Axis body worn solution

AXIS W100 Body Worn Camera

AXIS W101 Body Worn Camera

AXIS W700 Docking Station 1–bay

AXIS W701 Docking Station 8–bay

AXIS W800 System Controller

AXIS TW1200 Mini Bullet Sensor

AXIS TW1201 Body Worn Mini Cube Sensor

Axis body worn solution

User Manual

Axis body worn solution
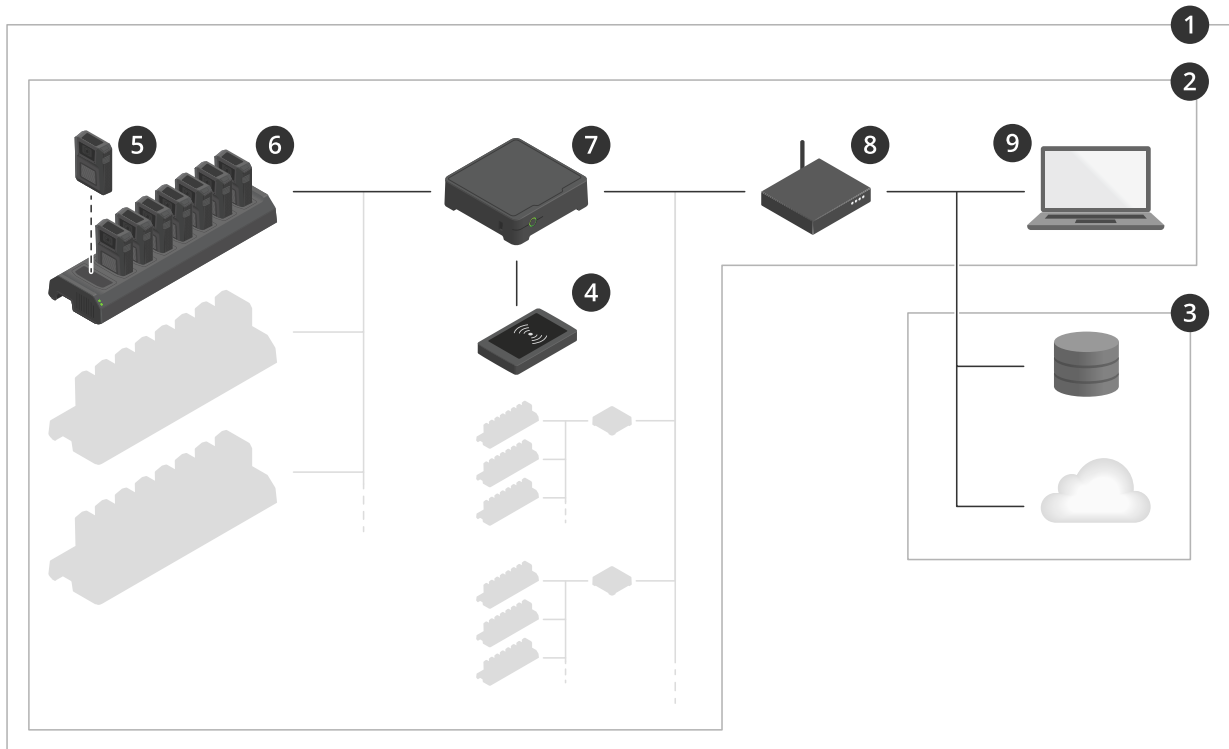
Table of Contents

Axis body worn solution

This is the Axis body worn solution

The Axis body worn solution

1   *Body worn solution*
2   *Body worn system*
3   *Content destination*
4   *RFID reader (optional)*
5   *Body worn camera*
6   *Docking station*
7   *System controller*
8   *Network*
9   *AXIS Body Worn Manager*

The Axis body worn solution (1) – is one or more Axis body worn systems (2) connected to a content destination (3). The body worn system functions only when it's connected to a content destination.

The Axis body worn system (2) – consists of Axis body worn cameras (5), Axis docking stations (6), Axis system controllers (7), and AXIS Body Worn Manager (9).

AXIS Body Worn Manager (9) – is the web application where you can configure and manage your body worn system.

AXIS Body Worn Assistant – is an application for mobile devices that connects directly to the body worn camera and, for instance, lets you view recorded video.

An optional RFID reader (4) – can be connected to the system controller. It lets the camera user self-assign any available body worn camera, using their self-assign tag.

Axis body worn solution

This is the Axis body worn solution

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.

What's new in the latest release?

Retrieve recordings from system controller – Content destinations normally accept recordings from body worn users and cameras that have been removed from the content destination. But if this isn't supported, and you remove users or cameras in the content destination instead of in AXIS Body Worn Manager, recordings might not be transferred from the system controller. You can now download the recordings that weren't transferred to a USB flash drive. This requires access to the highest security level in the body worn system, permitted using the Super admin passphrase. To retrieve recordings, open the affected system controller in AXIS Body Worn Manager, click **Download recordings**, and then follow the on-screen instructions. See *Retrieve recordings from system controller on page 34* for more information.

Body worn user export – You can export entered data for all the body worn users to a CSV file. This can be useful when you need to make changes to your system that require a system reset, but you still want to keep all the user data. After the system is reset, and all the changes are made, you can just import the user's data back into the system again. To export body worn users, go to **Users**, open the context menu, and click **Export users**. See *Export users on page 25* for more information.

Import RFIDs for all your users – You can now include your already existing RFIDs in the body worn user import. This is great news if you're using self-assign camera assignment because it means that you can associate RFID tags with all the users at once, instead of pairing each self-assign tag individually. To import RFIDs, just add them to the user import template, or to an existing user export, and then import the CSV file. See *Import users on page 14*

Backup now – You can now manually backup the system at any time instead of waiting for the scheduled backup. This ensures that all your data and settings can be saved on demand. To manually start the backup, go to **Settings** > **System backup** and click **Backup now**. See *System backup on page 9* for more information.

Get started

The recommended workflow to install and configure your system is:

1. *Install your system on page 6*

2. Open AXIS Body Worn Manager and configure system settings. See *Access AXIS Body Worn Manager for the first time on page 7*

3. *Edit a camera profile on page 10*

4. *Create a user on page 14*

5. *Add cameras on page 15*

6. If you're using fixed camera assignment, *Assign a user to a camera*. Alternatively, if you're using self-assign camera assignment, see *Set up self-assign camera assignment*.

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

www.axis.com/products/online-manual/58704#t10138319

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
- Optional RFID reader for self-assign camera assignment.
- 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. Optionally, connect the RFID reader to the system controller USB connector.

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

5. Power on the devices.

6. Dock the cameras.

7. Continue to *Access AXIS Body Worn Manager for the first time on page 7*

Configure your system

Access AXIS Body Worn Manager for the first time

Note

- Use AXIS IP Utility version 4.14 or later. AXIS IP Utility helps you find Axis devices on your network. The device is identified by its name, IP address, and serial number.
- Before you start, make sure you have the:
    - latest firmware available. You can download it at *axis.com*. To get access to firmware you need a My Axis account.

    - 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 to locate the system controller in the list. You can find the serial number on the underside of the system controller, or on the label on the system controller box.

    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. In this step you can also choose your preferred language for the body worn system.

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

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

    - Name your body worn system. This makes it easier identifying it in your content destination and in different cloud services, and when you receive email notifications about critical system events. You can change the system name under **Settings** in AXIS Body Worn Manager.

    - Configure network settings.

    - Date and time. Setting the time correctly is critical for several reasons. See *Adjust date and time on page 35* for information.

    - Cloud extensions. The body worn system comes with a set of standard features out of the box. The Cloud extensions are a set of additional cloud-based capabilities that, for example, give you improved location data performance. You can choose to enable Cloud extensions in AXIS Body Worn Manager at any time. However once enabled, Cloud extensions can't be turned off without resetting the system. See *Cloud extensions on page 20* for more information.

    - The connection file connects the body worn system to the content destination. The content destination is where your recordings and metadata are stored and managed. The body worn system is locked to a content destination once connected to it. To change to another content destination, you need to reset the body worn system first. See *Content destinations on page 8* for more information.

    - The **Super admin passphrase** provides extra security for the body worn system. System critical actions, for example restoring the system, require verification with the Super admin passphrase. It is also required when reestablishing the connection between the body worn system and cameras that are in safe mode. The passphrase can't be changed.

