

## **AXIS W110 Body Worn Camera**

**User manual**

# AXIS W110 Body Worn Camera

## Axis body worn solution

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### Axis body worn solution

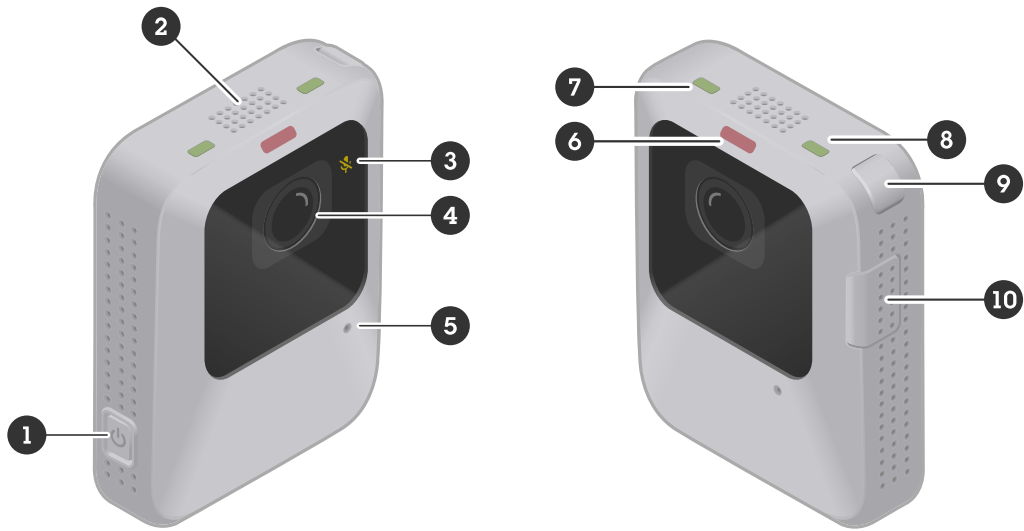
For information about the complete body worn solution, see the *Axis body worn solution user manual*.

# AXIS W110 Body Worn Camera

## Product overview

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### Product overview



- 1 Power button
- 2 Speaker
- 3 Microphone LED
- 4 Camera lens
- 5 Microphone
- 6 Recording LED
- 7 Status LED
- 8 Wi-Fi@connectivity LED
- 9 Function button
- 10 Recording button

### LED indicators

Microphone LED	Indication
Amber	Steady when the microphone is turned off.
Recording LED	Indication
Red	Steady when the camera is recording.

# AXIS W110 Body Worn Camera

## Product overview

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Status LED	Indication
Green	Steady when the camera is ready to use.  Flashing when the battery is running low during operation. For more info about battery warnings, see <a href="#">Feedback &gt; Low battery warning</a> in <i>Camera profile settings</i> .
Amber	Steady when it's not possible to record because the storage is full, or due to storage error, software error, or other operational error.  Pulsing when the camera is docked and one or more of the following processes are ongoing: battery charging, file transfer, software update.

Wi-Fi connectivity LED	Indication
Green	Lights up when paired with AXIS Body Worn Assistant or a holster sensor.  Steady when streaming to AXIS Body Worn Live.
Amber	Pulsing when trying to pair/connect.
Red	Lights up when pair/connect failed.

## Save battery with standby mode

### Important

You can't use prebuffer in combination with standby mode.

To save battery, the camera can enter standby mode when it's not recording. To set it up:

- Turn on **Standby mode** for the camera users through the camera profiles in AXIS Body Worn Manager. The cameras then enter standby mode by default when they're not recording.

When you use standby mode, it takes about one second for the camera to start recording when you press the recording button.

## Voice feedback

When you use the camera, it can give feedback when you, for example, press the recording button to start or stop recording, try to pair the camera with AXIS Body Worn Assistant, or when the battery is about to run out. You can get the camera feedback through vibrations, beeps, or voice. If you select the voice option, the camera gives the alerts as spoken messages. For example, if you press the function button, you get information about the remaining battery capacity in percent.

