



MUFU

More Unique For You

V20S
Moto Cam
User Manual

Thank you for purchase MUFU moto cam. This product is specifically designed to record real time video when riding a scooter or motorcycle. The content in this document is for informational purpose only and is subject to change without prior notice. We have made every effort to ensure that this User Manual is accurate and complete, however, no liability is assumed for any errors or omissions.

The manufacturer reserves the right to change the technical specifications or accessories without prior notice.

Please visit official website for the latest version of user manual.

Notice

1. Please peel off the protective film from the camera lens before use.
2. Do not touch the lens with your fingers. Finger grease may be left on the lens, resulting in unclear videos or pictures. Inspect and clean the lens with a soft, non-abrasive cloth regularly.
3. Please charge the unit to full before first use using the provided USB Type-C cable. Please do not use another brand of charging cable to avoid a potential equipment malfunction. The red LED on the camera will illuminate when charging, and will turn off upon reaching full charge.

*Charging adapter can use 5V, 1A and higher, USB Type-A port.

4. If the unit will not be used for an extended period of time, please charge at least once every 6 months to maintain the battery's health and avoid low-voltage related damage.
5. Please download MUFU Video app from iOS app store or Google Play Store before use. The Wi-Fi password is **12345678**.
6. By default, Wi-Fi is ON for 3 minutes when the camera is powered on. If it doesn't connect to the MUFU Video app within 3 minutes, the camera will disable Wi-Fi automatically to save power. To turn on again Wi-Fi, simply power the camera OFF then ON again.

NOTE: An active Wi-Fi connection will affect total recording time.

7. Recommend to use microSD card V30 or higher and capacity 16GB or higher (up to 128GB).

8. Format microSD card regularly and synchronize date/time.
(Recommended: Once per month.)
9. **In a high humidity environment or when travelling between areas with a large temperature difference, light moisture or fog may appear on the lens. This is normal. If this happens, remove the microSD card, and remain the microSD card slot cover and USB port cover opening, let the microSD card slot and USB port face up for several hours until the internal moisture or fog evaporates, and then reinsert the card and resume use.**
10. The friction scratches caused by the regular buckle of the main unit mount are normal and do not affect the use. Due to the production test, the main unit mount will have some micro-friction scratches.
This is normal.

Prohibition of co-location

This device and its antenna(s) must not be co-located or operated in conjunction with any other antenna or transmitter.

WEEE Notice

Disposal of Waste Electrical and Electronic Equipment and/or Battery by users in private households in the European Union



WEEE



Battery

This symbol on the product or on the packaging indicates that this cannot be disposed of as a household waste. You must dispose of your waste equipment and/or battery by handling it over to the applicable take-back scheme for the recycling of electrical and electronic equipment and/or battery. For more information about recycling of this equipment and/or battery, please contact your city office, the shop where you purchased

the equipment or your household waste disposal service. The recycling of materials will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and environment.

CE Regulatory Notice

The product herewith complies with the requirements of the EMC and RED Directive 2014/53/EU and the RoHS Directive 2011/65/EU.

EU Health Protection: This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Regulatory & Safety Notice

- ❖ This document provides country- and region-specific non-wireless and wireless regulatory notices and compliance information for your product. Some of these notices may not apply to your product.
- ❖ Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.
- ❖ Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.
- ❖ Due to local laws and for your own safety, DO NOT operate the camera while riding.
- ❖ Use MUFU Video to app to synchronize your date and time before first use.
- ❖ The firmware function in the camera is for reference only, riders are advised to exercise discretion based on actual road conditions.
- ❖ This product is intended only for non-commercial use, within the maximum limits permitted by law. We take no responsibility for any losses as a result of use of this product.
- ❖ Wi-Fi Signals are unable to pass through the building. The max limit of signal transmission is 5 meter.







