

RAIDON

InTANK
iR2301

User Manual

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Introduction

Thank you for purchasing RAIDON products. This manual will introduce the InTANK iR2301 Series. Before using your InTANK iR2301, 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.

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1. Environmental Requirements

Operating Temperature : 0 ~ 40 °C (32 ~ 104 °F)

Storage Temperature : -20 ~ 47 °C (-4 ~ 116 °F)

Line Voltage : 5V DC

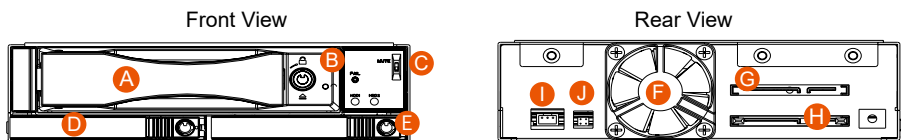
2. Product Appearance and Packaging Content

Open the package and you should find the following:

iR2301
IR2301 x 1 (with removable drive tray enclosed x 3)
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.

Product View



- A. 3.5" HDD/SDD Tray & Tray Handle
- B. 3.5" Tray key lock & Push Open Button
- C. MUTE Switch
- D. 2.5" HDD/SDD Tray & Tray Handle
- E. 2.5" Tray key lock & Push Open Button

- F. Cooling Fan
- G. SATA Port
- H. RAID SATA Port
- I. Cooling Fan Port
- J. RAID Switch

LED Indicators :

Status	Blue LED	Red LED	Buzzer
HDD Idle	Light On	--	--
HDD Fail or Adsent	--	Light On	On
HDD Access	Light On	Blinking	--
Rebuilding(Source)	Light On	--	--
Rebuilding(Target)	--	Blinking	--

3. Hardware Requirements and Precautions

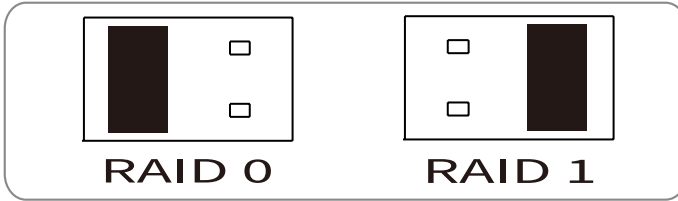
1. Computers or servers with SATA I & SATA II & SATA III.
2. Hard drive with SATA I & SATA II & SATA III
3. You are strongly advised to set the storage mode (the default is the Independent mode) before using the iR2301.
4. The product allows the user to simultaneously utilize two hard drives manufactured by different companies. However, if the user expects better efficiency, we strongly recommend the users to use hard drives manufactured by the same manufacturer.
5. 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.
6. The actual storage capacity of iR2301 recognized by the system may differ from the total capacity stated on the hard drives combined once the drives have been formatted.
7. It is highly recommended for users to back up important data contained within their iR2301 unit on a regular basis or whenever the user feels necessary to a remote or a separate storage device. RAIDON 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. RAID Mode & Buzzer Setting

RAID Mode Setting:



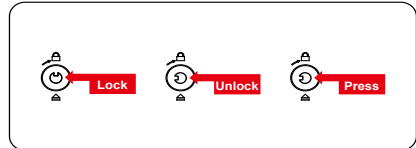
Buzzer Setting:



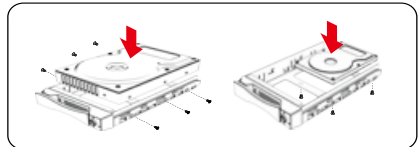
5. Hardware Installation Procedure

Please follow the instructions below to complete the hardware installation.

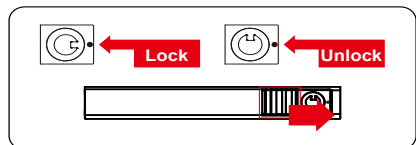
1. For the 3.5" HDD tray, please use the key included in the accessory kit to unlock the HDD tray key lock, and then press the HDD tray key lock. The removable drive tray will pop open and extract the removable drive tray.



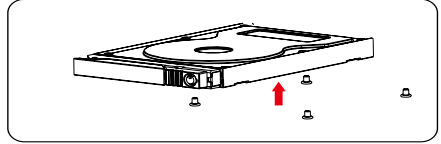
2. For 3.5" HDD/SSD, please secure it by use six the larger screws included in the accessory kit. For 2.5" HDD/SSD, please secure it by use four the smaller screws included in the accessory kit.



