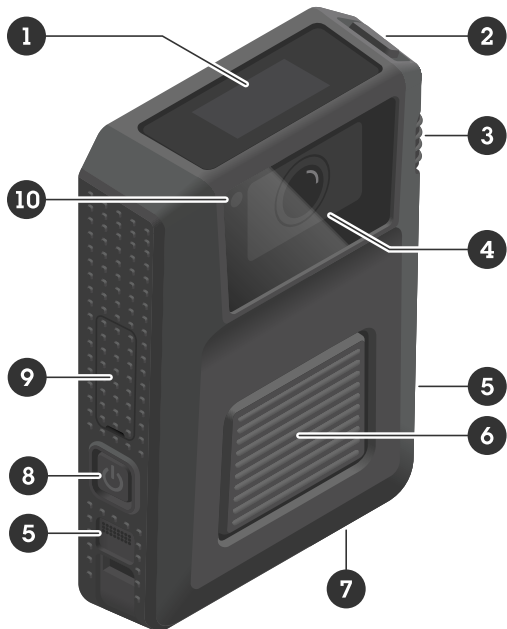AXIS W120 Body Worn Camera

User manual

Axis body worn solution

For information about the complete body worn solution, see the *Axis body worn solution user manual.*

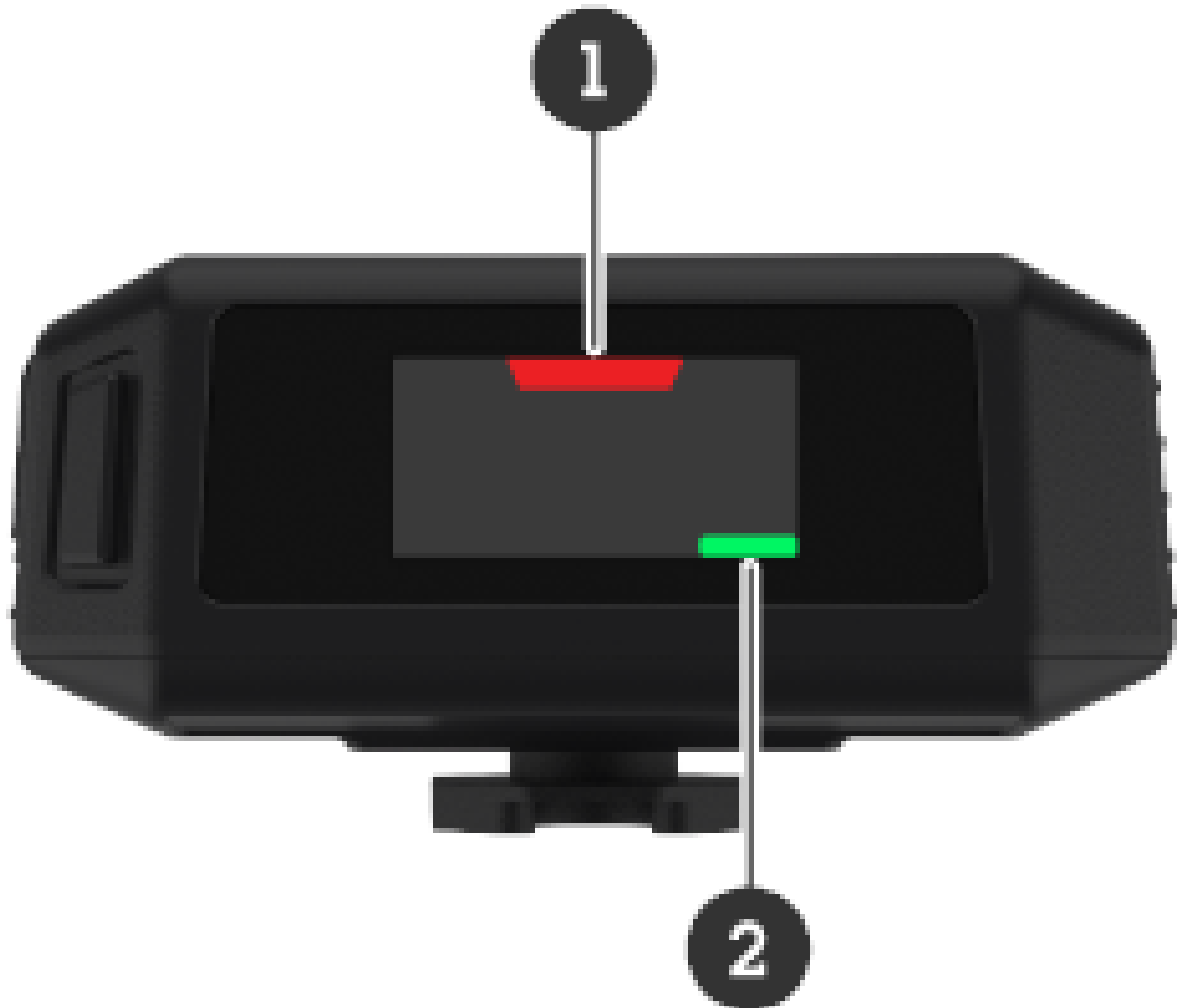# AXIS W120 Body Worn Camera

Product overview

Product overview

1	Display
2	Top button
3	Function button
4	Camera lens
5	Microphone (2x)
6	Recording button
7	USB connector
8	Power button
9	SIM card slot
10	Front recording indicator

AXIS W120 Body Worn Camera

Product overview

Display
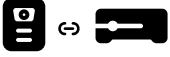
1	Recording LED	Red when the camera is recording.
2	Status LED	Steady green when the camera is ready to use or recording. Steady amber when the camera can't record.

Icons when docked	Indication
🖳	The camera is docked.

AXIS W120 Body Worn Camera

Product overview

	The battery is charging. Color indicates if the battery is charging or charged. Combined with progress bar and charge level in percent.
	A user is assigned to the camera.
	No user is assigned to the camera.
	Camera firmware upgrade is ongoing. Combined with progress bar.
	The camera couldn't be added to the body worn system.
	Data transfer to the content destination is ongoing. Combined with progress bar.
	Pulsing amber: the camera isn't added to the body worn system. Red: no connection to the system controller.

Icons during operation	Indication
	Battery charge level. Color depends on charge level.
	The battery is charging.
	Amount of local storage used. Color depends on amount left.
	Holster sensor connection.
	Holster sensor battery charge level.
	AXIS Body Worn Assistant connection.
	Body worn mini sensor connection.
	Microphone turned off.
	AXIS Body Worn Live connection.
	GPS coordinates.
	Mobile network connectivity.
	Wi-Fi® connectivity.
	The camera isn't operational.

Daily use

I want to...	Action needed	Information
Turn on my camera	Press the **power button**.	The camera vibrates and beeps. The AXIS Communications logo is shown during startup. Then the status LED turns green when the camera is ready to use. Depending on your settings, this takes up to 30 seconds.