- The **System restore key** is an important security feature. The body worn system requires a System restore key for certain operations. These operations include for instance, reestablishing the connection between the body worn system and the existing cameras, after replacing a system controller that has failed. Download the **System restore key** to your computer and store it in a secure location.

- 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.

- You can assign cameras to users in two ways. With **Fixed** camera assignment every user is manually assigned to a specific camera. With **Self-assign** the camera user taps a self-assign tag on an RFID reader, connected to the system, to pick up any available camera. It is not possible to switch between **Fixed** and **Self-assign** without resetting the system. With **Self-assign** you can assign users to cameras locally or globally in the system. This option is available under **Settings** once you've completed this setup. See *Camera assignment on page 15* for more information.

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 7* .

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

   AXIS Body Worn Manager opens in your browser.

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.

Connect to AXIS Camera Station

Go to the *AXIS Camera Station Integrator Guide* for help on how to integrate an Axis body worn system with AXIS Camera Station.

Connect to AXIS Case Insight

Go to the *AXIS Case Insight System Integrator Guide* for help on how to integrate an Axis body worn system with AXIS Case Insight.

Note

   Connecting to AXIS Case Insight requires firmware 10.2.0.3 or later.

Integrate with third party applications

Go to *Body worn integration Genetec* for help on how to integrate with Genetec Security Center, and *AXIS Optimizer Body Worn Extension* for help on how to integrate with Milestone XProtect®.

Axis body worn solution

Configure your system

- 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.

- The body worn system is locked to a content destination once connected to it. To change to another content destination, you need to reset the body worn system first.

- Never remove or reset the content destination before resetting the body worn system. Always reset the body worn system first. If you remove or reset the content destination first, recordings can remain on cameras or in the system controllers, preventing you from resetting the body worn system. This is a security feature ensuring that all evidence is uploaded to the content destination.

Associate recordings with a user in AXIS Case Insight

A recording transferred to AXIS Case Insight is now associated with a user. The AXIS Case Insight user corresponds to the person wearing the camera.

This makes it easier to search for and collect recordings made by a specific person, for example when creating a case.

See *Create a user on page 14* for information on how to associate recordings with a user in AXIS Case Insight.

System backup

The system backup saves all your settings. It lets you restore the body worn system in the unlikely event that the system controller, on which the system was initially created on, malfunctions. The backup includes all users, camera profiles, camera assignment, and system settings. The backup is updated automatically every 24 hours. System backup is available on systems with more than one system controller.

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

www.axis.com/products/online-manual/58704#t10167436

Axis body worn system backup and restore

To configure the system backup:

1. Go to **Settings** > **System backup**.

2. Click **Configure**.

3. Select **System controller backup**.

4. Select the extension system controller that you want to save the backup to.

5. Click **Save**.

You can manually backup the system at any time instead of waiting for the scheduled backup. This ensures that all your data and settings can be saved on demand. To manually start the backup, go to **Settings** > **System backup** and click **Backup now**.

Note

- The backup does not include any recorded evidence.
- We recommend that you physically label the backup system controller. This will be your way of identifying it in the unlikely event that the system controller, on which the system was initially created on, malfunctions.
- Backup requires a body worn system with multiple system controllers.

See *Restore a system with more than one system controller on page 32* if you want to restore a system.

You can receive a system notification If the system backup fails to synchronize. See *Email notifications on page 27*.

About camera profiles

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.

Edit a camera profile

1. Go to **Camera profiles** and select one of the pre-configured camera profiles from the drop down menu.
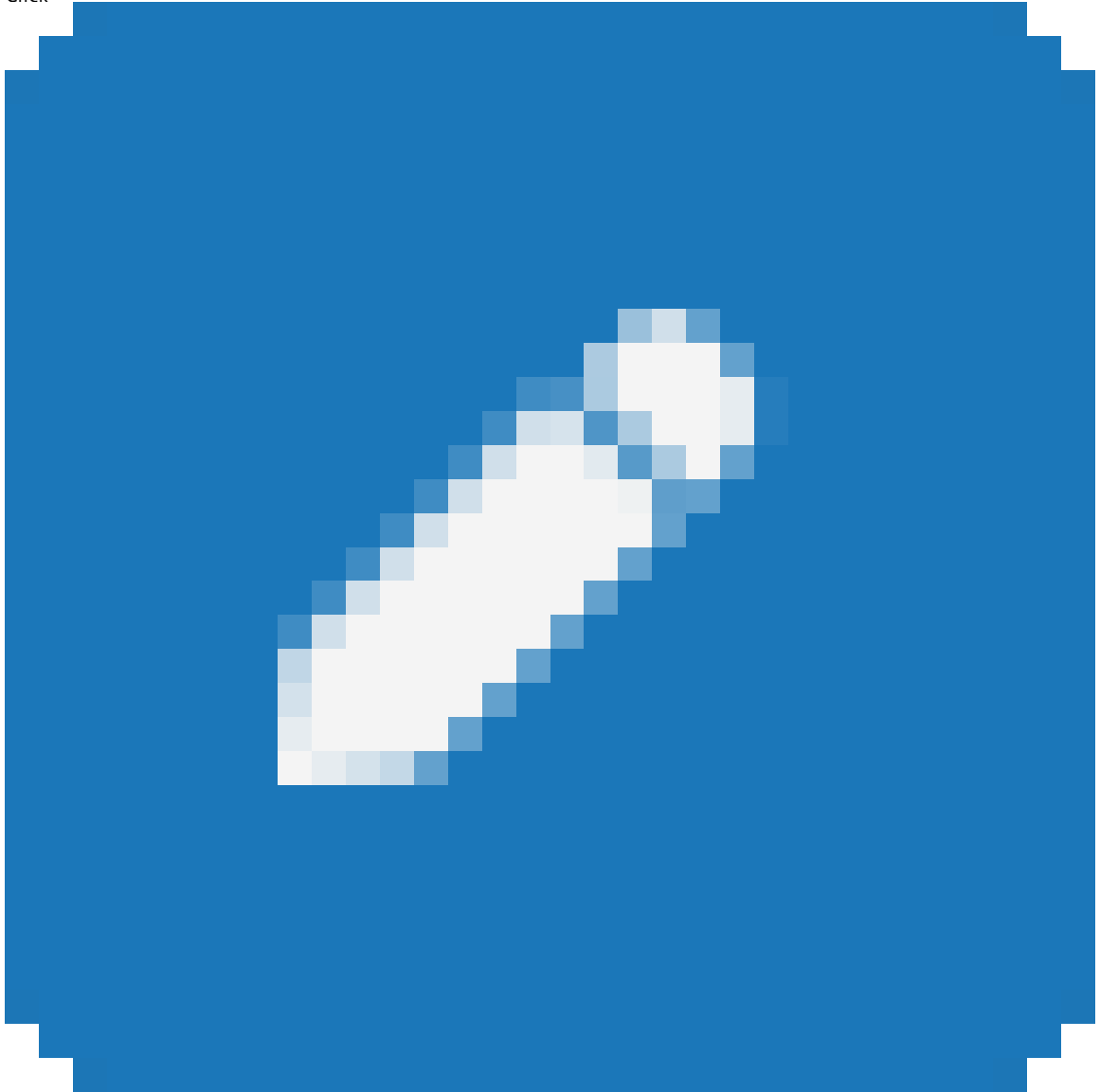
2. Click

   to edit the selected camera profile.

3. Edit the camera profile **Name**.

4. Enter a **Description** for the camera profile.

5. Select the cameras to make available for camera assignment for users with this camera profile.

6. Click **Done**.

7. Expand the devices in the list to edit the *Camera profile settings on page 11*.

Camera profile settings

AXIS W100 and AXIS W101 Body Worn Camera

Configure your system

Video	Image quality	• **720p** • **720p high** (AXIS W101 only) • **1080p** • **1080p high** (AXIS W101 only). Pre-buffer is limited to maximum 60 seconds. The **high** settings use less compression and increases sharpness, resulting in a higher bitrate. These settings are suitable for incident based recording.
	Barrel distortion correction (AXIS W101 only)	Barrel distortion is a lens effect that makes the image appear curved and bent outwards. Turn on **Barrel distortion correction** to get a straighter image.
Audio	Turn on to record audio.	
	Optimization	• **None** – Default audio recording. • **Post-processing** – Record audio with reduced compression and in dual audio channels, suitable for forensic audio analysis. This results in a higher bitrate. • **Voice** (AXIS W101 only) – Isolate voices in the recording by filtering out monotonous ambient sound.
Pre-buffer	Ensures that the whole event is captured by adding recording time before the recording is started. 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.	
	Length	The pre-buffer time in 15, 30, 60, or 90 seconds.
	Audio	Turn on to include audio in the pre-buffer.
Overlay	Choose what information to include in the overlay in the video image.	
	Name	The name entered when you create a user.
	User ID	The user ID entered when you create a user.
	Position	**AXIS W100**: The start position for a recording. **AXIS W101**: The current camera position, when using location mode **Track**. The start position for a recording, when using location mode **Start and end**.

