

KIOXIA

EXCERIA HIGH ENDURANCE G2 microSD Memory Card Manual









Read before use

Before using our products (the "Product"), please read the manual for the Product (this "Manual"), Warranty Statement (personal.kioxia.com/support/warranty/), and a user manual for the host device with which the Product is used (the "host device"). In this Manual, "Memory Card" is hereinafter referred to as "Card".

Before using

- Use your Card only in a device compatible with the capacity and the type of your Card: such as microSDHC/microSDXC or SDHC/SDXC. Need an SD card adapter to use microSDHC Card and microSDXC Card (See Table 1).

Table 1 microSDHC/microSDXC Card




Compatibility		SD Card	
			
Device	  *1	Compatible	
	  *1	Compatible	
	  *1	Not compatible	

*1 : Need an SD card adapter to use a microSDHC Card and a microSDXC Card.

Safety precautions

This section lists important precautions which users of the Product (and anyone else) should observe in order to avoid injury to human body and damage to property, and to ensure safe and correct use of the Product. Please be sure that you understand the meanings of the labels and graphic symbols described below before you move on to the detailed descriptions of the precautions, and comply with the precautions stated.

Explanation of labels



			<i>NOTICE</i>
Indicates a hazardous situation which, if not avoided, will result in death or serious injury ² .	Indicates a hazardous situation which, if not avoided, could result in death or serious injury ² .	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury ³ .	Indicates practices that may cause property damage ⁴ and other problems, but not personal injury.




*2: Serious injury includes blindness, wounds, burns (low and high temperature), electric shock, fractures, and poisoning, etc. with long-lasting effects or that require hospitalization and/or long-term hospital visits for treatment.

*3: Minor or moderate injury includes wounds, burns, electric shock, etc. not requiring hospitalization and/or long-term hospital visits for treatment.

*4: Property damage means damage to customer or third party machines and equipment.

Explanation of graphic symbols

	
Prohibited	Instructions
Indicates prohibited actions.	Indicates actions that must be undertaken for safety purposes.

	
 Prohibited	<ul style="list-style-type: none"> Keep the Product out of reach of children and pets. Accidental swallowing may cause suffocation or other injury. Contact a doctor immediately if you think a child or a pet might have swallowed the Product. Do not disassemble or modify the Product. It may result in personal injury, damage to the Product, smoke or fire. Do not bend, drop, place heavy objects upon the Product, or otherwise expose the Product to strong force or impact. Do not touch the Product with tweezers, pliers or other tools which may damage the Product. Insert and remove the Product with care. Do not use the Product if it malfunctions or is in an abnormal state. Using such Product may cause smoke, fire, burn injury or damage to the device into which such the Product is inserted.
 Instructions	<ul style="list-style-type: none"> If the Product produces an odor, overheats or smokes, immediately turn off the host device including the device and the peripherals, and disconnect all cables. Remove the Product from the device. Do not turn on the device or insert the Product into the device again. Contact our customer support center or the store from which you have purchased the Product.

Using such Product may cause smoke, fire, burn injury or damage to the device into which such Product is inserted.

CAUTION



Prohibited

● **Do not connect to the device that does not comply with the relevant standards*.**

Damage and ignition on the Product may be caused.

*) The "relevant standards" refers to the SDA standard for microSD Memory Card /SD Memory Card and the USB-IF standard for USB Flash Drive.

● **The Product may heat up if used for long hours.**

If the Product is hot, allow such Product to cool off before removing it from the device. Do not touch the Product while it is hot.

● **Do not touch the terminals (connection surface) of the Product directly or with metal or hard objects or short out the terminals.**

Static electricity may cause data corruption or loss.

● **Do not get the Product wet. Do not operate or store the Product outside of the operating temperature or humidity range.**

Do not expose to

- high humidity environment,
- high temperature environment such as in a hot car, in direct sunlight, near fire, near heater,
- airflow from air-conditioner,
- dusts,
- static electricity,
- electric noise,
- strong magnetic fields, or
- corrosive chemicals or gases.