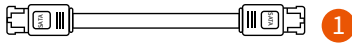
3. For the 2.5" HDD tray, please use the key included in the accessory kit to unlock the 2.5" HDD tray key lock and push the HDD eject button to the right, the 2.5" HDD tray handle will pop up to remove the tray. Install the 2.5-inch hard disk and secure it with the small screws included in the 4 parts package.



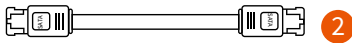
4. When the HDD/SSD installation has been completed, insert the hard drive tray into the system horizontally and secure the latch into place.



5. Properly connect SATA cable and power cable from your system to the device.



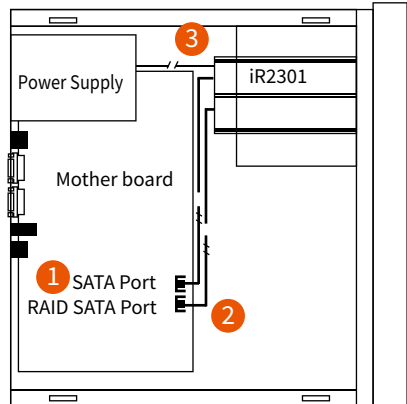
45cm SATA Cable



45cm SATA Cable



Power Supply Connector



Internal Case

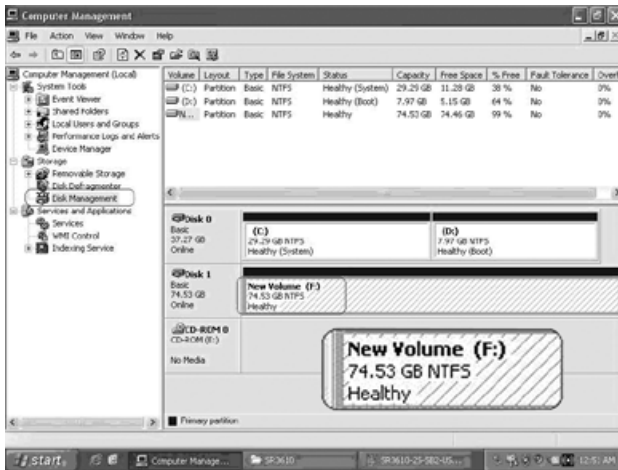
6. Power on your system after hardware installation is completed, and your operating system will automatically detect the hard drives from booting. Then follow the steps from your operating system to partition and format the drives when necessary, device will be ready to use once the format is completed.

6. Computer Set Up

When the hardware setup for iR2301 is complete, you are now ready to turn the machine on.

After the hardware installation is complete, the iR2301 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 iR2301, 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 iR2301.



At this point, the installation process is completely finished. The user can freely retrieve and save data to iR2301 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. Frequently Asked Questions

Unstable system after connecting iR2301

- Q1. After installing iR2301, we are unable to start the computer or the computer can not locate iR2301 upon startup.
- A: 1. Please check whether the SATA Cable connection cables are properly connected to the computer system and whether SATA drives are functioning normally.
2. 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 iR2301 is in use, the computer system is functioning normally but the iR2301 access speed is abnormal.
- A: Please first check whether the iR2301 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 iR2301 and remove the hard drive from iR2301. 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 iR2301 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, iR2301 can not rebuild the new hard drive.

About Auto Rebuilding Function

- Q1. What will happen if we turn off the computer's power while iR2301 is still executing data auto rebuilding?
- A: In the 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, iR2301 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 iR2301 產品。在您開始使用 iR2301 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 銳銓科技股份有限公司 版權所有

1. 環境需求

工作溫度：0 ~ 40 °C (32 ~ 104 °F)

儲存溫度：-20 ~ 47 °C (-4 ~ 116 °F)

工作電壓：5V DC

2. 產品外觀及包裝內容

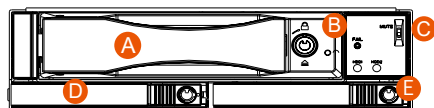
打開包裝外盒後，包裝內容應包含下列組件：

iR2301
IR2301 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

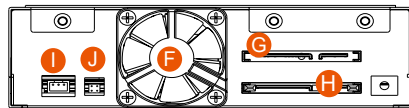
- 請確認相關配件與產品本身是否有受損或配件缺少，若有任何疑問請與本產品供應商聯絡。
- 請前往官網 (www.raidon.com.tw) 下載驅動程式以及其餘相關資源。