Voice feedback is helpful for inexperienced camera users, since they get clear information about what happens when they, for example, press a button. It is also useful for people who are being recorded, who can hear a message from the camera that it has started to record.

You select what type of feedback you want in the camera profiles settings in AXIS Body Worn Manager.

### Note

Voice feedback is currently only available in English.

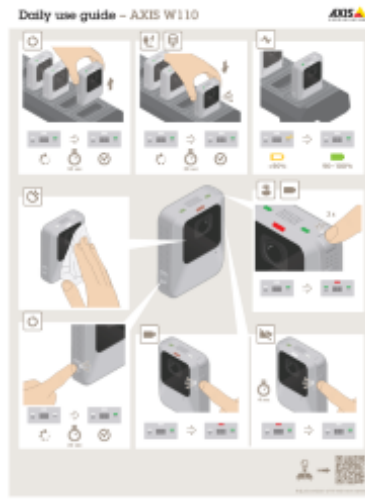
# AXIS W110 Body Worn Camera

## Daily use

### Daily use

I want to...	Action needed	Information
Turn on my camera	Press the <b>power button</b> .	The status LED pulses amber until the camera is ready for use. Then the status LED turns green. Depending on your settings, this takes up to 30 seconds.
Turn off my camera	Press the <b>power button</b> for at least 5 seconds.	The camera vibrates and beeps.
Start a recording	Press the <b>recording button</b> once.	The camera vibrates and beeps and the recording LED turns red when the recording starts.
Stop a recording	Press the <b>recording button</b> for at least 3 seconds.	The camera vibrates and beeps when the recording stops.
Start a live stream	Double-press the <b>function button</b> .	For more information, see the <i>AXIS Body Worn Live user manual</i> .
Stop a live stream	Press the <b>recording button</b> for at least 3 seconds.	
Create a bookmark	Press the <b>recording button</b> once while recording.	The camera vibrates and beeps.  This feature is available if the content destination you're using supports it. See <i>Bookmarks</i> for more information.
Turn off microphone (audio is on by default)	Press the <b>function button</b> for at least 3 seconds.	Microphone LED on.
Turn on microphone	Press the <b>function button</b> for at least 3 seconds.	Microphone LED off
Check remaining battery capacity	Press the <b>function button</b> .	If voice feedback is turned on, you hear information about the remaining battery capacity.

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

# AXIS W110 Body Worn Camera

## Daily use

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### 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 the status LED is green. The green color 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. LEDs on the self-assigned camera flash green, 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 LEDs 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.

# AXIS W110 Body Worn Camera

## Daily use

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### 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](https://axis.com/learning/white-papers) and search for the white paper *Battery health in body worn cameras*.

## 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.

# AXIS W110 Body Worn Camera

## Daily use

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### **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

## 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.

Factors that increase power consumption are:

