RAIDON

Your Data Security Guardian

InTANK
IR8624-S3

User Manual

About this Manual

Thank you for purchasing RAIDON products. This manual will introduce the IR8624-S3 Series. Before using your IR8624-S3, please read this manual thoroughly. Although all information contained in this user manual has been carefully verified before publishing, however, the actual product specification will be based on the time of delivery from RAIDON. Any updates to the product specifications or relevant information may be found on www.raidon.com.tw. Products are subject to change without prior notifications.
If you have any questions regarding the products of RAIDON, or you would like to know the latest product information, user manual update, or firmware update, please contact your local supplier or visit www.raidon.com.tw for further information.

1. Environmental Requirements

Operating Temperature : 0 ~ 40 °C (32 ~ 104 °F)
Storage Temperature : -20 ~ 47 °C (-4 ~ 116 °F)
Line Voltage : 12V/5V DC

## 2. Product Appearance and Packaging Content

Open the package and you should find the following:

IR8624-S3
IR8624-S3 x 1 (with removable drive tray enclosed)
SATA Cable x 2
Quick Setup Guide x 1
Screws and keys

- Please check the product and accessories for any defect or missing parts. If you have any questions, please contact your product supplier.
- Please visit the official website (www.raidon.com.tw) to download drivers and other related resources.

Front View

1. 2.5" HDD status indicator LED
2. 2.5" HDD tray key lock
3. HDD tray ejection
4. 2.5" HDD tray handle
5. LCD Display
6. LED of failure Alarm
7. Pri HDD status indicator
8. Sec HDD status indicator
9. Mute Button
10. 3.5" Removable drive tray
11. 3.5" HDD tray key lock
12. Pri HDD tray access light
13. Sec HDD tray access light
14. Cooling fan
15. RAID mode switch & RS232 Port
16. 3.5" SATA Port
17. 15 PIN SATA Port
18. 4Pin Power socket
19. 2.5" SATA Port
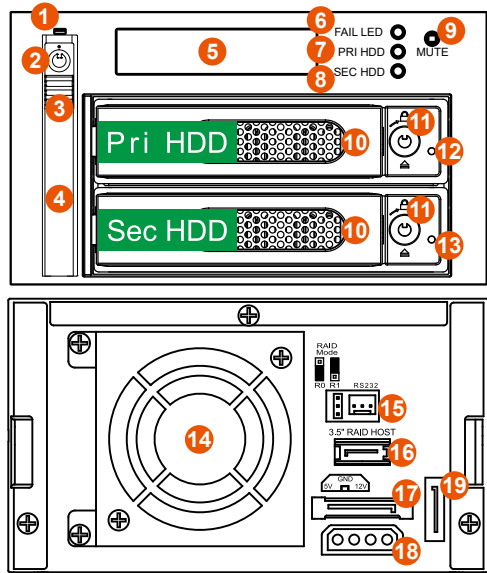
LED Indicators :

| Status	Panel light			3.5" HDD tray access light		M.2 SATA SSD access light	Buzzer
	Fail LED	Pri HDD status indicator	Sec HDD status indicator	Pri HDD tray access light	Sec HDD tray access light		
Power On	— —	Orange light always on		Blue and Purple light flashing		Blue light always on	— —
Stabdby	— —	Orange light always on		Blue light always on		Blue light always on	— —
HDD Failure	Red light always on	— —		Red light always on		Blue light always on	On
Access	— —	Orange light always on		Blue and Purple light flashing		Blue light flashing	— —
Rebuilding (Source)	— —	Orange light always on		Blue light always on		Blue light always on	— —
Rebuilding (Target)	— —	— —		Red light flashing		Blue light always on	— —
Fan Failure	Red light always on	Orange light always on		Blue light always on		Blue light always on	On
Over Heat (≥50℃)	Red light always on	Orange light always on		Blue light always on		Blue light always on	On

3. Hardware Requirements and Precautions

1. Computers or servers with SATA I & SATA II & SATA III.

2. Hard drive with SATA I & SATA II & SATA III interface and 2242/2260/2280 M.2 SATA SSD

3. You are strongly advised to set the storage mode (the default is the Independent mode) before using the IR8624-S3.

4. The product needs to be restarted after adding or changing the RAID mode, and the update is guaranteed to be the new RAID mode.

5. The product allows the user to simultaneously utilize two hard drives manufactured by different companies. However, if the user expects better efficiency, we strongly recommend the users to use hard drives manufactured by the same manufacturer.

6. Please make sure that the two hard drives are free from bad blocks or defects prior to installation in order to avoid system crashes or data loss.

7. The actual storage capacity of IR8624-S3 recognized by the system may differ from the total capacity stated on the hard drives combined once the drives have been formatted.

