G-RAID® PROJECT 2

User Manual

ACCESSING SUPPORT

For technical support visit https://www.westerndigital.com/support

Contents

1. WELCOME TO G-RAID® PROJECT 2

KEY FEATURES

7200RPM ULTRASTAR® ENTERPRISE-CLASS HARD DRIVES INSIDE

For your demanding workloads and mission-critical content, you can rely on the power and enhanced reliability of the 7200RPM Ultrastar® enterprise-class hard drives inside.

SHIPS IN RAID 0 FOR PEACE OF MIND

G-RAID® PROJECT 2 comes pre-configured with RAID 0, making it ideal for handling your most demanding workloads and projects effortlessly. Its fast access to your expansive video, audio, and content libraries helps ensure it's your reliable ally for backups and content retrieval.

CHANGE HARDWARE RAID SETTING ON DEVICE

Easily change the RAID mode setting from default RAID 0 to RAID 1 or JBOD by flipping a switch – no need to download an app or install special software.

HIGH-PERFORMANCE THUNDERBOLT™ 3 INTERFACE

Thunderbolt™ 3 interface for faster transfers, image editing, workload management, and daisy-chaining for up to five (5) additional devices.

WHAT'S IN THE BOX

- G-RAID® PROJECT 2 Desktop Hard Drive
- 1x Thunderbolt™ 3 Cable (WD Part Number: M032-000043)
- Quick Start Guide
- Power Cable
- 19VDC, 4.74A Power Adapter

HANDLING PRECAUTIONS

G-RAID® products are precision instruments and must be handled with care. It may be damaged by rough handling, shock, or vibration. Always observe the following safety precautions:

- Avoid touching the device's connector.
- Do not block any of the enclosure's ventilation slots.
- Do not use this product as a portable device.
- Handle the device using its edge or frame.
- Do not remove, damage, or cover any device labels.
- Ensure the device does not exceed maximum operating temperature.
- Exercise caution when handling a device as the device may have heated up.

2. TECHNICAL SPECIFICATIONS

OPERATING SYSTEM COMPATIBILITY

G-RAID® PROJECT 2 is pre-formatted APFS, compatible with:

- macOS 11+
- iPadOS 14+
- Windows® 10+ (via reformat)

FRONT FEATURES

Reference illustration 2.1 below.

1. **G-RAID® PROJECT 2 System LED—**The System LED can be dimmed or brightened with the rear LED Dimmer Button and provides the activity status for the G-RAID® PROJECT 2 device.

2. **Front Cover Removal—**these two locations are each marked with 3 raised dots. Simultaneously press on these two points to remove the front cover and gain access to the drives, and to view the Drive LED lights on each drive tray.

Illustration 2.1

REAR CONNECTIVITY

Reference illustration 2.2 below.

1. **LED Dimmer Button**—this feature provides the option to switch the LED light between three modes: Default, Bright, or Off.
2. **Power Port**—connect the included power supply to this 19VDC power connector.
3. **Power Button**—used to turn the device on or off.
4. **RAID Mode Dip-Switches**—Use these dip-switches to switch between RAID 0, RAID 1, and JBOD.
5. **Kensington® Security Slot**—use this slot to secure your device with a Kensington Security Lock (sold separately).
6. **Thunderbolt™ 3 Ports**—these two ports support Thunderbolt™ 3 and USB-C™ 3.2 Gen 2. Use the port on the right-hand side to connect the G-RAID® PROJECT 2 to the host computer system. Use the port on the left-hand side to daisy-chain another Thunderbolt™ 3 device.

Illustration 2.2

SIDE ANCHORS

Reference illustration 2.3 below.

1. **Anchor Points for Custom Mounting & Accessories—**These eight anchor points (four on each side of the device) are designed to be used for customization, such as attaching the G-RAID® PROJECT 2 to a DIT cart, a mounting plate, adding a handle, or other gear for your production needs.

NOTE: Included screws are not designed for attaching accessories or anchoring – anchor screws not included. Anchor points will accept a ¼”-20 screw. The screw length will vary based on the type of mount.

Illustration 2.3

3. MAIN ACTIVITIES

CONNECTING THE G-RAID® PROJECT 2

Before you begin, make sure your computer system is turned on with your operating system fully loaded and ready for hardware and software installation.