Turn off my camera	Press and hold the **power button** for at least 5 seconds.	The camera vibrates and beeps.
Insert a SIM card	- Turn off the camera. - Use a flat screwdriver to open the lid of the SIM card slot. - Use the lid to insert the SIM card. - Close the lid. For graphical instructions, see the installation guide at the *camera's support page*.	
Start a recording	Press the **recording button** once. This is configurable in AXIS Body Worn Manager.	The camera vibrates and beeps, and the front recording indicator and the recording LED turn on when the recording starts. This is configurable in AXIS Body Worn Manager.
Stop a recording	Press the **recording button** for at least 4 seconds.	The camera vibrates and beeps when the recording stops.
Start a live stream	Double-press the **function button**.	For more information, see the *AXIS Body Worn Live user manual*.
Stop a live stream	Press the **recording button** for at least 4 seconds.	
Create a bookmark	Press the **recording button** once while recording.	This feature is available if the content destination you're using supports it. See for more information.
Turn off microphone (audio is on by default)	Press the **function button** for at least 3 seconds.	Microphone icon on.
Turn on microphone	Press the **function button** for at least 3 seconds.	Microphone icon off.
Turn on silent mode	Press the **top button** for at least 3 seconds.	Turns off the display, front recording indicator, beeps, and vibrations.
Turn off silent mode	Press the **top button** for at least 3 s.	Turns on the display, front recording indicator, beeps, and vibrations.
Check remaining battery capacity	Press the **top button** and check the battery charge level on the display.	Green: >1 hour left Amber: 0.5–1 hours left Red: 0–0.5 hours left
Check remaining storage capacity	Press the **top button** and check the amount of local storage used on the display.	Green: >1 hour of recording left Amber: 0.5–1 hours of recording left Red: 0–0.5 hours of recording left