8. It is highly recommended for users to back up important data contained within the IR8624-S3 unit on a regular basis or whenever the user feels necessary to a remote or a separate storage device. Stardom will not be responsible for any lost of data caused during the use of the unit or the recovery of the data lost.
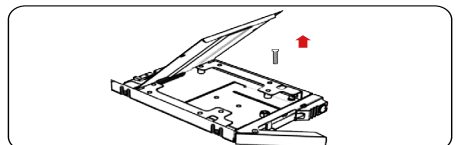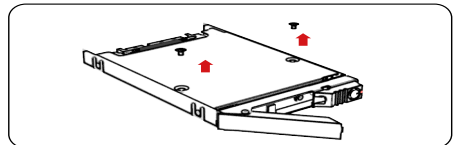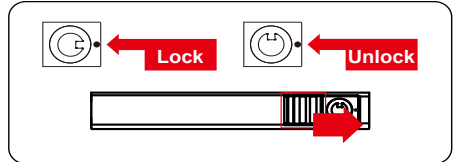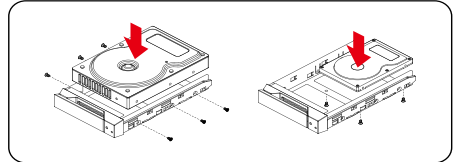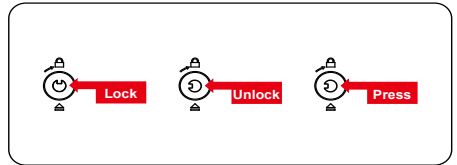
> **Note :**
> Once the drive mode configuration has been completed, re-configuration using the same hard drives to set the drive mode will result in complete data loss. If you must change the drive mode, make sure to backup all data prior to the mode change.
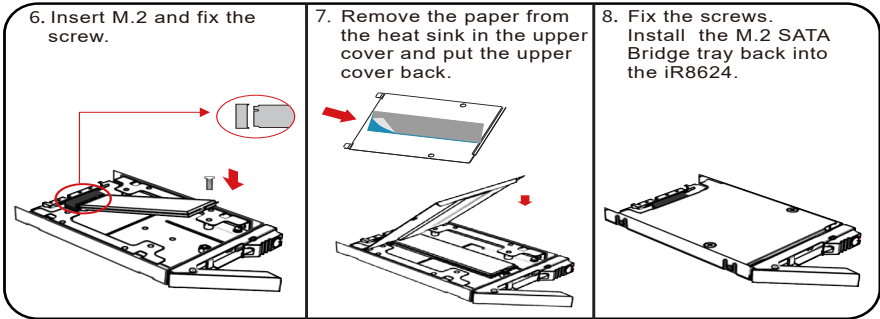
4. Hardware Installation

Please follow the instructions below to complete the hardware installation.

FAIL LED
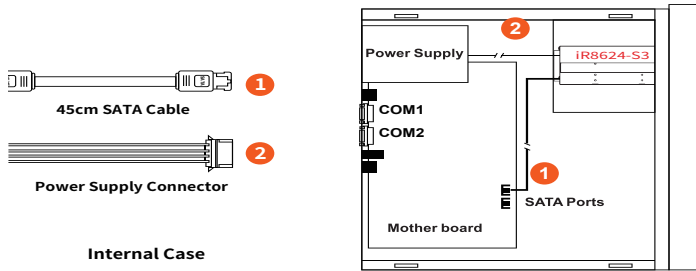PRI HDD   MUTE
SEC HDD
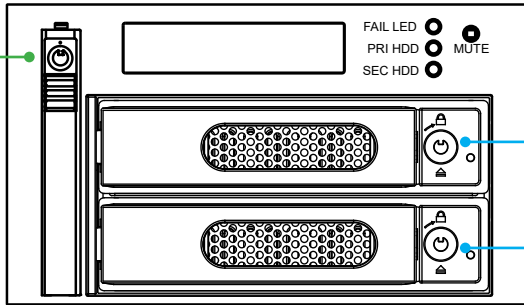
1. For the 3.5" HDD tray, please use the key included in the accessory kit to unlock the HDD tray key lock, and then press the HDD tray key lock. The removable drive tray will pop open and extract the removable drive tray.

   Lock   Unlock   Press

2. For 3.5" HDD/SSD, please secure it by use six the larger screws included in the accessory kit. For 2.5" HDD/SSD, please secure it by use four the smaller screws included in the accessory kit.

3. For the 2.5" HDD tray, please use the key included in the accessory kit to unlock the 2.5" HDD tray key lock and push the HDD eject button to the right, the 2.5" HDD tray handle will pop up to remove the tray.

   Lock   Unlock

4. For the 2.5" HDD tray, please use the key included in the accessory kit to unlock the 2.5" HDD tray key lock and push the HDD eject button to the right, the 2.5" HDD tray handle will pop up to remove the tray.

5. Open the upper cover and remove the screw .

6. Insert M.2 and fix the screw.	7. Remove the paper from the heat sink in the upper cover and put the upper cover back.	8. Fix the screws. Install the M.2 SATA Bridge tray back into the iR8624.

9. Install device into one of the CD-ROM bays with screws from the accessory kit. Then properly connect SATA cable and SATA power cable from your system to device.

45cm SATA Cable ①

Power Supply Connector ②

Internal Case

Power Supply ② iR8624-S3
COM1
COM2
SATA Ports ①
Mother board

10. Power on your system after hardware installation is completed, and your operating system will automatically detect the hard drives from booting. Then follow the steps from your operating system to partition and format the drives when necessary, device will be ready to use once the format is completed.

※ Note :

1. RS232 Port and RS232 Cable: Provides hardware status monitoring to industrial control system or IPC via RS232.

2. We do not recommend users to disassemble the device without proper instructions and authorization. The manufacture warranty will not cover the damages caused by unauthorized disassembling.

3. To prevent the device from malfunction, please make sure the device is connected with a direct and dedicated power connection of a stable power input.

4. RS232 Port: For industrial control system or IPC to monitor the hardware status. More information, please contact your sales window or supporting@raidon.com.tw

5. How to set the RAID Mode

The default is RAID 1 mode. Please set the RAID mode with the jumper at the rear side. For RAID 0 mode, please select the bottom two pins. For RAID 1, please select the top two pins.

RAID 0 mode
(R0)
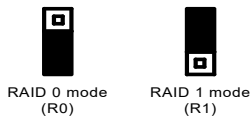
RAID 1 mode
(R1)

1. RAID 1 Mode
   1). Place two new hard drives into IR8624-S3 and strongly suggest you to use two identical hard drives to get the equal capacity. If the capacity is different, IR8624-S3 is downward to the small hard drive capacity.

2). Under RAID 1 mode, two hard drives has the identical information as one to mirror to the other one, therefore each of the hard drive failed is still able to function normally. When you replace the failed hard disk to the new one the system automatically rebuilding the data to the newly place hard disk.

2. RAID 0 Mode
   1). Place two new hard drives into IR8624-S3 and strongly suggest you to use two identical hard drives to get the equal capacity. If the capacity is different, IR8624-S3 is downward to the small hard drive capacity.
   2). Under RAID 0 mode, capacity is add up to a one big volume, also with the feature of faster read/write performance efficient.