Configure your system

Location Assisted GNSS (ephemeris) enabled	Turn on to record the camera's position. Turn off location data for indoor use. Location increases power consumption.	
	Mode	**None** – Location is off. **Start and end** – Record the geographical position of the camera when and where a recording starts and ends. **Track** (AXIS W101 only) – Continuously record the geographical position of the camera throughout the whole recording. Currently supported in AXIS Case Insight.
Recording activation	Front button	Choose one of the following ways to start a recording: **Single press** **Double press**. This setting also applies to AXIS TW1201 if connected to AXIS W101.
	Fall detection	Turn on to start a recording when the camera detects a fall.
Feedback	Front recording indicator	Choose if you want the front recording indicator to be **Steady** **None** **Flash** during recording. When AXIS TW1201 Mini Cube Sensor is connected, this behavior is applied to the mini cube sensor's front recording indicator.
	Alert	Choose camera feedback for starting and stopping recordings: **Vibration** **Sound** **Sound and vibration**
	Periodic recording reminder	The camera vibrates periodically while recording as a reminder and as reassurance. Select a preferred interval for the periodic reminder, or turn it off.
Camera feature access	Allow silent mode	Allow the camera user to turn off the display, front recording indicator, and alerts.
	Allow microphone mute	Allow the camera user to turn off audio recording.

AXIS TW1201 Mini Cube Sensor

Disable main camera front button	Disables the main body worn camera's front button (used to start and stop recordings) when the mini cube sensor is connected. Select this option if you want to use the recording button on the mini cube sensor only.
Rotate image 180 degrees	The ability to rotate the image gives you added mounting flexibility for the mini cube sensor.

AXIS Body Worn Assistant

Allow access to recordings	Choose whether the camera user is allowed to view recordings in AXIS Body Worn Assistant, or not.

Create a user

A body worn user in the system is the link between a recording and the person using a body worn camera.

To create a user:

1. Go to **Users**.

2. Click [+] to add a new user.

3. Enter user information:

    3.1 Name of the user (can be shown in the overlay).

    3.2 User's unique ID within the organization (can be shown in the overlay).

    3.3 Optionally, enter the AXIS Case Insight username.

    Note

    - This option is presented only if you're using AXIS Case Insight.
    - When you enter a user's email address as username, a corresponding guest user is created in AXIS Case Insight. This guest user has no access to any recorded evidence in the system. Access rights for the user are managed in AXIS Case Insight.
    - You can't enter or change the username for an existing user. To do this, you must remove the user and add it again.

    3.4 Choose a **Camera profile**

4. Click **Add user**.

Import users

The body worn system allows you to import your body worn user data from a CSV UTF-8 (Comma delimited) file. This is the most efficient way to add new users, as well as update usernames and camera profiles for existing body worn users with a user ID.

You can also include RFIDs for each user. This means that if you're using self-assign camera assignment, you can associate RFID tags with all the users at once, instead of pairing each self-assign tag individually.

If you already have users in the system that you want to update before doing the import, see *Export users on page 25*.

To import body worn users:

1. Go to **Users**.

2. Open the context menu ⋮ and click **Import users**.

3. Download the **CSV template**, which shows you the correct format for the users, user IDs, and RFIDs.

4. Enter the users and user IDs in the CSV file.

5. Click **Select CSV file** and select the file that you created.

6. Resolve any conflicts shown in the status window and then click **Import**.

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.

Camera assignment

There are two ways to assign a user to a camera:

- *Fixed camera assignment on page 15*

- *Self-assign camera assignment on page 15*

Note
- 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.
- Users can only be assigned to cameras supporting all features in the user's camera profile.

Fixed camera assignment

The body worn system administrator assigns the camera user to a specific camera. The camera user always uses the same body worn camera. See *Assign a user to a camera*

Assign a user to a camera

1. Go to **Devices**.

2. Open the camera you want to assign a user to.

3. In the **Assigned user** list, select a user.

Self-assign camera assignment

The camera user taps a self-assign tag on an RFID reader connected to the system. The system then assigns the user to an available camera. All LEDs on the self-assigned camera flash green, which means that the user can undock the camera.

For some body worn systems, the hardware is installed in different locations, and for others, the entire system is in the same room. You can choose between globally self-assigning any camera available in the whole body worn system, or locally self-assigning a camera at the same location as the card reader:

Global self-assign – Using an RFID tag, the user self-assigns any available camera. Use global self-assign when all cameras and system controllers are in the same room.

Local self-assign – Using an RFID tag, the user self-assigns a camera where the card reader is located. Local self-assign still allows the user to dock the camera at any location within the system. Use local self-assign when cameras and system controllers are spread out in different locations.

Axis body worn solution

Configure your system

For self-assign camera assignment setup, see *Set up self-assign camera assignment.*

Set up self-assign camera assignment

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

www.axis.com/products/online-manual/58704#t10160563

Set up self-assign camera assignment

Note

- Self-assign camera assignment is selected in the system setup wizard. Changing to fixed camera assignment requires a system reset.
- The RFID reader required for this setup is **External RFID Card Reader 125kHz + 13.56MHz with NFC (USB)**.
- Always install your RFID reader(s) in the same location as your docking stations.

To set up self-assign camera assignment:

1. Go to **Settings** > **Camera assignment** and select local or global self-assign. See *Self-assign camera assignment on page 15* for more information.

2. Connect the RFID reader to the system controller. Wait for the LED on the reader to light up green, which takes about 15 seconds. The reader now has the correct firmware and is ready for use.

3. Continue with the remaining steps to pair each RFID tag individually. Alternatively, see *Import users on page 14* for information on how to associate your already existing RFIDs with all users at once.

4. Disconnect the RFID reader from the system controller.

5. Connect the **same** RFID reader to the computer that you use for accessing AXIS Body Worn Manager.

Note

Setup via any remote desktop solution is not supported. The RFID reader must be connected directly to the computer that you use for accessing AXIS Body Worn Manager.

6. In AXIS Body Worn Manager, go to **Users**.

7. Select the user that you want to pair the self-assign tag with.

8. Click [+] to pair new equipment.

9. Click **Pair** (Self-assign tag).

10. Tap the self-assign tag on the RFID reader to register it. Keep tapping until all dots turn blue.

Note

Repeat steps 4–8 if you want to do more than one pairing.

11. Disconnect the RFID reader from the computer.

12. Connect the **same** RFID reader to the system controller.

Now the camera user can use the tag to self-assign a body worn camera.

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 can be used for authenticating devices on a network, and enable encrypted web browsing using HTTPS. We recommend using HTTPS to securely connect to your body worn 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 and IEEE 802.1x**.

2. Click **Show certificate settings**.

3. Click ⊞ .

4. Select **Create self-signed certificate** and click **Next**.

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

6. Open the context menu ⋮ next to the new certificate.

7. Click **Create signing request**.

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

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

17

Configure your system

Note

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

Install certificate

Note

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

1. Go to **Settings** > **Certificates and IEEE 802.1x**.

2. Click **Show certificate settings**.

3. Click [+] .

4. Select **Upload a CA certificate**.

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

6. Click **Install**.

7. Open the context menu ⋮ next to the certificate.

8. Click **Activate**.

Set up 802.1x

1. Connect the body worn system to a network without 802.1x.

2. Go to **Settings** > **Certificates and IEEE 802.1x**.

3. Click **Show certificate settings**.

4. Click [+] and create a new, or install an existing certificate.

5. Under **802.1x** select the certificate you installed.

6. Enter **EAP identity**.

7. Select **Use IEEE 802.1x**.

8. Click **Save**.

9. The page displays **Connecting...**

10. Connect the body worn system to your 802.1x enabled network.

Automatic recording activation

In combination with pre-buffer, automatic recording activation ensures that the whole incident is captured without the need for the camera user to manually start a recording. Recording can be started automatically using:

- *Fall detection on page 18*

- *Unholster detection on page 19*

Fall detection

Fall detection triggers video recording automatically when the person wearing the camera falls. In combination with pre-buffer, this feature ensures that the whole incident is captured without manual activation.

