Axis body worn solution

AXIS W100 Body Worn Camera

AXIS W700 Docking Station 1-bay

AXIS W701 Docking Station 8-bay

AXIS W800 System Controller

AXIS TW1200 Mini Bullet Sensor

# User Manual

# Axis body worn solution

## Table of Contents
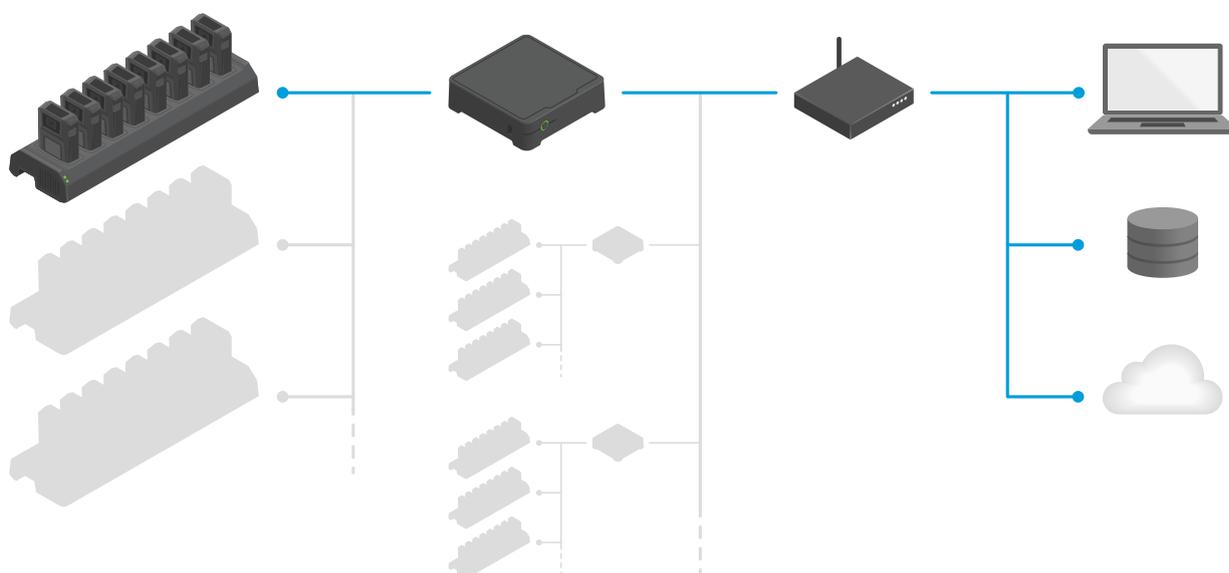
## Axis body worn solution

The Axis body worn solution consists of Axis body worn cameras, Axis docking stations, Axis system controllers, and a content destination. AXIS Body Worn Manager is the web application where you can configure and manage your body worn system.

When you place the camera in the docking station, the docking station charges the camera's battery, and the camera connects to the system. The system controller then seamlessly transfers all data from the camera to the content destination of your choice. The system controller also keeps the cameras up-to-date with the latest firmware and settings, and monitors the health of the Axis body worn solution.

The system is supported by different types of content destinations such as evidence management systems (EMS), video management systems (VMS), and media servers. You can use the Body Worn Integration API to integrate with any third party VMS or EMS. Go to *www.axis.com/developer-community-intro* to join the Axis Developer community, and get access to the Body Worn Integration API documentation.

*The Axis body worn solution*

## Get started

The recommended workflow to install and configure your system is:

1. *Install your system on page 5*

2. Open AXIS Body Worn Manager and configure system settings. See *Access AXIS Body Worn Manager for the first time on page 6*

3. *Create a camera profile on page 7*

4. *Create a user on page 9*

5. *Add cameras on page 9*

6. *Assign a camera to a user*



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

*www.axis.com/products/online-manual/58704*

*Getting started with the Axis body worn solution*

It is possible to add more than 40 cameras to your system by adding more system controllers. The extension system controllers become instances of the existing system. All settings are inherited from the system to the extension system controllers. The users and cameras that are added to the extension system controller are managed through AXIS Body Worn Manager. For information on how to extend your system by adding more system controllers, see *Extend the system.*

## Install your system

Note

You need these hardware components to install a body worn system:

- System controller(s)
- Docking station(s)
- Body worn camera(s)
- A computer
- Network cables
- We also recommend using a UPS (Uninterruptible Power Supply) to avoid unexpected system shutdowns.

1. Connect the system controller to your network.

2. Connect the docking stations to the **Docking stations** ports on the system controller.

3. Connect a computer to the same network as the system controller.

4. Power on the devices.

5. Dock the cameras.

6. Continue to *Access AXIS Body Worn Manager for the first time on page  6*

## Configure your system

### Access AXIS Body Worn Manager for the first time

Note

- Use AXIS IP Utility version 4.14 or later.
- Before you start, make sure you have the:
    - latest firmware available. You can download it at *axis.com*.
    - content destination connection file available, see *Content destinations*.