6. Computer Set Up

When the hardware setup for IR8624-S3 is complete, you are now ready to turn the machine on.

After the hardware installation is complete, the IR8624-S3 will be treated as one single hard drive. Set the hard drive to AUTO in the computer's BIOS. When the computer is turned on, the system will retrieve the following information:

1. In IR8624-S3, the installed hard drive can be detected by the Device Manager of Computer Management for Windows.

2. Customers can choose to format the hard drive by using the Disk Management tool of the operating system before using the IR8624-S3.
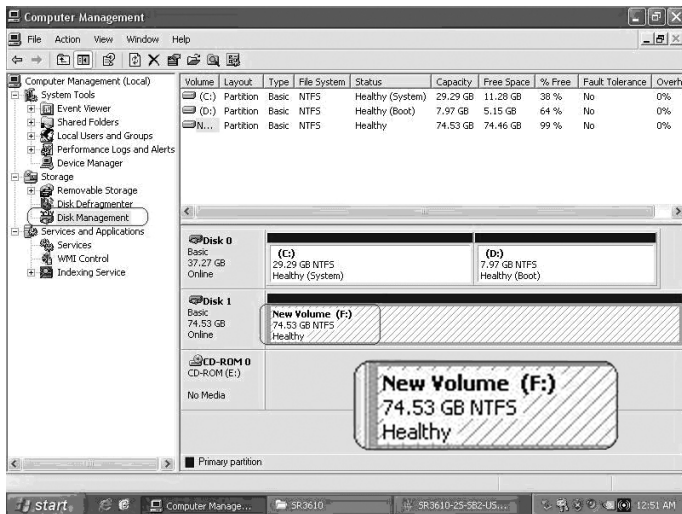
At this point, the installation process is completely finished. The user can freely retrieve and save data to IR8624-S3 just like retrieving and saving data to a regular hard drive. If the user experiences any abnormality during the operation, please refer to the trouble shooting Q&A section in Appendix.

7. Hard Disk status on LCD screen

1. Booting and Normal status.

```
RAIDbox4
RAID-1 vxxxxxx.x
```

```
Pri HDD : OK
Sec HDD : OK
```

2. Over Temperature (≥50°C)

```
Pri HDD : OK
Sec HDD : OK        T
```

3. Fan Failure.

```
Pri HDD : OK        F
Sec HDD : OK
```

4. RAID 1 Degraded. Primary hard drive is failure, but secondary hard drive is normal.

```
RAID-1 degraded
Pri : X Sec : O
```

5. RAID 1 Failure. Primary and secondary hard drives are failure.

```
RAID-1 failure
Pri : X Sec : X
```

6. RAID 1 Failure. (Double Source)

```
RAID-1 failure
Double Source
```

7. RAID 0 Failure. Primary hard drive is missing, but secondary hard drive is normal.

```
RAID-0 failure
Pri : M Sec :O
```

8. Rebuilding

```
Rebuilding
Sec → Pri 32%
```

8. Data Rebuilding Operation

The hard drive Hot Swap and Auto Rebuilding functions are available.

Off-line Back up When the data is stored within IR8624-S3, the user can remove one of the hard drives from IR8624-S3 as back up drive for data such as system operation file, secured files, seldom modified files or image and music files. The user can periodically insert the hard drive back into IR8624-S3 to execute automatic backup to protect the system from being hit by computer virus or to avoid risk of having both hard drives failing at the same time.

When one of the two hard drives fails in the IR8624-S3 system, the system will alarm the hard drive failure message both on the LCD display screen and in the monitoring software. The user can remove the failed hard drive from the system while the system is still in operation without shutting down the machine. If the failed hard drive is replaced shortly, the system will automatically execute the Auto Rebuilding function without affecting the system operation and without any operation command from the user.

When the IR8624-S3 detects a hard drive missing or a hard drive failure, the Buzzer will start and the LCD display screen will display the following messages:

```
RAID-1 degraded
Pri : X Sec : O
```

After removing the failed hard drive and replacing with a new hard drive, if the hard drive is properly installed, the LCD display screen will display the following messages:

```
Pri HDD : OK          Pri HDD :Insert
Sec HDD : Insert      Sec HDD : OK
```

After few seconds of installing the new hard drive, the LCD display screen will display the data rebuilding progress:

```
Rebuilding            Rebuilding
Sec → Pri 32%         Pri → Sec 32%
```

When the rebuilding is fully completed, the LCD display screen will again display the following messages:

```
Pri HDD : OK
Sec HDD : OK        T
```

9. GUI Monitoring Software and Firmware Update

You can install GUI software to monitor the status of IR8624-S3. This can be done by installing software from CD.

※ The HDD1 equals to Pri HDD and HDD2 equals to Sec HDD.

1. System Status

   This GUI will auto detects the connected IR8624-S3 and reveals relative information accordingly.

2. Firmware Upgrade

   You may update the Firmware via this GUI, simply click on "Load" button to locate the firmware file to proceed. After update is finished, you may restart the power properly to operate with newly updated firmware.


※ Caution : Any random firmware updates may cause device in malfunction, it is strongly suggested not to update device firmware if device is operating properly.

3. E-Mail Notify

Configuring an e-mail address for notification of drive malfunctioning or being removed.

3-1 Setup
1). Insert "Outgoing" SMTP and e-mail name and address.
2). If it is passwords required, select the option "SMTP Login Authentication" and insert the passwords.
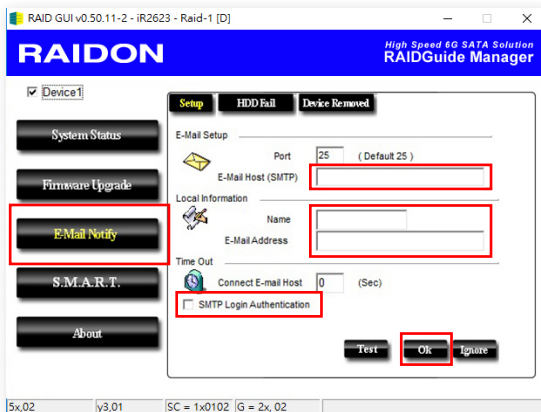
3). When the configuration completed, click on the "OK" button to save.