Configure your system

To turn on fall detection:

1. Go to **Camera profiles**.

2. Open the camera profile that you want to edit.

3. Turn on **Fall detection**.

Unholster detection

A holster sensor detects unholstering to automatically trigger video recording. In combination with pre-buffer, this feature ensures that the whole incident is captured without manual activation. This feature requires pairing the user with a *Yardarm* holster sensor.

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

www.axis.com/products/online-manual/58704#t10163346

Set up a holster sensor for your body worn camera

To enable unholster detection:

1. Make sure the holster sensor is disconnected from its power supply.

2. Go to **Users** and select the user that you want to pair the holster sensor with.

3. Click [+] to pair new equipment.

4. Click **Pair** (Holster sensor).

5. Dock the camera (do one of the following, based on camera assignment method):

    - **Fixed camera assignment:** Dock the camera assigned to the body worn user that you want to pair the holster sensor with.

    - **Self-assign camera assignment:** Make sure a camera is docked.

6. Enter the 6 digit serial number found on the holster sensor.

7. Undock the camera (do one of the following, based on camera assignment method):

    - **Fixed camera assignment:** Undock the camera and wait for it to start. Operation status LED lights up green.

    - **Self-assign camera assignment:** Self-assign a camera, undock it, and wait for it to start. Operation status LED lights up green.

8. Connect power supply to the holster sensor.

9. The wireless connectivity status LED on the camera pulses yellow to show that the pairing started. Wait for the wireless connectivity status LED on the camera to light up green, which indicates a successful pairing (can take up to 20 seconds). The wireless connectivity status LED lights up red if the pairing failed.

10. Disconnect power from the holster sensor.

19

11. Install the holster sensor and unholster to make sure the pairing was successful. The recording LED on the camera should light up red.

12. Dock the camera.

After completing the pairing, check the pairing status for the holster sensor under **Paired equipment**. Green status shows that the pairing is registered in the body worn system.

To connect the camera to a holster sensor in the daily use, undock the camera and make sure that it is in the holster sensor's range within 10 minutes after undocking. Under normal circumstances the range is 5–10 m (16–33 ft.).

Record location

You can record the geographical position of the camera. The recorded location data enables content destinations to show the camera's movement as a track, or as a single location on a map. This information can then be used to identify where an incident took place and to get a clearer picture of the whole course of events. The feature has two modes:

Start and end – Record the geographical position of the camera when and where a recording starts and ends.

Track (AXIS W101 only) – Continuously record the geographical position of the camera throughout the whole recording including the pre-buffer. Track is currently supported in AXIS Case Insight.

To turn on Location:

1. Go to **Camera profiles**.

2. Open the camera profile for which you want to turn on **Location**.

3. Expand the device for which you want to turn on **Location**.

4. Turn on **Location**.

5. Select a location **Mode**.

Note

- Location uses satellites (GNSS) to get the camera's position when used outdoors. With Cloud Extensions on, Assisted GNSS (ephemeris) improves positioning performance and decreases the time to get the first satellite fix.
- Different content destinations may present or use location data in different ways. For example, it can be used for searching recordings, or be displayed in a map or bookmark for a recording.
- Location is for outdoor use only. We recommend turning Location off for indoor use.
- Location increases battery consumption.

You can also include the position for a recording as an overlay in the video. To do this, go to the camera profile and select **Position** in the **Overlay** section. If you're using location mode **Start and end**, the start position is shown in the overlay. If you're using location mode **Track** (AXIS W101 only), the position is continuously updated in the overlay.

Limit access to recordings

The **Allow access to recordings** setting lets you decide whether the camera user can view recordings in AXIS Body Worn Assistant, or not. You can turn it on or off in the camera profile. To turn off access to recordings:

1. Go to **Camera profiles**.

2. Open the profile you want to edit.

3. Deselect **Allow access to recordings**.

Cloud extensions

The body worn system comes with a set of standard features out of the box. The Cloud extensions are a set of additional cloud-based capabilities.

Available cloud extensions are:

Assisted GNSS (ephemeris) – Improves the location data performance, and helps decrease the time it takes to get the first fix.

Email notifications – The notifications help reduce time spent monitoring the system health. See *Email notifications on page 27* for more information.

Assisted firmware upgrade – Lets you install the latest system firmware without downloading it to your computer first. It also shows you what's new in a firmware upgrade, directly in AXIS Body Worn Manager, before you install it. You can choose to receive email notifications when there's a new firmware version available.

Note

   Once enabled, Cloud extensions can't be turned off without resetting the system.

To turn cloud extensions on:

1. Go to **Settings** > **Cloud**.

2. Turn **Cloud extensions** on.

3. Select a **Cloud server location**.

Note

- To enable cloud extensions, you also need to make sure that your body worn system has access to ***.bodyworn.axis.cloud**.
- The Cloud server location is the geographical location where your data is stored. You can only change the cloud server location by resetting the body worn system.

These are the hostnames used by bodyworn.axis.cloud that the system must have access to when setting up and when using cloud extensions:

Global, *.bodyworn.axis.cloud			
Region	Domain	Port	Purpose
Global	logs.bodyworn.axis.cloud	443 (HTTPS)	Endpoint for uploading zipped logs from system controller. (Azure Front Door)
Global	flags.bodyworn.axis.cloud	443 (HTTPS)	API for feature flags. Proxy for api.flagsmith.com. (Azure Front Door)
Global	agnss.bodyworn.axis.cloud	443 (HTTPS)	API for fetching Assisted GNSS (GPS) data files. (Azure Front Door)
Global	api.bodyworn.axis.cloud	443 (HTTPS)	API for global endpoints (i.e. fetching Regions). (Azure Front Door)

Axis body worn solution

Configure your system

Global, *.bodyworn.axis.cloud			
Region	Domain	Port	Purpose
Global	dispatchse1-st.axis.com:443 dispatchse1-st.axis.com:80 dispatchse2-st.axis.com:443 dispatchse2-st.axis.com:80 dispatcher-st.axis.com:443 dispatcher-st.axis.com:80 dispatchus1-st.axis.com:443 dispatchus1-st.axis.com:80 dispatchjp1-st.axis.com:443 dispatchjp1-st.axis.com:80 195.60.68.120:443 195.60.68.120:80 195.60.68.121:443 195.60.68.121:80	443 (TLS) 80 (TLS)	System controller regional onboarding. Used for establishing trust and registering the system controller to a regional onboarding service. The system controller may try to establish connections to any of these addresses. If the system controller can't establish connection it will try another entry in the list. This means that it is okay to allow connections to only a subset, for example, "dispatchse1-st.axis.com:443" and "dispatchus1-st.axis.com:443". We recommend allowing connections to more than one for service availability reasons.
Global	oakcgi.o3c.axis.com	443 (HTTPS)	System controller regional onboarding. Used for retrieving owner authentication key which is required for registering the system controller to a regional onboarding service.

Europe (Germany), *.de.bodyworn.axis.cloud			
Region	Domain	Port	Purpose
EU Germany	logs.de.bodyworn.axis.cloud	443 (HTTPS)	Endpoint for uploading zipped logs from system controller. (Azure Front Door)
EU Germany	flags.de.bodyworn.axis.cloud	443 (HTTPS)	API for feature flags. Front for api.flagsmith.com. (Azure Front Door)
EU Germany	agnss.de.bodyworn.axis.cloud	443 (HTTPS)	API for fetching Assisted GNSS (GPS) data files. (Azure Front Door)
EU Germany	device.de.bodyworn.axis.cloud	443 (HTTPS)	API endpoint onboarding system controllers. Used for initiating onboarding sequence.
EU Germany	axisbws-de.azure-devices.net	443 (HTTPS, WSS)	Endpoint used for application communication between system controller and cloud. (Azure IoT Hub)

Axis body worn solution

Configure your system

Europe (Germany), *.de.bodyworn.axis.cloud			
Region	Domain	Port	Purpose
EU Germany	o3c-01.de.body-worn.axis.cloud o3c-02.de.body-worn.axis.cloud	443 (HTTPS)	System controller regional onboarding. The system controller identifies itself with a trusted certificate and will get Azure IoT Hub credentials in return.
EU Germany	noreply@de.mail.body-worn.axis.com	N/A	Email notifications are sent from this email address.