1. Find the system controller on your network:

    1.1 Go to *axis.com/support/downloads* and download AXIS IP Utility.

    1.2 Start AXIS IP Utility.

    1.3 Use the serial number, that you can find on the underside of the system controller, to locate the system controller in the list.

    1.4 In the search result list, double-click your system controller. AXIS Body Worn Manager opens in your browser.

2. Follow the wizard to set up the system:

    - Select **Create a new system** if you are configuring a single system controller setup, or if you are configuring the first system controller in a multi system controller setup. Select **Extend an existing system** if you want to add more system controllers to your existing system.

    - Create an administrator password. Your administrator username is `root`.

    - Install the latest firmware. Download the latest firmware at *axis.com*.

    - Configure network settings.

    - Date and time. It is important that the time and time zone of your system matches the time and time zone of the content destination.

    - Select a content destination. The content destination is where your recordings and metadata are stored and managed.

    - Select the power line frequency that is used in your region. With the right frequency, there is less image flicker. The American regions usually use 60 Hz. The rest of the world mostly uses 50 Hz. If you're not sure of your region's power line frequency, check with the local authorities.

    - Download the master key. The body worn system requires a master key for certain operations. These operations include for instance, unlocking a camera that hasn't been docked for over eight weeks. The master key also allows you to restore the system If a system controller fails. Always store the master key in a secure location.

### Open AXIS Body Worn Manager

1. Open a browser and enter the IP address or host name of the system controller.

    If you do not know the IP address, see *Access AXIS Body Worn Manager for the first time on page 6* .

2. Enter the username `root` and your administrator password.

    AXIS Body Worn Manager opens in your browser.

## Configure your system

### Content destinations

The content destination stores and manages your recordings and metadata. A content destination is for instance an EMS (evidence management system), a VMS (video management system) or a media server. The Axis body worn solution supports a number of different content destinations.

They all require a connection file to integrate with the Axis body worn system. The connection file is generated in your content destination. For information about how to generate the connection file, please refer to the user help in your content destination.

The connection with the content destination also requires that the network communication is working properly. This may include proxy, firewall, and anti-virus configuration.

If you are using AXIS Camera Station, see *Get an AXIS Camera Station connection file*.

Note

- The body worn system pushes changes to the content destination, for example when you add, remove, or change a user, or when you change a camera name. This type of communication is one way, which means that the content destination doesn't push corresponding changes to the body worn system.
- You must connect to a content destination before you can use the body worn system.
- We recommend that you delete the connection file from your computer after connecting to the content destination.

### Get an AXIS Camera Station connection file

1. Open AXIS Camera Station and login.

2. Go to ☰ > **Other** > **Body worn settings**.

3. To change the server computer name, type a new name.

4. Click **Export**. A link is displayed under Latest export.

5. Click the link to navigate to the connection file folder.

### About users and camera profiles

- A camera doesn't function unless a user is assigned to it. All LEDs flash red when you undock it, to indicate that a user must be assigned to the camera before use.
- A user in the system is the link between a recording and a user of a camera.
- Use *camera profiles* to apply the same camera settings to a group of users. You can for example create different profiles for the day and night shifts.
- A default camera profile is assigned to new users.

### Create a camera profile

1. *Open AXIS Body Worn Manager on page 6*

2. Go to **Camera profile** and select one of the pre-configured camera profiles.

3. Edit the camera profile name.

4. Edit the **Camera settings**.

5. Edit the **Recording settings**.

6. Close the window to save.

# Axis body worn solution

## Configure your system

*Example – Camera settings for user group 1 on page 8* and *Example – Camera settings for user group 2 on page 8* show how different camera and recording settings can be used to create camera profiles for specific needs.

### Example – Camera settings for user group 1

The following needs were identified for a user group:

- Get maximum image and audio quality.

- Record events (video and audio) that happened during the 90 seconds before the recording button (Front button) was pressed.

- Record data showing the location where the recording took place.

- Enable the camera user to operate without being detected, by allowing the camera user to turn off all camera feedback (LED, sound, vibration).

- Allow the user to turn off the microphone while recording.

The table below shows the Recording and Camera settings that fulfill the needs listed above.

| Need | Recording settings | Camera settings |
|---|---|---|
| Maximum image and audio quality | **Resolution**: 1080p<br>**Audio**: On<br>Select **Optimized for post-processing** | |
| Record before pressing button | **Pre-buffer**[1]: On<br>**Length**: 90s<br>**Audio**: On | |
| Record location data | **Location data**[2]: On | |
| Operate without being detected | | Select **Allow silent mode** |
| Turn off the microphone while recording | | Select **Allow audio recording off** |

1. The pre-buffer has a dedicated space on the camera storage. 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, resulting in a slightly shorter pre-buffer time than configured in AXIS Body Worn Manager.
2. Location data is for outdoor use only. We recommend turning Location data off for indoor use.