- ❖ Wi-Fi Operation Channel: Ch1~Ch11
- ❖ The product employs wireless data communication which may interfere, or be interfered by, a near-by camera.
- ❖ Never use this camera in the vicinity of a microwave oven or at places where there is radio interference.
- ❖ Radio wave reception may be worsened in specific environments.
- ❖ Please be advised that if another camera is also using the same 2.4GHz band as this product, the processing speed of both cameras may slow down.
- ❖ The camera may get warm during use. This is normal.
- ❖ Improper use or operation of the product may result in damage to the camera or its accessories and void the warranty.
- ❖ This device and its antenna(s) must not be co-located or operated in conjunction with any other antenna or transmitter.
- ❖ The radio frequency (RF) generated by this RF electronic camcorder may cause adverse effects on the operation of other electronic camcorders and result in malfunctioning. Wireless transmitters and circuitry may also interfere with other electronic camcorders. Therefore, do observe the following precautions:
 - Aircraft: Never use a radio transmitter when you are in an airplane. Please switch off the Wi-Fi function of the camcorder.
 - Vehicle: The radio frequency transmitted by this camcorder may affect the electronic system in a motorized vehicle. Please consult the manufacturer or dealer of your vehicle on the possible effect.
 - Pacemaker: In order to prevent any potential interference to a pacemaker, anyone who uses a pacemaker should be advised, that, when using this camcorder, a minimum distance of 15cm (6 inch) should be kept between the camcorder and the pacemaker; and never put this camcorder in a chest pocket. In case of any doubt of interference, switch off the camcorder immediately.

- Medical Camcorder: If you use a personal medical camcorder, consult the camcorder manufacturer or your physician to confirm if your camcorder is sufficiently shielded from the RF transmission of this camcorder.
 - Medical Facilities: Hospitals and medical institutes may use facilities that are sensitive to an external RF energy. Observe such instructions when the medical care personnel or any posted sign requests you to switch off any camcorder that may interfere the radio frequency.
 - Explosion sites or any location with a posted sign: In order to prevent interfering with an explosion activity, observe all the signage and instructions in the Explosion Area or in a zone with a “Switch Off 2-way Radios” sign by switching off camcorders that may interfere with the radio frequency.
- ❖ MUFU is NOT responsible for the loss of any data/content during operation.

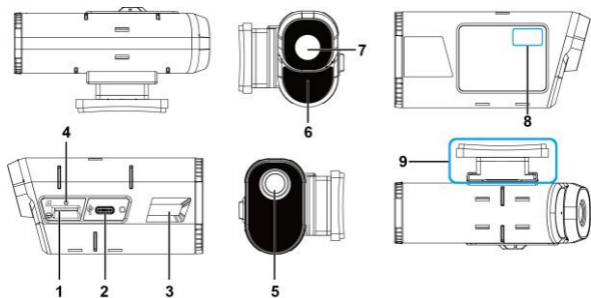
By using the product, it is assumed that you agree to all of the above statements.

Step 1: Check What's Inside

The package contains the following items. If any items are missing or damaged, please contact the original place of purchase immediately.

Camera (Main Unit)	Main Unit Mount	USB Cable (type C)	Noise Absorbent Sponge
			
User Manual	Warranty		
			

Step 2: Product Overview



No	Description	No	Description
1	microSD slot	6	Microphone
2	USB port (type C)	7	Rear camera
3	LED Indicator	8	Power On/Off Sensor
4	Reset	9	Bracket
5	Front camera		

Step 3: Insert microSD Card

Insert the microSD memory card with the pins facing forward. (See below for proper installation orientation.) Once the memory card locks into place, replace the slot cover securely over the slot.



The slot cover must be tightly sealed to prevent moisture from entering, causing the lens to fog. Insert the left edge of the slot cover, and then press the right edge of the slot cover to create a good seal. See below.



Step 4: LED Indicator

Indicator	LED Status	Description
Recording	Green, slow flashing	Recording
	Green, solid	Camera power on, not recording
	Green, rapid flashing	Emergency recording
Charging	Red, solid	Charging
	No Red Light	Fully charged
	Red, rapid flashing	Emergency recording
Battery	Orange, slow flashing	Low battery
	Orange, rapid flashing	Low battery & Emergency recording
USB mode	Red, solid	Connect computer to read memory card

Note: Before first use, use the supplied USB type-C charging cable to fully charge the camera until the red LED turns off.

