** button to get **3** further PIN entries. • After a total of **8** (5+3) consecutive incorrect Admin PIN entries, the drive will lock and the LEDs blink alternately. • Enter PIN "**47867243**" and press the **KEY (🔑)** button to get the final **2** PIN entries (10 in total). • After a total of 10 consecutive incorrect Admin PIN entries, the encryption key will be deleted and all data and PINs stored on the drive will be lost forever.

Important: A new Admin PIN must be configured if the pre-existing Admin PIN was brute forced, refer to Section 27 on page 20 on 'How to Configure an Admin PIN after a Brute Force attack or Reset', the diskAshur³ will also need to be formatted before any new data can be added to the drive.

34. How to set the User PIN Brute Force Limitation

Note: The User PIN brute force limitation setting is defaulted to 10 consecutive incorrect PIN entries when the drive is either completely reset, brute forced or the self-destruct PIN is activated.

The brute force limitation for diskAshur³ User PIN can be reprogrammed and set by the administrator. This feature can be set to allow attempts from 1 to 10 consecutive incorrect PIN entries.

To configure the User PIN brute force limitation, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both **7 + 0** buttons		Solid BLUE LED will change to GREEN and BLUE LEDs blinking together
2. Enter the number of attempts for the brute force limitation (between 01-10), for example enter: • **01** for 1 attempt • **10** for 10 attempts		
3. Press the **SHIFT** (⬆) button once		Blinking GREEN and BLUE LEDs will switch to a solid GREEN LED for a second and then to a solid BLUE LED indicating the brute force limitation was successfully configured

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

35. How to check the User PIN Brute Force Limitation

The Administrator is able to observe and determine the number of consecutive times an incorrect User PIN is allowed to be entered before triggering the Brute Force defence mechanism by simply noting the LED sequence as described below.

To check the brute force limitation setting, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **2** + **0** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press the **Unlock (🔓)** button and the following happens; a. All LED's (RED, GREEN & BLUE) become solid for 1 second. b. Each RED LED blink equates to ten (10) units of a brute force limitation number. c. Every GREEN LED blink equates to one (1) single unit of a brute force limitation number. d. All LED's (RED, GREEN & BLUE) become solid for 1 second. e. LEDs return to solid BLUE		

The table below describes the LED behaviour whilst checking the brute force limitation setting, for instance if you have set the drive to brute force after **5** consecutive incorrect PIN entries, the GREEN LED will blink five (**5**) times.

Brute Force Limitation Setting	RED	GREEN
2 attempts	0	2 Blinks
5 attempts	0	5 Blinks
10 attempts	1 Blink	0

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

36. How to perform a complete reset

To perform a complete reset, the diskAshur³ must be in standby state (solid RED LED). Once the drive is reset then all Admin/User PINs, the encryption key and all data will be deleted and lost forever and the drive will need to be formatted before it can be reused. To reset the diskAshur³ proceed with the following steps.

1. In standby state (solid RED LED) , press and hold down "**0**" button		Solid RED LED will change to all LEDs, RED, GREEN and BLUE blinking alternately on and off
2. Press and hold down both **2 + 7** buttons		RED, GREEN and BLUE alternating LEDs will become solid for a second and then to a solid RED LED indicating the drive has been reset

Important: After a complete reset a new Admin PIN must be configured, refer to Section 27 on page 20 on 'How to Configure an Admin PIN after a Brute Force attack or Reset', the diskAshur³ will also need to be formatted before any new data can be added to the drive.

37. How to configure diskAshur³ as Bootable

Note: When the drive is set as bootable, ejecting the drive from Operating System will not force the LED to turn RED. The drive stays solid GREEN and needs to be unplugged for next time use. The default setting of the diskAshur³ is configured as non-bootable.

The diskAshur³ is equipped with a bootable feature to accommodate power cycling during a host boot process. When booting from the diskAshur³, you are running your computer with the operating system that is installed on the diskAshur³.

To set the drive as bootable, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both **Unlock (🔓) + 9** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press **"0"** followed by a **"1"** (**01**)		GREEN and BLUE LEDs will continue to blink
3. Press the **SHIFT** (⬆) button once		Blinking GREEN and BLUE LEDs will change to a solid GREEN LED and finally to a solid BLUE LED indicating the drive has been successfully configured as bootable

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

38. How to disable the diskAshur³ Bootable feature

To disable the diskAshur³ Bootable Feature, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode, press and hold down both **Unlock (🔓) + 9** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press **"0"** followed by another **"0"** (**00**)		GREEN and BLUE LEDs will continue to blink
3. Press the **SHIFT** (⬆) button once		Blinking GREEN and BLUE LEDs will change to a solid GREEN LED and finally to a solid BLUE LED indicating the bootable feature has been successfully disabled

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

39. How to check the Bootable setting

To check the bootable setting, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both **SHIFT** (⬆) **+ 9** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs

2. Press the **Unlock (🔓)** button and one of the following two scenarios will happen;

- **If diskAshur³ is configured as Bootable, the following happens;**

a. All LED's (RED, GREEN & BLUE) become solid for 1 second.
b. GREEN LED blinks once.
c. All LED's (RED, GREEN & BLUE) become solid for 1 second.
d. LEDs return to solid BLUE

- **If diskAshur³ is <u>NOT</u> configured as Bootable, the following happens;**

a. All LED's (RED, GREEN & BLUE) become solid for 1 second.
b. All LEDs are off
c. All LED's (RED, GREEN & BLUE) become solid for 1 second.
d. LEDs return to solid BLUE

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

40. How to configure the Encryption Mode

WARNING: Changing the encryption mode from AES-XTS (default state) to AES-ECB or AES-CBC will delete the encryption key and cause the diskAshur³ to reset and render all data as inaccessible and lost forever!

Perform the following steps to configure the diskAshur³ encryption mode to either **AES-ECB** indicated by the number **'01'**, or **AES-XTS** indicated by the number **'02',**or **AES-CBC** indicated by the number **'03'**. This feature is set as AES-XTS (02) by default. Please note all critical parameters will be deleted when switching to a different encryption mode and will cause the drive to reset.

To set the diskAshur³ encryption mode, first enter the A**dmin Mode** as described in section 5. Once the diskAshur³ is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin Mode, press and hold down both '**KEY (🔑) + 1**' buttons.		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Enter **01** to set as **AES-ECB** Enter **02** to set as **AES-XTS (default state)** Enter **03** to set as **AES-CBC**		GREEN and BLUE LEDs will continue to blink
3. Press the **SHIFT** (⬆) button once.		GREEN and BLUE LEDs will change to a solid GREEN LED and then to a solid RED LED (**Reset State**) indicating the encryption mode was successfully changed

Important: After configuring the encryption mode, the diskAshur³ completely resets and a new Admin PIN must be configured, refer to Section 27 on page 20 on 'How to Configure an Admin PIN after a Brute Force attack or Reset'.

41. How to check the encryption mode

To check the diskAshur³ encryption mode, first enter the **Admin Mode** as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin Mode press and hold down both **'SHIFT** (⬆) + **1'** buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs

2. Press the **KEY (🔑)** button and the following happens:

- **If the encryption mode is configured as AES-ECB, the following happens:**

a. All LED's (RED, GREEN & BLUE) become solid for 1 second.
b. GREEN LED blinks once.
c. All LED's (RED, GREEN & BLUE) become solid for 1 second.
d. LEDs return to solid BLUE

- **If the encryption mode is configured as AES-XTS, the following happens:**

a. All LED's (RED, GREEN & BLUE) become solid for 1 second.
b. GREEN LED blinks twice.
c. All LED's (RED, GREEN & BLUE) become solid for 1 second.
d. LEDs return to solid BLUE

- **If the encryption mode is configured as AES-CBC, the following happens:**

a. All LED's (RED, GREEN & BLUE) become solid for 1 second.
b. GREEN LED blinks three times.
c. All LED's (RED, GREEN & BLUE) become solid for 1 second.
d. LEDs return to solid BLUE

Note: To immediately exit Admin Mode (solid BLUE LED), press and hold down the **SHIFT** (⬆) button for a second - the solid BLUE LED switches to a solid RED LED.

42. How to configure the Disk type

The diskAshur³ can be configured as either a 'Removable Disk' or 'Local Disk (default state)'. All critical parameters will be erased when switching to a different disk type, deleting all PINs, the encryption key and data and causing the drive to enter the reset state.

WARNING: Changing the disk type as either a 'Removable Disk' or 'Local Disk (default state)' will delete the encryption key and cause the diskAshur³ to reset and render all data as inaccessible and lost forever!

Perform the following steps to configure the diskAshur³ disk type to either a Removable Disk (**00**) or Local Disk (**01**)This feature is set as Local Disk (**01**) by default. Please note all critical parameters will be erased when switching to a different encryption mode causing the drive to reset.

To set the diskAshur³ encryption mode, first enter the **Admin Mode** as described in section 5. Once the diskAshur³ is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin Mode, press and hold down both '**KEY (🔑) + 8**' buttons.		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Enter **00** to set as **Removable Disk** Enter **01** to set as **Local Disk (default state)**		GREEN and BLUE LEDs will continue to blink
3. Press the **SHIFT** (⬆) button once.		GREEN and BLUE LEDs will change to a solid GREEN LED and then to a solid RED LED (**Reset State**) indicating the disk type was successfully changed

Important: After changing the disk type, the diskAshur³ completely resets and a new Admin PIN must be configured, refer to Section 27 on page 20 on 'How to Configure an Admin PIN after a Brute Force attack or Reset'.