### Example – Camera settings for user group 2

The following needs were identified for a user group:

- Allow user to record video and audio continuously during a long shift, by saving storage and battery.

- Help people understand that they are being video recorded (by making sure that the camera always indicates that it is recording).

- Allow the user to turn off the microphone while recording.

The table below shows the Recording and Camera settings that fulfill the needs listed above.

| Need | Recording settings | Camera settings |
|---|---|---|
| Record continuously | **Resolution**: 720p<br>**Audio**: On<br>De-select **Optimize for post-processing**: Mono<br>**Location data**[1]: Off | |
| Show that camera is recording | | De-select **Allow silent mode** |
| Turn off the microphone while recording | | Select **Allow audio recording off** |

## Configure your system

1. Location data is for outdoor use only. We recommend turning Location data off for indoor use.

### Create a user

1. Go to **Users**.
2. Click **Add user**.
3. Enter the required information and click **Add user**.

### Add cameras

1. Dock the camera you want to add to your system. All camera LEDs will flash with amber light.
2. Go to **Devices**.
3. In the camera list, click **New**.
4. In the **Add cameras** list, select the camera(s) you want to add and click **Add**. All LEDs stop flashing when the camera has been added successfully, which may take a couple of minutes.

### Assign a camera to a user

1. Go to **Devices** and click the camera you want to assign.
2. In the **Assigned to** list, select a user.
3. Click **Save**.

### Extend the system

1. Connect the new system controller to the same network as the existing body worn system.
2. Access the new system controller, see *Access AXIS Body Worn Manager for the first time*.
3. Select **Extend an existing system**.
4. Create an administrator password and click **Okay**.
5. Type in the IP address of the system controller that you initially created the body worn system on, and click **Connect**.
6. Add the new system controller to the body worn system, see *Add system controllers*.

### Add system controllers

1. Install the new system controller, see *Extend the system*
2. Go to **Devices**.
3. In the system controller list, click **New**.
4. In the **Add system controllers** list, select the system controller(s) you want to add and click **Add**.

### Certificates

Certificates authenticate devices on a network, and enable encrypted web browsing using HTTPS. We recommend using certificates to securely connect to your body worn system.

# Axis body worn solution

## Configure your system

To securely connect to your body worn system:

1. *Create a certificate signing request*

2. Use your CA (certificate authority) to sign the CSR (certificate signing request).

3. *Install certificate*

### Create a certificate signing request

1. Go to **Settings** > **Certificates**.

2. Click **Create**.

3. In **Create self-signed certificate**, enter your values and click **Create**.

4. Open the context menu &#8942; next to the new certificate.

5. Click **Create signing request**.

6. In **Create certificate signing request**, click **Create**.

7. In the **Signing request** dialog, copy the whole text and paste it into a file with the filename `<filename>.csr`.

Note

Alternatively, you can create a signing request for the already existing **Default (self-signed)** certificate.

### Install certificate

1. Go to **Settings** > **Certificates**.

2. Click **Install**.

3. Click **Select file** and locate your signed certificate with the filename `<filename>.crt`.

4. Click **Install**.

5. Open the context menu &#8942; next to the certificate.

6. Click **Activate**.

Note

The installed certificate gets its name from the uploaded .crt file, minus the suffix. This name must be unique.

## Manage users

### Transfer a camera to a different user

Important

Assigning a camera to a different user may affect the user structure in your content destination. Make sure to update the user structure there as well if needed.

1. *Assign a camera to a user on page 9*

2. Go to your content destination and make the required changes to the user structure.

### Remove a user

1. Go to **Users**.

2. Click the user you want to delete.

3. Open the context menu ⋮ .

4. Click **Remove**.

Important

Never remove body worn users from your content destination. Always use AXIS Body Worn Manager to remove users.

## Manage your system

### Change password

1. Go to **Settings** > **Password**.

2. Enter your old password and your new password.

3. Click **Save**.

### Download system report

You can download a system report from your body worn system. Axis support uses the system report for troubleshooting.

1. Go to **Support** > **System report**.

2. Click **Download system report**.

3. Send the file to Axis support.

Note

> A system report includes the system controller that you are signed-in to, and the cameras that are, or have been docked to it. The latest logs from a camera are included after it's docked.

To download a system report from a system controller, that is part of the extended system:

1. Access the system controller.

2. Open the context menu ⋮ .

3. Click **Download system report**.

4. Send the file to Axis support.

### Transfer a camera to another body worn system

To use a body worn camera in another system, you must first remove the camera from your current system. Then you can add the camera to the new system.

To transfer a camera to another body worn system:

1. Remove the camera from your current system, see *Remove a camera on page 12*.

2. Follow the instructions in *Add cameras* to add the camera in the new system.

### Remove system hardware

You can remove cameras and extension system controllers from the body worn system.