North America (US), *.useast.bodyworn.axis.cloud			
Region	Domain	Port	Purpose
North America (US)	logs.useast.body-worn.axis.cloud	443 (HTTPS)	Endpoint for uploading zipped logs from system controller. (Azure Front Door)
North America (US)	flags.useast.body-worn.axis.cloud	443 (HTTPS)	API for feature flags. Front for api.flagsmith.com. (Azure Front Door)
North America (US)	agnss.useast.body-worn.axis.cloud	443 (HTTPS)	API for fetching Assisted GNSS (GPS) data files. (Azure Front Door)
North America (US)	device.useast.body-worn.axis.cloud	443 (HTTPS)	API endpoint onboarding system controllers. Used for initiating onboarding sequence.
North America (US)	axisbws-useast.azure-devices.net	443 (HTTPS, WSS)	Endpoint used for application communication between system controller and cloud. (Azure IoT Hub)
North America (US)	o3c-01.useast.body-worn.axis.cloud o3c-02.useast.body-worn.axis.cloud	443 (HTTPS)	System controller regional onboarding. The system controller identifies itself with a trusted certificate and will get Azure IoT Hub credentials in return.
North America (US)	noreply@useast.mail.body-worn.axis.com	N/A	Email notifications are sent from this email address.

Asia-Pacific (Australia), *.au.bodyworn.axis.cloud			
Region	Domain	Port	Purpose
Asia-Pacific (Australia)	logs.au.bodyworn.axis.cloud	443 (HTTPS)	Endpoint for uploading zipped logs from system controller. (Azure Front Door)
Asia-Pacific (Australia)	flags.au.bodyworn.axis.cloud	443 (HTTPS)	API for feature flags. Front for api.flagsmith.com. (Azure Front Door)
Asia-Pacific (Australia)	agnss.au.bodyworn.axis.cloud	443 (HTTPS)	API for fetching Assisted GNSS (GPS) data files. (Azure Front Door)

Axis body worn solution

Configure your system

Asia–Pacific (Australia), *.au.bodyworn.axis.cloud			
Region	Domain	Port	Purpose
Asia-Pacific (Australia)	device.au.bodyworn.axis.cloud	443 (HTTPS)	API endpoint onboarding system controllers. Used for initiating onboarding sequence.
Asia-Pacific (Australia)	axisbws-au.azure-devices.net	443 (HTTPS, WSS)	Endpoint used for application communication between system controller and cloud. (Azure IoT Hub)
Asia-Pacific (Australia)	o3c-01.au.body-worn.axis.cloud o3c-02.au.body-worn.axis.cloud	443 (HTTPS)	System controller regional onboarding. The system controller identifies itself with a trusted certificate and will get Azure IoT Hub credentials in return.
Asia-Pacific (Australia)	noreply@de.mail.body-worn.axis.com	N/A	Email notifications are sent from this email address.

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 user to a camera on page 15*

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.

Export users

You can export entered data for all the body worn users to a CSV file. This can be useful when you need to make changes to your system that require a system reset, but you still want to keep all the user data. After the system is reset, and all the changes are made, you can just import the user's data back into the system again, see *Import users on page 14*.

To export body worn users:

- Go to **Users**.

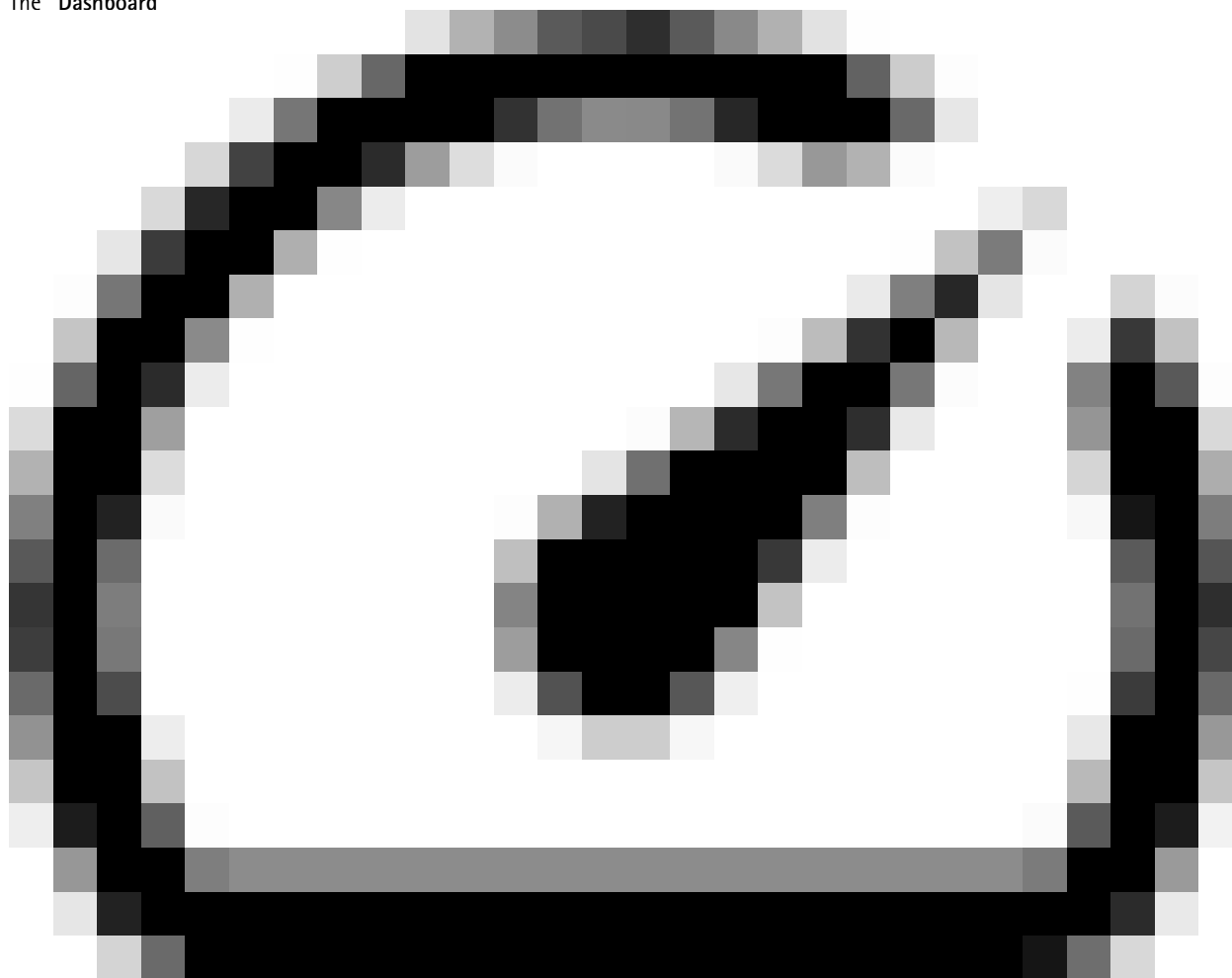- Open the context menu ⋮ .

- Click **Export users**.

System monitoring

Dashboard

The **Dashboard**

gives you an overview of your devices and system health. It also highlights any issues that require attention. If there are any issues the page gives you easy access and help to fix the problem.

A device can have more than one status at the same time. Hover the status icons to view more details.

Download camera usage report

The camera usage report shows for each user how the assigned camera was used for the past seven days. This includes for example, start and stop recording, docking, power on and off, and audio mute.

To download the Camera usage report:

1. Go to **Users**.

2. Open the context menu ⋮ .

3. Click **Camera usage report**.

4. Click **Download**.

The downloaded zip file contains a folder for each user.

> Note
>
> The report contains camera usage for up to seven days. If a previous report was downloaded less than seven days ago, the report contains camera usage from the time of the previous report, and until the time of the new report.

Monitor system controller storage

Monitoring system controller storage can help you identify potential file transfer error.

AXIS Body Worn manager displays **Storage used** and **Storage reserved** for each system controller.