43. How to check the Disk type setting

To check the diskAshur³ disk type setting, first enter the **Admin Mode** as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin Mode press and hold down both '**SHIFT** (⬆) + **8**' buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs

2. Press the **KEY (🔑)** button and the following happens:

- **If the disk type is configured as 'Removable', the following happens:**

a. All LED's (RED, GREEN & BLUE) become solid for 1 second and then switch off.
b. All LED's (RED, GREEN & BLUE) become solid for 1 second again and then switch off.
d. LEDs return to solid BLUE

- **If the disk type is configured as 'Local', the following happens:**

a. All LED's (RED, GREEN & BLUE) become solid for 1 second.
b. GREEN LED blinks once.
c. All LED's (RED, GREEN & BLUE) become solid for 1 second.
d. LEDs return to solid BLUE

44. Initialising and formatting diskAshur³ for Windows

After a 'Brute Force Attack' or a complete reset the diskAshur³ will delete all PINs,data and the encryption key. You will need to initialise and format the diskAshur³ before it can be used.

To format your diskAshur³, do the following:

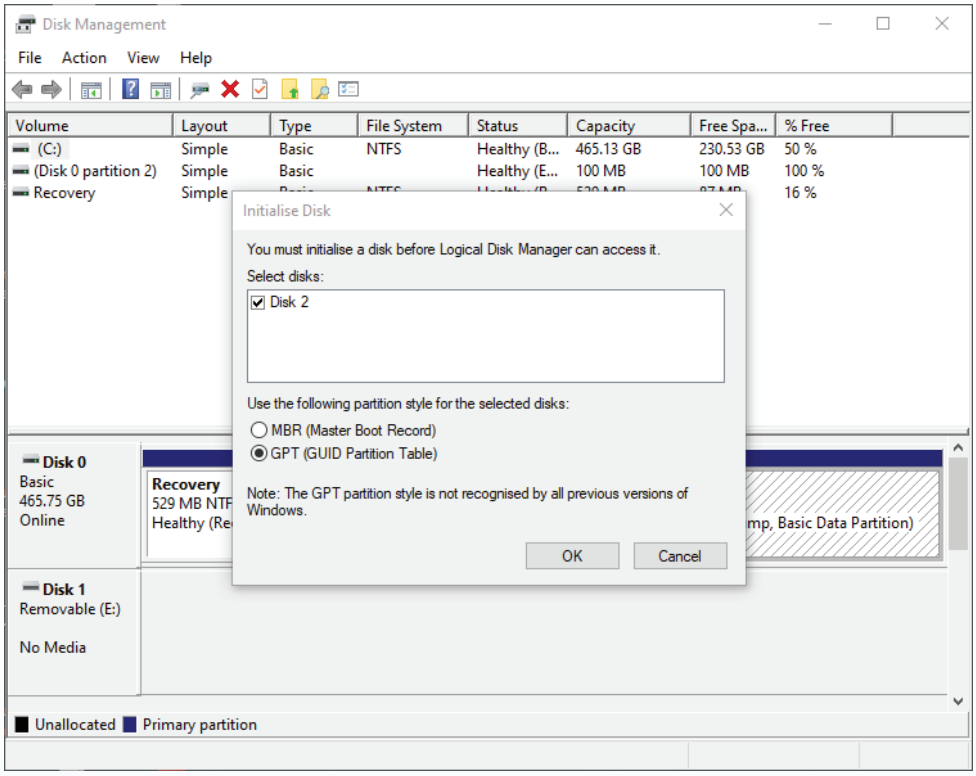
1. Configure a new Admin PIN - see page 20, section 27, 'How to configure an Admin PIN after a Brute Force attack or reset'.

2. With the diskAshur³ in standby state (RED LED), press the **Unlock (♿)** button once and enter **New Admin PIN** to unlock (blinking GREEN LED).