#### Remove a camera

Note

> You can remove a camera both docked and undocked. If you choose to remove the camera when it's undocked, all content is transferred, and the camera is removed after it's docked. When the content transfer is complete, the camera is reset to factory default with the latest uploaded firmware.

To remove a camera from the body worn system:

1. Go to **Devices**.

2. Click the camera you want to remove.

3. Open the context menu ⋮ .

4. Click **Remove**.

Important

    Never remove body worn cameras from your content destination. Always use AXIS Body Worn Manager to remove cameras.

### Remove an extension system controller

Note

    When you remove a system controller from the body worn system, all content is transferred to the content destination, and the system controller is reset to factory default settings.

To remove an extension system controller from the body worn system:

1. Go to **Devices**.

2. Click the system controller you want to remove.

3. Open the context menu ⋮ .

4. Click **Remove**.

## Replace system hardware

You can replace cameras and system controllers in the body worn system.

### Replace a camera

1. Dock the camera that you want to replace.

2. Wait for the storage LED on the camera to turn green, which means that all recordings are transferred.

3. *Open AXIS Body Worn Manager* and remove the camera that you want to replace, see *Remove a camera*.

4. Undock the old camera.

5. Add the new camera to the system, see *Add cameras*.

### Replace extension system controller

To replace a system controller, that is part of the extended body worn system:

1. Remove the old system controller, see *Remove an extension system controller*.

2. Add the new system controller, see *Add system controllers*.

### Replace system controller

If the system controller that you created the system on has failed, you may need to replace the system controller and restore the system, see *Restore system*.

## Reset system or hardware

You can reset cameras, system controllers, or the entire body worn system, to factory default settings.

### Reset camera

To reset a camera to factory default settings, remove it from the body worn system, see *Remove a camera*.

### Reset extension system controller

To reset a system controller that is part of the extended system, to factory default settings, remove it from the body worn system, see *Remove an extension system controller*.

### Reset system

To reset the entire body worn system to factory default settings:

1. Remove all cameras, see *Remove a camera*.

2. If possible, disable the corresponding cameras in the content destination.

3. Remove all extension system controllers, see *Remove an extension system controller*.

4. Go to **Devices**.

5. Locate and open the system controller that you initially created the body worn system on.

6. Open the context menu ⋮ .

7. Click **Reset system**.

## System restore

You can replace a broken system controller and reestablish the connection between the body worn system and the existing cameras, see *Restore system*.

To restore the system, you need a master key, see *Download master key*.

If you want to reset the body worn system to factory default settings, and can access it through AXIS Body Worn Manager, see *Reset system*.

Important
- A system restore reestablishes the connection between the body worn system and the existing cameras. It doesn't restore users and camera profiles.
- You can only restore a system, or unlock cameras if you have the master key. You may not be able to download a master key if the system has failed. We recommend that you download the master key during the initial system setup, and store it in a secure location.

### Restore system

1. Access all extension system controllers and click **Reset system controller**.

2. Connect a new system controller to the same network as the existing body worn system.

3. Access the new system controller, see *Access AXIS Body Worn Manager for the first time*.

4. Click **Create a new system**.

5. In the **Master key** step of the system setup, click **upload an existing master key,** to restore the system.

6. Enter your master key passphrase.

7. Click **Select file** and select your master key.

8. Click **Upload**.

9. Finish the system setup.

10. *Extend the system* with all system controllers, that were reset to factory default settings in step 1.

11. *Unlock cameras.*

### Download master key

There are two ways to download the master key:

- The master key is generated and downloaded during the system setup.

- You can also download a master key at any time in AXIS Body Worn Manager

To download the master key in AXIS Body Worn Manager:

1. Go to **Support** > **Master key**.

2. Click **Download master key**.

3. Enter the master key passphrase that you created in the system setup.

4. Click **Download** and save the master key.

Important
- The master key is passphrase protected.
- Always store the master key and the master key passphrase in a secure way.

### Unlock cameras

You can unlock a camera, that for security reasons is locked, and can't be used in the system. To unlock cameras, you need to enter the master key passphrase that you created during the system setup.

To unlock a camera:

1. Go to **System status**.

2. Under Cameras, click **Locked**.

3. Select the cameras that you want to unlock.

4. Click **Next**.

5. Enter your master key passphrase.

6. Click **Unlock**.

## Adjust date and time

All body worn cameras in the body worn system get the same date and time as the system.

Important
It is important that the time and time zone of your body worn system matches the time and time zone of the content destination.

To set the date and time:

1. *Open AXIS Body Worn Manager on page 6*

2. Go to **Settings > Date and time**.

**15**

## Upgrade system firmware

An upgrade of the system firmware takes effect immediately. All system controllers in the system are upgraded. Un-docked cameras are upgraded on docking.

1. Go to *axis.com/support/firmware* and download the firmware file to your computer.

2. *Open AXIS Body Worn Manager on page  6*

3. Go to **Settings > Firmware**.

4. Select the new system firmware file and click **Upload and install**. When the upgrade has finished, the system restarts.