Step 5: Beep Sound

Main Unit	Description
Beep-beep-beep (3 sound)	Power on and start recording
Beep~ (continuous sound)	No card or card error
Beep 5 sounds	Low battery and going to power off. About 3~5 min to power off.
Beep 5 sounds	Main unit is apart from main unit mount and power off

Step 6: Download the App

When using the camera for the first time, use your smartphone to download and install the **MUFU Video** app. Scan the QR code or search “MUFU Video” in the iOS App Store or Google Play Store.



iOS



Android

App layout and features may be changed subject to different software versions. Please refer to the Google Play Store or iOS App Store for the latest version.

Step 7: Wi-Fi Connection

1 When secured into the main unit mount, the camera and its Wi-Fi will automatically power on. Using your smartphone, search nearby Wi-Fi networks for MUFU Video and tap to connect. Enter password **12345678** to connect to and control the camera.

2 Once Wi-Fi is connected, open the MUFU Video app



to connect to and control your camera and its settings. For detailed app operation, please refer to: **[Step 12. App Operation]**

Note:

1. Wi-Fi is turned on automatically when the camera powers on. If the camera doesn't connect with the MUFU Video app within 3 minutes, Wi-Fi will be disabled automatically to preserve battery life. If you want to turn on Wi-Fi once again, simply remove the camera from the mount, wait for all indicator lights to turn off, and buckle it in once again to power on the camera and reactivate the Wi-Fi.
2. Your smartphone must be within a maximum 5-meter distance from the camera with no buildings in between.
3. The language of the app will be consistent with your smartphone. Beyond the language options, the app will be activated with the default language.

Step 8: Main Unit Installation

Due to shooting view angle differs from front and rear lens, the camera must be installed at right side of the helmet. DO NOT install at left side of the helmet to prevent recordings from incorrect view angle.

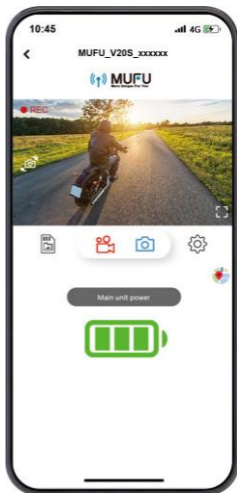
① Buckle the camera into main unit mount. Green indicator lights up.



② Put ① buckled camera and mount on the right side of helmet. Temporarily fix it in order to adjust the best view angle.



3 Make sure your phone is connected with MUFU_V20S_XXXXXX via Wi-Fi, and open the MUFU Video app to check preview image. Move up or down, forward or backward the mount, or shift up or down the camera to obtain the best recording image angle.



4 After the recording angle is confirmed, pull down the camera and the main unit mount from helmet. And take the camera and main unit mount apart.

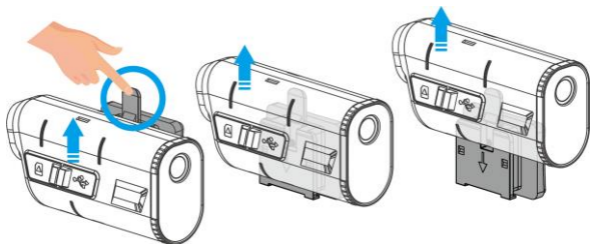
5 Wipe the newly confirmed helmet sticking area, and after its surface dries, peel off the protective plastic sheet from the adhesive pad on the main unit mount, stick and press the main unit mount to the helmet. Wait for 12 hours for firmly fixing. And then buckle the camera on the main unit mount and start using.




6 While riding, the environment noise such as wind cutting sound is difficult to avoid. If necessary, use the provided noise absorbent sponge to stick on the microphone hole of the camera.