1. Use the included data cable and connect one end to the Thunderbolt™ 3 / USB-C™ port on the rear of the G-RAID® PROJECT 2 device—the port with the laptop icon.
2. Connect the other end of the data cable to your computer system (host).
3. Connect the included power cable to the G-RAID® PROJECT 2 device and plug the other end into a surge protector or wall outlet.
4. The G-RAID® PROJECT 2 device will automatically mount on the desktop if you are running macOS.
5. Congratulations, you have connected the G-RAID® PROJECT 2 device to your computer system.

LED BEHAVIOR

The G-RAID® PROJECT 2 has multiple front LED lights. One indicates the System Status, and behind the front cover are LED lights that indicate the Drive Status. Reference the following tables for details.

System LED Status

Reference to the table below for System LED System status and Illustration 2.1 under the Front Features section.

Note: The G-RAID® PROJECT 2 will automatically power On when connected to power.

Table 1: System LED Status Behavior

System LED Behavior	State	Description
Alternating between White and Red → Blinking White → Solid White	Power On	Device is first powered on and connected to the host.
Solid White for 20mins → Off	Power On	Drive is first connected to power source but not to the host.
Off	Power Off	Device is disconnected from host/ powered off.
Blinking White	Data Transfer	Data transfer to or from the drive.
Off	Power Saving	Drive is powered on and connected to host that goes to sleep, suspend or is powered off.
Blinking White → Off	Overheating or Fan Failure	Drive is powered on, connected to host and overheating.

Drive LED Status

The Drive LED Status is located on the drive tray. To access these LED lights, remove the front cover from the G-RAID® PROJECT 2 device (Reference Topic: Drive Replacement). The LED lights are located on the right-hand side of the drive trays. They include blue, red, and white colored lights to indicate the status. Reference the table below to see the G-RAID® PROJECT 2 Drive LED Status with the corresponding System LED status.

Table 2: Drive LED Status

System LED	Drive 1 LED	Drive 2 LED	RAID Status
Red and White Blinking → White Blinking → Solid White	Blue	Blue	Power On
Red	Red	Blue	RAID 0 Drive 1 Failed
Red	Blue	Red	RAID 0 Drive 2 Failed
Blinking Red	Red	Blinking Blue	RAID 1 Drive 1 Failed
Blinking Red	Blinking Blue	Red	RAID 1 Drive 2 Failed
Solid White	Off	Blinking Blue	JBOD Drive 1 Disconnected
Solid White	Blinking Blue	Off	JBOD Drive 2 Disconnected
Alternating between Red and White	Alternating between Red and Blue	Alternating between Red and Blue	RAID Rebuild

RAID SETUP

The following information will provide instructions on changing the G-RAID® PROJECT 2's RAID configuration.

Warning!: Changing the RAID configuration will result in data loss.

RAID Mode Setting

The following table indicates the various dip-switch states or settings used for the available RAID modes.

Warning!: Changing the RAID configuration will result in data loss.

Table 3: RAID Mode Settings

Dip-Switch Setting	Illustration (black is the switch position)
RAID 0 switch setting (default / preconfigured)	
RAID 1 switch setting	
JBOD switch setting	
Not Assigned - does not affect the current RAID setting	

RAID Configurations

The G-RAID® PROJECT 2 supports RAID 0, RAID 1, and JBOD. The default or pre-configured setting is RAID 0.

Warning!: Changing the RAID configuration will result in data loss.

Table 4: Supported RAID Levels

RAID Level	Description	Advantage	Disadvantage	Ideal Usage
0 (pre-configured)	Disk Striping	Offers the highest performance and a 100% total use of available storage capacity.	No fault tolerance - failure of one drive in the array results in complete data loss.	Content creation applications requiring the highest performance and storage capacity.
1	Disk Mirroring	Maximum level of data protection; identical data is written to both drives.	Useable storage space is 50% of total available capacity.	Data applications where data security is paramount.
JBOD	One or more logical drives.	Both disks are recognized as independent drives, allowing for 1 or more logical drives, resulting in maximum storage utilization.	No data protection or fault tolerance.	Applications where data stored on each drive needs to be separated.