## System controller user guide
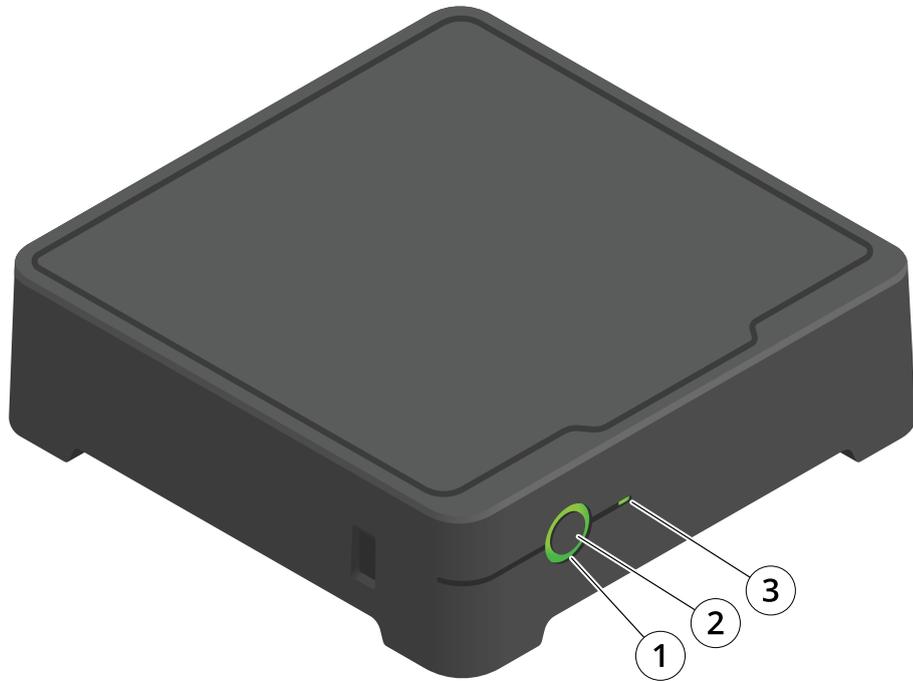


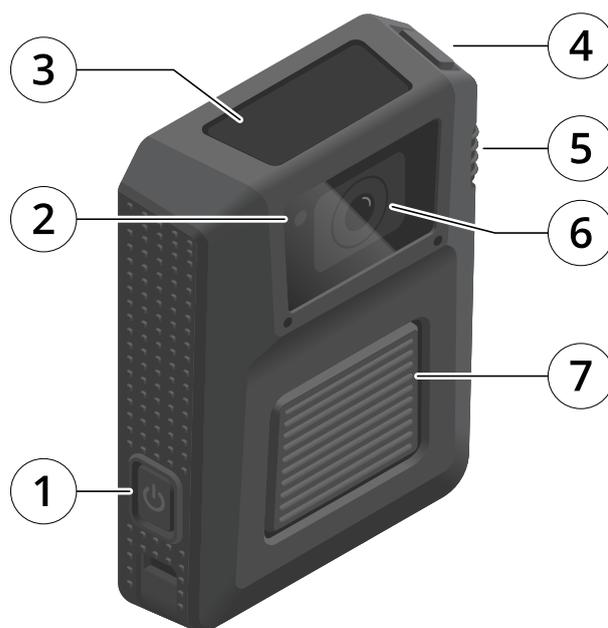| Number | Name | Description |
|---|---|---|
| 1 | Status LED | Green: The system controller is ready to use.<br><br>Amber: Storage warning. Less than 8% storage left.<br><br>Red: General warning. Connection with Content destination failed, or storage error. |
| 2 | Power button | See table below. |
| 3 | Storage LED | Green: Standby<br><br>Flashing green: Accessing storage<br><br>Red: Storage error |

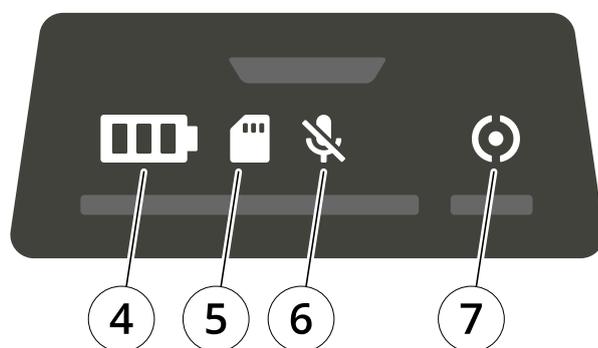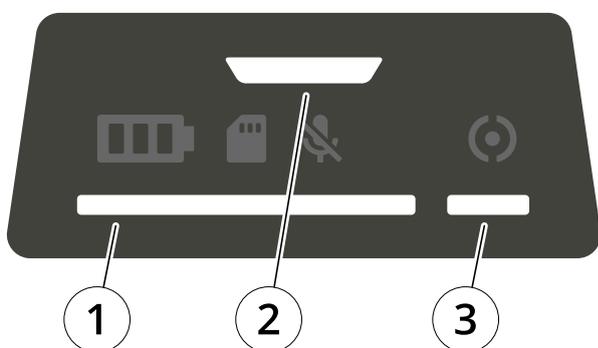| I want to... | Action needed | Information |
|---|---|---|
| Turn on the system controller | Press the **power button**. | The status LED turns amber. The status LED turns green when the system controller is ready for use. |
| Turn off the system controller | Press and hold the **power button** until the status LED turns amber. | Shut down begins when the status LED turns amber. The system controller is off when the status LED turns off. |