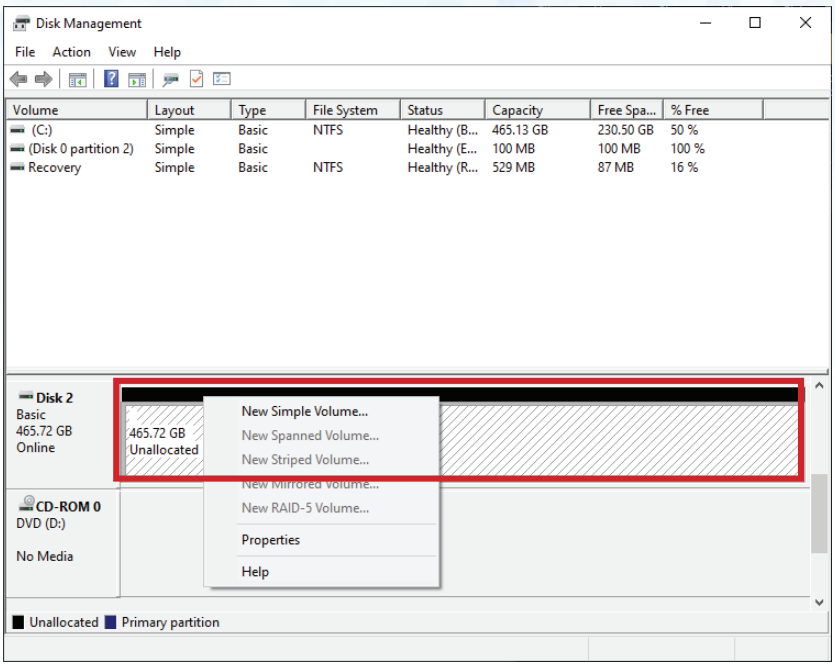
3. **Windows 7:** Right click **Computer** and then click **Manage** and then select **Disk Management**
   Windows 8: Right-click left corner of desktop and select **Disk Management**
   Windows 10: Right click on the start button and select **Disk Management**

4. In the Disk Management window, the diskAshur³ is recognised as an unknown device that is uninitialized and unallocated. A message box should appear for you to choose between MBR and GPT partition style. GPT stores multiple duplicates of this data over the disk, as a result it's much more robust. On an MBR disk, the partitioning and boot information is stored inside single place.

   Select the partition style and click **OK**.



5. Right-click in the blank area over the **Unallocated** section, and then select **New Simple Volume**.



6. The Welcome to the New Simple Volume Wizard window opens. Click Next.

7. If you need only one partition, accept the default partition size and click **Next**.

8. Assign a drive letter or path and click **Next**.

9. Create a volume label, select Perform a quick format, and then click **Next**.

10. Click **Finish**.

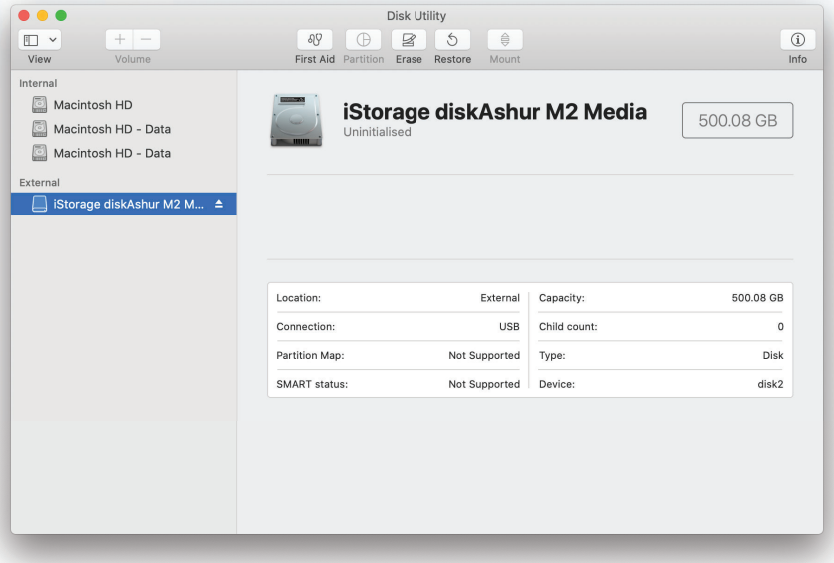
11. Wait until the format process is complete. The diskAshur³ will be recognised and it is available for use.

45. Initialising and formatting diskAshur³ in Mac OS

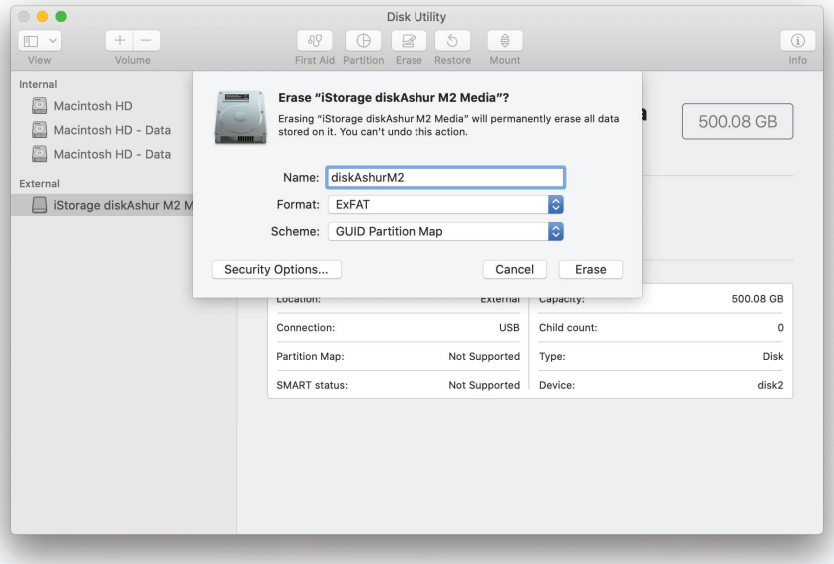
After a 'Brute Force Attack' or a complete reset the diskAshur³ will delete all PINs,data and the encryption key. You will need to initialise and format the diskAshur³ before it can be used.