※ Device must be connected in operational states during configurations to take effects.

3-2 HDD Fail / Device Removed
1). Insert the e-mail address of the receiver for notification and click on "+" to add the inserted e-mail address onto the notifying list. (Maximum up to 10 e-mail addresses)
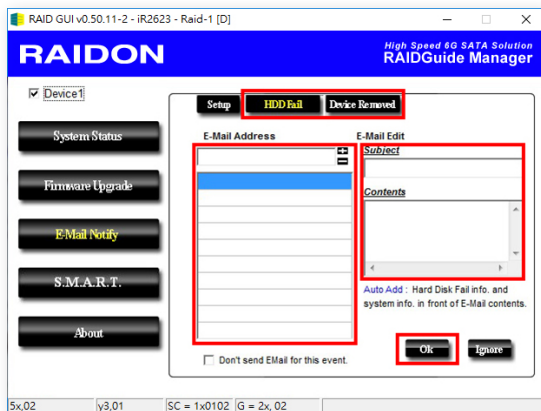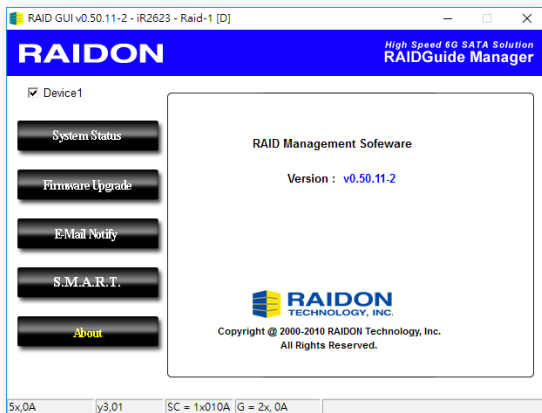

2). Insert the error message and descriptions from the columns of "Subject" and "Contents".
3). When the configuration completed, click on the "OK" button to save.

※ Device must be connected in operational states during configurations to take effects.

4. S.M.A.R.T.
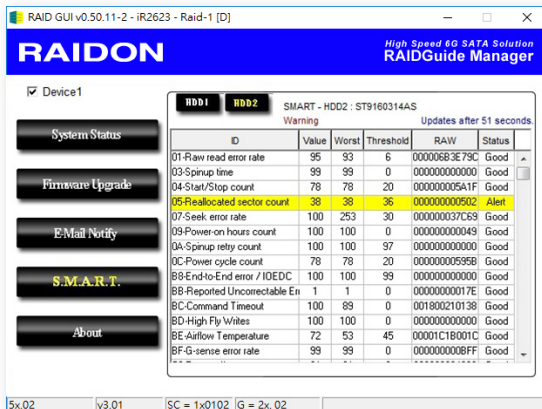
5. About Indicates GUI Management Software version

10. Frequently Asked Questions

Unstable system after connecting IR8624-S3

Q1. After installing IR8624-S3, we are unable to start the computer or the computer can not locate IR8624-S3 upon startup.

A: 1. Please check whether the readings on the IR8624-S3 LCD display screen appear normal.
    2. Please check whether the SATA Cable connection cables are properly connected to the computer system and whether SATA drives are functioning normally.
    3. If everything is functioning properly but the user still can not start the computer system, then the problem might be the system incompatibility. If such incompatibility takes place, please contact our technical support department.

Q2. When the IR8624-S3 is in use, the computer system is functioning normally but the IR8624-S3 access speed is abnormal.

A: Please first check whether the IR8624-S3 is in the progress of executing data auto-rebuild.
    1. Please examine if the length of the connection cables, SATA cable that connect the drives to the computer system is too long and whether the specification these cables complies with the requirements.
    2. If both the lengths and specification of the cables are checked out ok, please turn off IR8624-S3 and remove the hard drive from IR8624-S3. Test the hard drive directly with the computer system since it might be the bad sectors in the hard drive that are causing the longer than normal system down time.

Hard Drive Failure

Q1. Under the mirror mode (RAID 1), what will be the system's total storage capacity when adding a brand new hard drive?

A: 1. The total storage capacity for IR8624-S3 is determined by the storage capacity of the primary hard drive installed during the initial usage.
    2. The storage capacity will not increase after initial installation even when place a brand new hard drive with larger storage capacity.

Q2. Why does the error message appear when I installed the second hard drive?

A: The storage capacity of the second hard drive must be larger than the first hard drive. Otherwise, IR8624-S3 can not rebuild the new hard drive.

About Auto Rebuilding Function

Q1. What will happen if we turn off the computer's power while IR8624-S3 is still executing data auto rebuilding?

A: he mirror mode (RAID 1), if the power is out of the auto rebuilding process, the controller will remember when completion percentage of the auto rebuilding process and resume the rebuilding process when the power is back on.

Q2. Is it possible to lose any part of the data during the data auto rebuilding?

A: The data auto rebuilding function will copy data from one sector to another sector. Technically speaking, the data will not be lost during the auto rebuilding process. However, if the original hard drive is detected with bad sectors during the rebuilding process, IR8624-S3 will make hypothetical duplication instead of treat the bad sectors as hard drive failure. Therefore, the data stored in the bad sectors could potentially be lost during rebuilding.