### Product overview



| | |
|---|---|
| 1 | Power button |
| 2 | Front recording indicator |
| 3 | Display |
| 4 | Top button |
| 5 | Function button |
| 6 | Camera lens |
| 7 | Front button |

| Number | Name | Description |
|---|---|---|
| 1 | Docking status | Green: Camera is ready to use (battery charged, files transferred, software up to date).<br><br>Pulsing amber: Battery charging, file transfer, software update (any combination of) is ongoing. |
| 2 | Recording status | Red: Recording |
| 3 | Operation status | Green: Standby, ready to use<br><br>Flashing green: Less than 0.5 hours of battery (red battery status) or storage (red storage status) left<br><br>Amber: Recording not possible (storage error, software error, or other operational error) |
| 4 | Battery status | Green: >1 hour left<br><br>Amber: 0.5–1 hours left<br><br>Red: 0–0.5 hours left |
| 5 | Storage status | Green: >1 hour of recording left<br><br>Amber: 0.5–1 hours of recording left<br><br>Red: 0–0.5 hours of recording left |
| 6 | Microphone | Lights up if you've turned off the microphone |
| 7 | Camera extension | Green: Camera extension connected<br><br>Pulsing amber: Switching between camera sources when connecting the camera extension to the body worn camera. Recording is disabled.<br><br>Red: Camera extension error |

## Daily use

| I want to... | Action needed | Information |
|---|---|---|
| Turn on my camera | Press the **power button**. | The status LEDs pulse amber until the camera is ready for use. Then the operation status LED turns green. This takes about 15 s. |
| Turn off my camera | Press and hold the **power button** for 5 s. | The camera vibrates and beeps. |
| Start a recording | Press the **front button** once. [1] | The camera vibrates, beeps and the front recording indicator turns on when the recording starts. [1] |
| Stop a recording | Press the **front button** for at least 4 s. | The camera vibrates and beeps when the recording stops. |

| Turn off microphone (audio is on by default) | Press the **function button** for at least 3 s. | Microphone LED on. |
|---|---|---|
| Turn on microphone | Press the **function button** for at least 3 s. | Microphone LED off |
| Turn on silent mode | Press the **top button** for at least 3 s. | Turns off the display, front recording indicator, beep, and vibration. |
| Turn off silent mode | Press the **top button** for at least 3 s. | Turns on the display, front recording indicator, beep, and vibration. |
| Check remaining battery capacity | Press the **top button** and check the battery status on the display. | Green: >1 hour left<br><br>Amber: 0.5–1 hours left<br><br>Red: 0–0.5 hours left |
| Check remaining storage capacity | Press the **top button** and check the storage status on the display. | Green: > 1 hour of recording left<br><br>Amber: 0.5–1 hours of recording left<br><br>Red: 0–0.5 hours of recording left |

1.  This can be configured in AXIS Body Worn Manager.

Download and print the AXIS W100 Daily Use Guide to help the camera users in their daily work.

*AXIS W100 Daily Use Guide*
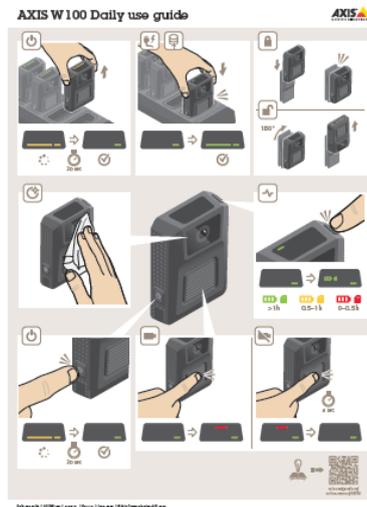
*AXIS W100 Daily Use Guide*

**Starting a shift**

We recommend checking a few things before starting a shift:

*   Before you undock the camera, make sure that the docking status is green, which indicates that the battery is charged, all files are transferred, and that the software is up to date.

Note

> If file transfer is not complete when you undock the camera, you must dock it to the same system controller at the end of the shift. A different system controller will not accept the camera. The storage LED lights up and the docking status LED flashes amber to indicate that you need to dock the camera in the system controller that was used initially for the file transfer.