Storage used – The storage in the system controller is used as a buffer when recordings are transferred from a camera to the content destination. A continuous high level of storage used may indicate transfer error.

Storage reserved – When a camera is docked it reserves the memory needed to offload its content to the system controller. When all files are transferred to the content destination, the reservation is removed. Any remaining storage reserved may indicate transfer error.

To view Storage information go to **Devices**, and open the system controller that you're interested in.

Monitor camera use

AXIS Body Worn Manager shows for how long a camera has been in use. For example, this can give you an indication that a camera is lost or needs a firmware upgrade.

To view information about camera use go to **Devices**, and open the camera that you're interested in.

Email notifications

You can receive emails from the body worn system notifying you about the following events:

*   Lost connection to content destination

*   Lost connection to extension system controller

*   System controller storage space is low

*   Failed to synchronize system backup

*   New system firmware available

To turn on system notifications:

1. Go to **Settings** > **Email notifications**.

2. Enter your email address.

3. Optionally, select **Send a test email to verify the address**.

4. Click **Set**.

To stop receiving the notifications, remove the email address and click **Set**.

> Note
>
> *   The Email notifications feature requires access to Cloud extensions.
> *   To send email notifications to more than one person, use a mailing list.

Maintenance

Important

> Always initiate all body worn system maintenance, such as resetting the system, or removing a camera, from AXIS Body Worn Manager.

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 all system controllers, and the cameras that are, or have been docked in the system. The latest logs from a camera are included after it's docked.
- A system report is generated the moment you download it, as well as automatically once every day. It's stored in the system for seven days, and is then replaced by a new one.

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 30*.

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

Change connection file

Replacing the current connection file with a new one, may be a solution if connection to the content destination is lost. This typically happens when the content destination gets a new IP address, or when certain configurations are changed in the content destination.
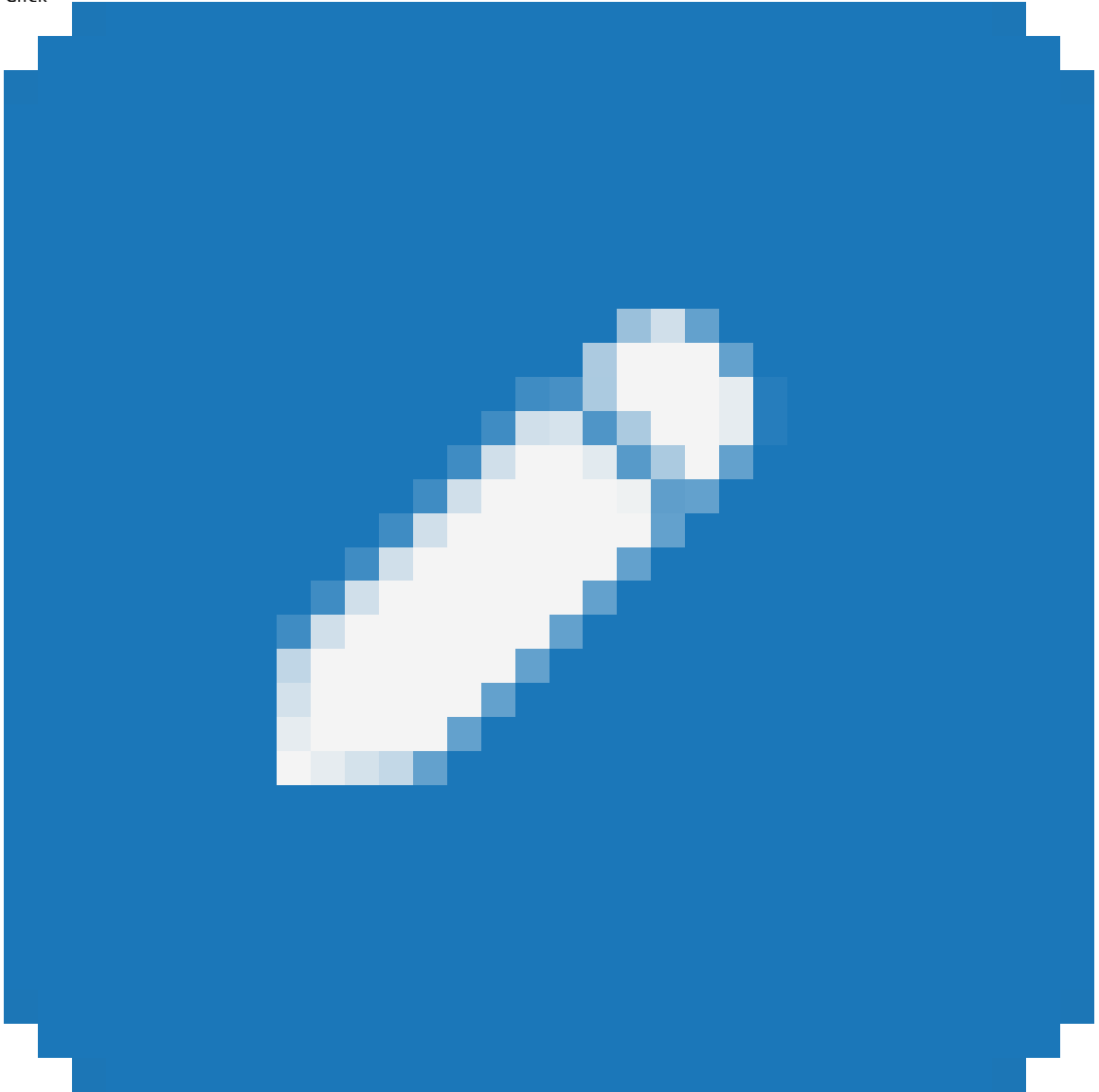
1. Go to **Settings**.

Maintenance

2. Click

under **Configuration** for your content destination.

3. Upload the new connection file.

4. Click **Save**.

Note

> If you want to switch to a different content destination you need to reset the system, see *Reset system on page 31*.

Remove system hardware

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

Maintenance

Remove a camera

Note

You can remove a camera both docked and when it's in use. If you choose to remove the camera when it's in use, 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

- Always remove the extension system controller from the system in AXIS Body Worn Manager before you physically disconnect it.
- 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 a system with a single system controller.*

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

You can reset an extension system controller to factory default settings by removing it from the body worn system, see *Remove an extension system controller.*

If you can't access the body worn system through AXIS Body Worn Manager, you can reset each extension system controller by accessing them separately:

1. Access the extension system controller.

2. Open the context menu ⋮ .

3. Click **Reset system controller**

Note

> The backup extension system controller can't be reset to factory default settings.

Reset system

Important

> - Never remove or reset the content destination before resetting the body worn system. Always reset the body worn system first. If you remove or reset the content destination first, recordings can remain on cameras or in the system controllers, preventing you from resetting the body worn system. This is a security feature ensuring that all evidence is uploaded to the content destination.
> - Never remove cameras or users in the content destination before they're removed in AXIS Body Worn Manager.

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 **Support** > **System reset**.

5. Click **Reset system**.

Remove paired equipment

1. Go to **Users**.

2. Click the user that you want to remove a pairing from.

3. Locate the equipment that you want to remove, and open the context menu.

4. Click **Remove**.

Note

> When a pairing between a body worn user and AXIS Body Worn Assistant is removed from the body worn system, it still remains in AXIS Body Worn Assistant. To replace the existing pairing in AXIS Body Worn Assistant, see *Replace existing pairing*.

System restore

You can restore a system in the unlikely event that the system controller, on which the system was initially created on, malfunctions. Restoring a system with more than one system controller is different from restoring a system with a single system controller:

More than one system controller – Lets you restore the system, including all users, camera profiles, camera assignment, and system settings. When you restore the system from a backup saved on an extension system controller, it becomes the system controller where you access AXIS Body Worn Manager. The system restore takes about the same amount of time it takes to restart the system. See *Restore a system with more than one system controller on page 32* for information on how to restore the system.

Single system controller – Lets you replace the system controller, and reestablish the connection between the body worn system and the existing cameras. See *Restore a system with a single system controller* for information on how to restore the system. To restore the system, you need your latest System restore key, see *Download System restore key*.

Restore a system with more than one system controller

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

www.axis.com/products/online-manual/58704#t10167437

Axis body worn system backup and restore

Restoring the body worn system requires a *System backup on page 9* .