Do not place the Product near sources of heat or flame, or near flammable materials. Do not expose to fire or heat. Do not contaminate the terminals of the Product. Do not allow the Product to maintain direct contact with skin for long hours.

● **While data in the Product is being written or read,**

- do not apply vibration or physical shock to the Product,
- do not turn off the host device, or
- do not remove the Product.

Malfunction of the Product, corruption or loss of data may result.

● **Do not expose to rapid temperature change.**

Condensation on the Product may be caused.



Instructions

● **To protect against accidental data loss, back up your data periodically to other storage media.**

As the Product is used for extended periods of time or repeatedly, the Product may lose some or all of its functionality including writing, reading or deleting.

KIOXIA ASSUMES NO LIABILITY FOR ANY CORRUPTION OR LOSS OF DATA RECORDED IN THE PRODUCT, REGARDLESS OF THE TYPE OR CAUSE OF SUCH FAILURE.

Mandatory actions

● The Product is neither intended nor warranted for use in equipment or systems that require extraordinarily high levels of quality and/or reliability and/or a malfunction or failure of which may cause loss of human life, bodily injury, serious property damage or serious public impact ("Unintended Use"). Unintended Use includes, without limitation, equipment used in nuclear facilities, equipment used in the aerospace industry, medical equipment, equipment used for automobiles, trains, ships and other transportation, traffic signaling equipment, equipment used to control combustions or explosions, safety devices, elevators and escalators, devices related to electric power, and equipment used in finance-related fields. Do not use Product for Unintended Use unless specifically permitted in this document.

● Although the Product comes pre-formatted in compliance with microSD Card standards, you may need to reformat the Product using a device with which you are using the Product. Follow the instructions in the manual of the device to reformat the Product. When switching devices with which you are using the Product, you may need to reformat the Product using the new device. Reformatting the Product may cause all the data stored in the Product to be lost or corrupted. Ensure the Product contains no necessary data or files before reformatting. Some devices may require setting changes. Formatting with a PC will format the Product in noncompliance with microSD Card standards and may cause problems with the Product such as the inability to read, write, or delete data. If you have such trouble, you may be able to repair the Product by reformatting it using a device compatible with microSD Cards (except PCs) or the latest format utility found at the following link.

(<https://www.sdcard.org/downloads/formatter/index.html>)

- To protect your data from unintended deletion, you can toggle on the "Lock" (write-protect tub) on a side of the SD card adapter to use a microSDHC Card or a microSDXC Card.
- CAUTION: Waterproof of microSD Cards
Remove any water droplets or splashes on a microSD Card with a soft dry cloth immediately. The SD card adapters are NOT waterproof.

Table 2 High Endurance specification

Model number	Capacity	Instructions		Cumulative recording hours
LMHE2G064GG2	64GB	<ul style="list-style-type: none"> ● These models are designed for long-time recording with in-car recording devices⁵, dashboard cameras⁵ and security/surveillance cameras⁵, up to the designed cumulative recording hours of use, stated at right, in Full HD (1920×1080 pixels, 21Mbps). Results may vary depending on a device and other conditions. 	<ul style="list-style-type: none"> ● microSD cards are consumables and have a finite Product life as represented by the number of write cycles and other parameters. We recommend replacing your microSD memory card within 3 years, assuming that it is used for 8 hours per day under the conditions shown above at left. The Product life of a microSD memory card may be reduced depending on usage conditions. 	10,000 h (Full HD)
LMHE2G128GG2	128GB		<ul style="list-style-type: none"> ● microSD cards are consumables and have a finite Product life as represented by the number of write cycles and other parameters. We recommend replacing your microSD memory card within 3 years, assuming that it is used for 16 hours per day under the conditions shown above at left. The Product life of a microSD memory card may be reduced depending on usage conditions. 	20,000 h (Full HD)
LMHE2G256GG2	256GB		<ul style="list-style-type: none"> ● microSD cards are consumables and have a finite Product life as represented by the number of write cycles and other parameters. We recommend replacing your microSD memory card within 3 years, assuming that it is used under the conditions shown above at left. The Product life of a microSD memory card may be reduced depending on usage conditions. 	40,000 h (Full HD)
LMHE2G512GG2	512GB	<ul style="list-style-type: none"> ● These models are designed for long-time recording with in-car recording devices⁵, dashboard cameras⁵ and security/surveillance cameras⁵, up to the designed cumulative recording hours of use, stated at right, in 4K (3840×2160 pixels, 100Mbps). Results may vary depending on a device and other conditions. 	<ul style="list-style-type: none"> ● microSD cards are consumables and have a finite Product life as represented by the number of write cycles and other parameters. We recommend replacing your microSD memory card within 5 years, assuming that it is used for 9 hours per day under the conditions shown above at left. The Product life of a microSD memory card may be reduced depending on usage conditions. 	17,000 h (4K)