To initialize and format the diskAshur³:

1. Select diskAshur³ from the list of drives and volumes. Each drive in the list will display its capacity, manufacturer, and product name, such as '**iStorage diskAshur³ Media**'.

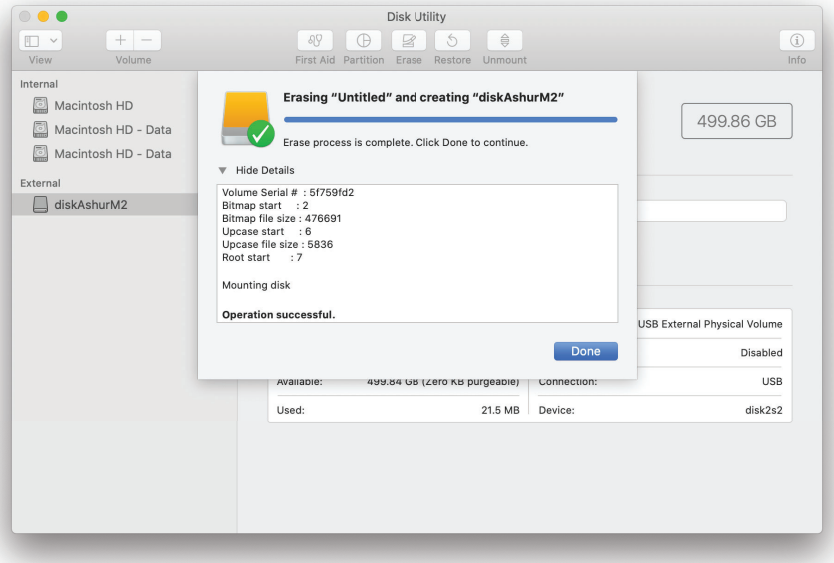


2. Click the '**Erase**' button under Disk Utility.
3. Enter a name for the drive. The default name is Untitled. The name of the drive will eventually appear on the desktop.



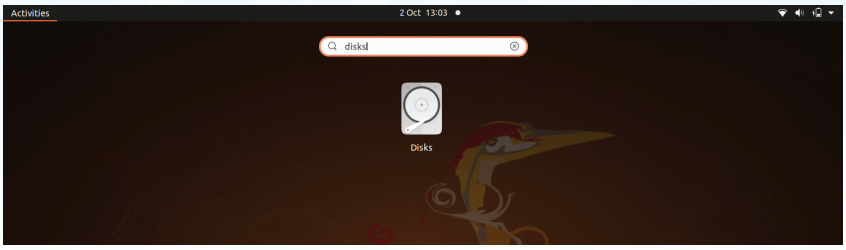
4. Select a scheme and volume format to use. The Volume Format dropdown menu lists the available drive formats that the Mac supports. The recommended format type is 'Mac OS Extended (Journaled).' For cross platform use exFAT. The scheme format dropdown menu lists the available schemes to use. We recommend using 'GUID Partition Map' on drives larger than 2TB.

5. Click the 'Erase' button. Disk Utility will unmount the volume from the desktop, erase it, and then remount it on the desktop.