Changing RAID Configuration

Warning!: Changing the RAID configuration will result in data loss.

1. Turn off the G-RAID® PROJECT 2 device.
2. **Change** the **Dip-Switch** setting to the desired RAID mode.
3. **Press and Hold** the **RAID Mode Setting Switch** and turn on the unit.
   a. Continue Pressing the RAID Mode Setting Switch for 10 seconds. The front LED blinking fast indicates that RAID mode change has registered.
4. Turn the unit off, then back on for the new RAID setting to take affect.
5. Re-initialize the drive.

Initialize G-RAID® PROJECT 2 for macOS

G-RAID® PROJECT 2 was factory-formatted for use or "Initialized" for macOS. You can re-initialize to quickly erase the contents of the drive. Here are the steps.

CAUTION: Initializing or Re-Initializing a device will *erase* all data on the device. Do not continue if you wish to retain your information.

1. First, open the **Disk Utility** program located on your hard drive under Applications/Utilities/Disk Utility. The window below will appear. Your G-RAID® PROJECT 2 will be displayed in the left-hand column.
2. Select the G-RAID® PROJECT 2 by clicking its drive icon in the left-side column. Information about the device will be displayed at the bottom of the window.
3. Select the **Erase** tab to view the formatting options. By default, the product is formatted as APFS.
4. Choose the **Format** option that you prefer.
5. Click the **Erase** button in the lower right corner of the window. A dialog box will appear asking if you want to erase the G-RAID® PROJECT 2 partition.
6. Click on the Erase button to continue. A progress bar in the lower right corner of the window will show the progress of the disk's reformatting.
7. After the device is re-initialized, you should automatically see the **Time Machine** dialog box.
   - Click the **Use as Backup Disk** button if you want to use the drive with Time Machine.
   - Click the **Don't Use or Decide Later** button if you do not want to use Time Machine at this point.
8. This should complete the initialization process, and the G-RAID® PROJECT 2 should now be erased.

Reformatting the G-RAID® PROJECT 2

G-RAID® PROJECT 2 is set up at the factory for use with macOS systems but can be reformatted for use with Windows 10 and higher.

CAUTION: Reformatting the device will *erase* all of its contents. If you have saved files on the device, back them up to another file storage location before reformatting it.

For instructions on formatting your device for Windows, please visit Support, and review Answer ID 30566.

SAFELY DISCONNECTING THE DEVICE

A great feature of G-RAID® PROJECT 2 is its ability to be connected and disconnected while your computer is running. The macOS and Windows operating systems have a means for safely disconnecting and removing the device without turning off the system:

- **macOS**—Users running macOS can simply drag the device icon to the Trash before disconnecting it.
- **Windows**—Windows has a Safely Remove Hardware and Eject Media icon in the system tray which, when used, ensures that all data is saved to the device and is also flushed from system cache before disconnecting the device.

CAUTION: Do not disconnect the device while it is transferring data. Disconnecting the G-RAID®PROJECT 2 from the computer during data transfer may damage the device or cause data loss.

DRIVE REPLACEMENT

Below are the steps for a drive replacement and for a RAID 0 rebuild.

Table 6:

Note:
• For a RAID 0 setup, when a drive fails, all of the data is lost. A new RAID 0 can be created with the replacement drive, but the previous data is lost. • For JBOD, when a drive fails, only in-tact volumes on the drive that has not failed retain their data.

Table 7:

Warning! For the RAID 0 rebuild process:
• G-RAID® PROJECT 2 must be turned on and plugged into the computer during the entire rebuild process. • Sleep settings on the computer must be turned off. • Do not change or add new files to the G-RAID® PROJECT 2 device during the rebuild process.

Drive Replacement

G-RAID® PROJECT 2 drive replacement.

1. Open and remove the front cover on the G-RAID® PROJECT 2 by pressing on the raised 3-dot locations highlighted in illustration 3.1

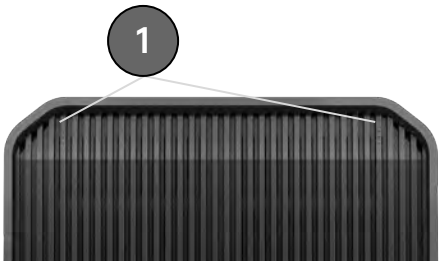

Illustration 3.1

2. With the G-RAID® PROJECT 2 device powered on, use the RAID LED lights on the right-hand side of the drive trays highlighted in illustration 3.2 to determine which drive has failed.

   a. A failed drive is indicated by a solid red LED status. A good drive is indicated by a solid blue LED status.