7 Press the lock on top of the main unit mount, and remove upward the main unit.



Step 9: Main Unit Calibration and Use

After adjusting your viewing angle, tap  in the MUFU Video app to enter [Camera Setting]. On first use, be sure to calibrate the “Tilt Sensor” and “Format” the microSD card.

1 Calibrate the Tilt Sensor

Hold your motorcycle upright, straight, and as still as possible. The camera buckles on the main unit mount at the helmet. Put the helmet upright on the seat, or put it on your head and seat down on the motorcycle. Then, tap on “**Tilt Sensor**” in the menu so the camera can calibrate the internal tilt sensor. After calibration is completed, if the camera detects that the motorcycle is toppled over, it will trigger emergency recording automatically. This is indicated by the green LED going from a slow flash to a rapid flash. Emergency recordings are stored in the emergency video folder. When the folder reaches capacity, app will remind with “Emergency video files will be overwritten by loop recording. Backup important files.” Please check and backup emergency files regularly.

2 Format microSD card

Tap “Format” in the menu to format microSD card. It is recommended to format your card at least once a month to ensure that it is working properly.

Note:

1. DO NOT remove or insert memory card when the camera is in power-on status. This may cause memory card damage or data loss.
2. Memory cards have a service life. Long-term use may lead to write speed degradation and file save failure. If this happens, it is recommended that you purchase a new memory card.

Step 10: Power On and Off

There are two ways to power on/off the camera.

1 Buckle Detection

Buckle the camera into the main unit mount, the camera will automatically power on and start recording. Remove the camera from the main unit mount, the camera will power off automatically.

2 Vibration Detection

When pick up the helmet with camera and the main mount buckled, the camera will automatically power on and start recording. If the helmet idles for 3 minutes, the camera will power off automatically. This is for the rider's convenience to store the helmet in the cabinet without taking out camera. *This function is activated on the premise that the camera is buckled with the main unit mount, and "Vibration Detection to turn on/off the device" on app's [Camera Setting] is turned on.

The portable power key is available for optional purchase. It's for home use when the device leaves main mount on the helmet.





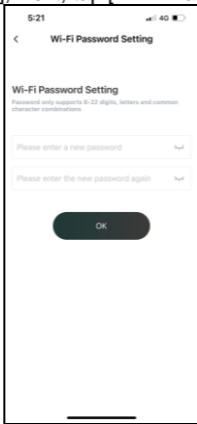
Note:

1. When the camera is buckled into the main unit mount, it will automatically power on and start recording, indicated by a slow-flashing green LED indicator light. The recording file will be saved onto the microSD card. When the card reaches capacity, the loop recording function will overwrite the oldest file to make room for new files and continue recording. If the green LED is not flashing, check if the memory card is inserted.
2. The portable power key is optional accessory and not included in the box. Please contact distributor for extra purchase.

Step 11: Change Password

To change the Wi-Fi password, follow the steps below. If left unchanged, the default password is 12345678.

- 1 Open MUFU Video app , and tap  to enter [Camera Setting], Next, tap [Wi-Fi Password Setting].

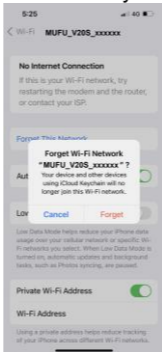


- Enter your new password.
- Enter your new password again to confirm.
- Tap “OK”, and screen will show message of “The camera needs to be reconnected after completion, please confirm the change?”. Tap “OK”.

→ It will automatically lead to previous page. The screen will show “Please ignore the network named MUFU_V20S_XXXXXX in the [Settings-Wi-Fi] option of the iPhone, and then enter the new password to rejoin.”

→ Close app, and follow by step 2 to re-connect Wi-Fi.

2 iPhone users: Open the Wi-Fi connection menu and tap the icon ⓘ by side of MUFU_V20S_XXXXXX network. Next, tap “Forget This Network” and confirm your decision.