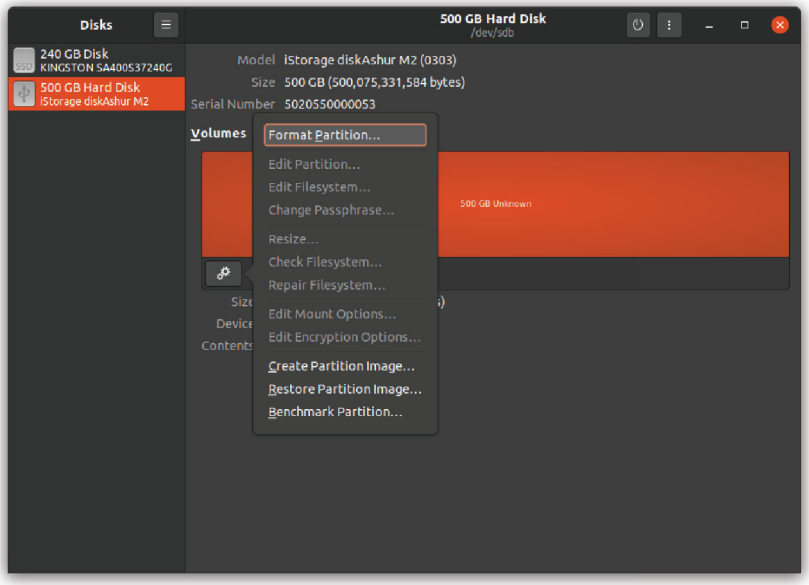


46. Initialising and formatting diskAshur³ in Linux OS

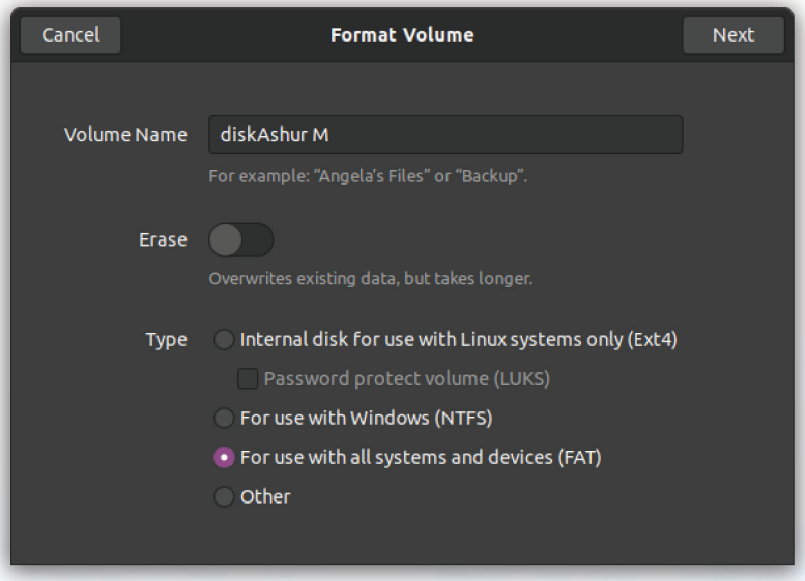
1. Open '**Show Application**' and type '**Disks**' in the search box. Click on the '**Disks**' utility when displayed.



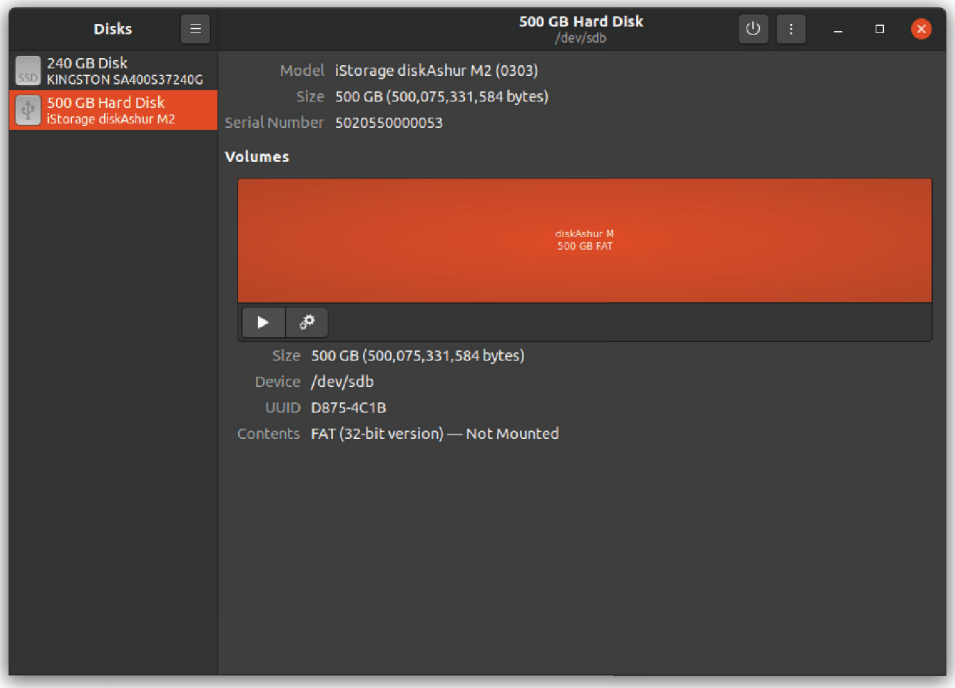
2. Click to select the drive (500 GB Hard Disk) under '**Devices**'. Next click on the gears icon under '**Volumes**' and then click on '**Format Partitons**'.