- When you undock the camera, it restarts. This takes about 20 seconds, after which the camera is ready to use.

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

### 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
- camera settings and user configuration is synchronized with the system

- When you dock the camera, it restarts. After about 10 seconds the status LEDs start pulsing with amber light. After another 10 seconds the camera starts uploading content. The docking status LED shows amber light.

- It takes 3–6.5 hours to fully charge a depleted battery.

- 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.

Note

> If a camera is not docked for eight weeks, it's locked by the system for security reasons, see *Unlock cameras*.

### 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 -20°C (-4 °F) to 55°C (131 °F). Using the camera outside of the specified temperature range damages the battery.
- Always charge the camera within the charging temperature range -0°C (32 °F) to 40°C (104 °F). Charging the camera outside of the specified temperature range damages the battery.
- Do not 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.

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 storing it. When you remove the camera from the system, the camera enters shipping mode, which ensures a healthy battery level.
- Always store the camera at the recommended storage temperature. If you are storing the camera for less than 3 months, the recommended storage temperature range is -20°C (-4 °F) to 45°C (113 °F). If you are storing the camera for more than 3 months, the recommended storage temperature is 25°C (77 °F). Storing the camera outside of the specified temperature damages the battery.
- Do not store the camera with the battery fully charged. Doing so shortens the expected battery life.
- Do not store the camera with a depleted battery. Doing so shortens the expected battery life.
- If you are storing the camera for more than 3 months, charge the camera every 3 months.
- Do not store the camera in damp environments. This may increase battery discharge rates.

### Cleaning

To clean the body worn 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.

### Charging the camera

To charge the body worn camera, always use one of the following options:

- AXIS W700 Docking Station 1-bay
- AXIS W701 Docking Station 8-bay
- 5 V DC output mobile phone charger, or power bank, with a USB Type-C connector.

### 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:

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

**Location data –** When the camera positioning system is on.

**Temperature –** +25°C (77 °F) is the optimal operating temperature. Using the camera in temperatures above or below this increases power consumption.

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

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.

### Note

The pre-buffer has a dedicated space on the camera storage. 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, resulting in a slightly shorter pre-buffer time than configured in AXIS Body Worn Manager.

## Troubleshooting

If you can't find what you're looking for here, try the troubleshooting section at *axis.com/support*.

## Basic troubleshooting

| | Problem | Cause | Solution |
|---|---|---|---|
| **Body worn camera** | Camera doesn't turn on. | Camera is in shipping mode. | Add the camera to the body worn system, see *Add cameras on page 9* |
| | | Camera is out of battery. | Charge the camera, see *Charging the camera* |
| | Camera doesn't record. | Camera storage is full (storage status is red). | 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* |
| | LED display doesn't work. | 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. |
| | 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. |
| **Docking station** | Docking station LED doesn't turn on. | The docking station doesn't have power. | Connect the docking station to the power supply. Docking stations can't be powered by PoE. |

## Troubleshooting

| | Problem | Cause | Solution |
|---|---|---|---|
| **System controller** | Can't find system controller in AXIS IP Utility. | You are using an old version of AXIS IP Utitlity. | Upgrade to AXIS IP Utility version 4.14 or later. |
| | | System controller is turned off. | Connect the system controller to the power supply. |
| | | System controller is not connected correctly to the network. | Connect the system controller to the network. |
| **Content destination** | Recordings don't appear in content destination. | Content destination is unavailable. | Check the content destination status on the System status page in AXIS Body Worn Manager. |
| | | Many simultaneous offloads affect transfer speed. | Check transfer status in AXIS Body Worn Manager. Wait for recordings to be transferred. |
| | | The time in the body worn system doesn't match the time of the content destination. | Make sure that the body worn system and the content destination have matching time. |
| | | Out of licenses. | Check licenses and buy additional licenses if needed. |
| | Recordings have the wrong resolution. | The image resolution setting in AXIS Body Worn Manager is wrong. | Go to the camera profile in AXIS Body Worn Manager and set the correct image resolution. |
| | Recording is deleted. | Retention time of the content destination is short. For example: If the retention time on the content destination is 7 days, and the recording on the camera is 8 days old when docking, then the recoding will be deleted when it reaches the content destination. | Change the retention time on the content destination to a higher value. |
| | Recording is transferred from camera to system controller, but not from the system controller to the content destination. | The camera has been removed from the content destination. | Rename the user that the camera is assigned to, and restart the system controller. |

## Check System status

**System status** gives you an overview of how the different components of your system – the cameras, the system controllers, and the content destination – are functioning. If your system is okay all components will show **Okay**. Messages are presented under the respective system component. To resolve a problem, click the message. See the table below for information about the probable cause and solution to each message.