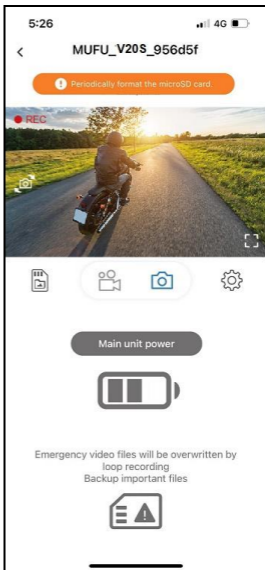
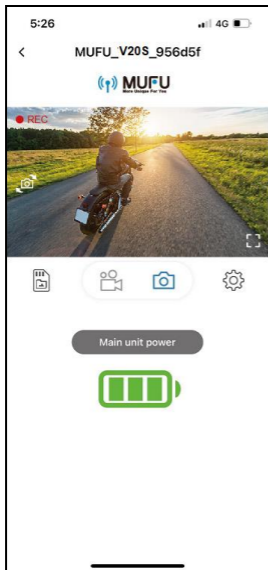
*Note: Android phone user can skip this step.









3 Next, tap the V20S network again to re-enter your new password and reconnect your smartphone to the MUFU Video.



Note: Be sure to remember your new password. If you forget your new password, a factory reset will be necessary.

Step 12: App Operation

1 Main Screen



圖示	敘述
	MUFU logo / microSD card message
	Preview image
	Switch front and rear preview image
	Full screen preview
	Start / Stop recording
	Take snapshot
	Camera Files (review recorded files in V20S's microSD)
	Camera Setting


<p>Main unit power</p> 	<p>Note: the remaining battery</p>
<p>Emergency video files will be overwritten by loop recording Backup important files</p> 	<p>Note: The emergency videos folder in microSD reaches capacity, and will be overwritten by new recordings. Please back up important files. This message icon will eliminate after backup.</p>

Note:

1. The MUFU Video App will auto sync the camera's date/time with your smartphone.
2. App layout and features are subject to change, depending on the software version. Refer to the Google Play Store or iOS App Store for the latest updates.

2 Playback, delete, and download recordings

Use this feature to playback, delete recordings, or download recordings from the camera to your smartphone.




1. Tap the icon  [Camera File] to enter file playback list. Recording will stop.
2. The files save in the V20S's microSD card will be listing on your smartphone. There are three folders, Loop, Snapshot and Locked. The “F” and “R” letter at the right bottom corner of preview thumbnail stands for “Front camera” and “Rear camera”. Tap the preview thumbnail to playback the file.





3. Tap the right top corner “Select” and pick up the files that you want to delete or download and tap below icon to execute.




Icon	Description
	<p>Download the file to smartphone.</p>
	<p>Delete file from V20S's microSD card.</p>
	<p>Downloaded file will mark as "Downloaded" on preview thumbnail. It can be opened from "Album" without Wi-Fi connection to the camera.</p>

Note :

1. If recordings have no audio, check if Microphone is OFF in the menu. For video playback, we recommend VLC Media Player.
2. Deleted files cannot be recovered. Backup any important files before deleting them.
3. The snapshot is activated by app. The image file will be stored both in microSD card in the camera and "Album" folder of MUFU Video app. The file will be marked as "Downloaded" on preview thumbnail.
4. If you plan to download a large number of videos and photos, we recommend connecting directly to a PC/Mac via USB Type-C cable.

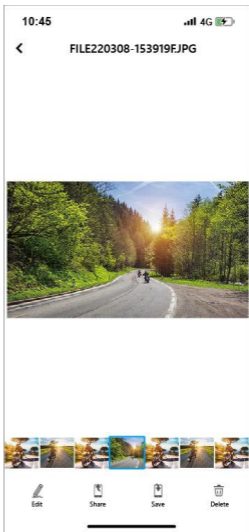
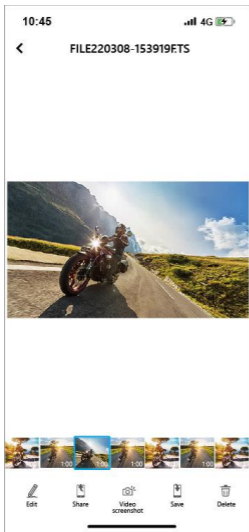
3 Album






Use this feature to playback or delete the file that you download to your smartphone. The file can be opened and reviewed without Wi-Fi connection to the camera.