Download the **Daily use guide** from the *camera's support page* and print it, to help the camera users in their daily work.
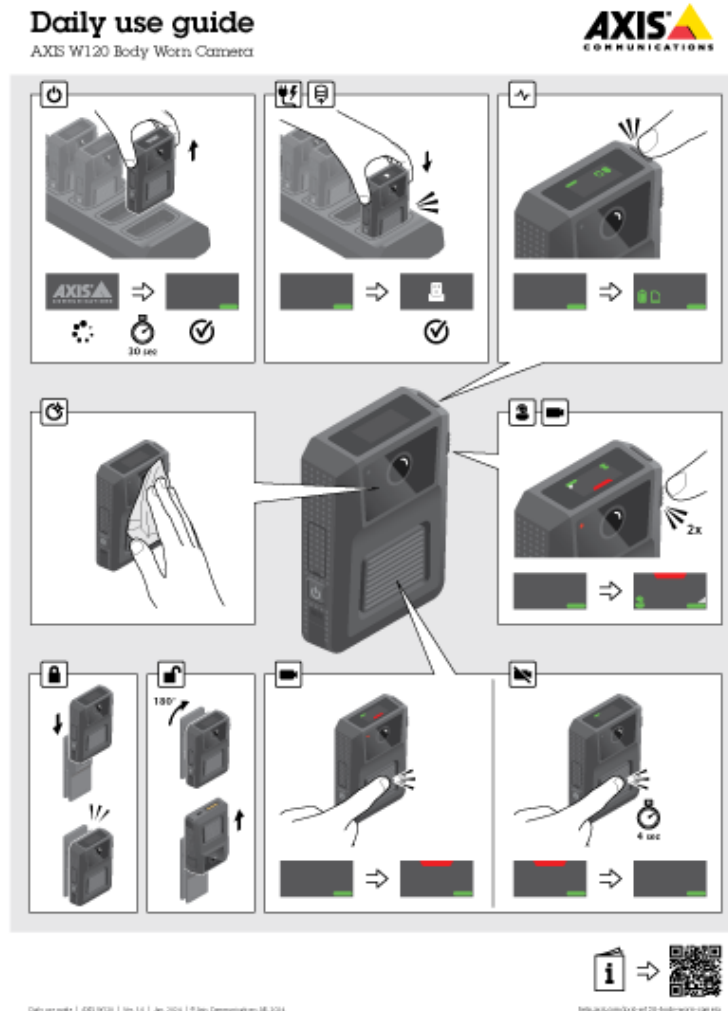
Daily use guide

Starting a shift

We recommend that you check a few things before you start a new shift:

- Before you undock the camera, make sure that your username is visible. It indicates that the battery is charged, all files are transferred, and the software is up to date.

- If you're using self-assign camera assignment, tap your self-assign tag on the RFID reader. The self-assigned camera's display lights up green and shows the username, to indicate that it's ready to be undocked. You must undock the camera within 15 seconds after tapping the self-assign tag. Only one user at a time can self-assign a camera.

- If you're connecting the camera to a holster sensor, make sure that it's in the camera's range within 10 minutes after you undock the camera. Under normal circumstances the range is 5–10 m (16–33 ft.).

- When you undock the camera, it restarts. Depending on your settings, this takes up to 40 seconds, after which the camera is ready to use.

- Clean the lens window, using a dry, nonabrasive cloth. See *Cleaning* for more cleaning recommendations.

- Optionally, use the live view in AXIS Body Worn Assistant to check your camera image, making sure that it is working properly and that the camera orientation is okay. For more information, see *AXIS Body Worn Assistant* in the body worn solution manual.