關於這份手冊

感謝您使用 RAIDON 的產品。本手冊將介紹 InTANK IR8624-S3 產品。在您開始使用 IR8624-S3 產品前,建議您先閱讀過本手冊。手冊裡的資訊在出版前雖已被詳細確認,實際產品規格仍將以出貨時為準;任何產品規格或相關資訊更新請您直接到 www.raidon.com.tw 網站查詢,本公司將不另行通知。若您想獲得 RAIDON 最新產品訊息、使用手冊、韌體或對 RAIDON 產品有任何疑問,請您聯絡當地供應商或到 www.raidon.com.tw 取得相關訊息。
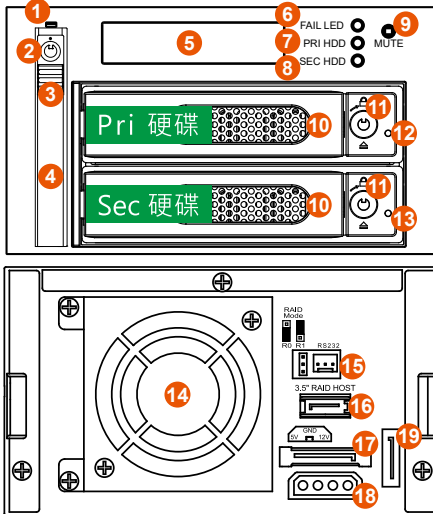
本手冊相關產品內容歸 銳銨科技股份有限公司 版權所有

1. 產品外觀及包裝內容

打開包裝外盒後,包裝內容應包含下列組件:

IR8624-S3
IR8624-S3 產品本體 X1(內含抽取盒 x3)
SATA 線 x2
快速安裝導引 x 1
螺絲及鑰匙

- 請確認相關配件與產品本身是否有受損或配件缺少,若有任何疑問請與本產品供應商聯絡。
- 請前往官網 (www.raidon.com.tw) 下載驅動程式以及其餘相關資源。

正面與背面示意圖

1. 2.5" 硬碟讀取燈
2. 2.5" 硬碟鑰匙孔
3. 2.5" 頂出按鍵
4. 2.5" 硬碟抽取盒把手
5. 液晶顯示面板
6. 故障顯示燈
7. 主硬碟狀態指示燈
8. 次硬碟狀態指示燈
9. 靜音按鍵
10. 3.5" 硬碟抽盒把手
11. 3.5" 硬碟卡榫按鍵
12. 主硬碟讀取燈
13. 次硬碟讀取燈
14. 散熱風扇
15. RAID 模式設定 & RS232 埠
16. 3.5" 硬碟 SATA 連接埠
17. SATA 15Pin 電源輸入埠
18. 4Pin 電源輸入埠
19. 2.5" 硬碟 SATA 連接埠

燈號說明

狀態	面板燈號			3.5" 硬碟讀取燈		M.2 SATA SSD 讀取燈	蜂鳴器
	故障顯示燈	主硬碟狀態指示燈	次硬碟狀態指示燈	主硬碟讀取燈	次硬碟讀取燈		
開機	——	橘燈恆亮		藍紫燈閃爍		藍燈恆亮	——
待機	——	橘燈恆亮		藍燈恆亮		藍燈恆亮	——
硬碟故障（RAID 降級）	紅燈恆亮	——		紅燈恆亮		藍燈恆亮	鳴叫
資料存取	——	橘燈恆亮		藍紫燈閃爍		藍燈閃爍	——
資料重建 (Source)	——	橘燈恆亮		藍燈恆亮		藍燈恆亮	——
資料重建 (Target)	——	——		紅燈閃爍		藍燈恆亮	——
風扇故障	紅燈恆亮	橘燈恆亮		藍燈恆亮		藍燈恆亮	鳴叫
溫度過高	紅燈恆亮	橘燈恆亮		藍燈恆亮		藍燈恆亮	鳴叫

2. 環境需求

工作溫度 : 0 ~ 40 ^{o}C (32 ~ 104 ^{o}F)
儲存溫度 :-20 ~ 47 ^{o}C (46 ~ 116 ^{o}F)
工作電壓 : 12V/5V DC

3. 硬體需求與注意事項

1. 電腦或伺服器具備 SATA I、SATA II 或 SATA III 介面。
2. 具備 SATA I、SATA II 或 SATA III 介面的硬碟與 2242/2260/2280 M.2 SATA SSD。
3. 強烈建議使用 IR8624-S3 前先設定好 RAID 模式 (預設值是 RAID 1)。
4. 在新增或變更 RAID 模式後需重新啟動產品,以確保完成更新為新的 RAID 模式。
5. 本系統允許使用不同廠牌的硬碟。但如果要獲得更好的效能,我們強烈建議使用相同廠牌型號的硬碟。
6. 安裝硬碟前請先確認所使用的硬碟並無壞軌或是其他問題,以免導致系統損毀或資料遺失。
7. 硬碟格式化後,IR8624-S3 的總使用儲存容量或許會與硬碟容量加總後的有所不同。
8. 強烈建議除了使用 IR8624-S3 系列的資料儲存功能外,請針對重要資料備份到另一個儲存裝置上或遠端備份,雙重備援您重要的資料。若您儲存在 IR8624-S3 系列的資料損毀或遺失,RAIDON 將不負任何的責任。

> 注意 :
> 一旦使用模式確認後 , 使用相同的硬碟進行模式切換將會導致資料遺失 . 如果需要進行模式變更 , 請於變更前先進行資料備份。
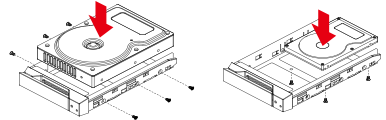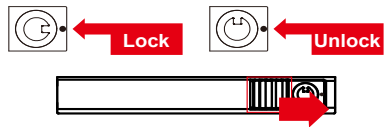
4. 硬體安裝