To restore the body worn system:

1. Access the extension system controller containing the system backup (enter the IP address of the system controller in a web browser).

2. Open the context menu ⋮ .

3. Click **Restore system**.

4. Enter the Super admin passphrase.

5. Click **Restore**.

6. Reestablish the connection between the restored system and the existing extension system controllers:

   6.1 Reset all extension system controllers, see *Reset extension system controller on page 31*.

   6.2 Configure all extension system controllers, see *Extend the system on page 17*.

7. Reestablish the connection between the body worn system and the existing cameras. see *Allow cameras on page 33*.

Maintenance

> **Important**
>
> Remember to re-configure the backup when the system restore is done. The previous backup system controller is now where you access AXIS Body Worn Manager. You also need to replace the malfunctioning system controller with a new one.

Restore a system with a single system controller

1. Install a new system controller.

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

3. Click **Create a new system**.

4. In the **Install the latest firmware** step of the system setup, after the firmware upgrade is completed, click **Restore**.

5. Click **Select System restore key**, then locate and open your previously downloaded System restore key.

6. Enter your Super admin passphrase and click **Next**.

7. Finish the system setup.

8. *Allow cameras*.

> **Important**
>
> - Restoring a system with only one system controller means reestablishing the connection between the body worn system and the existing cameras. It doesn't restore system configurations, such as users, camera profiles, content destination, etc.
> - You can only restore a system if you have the System restore key. You may not be able to download a System restore key if the system has failed. We recommend that you download the System restore key during the initial system setup, and store it in a secure location.

Download System restore key

There are two ways to download the System restore key:

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

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

To download the System restore key in AXIS Body Worn Manager:

1. Go to **Support** > **System restore key**.

2. Click **Download System restore key**.

3. Enter the Super admin passphrase that you created in the system setup.

4. Click **Download** and store the System restore key in a secure location.

> **Important**
>
> - The System restore key is passphrase protected.
> - Always store the System restore key and the Super admin passphrase in a secure way.

Allow cameras

If a camera is undocked for eight weeks, for security reasons, it enters safe mode.

You can allow a camera that is in safe mode, back into the system. This requires access to the highest security level in the body worn system, permitted using the Super admin passphrase.
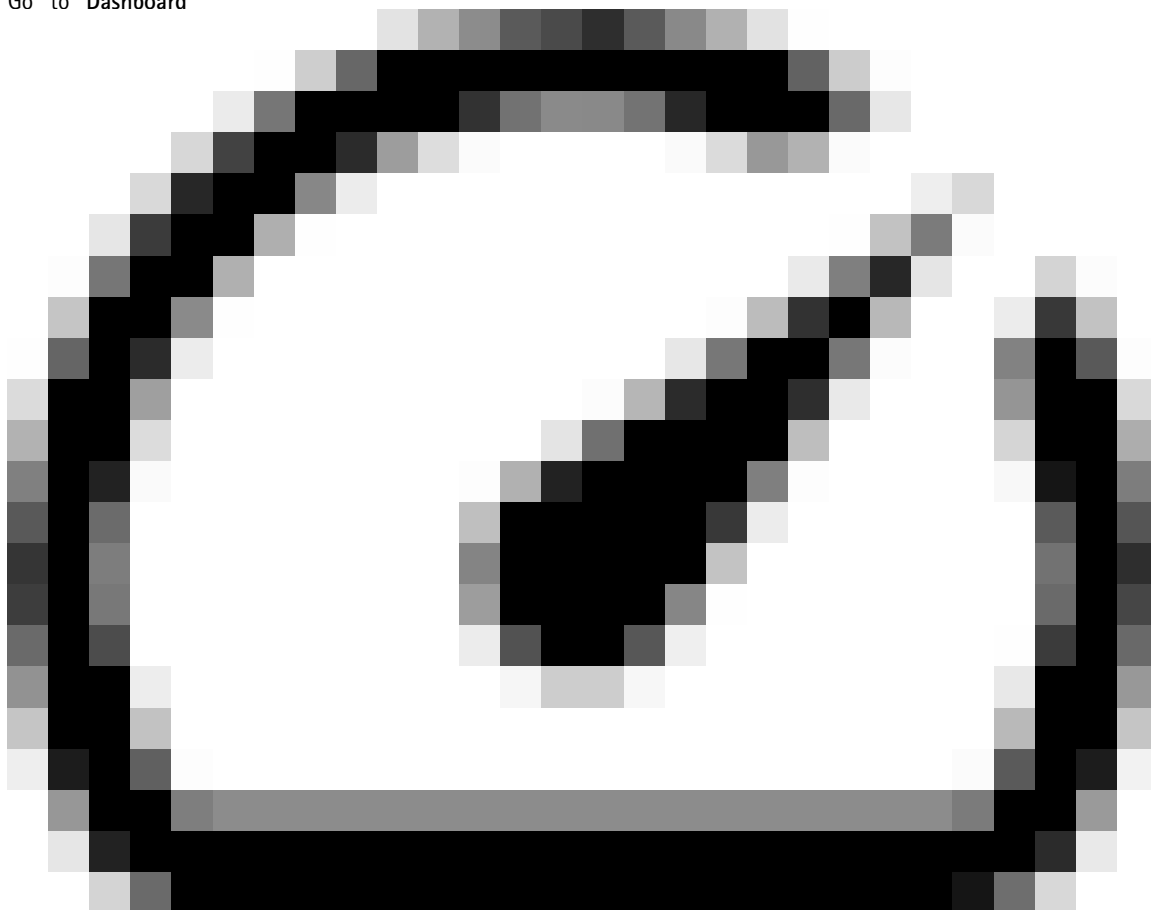
To allow a camera to reestablish the connection to the body worn system:

1. Go to **Dashboard**

.

2. Open the camera with status **In safe mode**.

3. If there is more than one camera in safe mode, select the cameras you want to allow.

4. Click **Next**.

5. Enter the Super admin passphrase.

6. Click **Allow cameras**.

Retrieve recordings from system controller

Content destinations normally accept recordings from body worn users and cameras that have been removed from the content destination. But if this isn't supported, and you remove users or cameras in the content destination instead of in AXIS Body Worn Manager, recordings might not be transferred from the system controller. If this happens, you can download the recordings that weren't transferred to a USB flash drive.

To download recordings:

1. Go to **Devices**.

2. Open the affected system controller.

3. Click **Download recordings**.

4. Insert a USB flash drive with exFAT filesystem, into the affected system controller.

5. Enter your Super admin passphrase.

6. Enter an encryption passphrase for the recordings.

7. Click **Download**.

Note

- Downloading recordings to a USB flash drive requires access to the highest security level in the body worn system, permitted using the Super admin passphrase.

- We recommend using *7-Zip*, which supports AES-256 encrypted archives, to extract the downloaded recordings. Your default zip application may not support archives from the body worn system.

Adjust date and time

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

Important

- We recommend using **NTP server (DHCP)** or **NTP static and fallback server** as opposed to **Manual time**, as these ensure an accurate system time.

- The time and time zone of your body worn system must always match the time and time zone of the content destination.

- If the time set in the body worn system is incorrect, time difference may prevent the GPS from providing location data in the recording.

- A correct system time is critical when using recordings as evidence material.

To set the date and time:

1. *Open AXIS Body Worn Manager on page 8*

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

System firmware

Upgrade system firmware

The body worn system detects new system firmware versions when they are released. A notification appears in AXIS Body Worn Manager.

Note

Automatic system firmware detection requires Cloud extensions and that the system has access to `*.bodyworn.axis.cloud`.

To install the latest system firmware:

1. Go to **Support** > **Firmware**.

2. Click **Install**.

If you don't have Cloud extensions, or if you want to specify another firmware version, instead of the latest:

1. Go to **Maintenance** > **Firmware**.

2. Click **Choose file** to select a system firmware file on your computer.

3. Click **Upload and install**.

Maintenance

A system firmware upgrade takes effect immediately. All system controllers in the system are upgraded. When the upgrade is done, the system restarts. Cameras that are in use are upgraded on docking.

Note

You can find the latest firmware version on *axis.com*.

Firmware version report

The firmware version report shows the firmware version for all cameras and system controllers, in the body worn system, at a given date and time. This provides the traceability and a historical overview of the system and enables system administrators to keep track of status of a device throughout its lifetime.