Ending a shift

Important

Always dock your body worn camera after a shift. This ensures that:

- the camera battery is charged before the next shift
- all content is uploaded to the system controller
- the camera's software is up to date
- user configuration and camera settings are synchronized with the system

- When you dock the camera, it restarts. To make sure the camera is properly docked, wait another 10 seconds for the display to come back on.
- The time it takes to fully charge a depleted battery varies depending on the ambient charging temperature. Check the datasheet for detailed information.
- The time to upload recorded video varies. For example, 12 hours of recorded video can take up to about 30 minutes to upload to the system controller, depending on the bitrate of the video recordings.

Battery health

To ensure optimal battery capacity throughout the life of the product, follow these recommendations on normal use.

NOTICE

- Always use the camera within the operating temperature range specified in the product's datasheet. If you use the camera outside of the specified temperature range it damages the battery.
- Always charge the camera within the charging temperature range specified in the product's datasheet. If you charge the camera outside of the specified temperature range it damages the battery.
- Don't leave the camera in your car. Temperatures in parked cars can exceed the specified temperature range.
- Always recharge a camera that is turned off with a low battery, as soon as possible. The battery discharges over time, which shortens the expected battery life.
- Don't charge a camera for more than 45 days. It can shorten the expected battery life.

To ensure optimal battery capacity throughout the life of the product, follow these recommendations on storage.

NOTICE

- Always remove the camera from the body worn system through AXIS Body Worn Manager before you store it. When you remove the camera from the system, the camera enters shipping mode, which ensures a healthy battery level.
- Always store the camera within the storage temperature range specified in the product's datasheet. The recommended temperatures are different for short-term storage (less than 3 months) and long-term storage (more than 3 months). If you store the camera outside of the specified temperature it damages the battery.
- Don't store the camera with the battery fully charged. It shortens the expected battery life.
- Don't store the camera with a depleted battery. It shortens the expected battery life.
- If you store the camera for more than 3 months, charge it every 3 months.
- Don't store the camera in damp environments. It can increase battery discharge rates.
- Use the camera at least once a year so that the battery is discharged and charged again. This helps to activate the battery and restore its energy.

To learn more about battery health, go to *axis.com/learning/white-papers* and search for the white paper *Battery health in body worn cameras*.

Replace the battery

You can replace a body worn camera battery using the AXIS TW1906 Battery Kit 5P. Before you replace the battery, read the installation guide available on the *AXIS TW1906 Battery Kit 5P support page*.

To watch this video, go to the web version of this document.

help.axis.com/?&piaId=70388&section=replace-the-battery

Important
- Take precautions to avoid electrostatic discharge (ESD) events when you replace the battery.
- Do not replace the 3.7 V ID1058 battery during the 3-year warranty period. Replacement of the battery during the 3-year warranty period carried out by any other party than Axis (or an RMA partner on behalf of Axis) will void the main item's warranty. Contact Axis Support or your reseller for battery- or service-related matters.

Cleaning

Clean the camera

- Use a non-abrasive, solvent-free neutral soap, or detergent, with water.
- Use a soft microfiber cloth, or moist non-abrasive sponge.
- Dry with a soft cloth to prevent water spotting.

NOTICE
- Never use harsh detergents, such as gasoline, benzene or acetone, to avoid material degradation.
- Never use abrasives of any kind to clean the camera.
- Never use water with any detergent on the docking connectors since it causes corrosion and a bad connection.

Disinfect the camera

- Use disinfection products with up to 50 percent isopropyl alcohol on the exterior surfaces of the camera.
- Apply with a soft microfiber cloth, or non-abrasive sponge.

Clean the docking station

To clean the outer surface of the docking station:

- Use a non-abrasive, solvent-free neutral soap, or detergent, with water.
- Use a soft microfiber cloth, or moist non-abrasive sponge.
- Dry with a soft cloth to prevent water spotting.

To clean the inside of the docking bay:

- Use canned air intended for electronics to clear any dust in between and around the pogo pins.

- Use a dry cloth to carefully clean the pogo pins.

- After cleaning, make sure all of the pogo pins spring back to their upper position.