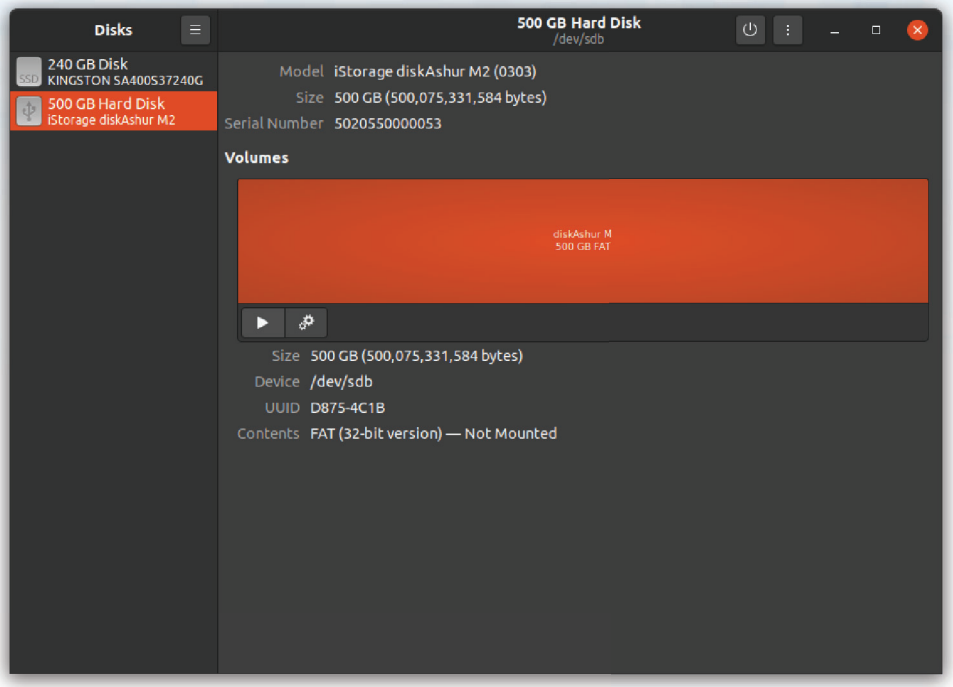
3. Select '**Compatible with all systems and devices (FAT)**' for the '**Type**' option. And enter a name for the drive, e.g: diskAshur³. Then, click the '**Format**' button.



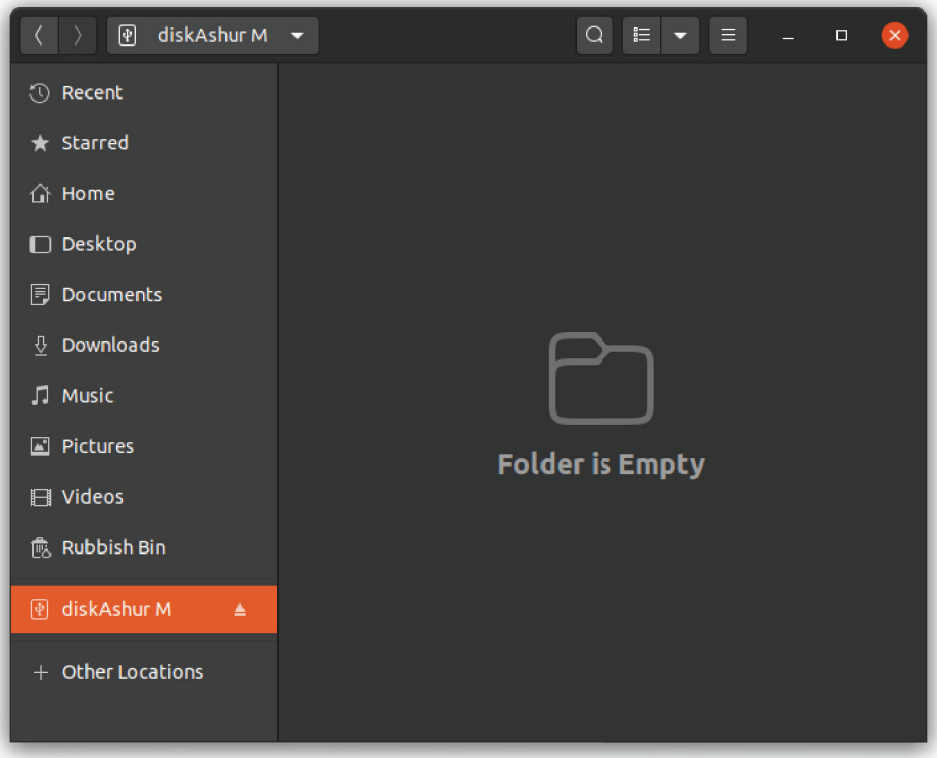
4. After the format process is finished, click Play button to mount the drive to Ubuntu.



5. Now the drive should be mounted to Ubuntu and ready to use.



6. The disk will be shown as seen in the image below. You can click the disk icon to open your drive.



47. Hibernating, Suspending, or Logging off from the Operating System

Be sure to save and close all the files on your diskAshur³ before hibernating, suspending, or logging off from the operating system.

It is recommended that you lock the diskAshur³ manually before hibernating, suspending, or logging off from your system.