請參照以下步驟完成硬體安裝
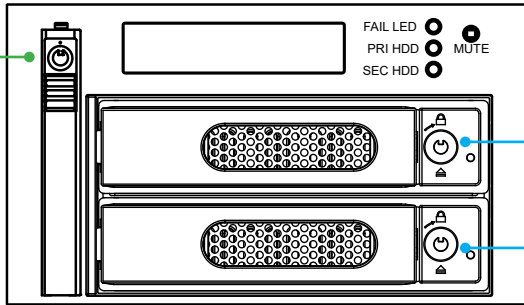
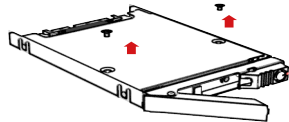1. 3.5 吋硬碟抽盒的部份，請使用零件包內附的鑰匙解鎖卡榫按鍵，再將按下卡榫按鍵，硬碟抽取盒把手便會彈開，即可取出抽取盒。

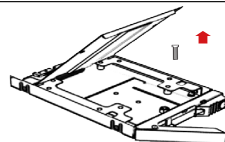2. 安裝 3.5 吋硬碟，請使用 6 顆零件包內附的大顆螺絲加以固定；安裝 2.5 吋硬碟，請使用 4 顆零件包內附的小顆螺絲加以固定。

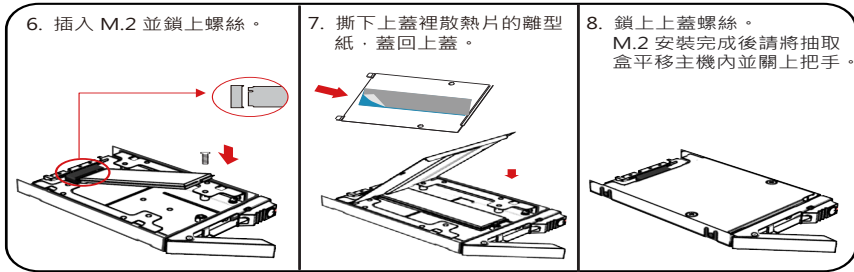3. 2.5 吋硬碟抽盒的部份，請使用零件包內附的鑰匙解鎖硬碟抽取盒鎖，將頂出按鍵向右推移，硬碟抽取盒把手便會彈開，即可取出抽取盒。
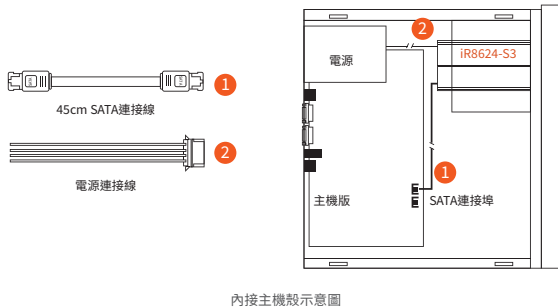

4. 抽出 M.2 SATA Bridge 托盤組，取下上蓋的 2 顆螺絲。

5. 打開上蓋，取出螺絲。

6. 插入 M.2 並鎖上螺絲。	7. 撕下上蓋裡散熱片的離型紙，蓋回上蓋。	8. 鎖上上蓋螺絲。M.2 安裝完成後請將抽取盒平移主機內並關上把手。

9. 將產品安裝於電腦機殼上的 CD-ROM 位置， 並使用配件包裡的螺絲固定，並連接 SATA 連接線與 SATA 電源線。(參照下圖)。

45cm SATA連接線

①

電源連接線

②

內接主機殼示意圖

電源

iR8624-S3

②

主機版

SATA連接埠

①

10. 硬體安裝完成。一旦開啟電腦，您的作業系統會自動辨識所裝置好的硬碟。如果您的硬碟是必須被格式化的，請依照電腦的作業系統進行硬碟格式化步驟。當完成硬碟格式化後，硬碟便可以進行資料讀寫。

※ Note：
1. RS232 埠與 RS232 線：提供工控系統或是工業電腦透過 RS232 監控硬碟狀態。
2. 我們不建議使用者在未經授權的情況下自行拆卸系統。如未經授權自行拆卸所導致的損毀將不在保固之列 。
3. 為了防止系統發生問題，請確保系統的電源供應是穩定且獨立的。
4. RS232 連接埠和 RS232 連接線：提供工控產業或 IPC 產業透過 RS232 進行硬體狀態偵測，如有需要可向銳銨銷售 / 客服人員 supporting@raidon.com.tw 索取相關資料。

5. 設定 RAID 層級

請透過機器後面的 jumper 來設定 RAID 層級。出廠預設值是 RAID 1。機器背面有三根 pin 腳用來設定 RAID 層級，若要設定 RAID 0 模式，請選用下面兩根；若要設定 RAID 1 模式，請選用上面兩根。

RAID 0 模式
(R0)

RAID 1 模式
(R1)

1. RAID 1 模式
   1). 將新的硬碟放入 IR8624-S3 中。強烈建議您使用兩顆相同的硬碟，以便取得對等的容量 . 如果兩顆硬碟的容量不同，IR8624-S3 將會以小容量的硬碟為依據。
   2). RAID 1 模式下，兩顆硬碟是鏡射關係因此擁有相同的資料，因此有一顆硬碟損毀仍然可以正常運作。當放入新硬碟取代損毀硬碟後，系統會自動將資料重建到新的硬碟。

2. RAID 0 模式
   1). 將新的硬碟放入 IR8624-S3 中。強烈建議您使用兩顆相同的硬碟,以便取得對等的容量。如果兩顆硬碟的容量不同,IR8624-S3 將會以小容量的硬碟為依據。
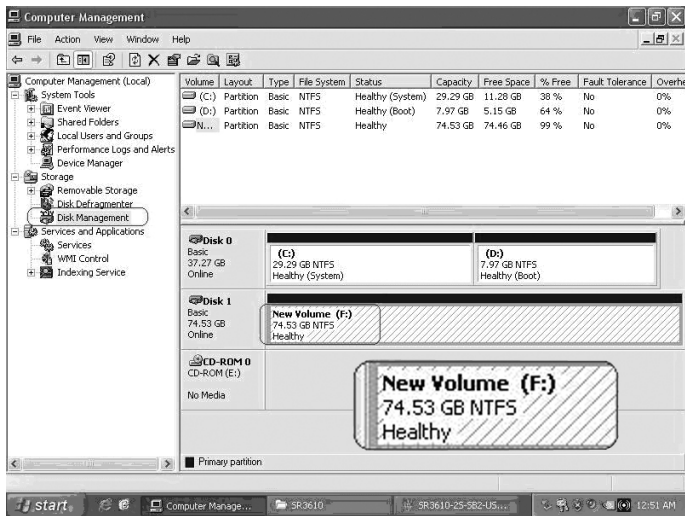   2). RAID 0 模式下,兩顆硬碟的容量會被加總成一個大儲存容量,並且提供更佳的存取效能。

6. 電腦安裝

當 IR8624-S3 的硬體安裝完成,即可準備進行行開機動作.