Illustration 3.2

3. Remove the drive tray with the Red LED status by: (see Illustration 3.3)
    a. Pushing in the lever on the right-hand side of the drive tray, just above the RAID LED light.
    b. Pulling on the center handle of the drive tray.

Illustration 3.3

4. Attached the drive tray to the replacement drive, making sure to carefully align the four mounting points on the drive with the four mounting receivers on the drive tray.
5. Insert the newly assembled drive tray and drive into the G-RAID® PROJECT 2.
6. The hardware replacement process is now complete.

RAID 0 Rebuild

After following the steps in the Drive Replacement process, continue here for rebuilding the RAID 0 array.

1. When the replacement drive is first inserted into the G-RAID® PROJECT 2, the replacement drive RAID LED status may be red. However, shortly after this, the rebuild process should automatically begin with the drive RAID LED status on both drive trays blinking purple, or what may look like alternating red and blue blinks.
2. The rebuild of the previous RAID 0 array will automatically begin.
    a. The RAID 0 rebuild process will take approximately 2 hours per terabyte to complete.
3. Once the RAID 0 rebuild is complete, the RAID LED lights will be blue.

4. COMPLIANCE AND WARRANTY INFORMATION

LIMITED WARRANTY – EXCEPT AUSTRALIA

Warranty Information

This device is covered by a 5-year limited warranty (or 5-year warranty in regions not recognizing “limited”) from the date of purchase, subject to the applicable warranty terms and conditions, as defined in http://support.wdc.com/warranty/policy.asp.

How to Make a Warranty Claim

Please go to www.westerndigital.com and select “support” for more information on making a warranty claim (Support Page).

If it is determined that your product may be defective, you will receive an RMA (Return Material Authorization) and product return instructions. You are responsible for any expenses associated with a claim under ’s Limited Warranty.

You must send your product in a secure, prepaid package, to the address provided with your RMA number.
Proof of purchase is required for all warranty claims.

LIMITED WARRANTY – AUSTRALIA

Warranty Information

Western Digital warrants to the end user, that this product, excluding content and or software supplied with or on the product, will be free from material defects in manufacture, will conform to published product specifications and be fit for normal use for a period of 5 years from the date of purchase, provided that the product is legally placed on the market.

When making a claim under this Limited Warranty, Western Digital may at its option repair this product or provide you with an equivalent product; and if unable to repair or replace the product, will refund the purchase price.
The full terms of warranty and warranty period are available at: http://support.wdc.com/warranty/policy.asp.

Warrantor Details

Western Digital Corporation, 5601 Great Oaks Parkway, San Jose, CA 95119, U.S.A.

How to make a warranty claim:

Before you return the product you must first obtain a Return Material Authorization (RMA) number. Please either:

1. Contact www.westerndigital.com/support (support@westerndigital.com) and provide proof of purchase (showing date and place of purchase and name of the reseller) and product name, type and number; or
2. Contact the dealer from whom you originally purchased the product.

Please go to www.westerndigital.com/support for more information on making a warranty claim (Support Page).

If it is determined that your product may be defective, you will receive an RMA number and product return instructions. You are responsible for any expenses associated with a claim under Limited Warranty. You must send your product in a secure, prepaid package, to the address provided with your RMA number. Proof of purchase is required for all warranty claims.

Australian consumers only:

Notwithstanding the terms of this Limited Warranty, products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the products repaired or replaced if the products fail to be of acceptable quality and the failure does not amount to a major failure.

REGULATORY COMPLIANCE

Regulatory Compliance – FCC

FCC CLASS B INFORMATION

NOTE: This device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the device.

Regulatory Compliance – Canada

Canada ICES-003 (B) / NMB-003 (B) Statement

Cet appareil numérique de la classe B est conforme à la norme NMB-003 (B) du Canada.

This device complies with Canadian ICES-003 (B).