正面與背面示意圖

前視圖



背視圖



A 3.5" 硬碟抽取盒把手

B 3.5" 硬碟卡榫按鍵

C 靜音模式切換

D 2.5" 硬碟抽取盒把手

E 2.5" 硬碟卡榫按鍵

F 散熱風扇

G SATA 連結埠

H RAID SATA 連結埠

I 風扇連接埠

J RAID 切換

燈號一覽表：

狀態	藍色LED	紅色LED	蜂鳴器
硬碟閒置	恆亮	--	--
無硬碟/硬碟故障	--	恆亮	鳴叫
資料存取	恆亮	閃爍	--
資料重建(來源)	恆亮	--	--
資料重建(目標)	--	閃爍	--

3. 硬體需求與注意事項

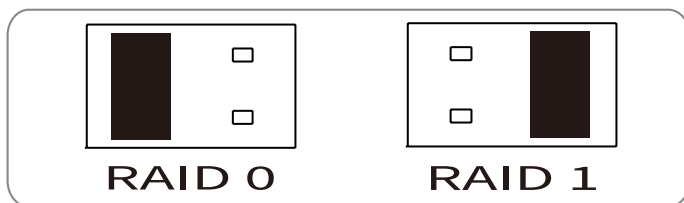
1. 電腦或伺服器具備 SATA I、SATA II 或 SATA III 介面。
2. 具備 SATA I、SATA II 或 SATA III 介面的硬碟。
3. 強烈建議使用 iR2301 前先設定好 RAID 模式 (預設值是 RAID 1)。
4. 本系統允許使用不同廠牌的硬碟。但如果要獲得更好的效能，我們強烈建議使用相同廠牌型號的硬碟。
5. 安裝硬碟前請先確認所使用的硬碟並無壞軌或是其他問題，以免導致系統損毀或資料遺失。
6. 硬碟格式化後，iR2301 的總使用儲存容量或許會與硬碟容量加總後的有所不同。
7. 強烈建議除了使用 iR2301 的資料儲存功能外，請針對重要資料備份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 iR2301 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. 設定 RAID 層級

RAID 模式切換設定：



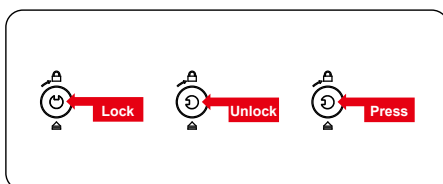
Buzzer 切換設定：



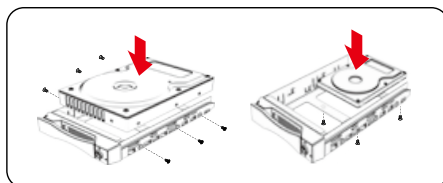
5. 硬體安裝

請參照下列步驟，完成 iR2301 的硬體安裝：

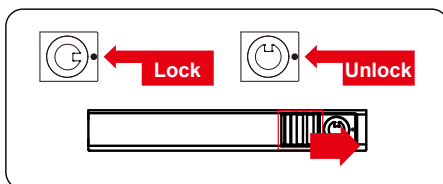
1. 3.5 吋硬碟抽盒的部份，請使用零件包內附的鑰匙解鎖卡榫按鍵，再將按下卡榫按鍵，硬碟抽取盒把手便會彈開，即可取出抽取盒。



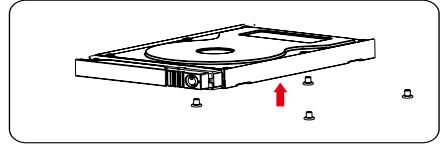
2. 安裝 3.5 吋硬碟，請使用 6 顆零件包內附的大顆螺絲加以固定；安裝 2.5 吋硬碟，請使用 4 顆零件包內附的小顆螺絲加以固定。