1. Tap the icon  [Album] below the home page. The camera will stop recording if it's connected with app.



Tap the file from preview thumbnail to playback, delete or edit.



Icon	Description
	<p>Edit the video or photo.</p>
	<p>Share the video or photo to social media.</p>
	<p>Video screenshot.</p>
	<p>Save the video or photo to smartphone's album. When the file is saved, the screen will show a message of "Save to smartphone's album successfully." and smartphone's album will automatically create a folder named "MUFU Video".</p>
	<p>Delete the file downloaded in App's Album. The file in the microSD card in the camera is still existed.</p>

4 Camera Setting

Use this feature to set up your preferred options.



1. Tap icon [Camera Setting] on main screen. The camera will stop recording.
2. See available settings below and adjust to your preferred options.

Menu	Description	Options
Vibration Detection to Power On/Off	When pick up the helmet with camera mounted, the camera will automatically power on and start recording. If the helmet idles for 3 minutes, the camera will power off automatically. *The camera must be mounted with the mount.	On / Off
Audio Recording	Enable/Disable audio recording.	On / Off
Recording Interval	Set the length of each individual recording.	1min / 3min
Tilt Sensor	Calibrate the Tilt-Sensor for topple-over detection.	Yes / No
Emergency Recording	Enable/Disable emergency recording function. *The emergency recording folder is occupied 20% of memory card. Even it turns off, this capacity is still occupied.	On / Off

Format	Format the memory card in the camera. This will delete all contents permanently.	Yes / No
Wi-Fi Turn-on Time	Set the Wi-Fi activation duration. *Active Wi-Fi will decrease total recording hours	Always on / 3min off
Watermark	Watermark includes brand, model, car speed, longitude and latitude, and date/time.	On / Off
Wi-Fi Password	Change the Wi-Fi password. (Default: 12345678)	
Default Settings	Reset the camera to factory default settings.	Yes / No
Firmware Version	Indicates the current firmware version of the camera.	

Step 13: Final Check

- Peel off lens protective films**
- Fully charge the camera (Red LED off)**
- Tilt sensor calibration done**
- Format microSD card done**
- MicroSD card slot cover and USB port cover are closed tightly**
- The main unit mount is fixed tightly**

Specifications

Item	Description
Image Sensor	2MP CMOS sensor
Effective Pixels	1920 (H) x 1080 (V)
Storage Media	Suggest V30 or higher microSD card, up to 128GB
Lens	Wide angle fixed focus waterproof lens Aperture : up to F/2.2
Video File	Resolution : Front camera: 1080P/ 30 fps Rear camera: 1080P/ 25 fps
	Format : TS
Picture File	Use App to take snapshot
	Format : JPG
G-sensor	3-Axles G-Force sensor
GPS	N/A
Wi-Fi	Built-in
Microphone	Built-in
Battery	3100mAh
Operating Temperature	-10° ~ 60° C
Operating Humidity	20 ~ 70% RH





Item	Description
Storage Temperature	-20° ~ 70° C
Size	98 x 48 x 38.5 mm
Weight	Approximately 142g

Built-in IEEE 802.11g/n (HT20) Wi-Fi chip: RTL8188FTV

Wi-Fi Frequency	2412~2462MHz
Wi-Fi Channel	Ch1~Ch11

Optional Accessories

Contact distributor to purchase additional accessories for the camera.

Pouch	Main Unit Mount	Carry-on Power Key
		
Helmet Clip		
		



DIY quick installation



Hall sensor detection, buckle and record.



Dedicated app for preview and playback.



Built-in 3100mAh battery



Tilt Sensor detects if the motorcycle has toppled over and automatically locks the recording.



Camera IP66 Waterproof