**Wireless connection** – When you use AXIS Body Worn Live, AXIS Body Worn Assistant, or turn on broadcasts.

**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 W110 Body Worn Camera

## Troubleshooting

### Troubleshooting

#### 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
<b>The camera is docked:</b>		
<ul style="list-style-type: none"> <li>All LEDs are off.</li> </ul>	No user is assigned to the camera.	<ul style="list-style-type: none"> <li>If you are using fixed camera assignment, assign a user to the camera, see <i>Assign a user to a camera</i>.</li> <li>If you are using self-assign camera assignment, this means that the camera is ready to be self-assigned.</li> </ul>
<ul style="list-style-type: none"> <li>Status LED: Flashing amber</li> </ul>	General error.	Try the <i>General troubleshooting steps</i> . If the problem persists try <a href="http://axis.com/support">axis.com/support</a> .
<ul style="list-style-type: none"> <li>Status LED: Flashing amber</li> <li>Wi-Fi connectivity LED: Red</li> </ul>	Error when uploading content to the 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 <i>Dashboard</i> .
<ul style="list-style-type: none"> <li>Status LED: Flashing amber</li> <li>Beep: continuous</li> </ul>	The battery is not charging.	Try the <i>General troubleshooting steps</i> . If the problem persists try <a href="http://axis.com/support">axis.com/support</a> .
<b>The camera is undocked:</b>		
<ul style="list-style-type: none"> <li>No feedback.</li> <li>Camera doesn't start.</li> </ul>	The camera is in shipping mode. 1	Add the camera in the body worn system, see <i>Add cameras</i> .
	The camera has run out of battery.	Charge the camera.
<ul style="list-style-type: none"> <li>Status LED: Amber</li> <li>Beep: 2 short, 1 long</li> <li>Buzz: 2 short, 1 long</li> </ul>	Recording not possible due to: <ul style="list-style-type: none"> <li>Storage full</li> <li>Software error</li> <li>Other operational error</li> </ul>	Try the <i>General troubleshooting steps</i> . If the problem persists try <a href="http://axis.com/support">axis.com/support</a> .
<ul style="list-style-type: none"> <li>Status LED: Green or flashing amber</li> <li>Recording LED and Wi-Fi connectivity LED: Flashing amber</li> </ul>	The camera is not added in the body worn system.	Add the camera to the body worn system, see <i>Add cameras</i> .
<ul style="list-style-type: none"> <li>All LEDs: Flashing red</li> <li>Beep: 2 x 3</li> <li>Buzz: 2 x 3</li> </ul>	No user is assigned to the camera.	Dock the camera and assign a user to it, see <i>Assign a user to a camera</i> .

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.

# AXIS W110 Body Worn Camera

## Troubleshooting

### 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 <i>Add cameras</i> .
	Camera is out of battery.	Charge the camera, see <i>Charging the camera</i> .  If that doesn't help: <ol style="list-style-type: none"><li>1. Press and hold the power button on the camera for 4 seconds.</li><li>2. Dock the camera and wait until it's charged.</li><li>3. Undock the camera and wait for it to restart.</li></ol>
Camera doesn't record.	Camera storage is full.	Dock the camera.
Prebuffer video is not complete. Prebuffer 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 prebuffer memory can get full.	–
Image looks foggy.	The lens is dirty.	Clean the lens, see <i>Cleaning</i>
	The protective film is still on the lens window.	Remove the protective film.
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 <i>Cleaning on page 7</i> .
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.

# AXIS W110 Body Worn Camera

## Troubleshooting

<p>No camera is assigned to the user when the user taps the RFID tag on the reader (using self-assign).</p>	<p>There can be different reasons:</p> <ul style="list-style-type: none"> <li>• The user is already assigned to an undocked camera.</li> <li>• 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 AXIS OS version as the rest of the system.</li> <li>• The RFID tag isn't registered in the system.</li> </ul>	<ul style="list-style-type: none"> <li>• Dock the assigned camera.</li> <li>• Wait until a camera is ready for use.</li> <li>• Register the RFID tag in the system.</li> </ul>
<p>Can't remove camera.</p>	<p>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.</p>	<p>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.</p>
<p>Camera status is In safe mode.</p>	<p>If a camera is undocked for eight weeks, for security reasons, it enters safe mode.</p>	<p>See <i>Allow cameras back into the system</i></p>
<p>Camera doesn't charge.</p>	<p>The camera isn't docked properly, or there is something wrong with the docking station.</p>	<p>Try the following in the stated order:</p> <ol style="list-style-type: none"> <li>1. Undock and dock the camera properly.</li> <li>2. Clean the connectors on the camera and the pogo pins in the docking bay. For instructions, see <i>Cleaning on page 7</i>.</li> <li>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.</li> </ol>
<p>Camera doesn't offload files.</p>		