⁵: This Product is not for industrial uses. We do not warrant compatibility of this Product with any devices.

Table 3 Estimation for SD Card Capacity (3 years of use)

Video recording data	Time of usage per day				
	2 h/day	4 h/day	8 h/day	16 h/day	24 h/day
1 lens Full HD (21Mbps) video recording	64GB or more	64GB or more	64GB or more	128GB or more	256GB or more
2 lenses Full HD (21Mbps per lens) video recording	64GB or more	64GB or more	128GB or more	256GB or more	512GB or more

Table 3 shows the estimated card capacity based on the number of lenses in in-car recording devices, dashboard cameras, and security/surveillance cameras, and its time of usage per day. These estimations are calculated using cumulative recording hours noted on Table 2. Please consider the card based on estimated capacity according to your usage. If you will select a card lower than estimated capacity, we recommend to replace it earlier than warranty period. Camera with multiple lenses might consume data size larger than one lens camera. Please check the user manual and specification of your camera.

Technical specification

- For technical specification posted on Product page, go to personal.kioxia.com/.
- Capacity is based on installed flash memory and not user available memory as part of the memory is used for management functions. Available user area is as Product page (1GB = 1,073,741,824 bytes).

SD Speed Class

- For SD Speed Class, go to personal.kioxia.com/support/faq/.

Accessory

- An SD card adapter (for microSDHC Card and microSDXC Card)(1piece)
Whether an accessory is included or not depends on the Product. For details posted on the Product page, go to personal.kioxia.com/.

Country/region of origin

- The country/region of origin of the Product and its accessory is labeled on their bodies or their package.

Transfer and disposal

- Even if you delete or reformat the Product on device such as a PC, data may not be completely removed and/or may be recoverable if the device used for the deletion or reformatting was not supplied with functionality that permanently deletes data from the Product.
Sort and dispose of Product in accordance with local laws and regulations.

Privacy data

- Please confirm details of the privacy policies of KIOXIA, its subsidiaries and affiliates by contacting those companies directly.
- The Product, once directly or indirectly returned to KIOXIA, may be analyzed for quality improvement purposes by KIOXIA or a company that provides components or services for the Product. Data that may still be remaining on the Product will be treated in confidence and will not be shared with any other third party. The returned Product and the data will be destroyed after the analysis.

Export and import

- Any export, re-export, import and re-import of the Product, related software, software you have installed on the Product and data you have written in the Product are strictly prohibited except in compliance with the Japanese Foreign Exchange and Foreign Trade Law, the U.S. Export Administration Regulations and all applicable export laws and regulations.

Support

- For frequently-asked questions (FAQ), go to personal.kioxia.com/support/faq/.
- If you want to obtain warranty service, contact customer support and provide them with (1) to (3):
 - (1) part number of the Product (printed on the backside of package) and proof of purchase of the Product such as receipt,
 - (2) manufacturer and model of the host device, and
 - (3) detailed descriptions of the failure, how the Product has been used when such failure occurred, how often such failure occurred and so on.

Warranty statement

- For warranty statement, go to personal.kioxia.com/support/warranty/.

Customer support

- For customer support, go to personal.kioxia.com/support/contact/.

Manufactured by **KIOXIA Corporation**
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The address is subject to change.

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- Designs and specifications are subject to change without notice.