NOTICE
- Never use harsh detergents, such as gasoline, benzene or acetone, to avoid material degradation.
- Never use abrasives of any kind to clean the docking station.
- Never use water with any detergent on the pogo pins inside the docking bays since it causes corrosion and a bad connection.

Charging the camera

To charge the body worn camera, always use:

- Compatible Axis docking station

- 5 V DC output mobile phone charger

- 5 V DC output power bank

Operating time

Operating time varies depending on how you use the body worn camera. The limiting factors of operating time are battery capacity and storage space. These are affected by power consumption and recording bitrate, respectively.

NOTICE
If the ambient charging temperature is above 35 °C (95 °F) the battery is only charged up to 70% of full capacity, with a significantly shortened operating time as a result.

Factors that increase power consumption are:

Location data – When the camera positioning system is on.

Wireless connection – When you use AXIS Body Worn Live or AXIS Body Worn Assistant.

Sensor camera – When you connect a sensor camera to the body worn camera.

Outdoor use – When you use the camera outdoors, the display increases its intensity, which increases power consumption.

Temperature – +25°C (77 °F) is the optimal operating temperature. Using the camera in temperatures above or below this affects the battery capacity.

Movement – Increased movement in the scene, or camera movement. The camera processor uses power in relation to the movement in the scene.

Image resolution – High recording resolution.

Electronic image stabilization – When electronic image stabilization is turned on.

Factors that increase recording bitrate are:

Movement – Increased movement in the scene, or camera movement.

Image resolution – High recording resolution.

Light – Low light increases image noise.

Scene complexity – A scene with few objects and colors, for instance a typical office, results in a lower bitrate than a more complex scene.

AXIS W120 Body Worn Camera
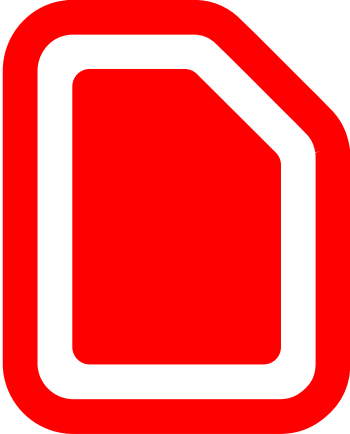
Troubleshooting

Body worn camera error feedback

Use the body worn camera feedback to identify different errors. The table below shows the different camera behaviors, what they mean, and how to solve the problem.

Behavior	What it means	What to do
The camera is docked:		
• The display is black.	No user is assigned to the camera.	• If you are using fixed camera assignment, assign a user to the camera, see *Assign a user to a camera*. • If you are using self-assign camera assignment, this means that the camera is ready to be self-assigned.
• Icon: pulsing	The camera is not added in the body worn system.	Add the camera to the body worn system, see *Add cameras*.
• Icon: steady	General error.	Try the *General troubleshooting steps*. If the problem persists try *axis.com/support*.
• Icon: steady	Lost connection to system controller.	Check the connection between the body worn camera and the docking station. Check the connection between the docking station and the system controller. Make sure that the system controller is okay, see *Dashboard*.
• Icon: flashing • Beep: continuous	The battery is not charging.	Try the *General troubleshooting steps*. If the problem persists try *axis.com/support*.
The camera is undocked:		
• No feedback. • Camera doesn't start.	The camera is in shipping mode.[1]	Add the camera in the body worn system, see *Add cameras*.
	The camera has run out of battery.	Charge the camera.
• Icon: steady • Beep: 2 short, 1 long • Buzz: 2 short, 1 long	Recording not possible, SW error or other operational error.	Try the *General troubleshooting steps*. If the problem persists try *axis.com/support*.
• Icon: steady • Beep: 2 x 3 • Buzz: 2 x 3	No user is assigned to the camera.	Dock the camera and assign a user to it, see *Assign a user to a camera*.

Troubleshooting

Behavior	What it means	What to do
• Icon: steady • Beep: 1 every second minute (Periodic), or 3 every minute (Periodic reinforced) • Buzz: 1 every second minute (Periodic), or 3 every minute (Periodic reinforced)	The battery is about to run out.	This behavior only occurs when the camera profile setting **Low battery warning** is set to **Periodic** or **Periodic reinforced**. The camera needs charging. If the camera is placed in the docking station, make sure it's docked properly.
• Icon: steady • Beep: 2 short, 1 long • Buzz: 2 short, 1 long	Storage full, not possible to record.	Dock the camera to offload the recordings.