To lock the drive, safely eject the diskAshur³ from your host operating system and then unplug from the USB port. If data is being written to the drive, safely ejecting and unplugging the diskAshur³ will result in incomplete data transfer and possible data corruption.

Attention: To ensure your data is secure, be sure to lock your diskAshur³ if you are away from your computer.

48. How to check Firmware in Admin mode

To check the firmware revision number, first enter the "**Admin Mode**" as described in section 5. Once the drive is in **Admin Mode** (solid BLUE LED) proceed with the following steps.

1. In Admin mode press and hold down both "**3 + 8**" buttons		Solid BLUE LED will change to blinking GREEN and BLUE LEDs
2. Press the **Unlock (🔓)** button once and the following happens; a. All LED's (RED, GREEN & BLUE) become solid for 1 second. b. RED LED blinks indicating the integral part of the firmware revision number. c. GREEN LED blinks indicating the fractional part. d BLUE LED blinks indicating the last digit of the firmware revision number e. All LED's (RED, GREEN & BLUE) become solid for 1 second. f. RED, GREEN & BLUE LEDs switch to a solid BLUE LED		

For example, if the firmware revision number is '**1.9**', the RED LED will blink once (**1**) and the GREEN LED will blink nine (**9**) times. Once the sequence has ended the RED, GREEN & BLUE LED's will blink together once and then return to Admin mode, a solid BLUE LED.

49. How to check Firmware in User Mode

To check the firmware revision number, first enter the "**User Mode**" as described in section 13. Once the drive is in **User Mode** (solid GREEN LED) proceed with the following steps.

1. In User mode press and hold down both "**3 + 8**" buttons until GREEN and BLUE LEDs blink together		Solid GREEN LED will change to blinking GREEN and BLUE LEDs
2. Press the **Unlock (🔓)** button and the following happens; a. All LED's (RED, GREEN & BLUE) become solid for 1 second. b. RED LED blinks indicating the integral part of the firmware revision number. c. GREEN LED blinks indicating the fractional part. d. BLUE LED blinks indicating the last digit of the firmware revision number e. All LED's (RED, GREEN & BLUE) become solid for 1 second. f. RED, GREEN & BLUE LEDs switch to a solid BLUE LED		

For example, if the firmware revision number is '**1.9**', the RED LED will blink once (**1**) and the GREEN LED will blink nine (**9**) times. Once the sequence has ended the RED, GREEN & BLUE LED's will blink together once and then return to the User mode, a solid GREEN LED.

50. Technical Support

iStorage provides the following helpful resources for you:

Website:
https://www.istorage-uk.com

E-mail Support:
support@istorage-uk.com

Telephone Support:
+44 (0) 20 8991-6260.

iStorage Technical Support Specialists are available from 9:00 a.m. to 5:30 p.m. GMT - Monday through Friday.

51. Warranty and RMA information

ISTORAGE PRODUCT DISCLAIMER AND WARRANTY

iStorage warrants that on delivery and for a period of 36 months from delivery, its Products shall be free from material defects. However, this warranty does not apply in the circumstances described below. iStorage warrants that the Products comply with the standards listed in the relevant data sheet on our website at the time you place your order.

These warranties do not apply to any defect in the Products arising from:

- fair wear and tear;
- wilful damage, abnormal storage or working conditions, accident, negligence by you or by any third party;
- if you or a third party fail(s) to operate or use the Products in accordance with the user instructions;
- any alteration or repair by you or by a third party who is not one of our authorised repairers; or
- any specification provided by you.

Under these warranties we will, at our option, either repair, replace, or refund you for, any Products found to have material defects, provided that upon delivery:

- you inspect the Products to check whether they have any material defects; and
- you test the encryption mechanism in the Products.

We shall not be liable for any material defects or defects in the encryption mechanism of the Products ascertainable upon inspection on delivery unless you notify such defects to us within 30 days of delivery. We shall not be liable for any material defects or defects in the encryption mechanism of the Products which are not ascertainable upon inspection on delivery unless you notify such defects to us within 7 days of the time when you discover or ought to have become aware of such defects. We shall not be liable under these warranties if you make or anyone else makes any further use of the Products after discovering a defect. Upon notification of any defect, you should return the defective product to us. If you are a business, you will be responsible for the transportation costs incurred by you in sending any Products or parts of the Products to us under the warranty, and we will be responsible for any transportation costs we incur in sending you a repaired or replacement Product. If you are a consumer, please see our terms and conditions.

Products returned must be in the original packaging and in clean condition. Products returned otherwise will, at the Company's discretion, either be refused or a further additional fee charged to cover the additional costs involved. Products returned for repair under warranty must be accompanied by a copy of the original invoice, or must quote the original invoice number and date of purchase.

If you are a consumer, this warranty is in addition to your legal rights in relation to Products that are faulty or not as described. Advice about your legal rights is available from your local Citizens' Advice Bureau or Trading Standards office.

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