硬體安裝完成後,將 BIOS 的硬碟偵測設定為自動,IR8624-S3 將會被視為如同一顆硬碟一般。

當電腦開機後,系統會顯示下列偵測訊息:

1. 安裝在 IR8624-S3 中的硬碟能夠被 Windows 的裝置管理員偵測到。

2. 使用 IR8624-S3 前,使用者可以透過磁碟管理選擇硬碟的格式。

到此完成整個安裝程序。使用者可以如同存取一般硬碟般的使用 IR8624-S3。如果使用上仍有問題,請參閱附件的 Q&A。

7. LCD 訊息顯示

1. 開機與正常待機狀態

```
     RAIDbox4                   Pri HDD : OK
  RAID-1 vxxxxxx.x              Sec HDD : OK
```

2. 溫度過高 (≥50° C)

```
  Pri HDD : OK
  Sec HDD : OK        T
```

3. 風扇故障

```
  Pri HDD : OK        F
  Sec HDD : OK
```

4. RAID 1 模式，Pri 硬碟損毀而 Sec 硬碟仍然可正常存取

```
   RAID-1 degraded
    Pri : X Sec : O
```

5. RAID 1 損毀，Pri 與 Sec 硬碟皆損毀

```
    RAID-1 failure
    Pri : X Sec : X
```

6. RAID 1 損毀，Source 碟重複

```
    RAID-1 failure
    Double Source
```

7. RAID 0 損毀，Pri 或 Sec 硬碟遺失

```
    RAID-0 failure              RAID-0 failure
    Pri : M Sec : O             Pri : O Sec : M
```

9. 資料重建

```
     Rebuilding
   Sec → Pri 32%
```

8. 資料重建功能說明

具備硬碟熱抽拔與自動資料重建功能。

離線備份。當資料儲存在 IR8624-S3 後，使用者可以移除其中一顆硬碟當作資料備份碟，確保相關資料例如作業系統檔案、加密文件、較少存取的檔案甚至影音檔案的安全。使用者可以定期的將硬碟放回 IR8624-S3 執行自動資料重建，確保系統不會被病毒攻擊或是減少兩顆硬碟同時損毀的風險。

當 IR8624-S3 中的其中一顆硬碟損毀，系統會透過 LCD 顯示幕與監控軟體發出警示。使用者可以在系統仍在運作下，無需關掉機器即可將損毀的硬碟取出。一但替換損毀硬碟後，IR8624-S3 即會在不影響系統運作的情況下自動開始進行資料重建，使用者也無需對 IR8624-S3 下任何指令。

當 IR8624-S3 偵測到硬碟遺失或是損毀，蜂鳴器會啟動，LCD 螢幕會顯示以下訊息：

```
RAID-1 degraded
Pri : X Sec : O
```

當移除損毀的硬碟並替換一顆新硬碟後，如果新硬碟有正確安裝，LCD 螢幕會顯示以下訊息：

```
Pri HDD : OK
Sec HDD : Insert
```

```
Pri HDD :Insert
Sec HDD : OK
```

安裝新硬碟後幾秒鐘，LCD 螢幕會顯示資料重建的進度：

```
Rebuilding
Sec → Pri 32%
```

```
Rebuilding
Pri → Sec 32%
```

當資料重建完成後，LCD 螢幕會顯示以下訊息：

```
Pri HDD : OK
Sec HDD : OK      T
```
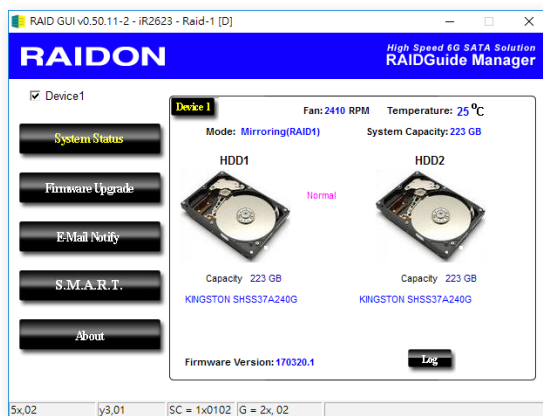
9. GUI 功能說明與韌體更新

使用者可以透過光碟來安裝 GUI 軟體，藉此監控 IR8624-S3 的狀態。

※ HDD1 等於 Pri 硬碟，HDD2 等於 Sec 硬碟。

1. 系統狀態

GUI 會自動偵測 IR8624-S3 並且顯示相關資訊 .