1. The body worn camera is in shipping mode until it is docked and added to a body worn system. Shipping mode is a power saving mode used for transportation and storage.

Technical issues, clues, and solutions

Issue	Cause	Solution
Camera doesn't turn on.	Camera is in shipping mode.	Add the camera to the body worn system, see *Add cameras*.
	Camera is out of battery.	Charge the camera, see *Charging the camera*. If that doesn't help: 1. Press and hold the power button on the camera for 4 seconds. 2. Dock the camera and wait until it's charged. 3. Undock the camera and wait for it to restart. Or if you don't have access to a docking station:

Troubleshooting

		1. Press and hold the power button on the camera for 4 seconds. 2. Use a USB charger to charge the camera. See *Charging the camera.*
Camera doesn't record.	Camera storage is full.	Dock the camera.
Pre-buffer video is not complete. Pre-buffer time is shorter than configured in AXIS Body Worn Manager.	Recording started directly after the camera was turned on, or directly after the previous recording was ended.	–
	Recording started directly after the previous recording was ended.	–
	When using the maximum resolution 1080p in very complex scenes with a lot of movement, or in low light, the pre-buffer memory can get full.	–
Image looks foggy.	The lens is dirty.	Clean the lens, see *Cleaning*
	The protective film is still on the lens window.	Remove the protective film.
Display doesn't work.	The camera is in silent mode which turns off the display.	Press the top button for 2 seconds, see *Daily use*
No audio in recordings.	Audio is turned off in the camera profile.	Make sure audio is turned on in the camera profile in AXIS Body Worn Manager.
Offloading recordings is slow.	Many simultaneous offloads affect transfer speed.	Check camera status in AXIS Body Worn Manager. Wait for recordings to be transferred.
	The connection between the camera and the docking station is bad. The camera is docked incorrectly. The docking connectors are dirty or worn out.	Make sure all connectors are clean. See *Cleaning on page 9*.
Camera is not discovered by the system and doesn't appear in AXIS Body Worn Manager.	The docking station is connected to the system controller through a router.	Enable IPv6 on the network.
No camera is assigned to the user when the user taps the RFID tag on the reader (using self-assign).	There can be different reasons: • The user is already assigned to an undocked camera. • There is currently no camera ready for use. A camera is ready for use when it has enough storage and battery, and it has the same firmware version as the rest of the system. • The RFID tag isn't registered in the system.	• Dock the assigned camera. • Wait until a camera is ready for use. • Register the RFID tag in the system.

Troubleshooting

Not recording location data.	The time it takes to receive the first GPS position after starting the camera depends on the outdoor environment. For example, tall buildings and humidity in the atmosphere can increase the time it takes to get the first GPS position.	–
	Location data is turned off in the camera profile.	Go to the camera profile and turn on **Location data**.
	The body worn system time is wrong.	Set a correct system time. We recommend using **NTP server (DHCP)** or **NTP static and fallback server** as opposed to **Manual time**, as these ensure an accurate system time.
Can't remove camera.	An extension system controller has been disconnected physically from the system before it was removed in AXIS Body Worn Manager. This prevents the system from verifying the transfer status.	To make sure that all content has been transferred to the content destination, remove the extension system controller in AXIS Body Worn Manager before you remove it from the system physically. Then you can remove the camera.
Camera status is **In safe mode**.	If a camera is undocked for eight weeks, for security reasons, it enters safe mode.	See *Allow cameras back into the system*
Camera doesn't charge. Camera doesn't offload files.	The camera isn't docked properly, or there is something wrong with the docking station.	Try the following in the stated order: 1. Undock and dock the camera properly. 2. Clean the connectors on the camera and the pogo pins in the docking bay. For instructions, see *Cleaning on page 9*. 3. Dock the camera in another docking bay, where other cameras don't have this problem. If the camera starts to charge or offload files, the original docking bay is faulty and the docking station should be replaced.