Safety Compliance – US and Canada

Safety Compliance

Approved for US and Canada. CAN/CSA-C22.2 No. 62368-1-14: Audio/ Video, Information and Communication Technology Equipment Part 1: Safety Requirements.

Approuvé pour les Etats-Unis et le Canada. CAN/CSA-C22.2 No. 62368-1-14, Sûreté d'équipement de technologie de l'information.

Regulatory Compliance – CE

CE Compliance for Europe

Hereby, Western Digital declares compliance of this equipment to the applicable Council Directives of the European Union, including the EMC Directive (2014/30/EU), the Low Voltage Directive (2014/35/EU) and the RoHS Directive (2011/65/EU) as amended by Directive 2015/863/EU. The full text of the EU declaration of conformity is available at the following internet address: http://www.wdc.com/products/EUDoC.

a. BP 80006, 92135 Issy les Moulineaux, France
b. PO Box 471, Leatherhead, KT22 2LU, UK

Regulatory Compliance – Austria

CE-Konformität für Europa

Hiermit erklärt Western Digital die Konformität dieses Geräts mit den anwendbaren Richtlinien des Rats der Europäischen Union, einschließlich der Richtlinie 2014/30/EU zur elektromagnetischen Verträglichkeit, der Niederspannungsrichtlinie (2014/35/EU) und der Richtlinie 2011/65/EU zur Beschränkung der Verwendung von gefährlichen Stoffen sowie der Abänderung durch die Richtlinie (EU) 2015/863. Den vollständigen Text der EU-Konformitätserklärung finden Sie unter der folgenden Internetadresse: http://www.wdc.com/products/EUDoC.

Geprüfte Sicherheit

Maschinenlärminformations-Verordnung 3. GPSGV: Der höchste Schalldruckpegel beträgt 70 db(A) oder weniger gemäß EN ISO 7779, falls nicht anders gekennzeichnet oder spezifiziert.

Regulatory Compliance – Japan

添付の電源コードは、本製品専用です。

接地接続は必ず，電源プラグを電源につなぐ前に行って下さい。

また，接地接続を外す場合は，必ず電源プラグを電源から切り離してから行って下さい。

Regulatory Compliance – Korea

기종별	사용자 안내문
B급 기기 (가정용 정보통신기기)	이 기기는 가정용으로 전자파적합성 기준을 통과했으므로 주거 지역에서는 물론 모든 지역에서 사용할 수 있습니다.

Regulatory Compliance – China

有毒有害物质或元素

部件名称	产品中有毒有害物质或元素的名称及含量					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
底盘外壳和镜头	O	O	O	O	O	O
减震器	O	O	O	O	O	O
塑料其它部件	O	O	O	O	O	O
组合电缆/电源	X	O	O	O	O	O
金属部件	X	O	O	O	O	O
固态驱动器/硬盘/电路板组合	X	O	O	O	O	O

本表格依据SJ/T 11364-2014的规定编制。
O：表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。
X：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。
（在此表中，企业可能需要根据实际情况对标记"X"的项目进行进丨步的技术性解释。）

Regulatory Compliance – Taiwan

此裝置已通過測試且符合 CNS 15936 (EMC) 和 CNS 15598-1 (Safety) 規定。

設備名稱：硬式磁碟機　　型號（型式）：R/N: K6C

單元	限用物質及其化學符號					
	鉛 (Pb)	汞 (Hg)	鎘 (Cd)	六價鉻 (Cr (VI))	多溴聯苯 (PBB)	多溴二苯醚 (PBDE)
機箱外皮殼與鏡片	O	O	O	O	O	O
塑料其它部件	O	O	O	O	O	O
橡皮脚墊, 4 片	O	O	O	O	O	O
片金屬部件	-	O	O	O	O	O
固態硬碟/硬碟/電路板組合	-	O	O	O	O	O
組合電纜線/電源	-	O	O	O	O	O

備考1. 〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準
備考2. 〝O〞係指該項限用物質之百分比含量未超出百分比含量基準值
備考3. 〝 - 〞係指該項限用物質為排除項目。

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* Compatible with iPad devices with USB-C port and iPadOS 14+. Based on internal testing; compatibility may vary based on host device and other factors.

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