|  | Message | Cause | Solution |
|---|---|---|---|
| **Cameras** | Locked | Camera lost connection with the body worn system because:<br>• it wasn't docked for over 8 weeks<br>• the system controller that the system was initially created on was replaced | *Unlock cameras* |
|  | New | New cameras are docked but not added to the system | *Add cameras* |
|  | No cameras added to the system | No cameras have been added to the system | *Add cameras* |
|  | Storage error | Camera storage may be faulty | • Try *General troubleshooting steps*.<br>• If the problem persists, try *axis.com/support*. |
|  | Firmware update pending | Camera firmware is not up to date with the system | • Dock the camera.<br>• If the problem persists, try *General troubleshooting steps*.<br>• If the problem persists, try *axis.com/support*. |
| **System controllers** | Unavailable | The extension system controller has lost connection with the body worn system. One reason for this could be that the system controller that you initially created the body worn system on has changed IP address. | Make sure that the IP addresses of the system controller that you initially created the body worn system on, is the same as the IP address entered in the extension system controller. |
|  | Storage error | System controller storage may be faulty | • Try *General troubleshooting steps*.<br>• If the problem persists, try *axis.com/support*. |
|  | Storage low | System controller storage is almost full | • Make sure that the connection with the content destination is working.<br>• Make sure your network capacity supports the size of your body worn system.<br>• Avoid docking cameras to the affected System |

## Troubleshooting

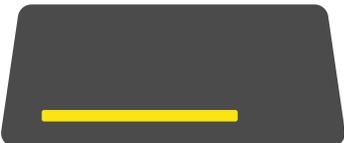|  | Message | Cause | Solution |
|---|---|---|---|
|  |  |  | controller until the problem is resolved. |
|  | New | There are new system controllers connected but not added to the system | *Add system controllers* |
| Content destination | Authorization failed | There is an incorrect signature in the connection file. The content destination won't accept uploads | Try generating a new connection file, or troubleshoot your existing connection file. |
|  | Connection failed | General network problem | Make sure that your network connection is working. |
|  |  | The system can't reach the endpoints | Make sure that your firewalls accept connection with the listed endpoints. |

## 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 |
|---|---|---|
| • No feedback<br>• 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. |
| <br>• LED: Operation status amber<br>• Beep: 2 short, 1 long<br>• 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.* |
| <br>• LED: Camera extension red, Operation status green<br>• Beep: 1 short<br>• Buzz: 1 short | Faulty sensor camera, or body worn camera. | Disconnect the sensor camera to eliminate body worn camera error. Press the top button. If the camera extension LED is still red, then there is something wrong with the body worn camera. If the camera extension LED is off, then there is something wrong with the sensor camera. Try replacing the sensor camera. |

## Troubleshooting

| Behavior | What it means | What to do |
|---|---|---|
| LED: All flash amber | The camera Is not added in the body worn system. | Add the camera to the body worn system, see *Add cameras*. |
| • LED: All flash red<br>• Beep: intermittent<br>• Buzz: intermittent | A user is not assigned to the camera.. | Dock the camera and assign a user to it, see *Assign a camera to a user*. |
| LED: Docking status flashes amber | General error | Try the *General troubleshooting steps*. If the problem persists try *axis.com/support*. |
| LED: Docking status flashes amber, Storage red | Error when uploading content to the system controller | Check he 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 *Check System status*. |
| LED: Docking status flashes amber, Battery red | Battery is not charging | Try the *General troubleshooting steps*. If the problem persists try *axis.com/support*. |

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.

## Troubleshooting

### General troubleshooting steps

If you're not sure what's causing the problem with your body worn system, one of the following actions may help:

**Camera**

1. Restart the body worn camera.

    - If the camera is docked, undock the camera and dock it again.

    - If the camera is undocked, use the power button to turn it off, and then turn it back on again.

2. Upgrade the body worn camera with the latest firmware, see *Upgrade system firmware*.

3. Dock the camera and remove it from the system through AXIS Body Worn Manager. This resets the camera to factory default. Add the camera to the system again. See *Reset camera*.

**System controller**

1. Restart the system controller, see *System controller user guide*. Logs and recordings remain intact on the system controller storage during the restart.

2. Upgrade the system controller with the latest firmware, see *Upgrade system firmware*.

3. Reset the extension system controller to factory default (this doesn't apply to the system controller that the body worn system was initially created on), using one of the following methods:

    - We recommend that you reset the extension system controller from AXIS Body Worn Manager, see *Reset extension system controller*.

    - When the above method is not possible, access the extension system controller and click **Reset system controller**.

4. Reset the body worn system to factory default settings, see *Reset system*.

## Learn more

### Secure passwords

Important

Axis devices send the initially set password in clear text over the network. To protect your device after the first login, set up a secure and encrypted HTTPS connection and then change the password.

The device password is the primary protection for your data and services. Axis devices do not impose a password policy as they may be used in various types of installations.

To protect your data we strongly recommend that you:

- Use a password with at least 8 characters, preferably created by a password generator.

- Don't expose the password.

- Change the password at a recurring interval, at least once a year.

## Need more help?

### Contact support

Contact support at *axis.com/support*.