2. 韌體升級

使用者可以透過此 GUI 進行韌體升級。只需簡單的點選 "Load" 指定韌體檔案位置後即可進行升級。升級過程或許需要重新啟動系統來完成整個升級程序。
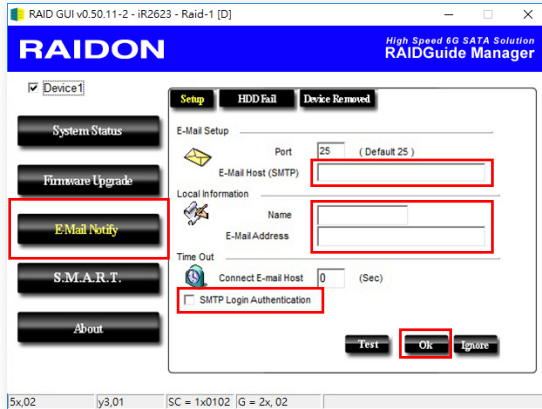

※ 注意：任意更新韌體有可能導致系統運作不正常。強烈建議如果系統運作正常情況下不要進行韌體升級。

3. E-Mail 通知

　　設定 e-mail 帳號來收取系統問題或被移除通知。

　　3-1 設定
　　　　1). 填入 e-mail 相關名稱與完整位置，以及 SMTP 的相關資訊。
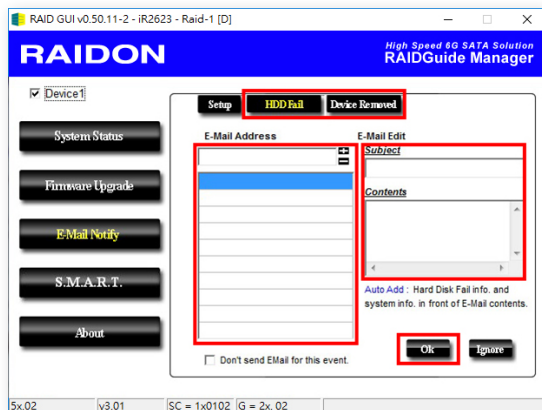　　　　2). 如果需要密碼，請勾選"SMTP Login Authentication"並輸入密碼。

　　　　3). 相關資訊填寫完成後，點選"OK"。
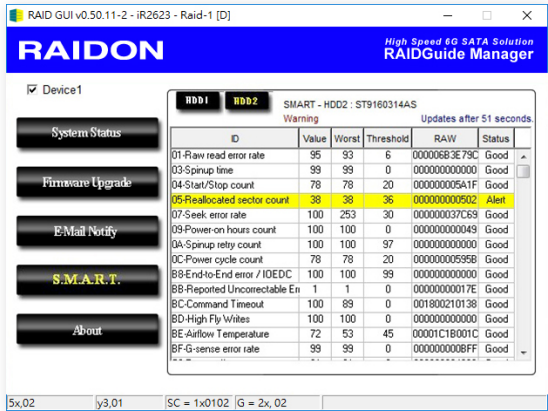　　　　※ 設定過程中，系統必須維持在正常運作狀態。

　　3-2 硬碟損毀 / 裝置被移除
　　　　1). 在 E-Mail Address 欄位填入要收取通知的 e-mail，點選"+"即可增加另一組。(最多可填入 10 組 e-mail)
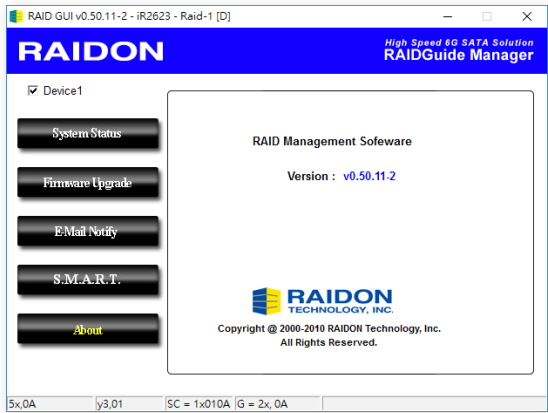

　　　　2). 在"Subject"與"Contents"填入 e-mail 訊息的主旨與內容。
　　　　3). 相關資訊填寫完成後，點選"OK"。
　　　　※ 設定過程中，系統必須維持在正常運作狀態。

4. S.M.A.R.T.

5. 關於 GUI 軟體版本

10. 常見問題

連接 IR8624-S3 後系統不穩定

Q1. 安裝完 IR8624-S3 後，電腦無法開機或是電腦認不到 IR8624-S3。

A: 　1. 請確認 IR8624-S3 上的 LCD 螢幕顯示正常。

　　2. 請確認 SATA 線有正確的跟電腦連接且硬碟是可正常運作。

　　3. 如果一切正常但使用者還是無法正常開機，這有可能是因為硬碟上的相容性問題。如果是硬體上相容性問題，請連繫我們的客服部門。

Q2. 使用時，電腦運作正常但是 IR8624-S3 的存取效能不正常。

A: 　請確認 IR8624-S3 是否正在資料重建。

　　1. 請確認所使用的連接線長度，是否所使用的 SATA 線太長以及是否合乎標準規範。

　　2. 如果線材的長度與規格都沒問題，請關閉 IR8624-S3 並取出其中的硬碟。直接接硬碟連接到電腦並進行檢測，有可能是硬碟中的壞軌導致。

硬碟損毀

Q1. RAID 1 模式下，如果放入一顆新的硬碟，系統的總容量會是？

A: 　1. IR8624-S3 的總容量是依據一開始安裝的主硬碟容量而定。

　　2. 安裝完成後，即使更換一顆較大容量的硬碟，儲存容量也不會增加。

Q2. 為何當我安裝第二顆硬碟時出現錯誤訊息？

A: 　第二顆硬碟的容量必須大於第一顆硬碟，否則 IR8624-S3 不會進行資料重建。

關於資料自動重建功能

Q1. 如果當 IR8624-S3 在資料重建時關掉電腦電源，會不會怎樣？

A: 　在 RAID 1 模式下，資料重建過程中關閉電源，控制器會自動記憶已完成的百分比，當在度開啟電源後，重建過程會從斷電前的百分比繼續。

Q2. 資料重建過程中是否有可能會遺失資料？

A: 　資料重建功能是 Sector to Sector 的拷貝方式。技術上來說，資料並不會在資料重建過程中遺失。但是，如果資料重建過程中，原本的硬碟 (Source) 被偵測到壞軌，IR8624-S3 將會採用模擬方式而不會因此壞軌認為硬碟損毀。因此，這種情況下儲存在壞軌的資料就有可能會遺失。

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