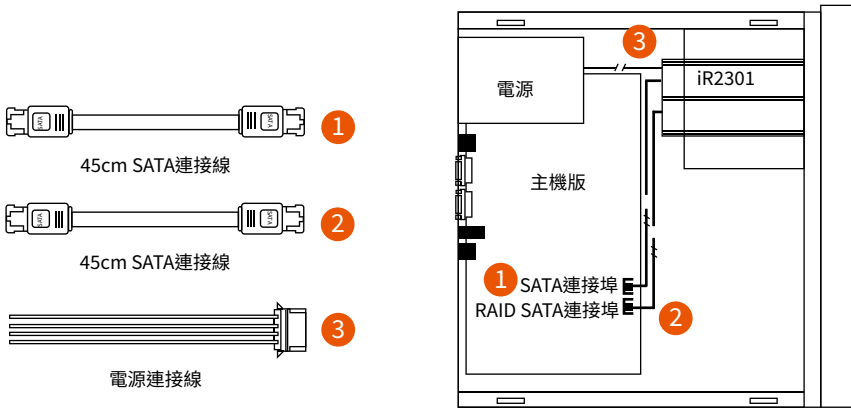
3. 2.5 吋硬碟抽盒的部份，請使用零件包內附的鑰匙解鎖硬碟抽取盒鎖，將頂出按鍵向右推移，硬碟抽取盒把手便會彈開，即可取出抽取盒。



4. 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。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。



5. 將硬碟安裝到抽取盒上，將抽取盒放入主機內並關上把手。
6. 連接 SATA 連接線與電源線。(參照以下圖)。



內接主機殼示意圖

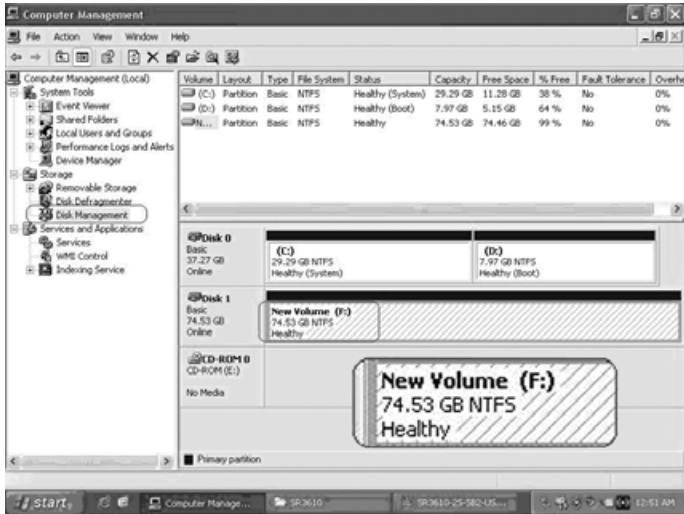
7. 硬體安裝完成。您可開啟電源進行相關設定與應用。
8. 你的作業系統將會自行辨識硬體，辨識成功後請先完成硬碟格式化，完成後即可使用。

6. 電腦設定

當 iR2301 的硬體安裝完成，即可準備進行開機動作。

硬體安裝完成後，將 BIOS 的硬碟偵測設定為自動，iR2301 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 iR2301 中的硬碟能夠被 Windows 的裝置管理員偵測到。
2. 使用 iR2301 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 iR2301。如果使用上仍有問題，請參閱附件的 Q&A。

7. 常見問題

Q. 是否可以利用 RAID 1 功能來進行硬碟備份？

A: 可以。RAID 1 本身即鏡射功能。若您有硬碟需要利用 RAID 1 進行備份，請將存有資料硬碟放入硬碟 1 (Source) 的位置，設定成 RAID 1 並完成開機後，再把新硬碟放入硬碟 2(Target) 的位置，系統將會自動進行資料備份 (Rebuild)。當 iR2301 重建完成，兩個硬碟內就已經是完全相同資料。

Q. 是否可以在 RAID 1 下使用單顆硬碟？

A: 可以，但是將會喪失原本 RAID 1 的資料安全功能，建議您在 RAID 1 模式下，應使用兩顆硬碟以確保資料安全。在單顆硬碟下，RAID 1 將無法進行鏡射功能，一旦單一硬碟損毀則內部的資料將全數損毀。建議用戶只要發生有一個硬碟損壞的狀態，應儘快購買一個新硬碟回來更換。

Q. 當 iR2301 硬碟發生錯誤時，我應該如何處理？

A: 若您使用的是 RAID 0 模式，請您先確認哪顆硬碟發生錯誤並關掉 iR2301 電源，將損毀的硬碟抽出並置換上新的硬碟，再度開啟電源後系統將重建您的 RAID 0 系統，原本的資料將全數遺失。

若您使用的是 RAID 1 模式，請用戶在不關機的情況下直接將損毀的硬碟抽出並置換上新的硬碟，當新硬碟置入後，系統將會自動開始「重建」程序，當重建完成，即可正常使用。請注意，當系統處於資料重建中時，請勿將任一硬碟抽出，以確保資料的完整性。

RAIDON
Your Data Security Guardian
www.raidon.com.tw