You can download the Firmware version report under **Maintenance** > **Firmware**.
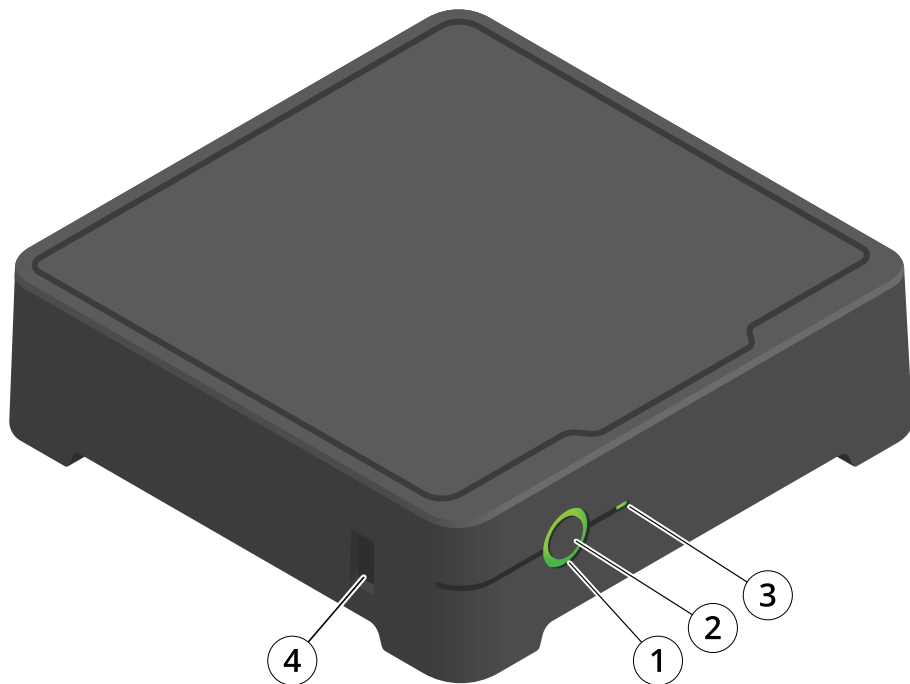
System controller

The system controller is the central integration and management point of the body worn solution. It controls the transfer of evidence, from the body worn camera to the content destination in a secure way.

Note

> The System controller is not a storage device. The storage in the system controller is used as a buffer when content is transferred from a camera to the content destination. The body worn system only works when it's connected to a content destination, where the recordings are stored.

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

Axis body worn solution

System controller

1   *Power connector*
2   *Docking station connectors*
2   *Network connector*

| 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.
Restart an extension system controller remotely	1. Access the extension system controller in your web browser. 2. Open the context menu. 3. Click **Restart system controller**.	Restarting a system controller stops all ongoing processes, and makes it temporarily inaccessible.

Product overview
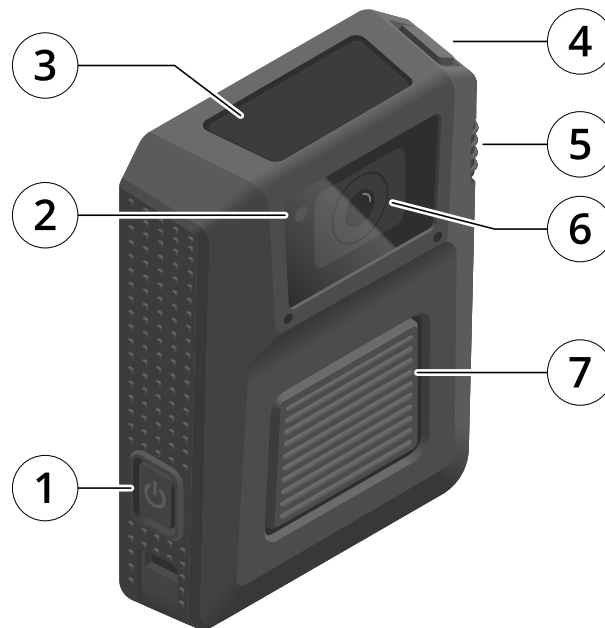
1	*Power button*
2	*Front recording indicator*
3	*Display*
4	*Top button*
5	*Function button*
6	*Camera lens*
7	*Front button*
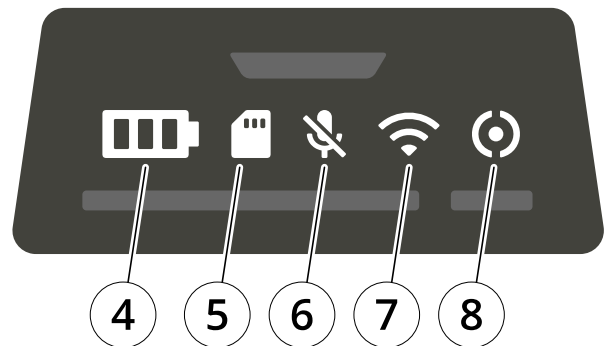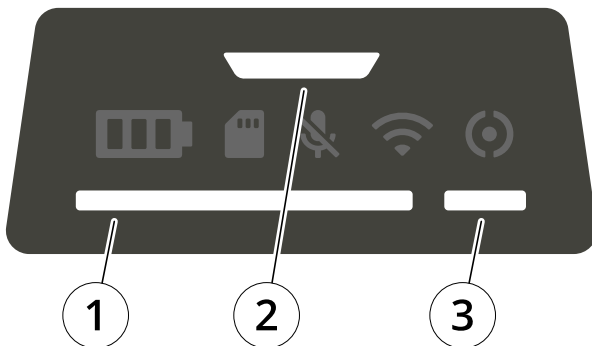
Number	Name	Display feedback
1	Docking status	Green: Camera is ready to use (battery charged, files transferred, software up to date). Pulsing amber: Battery charging, file transfer, software update (any combination of) is ongoing.
2	Recording status	Red: Recording
3	Operation status	Green: Standby, ready to use Flashing green: Less than 0.5 hours of battery (red battery status) or storage (red storage status) left Amber: Recording not possible (storage error, software error, or other operational error)
4	Battery status	Green: >1 hour left Amber: 0.5–1 hours left Red: 0–0.5 hours left
5	Storage status	Green: >1 hour of recording left Amber: 0.5–1 hours of recording left Red: 0–0.5 hours of recording left
6	Microphone	Lights up if you've turned off the microphone
7	Wireless connectivity status	Lights up green: Paired Pulsing amber: Pairing Lights up red: Pairing failed
8	Camera extension	Green: Camera extension connected Pulsing amber: Switching between camera sources when connecting the camera extension to the body worn camera. Recording is disabled. 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 Amber: 0.5–1 hours left 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 Amber: 0.5–1 hours of recording left Red: 0–0.5 hours of recording left

1.   Configurable in AXIS Body Worn Manager.

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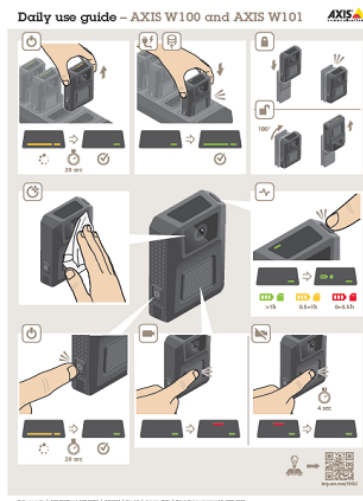
Daily Use Guide

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.

- If you're using self-assign camera assignment, tap your self-assign tag on the RFID reader. All LEDs on the self-assigned camera flash green, indicating that it's ready to be undocked. You must undock the camera within 15 seconds after tapping the self-assign tag. Only one user can self-assign a camera at a time.

- If you're connecting the camera to a holster sensor, make sure that it is 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. 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.

- 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.

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 undocked for eight weeks, for security reasons, it enters safe mode. See *Allow 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.
- Do not leave a fully charged camera on the docking station or connected to USB charging for a long time. 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 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.

- 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.

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.

To 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.

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 with a USB Type-A connector.

- 5 V DC output power bank with a USB Type-A 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.

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
All LEDs are off when the camera is docked	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.
• 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.
  • LED: Operation status amber • 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*.

Behavior	What it means	What to do
• LED: Camera extension red, Operation status green • Beep: 1 short • 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.
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 • Beep: intermittent • Buzz: intermittent	A user is not assigned to the camera.	Dock the camera and assign a user to it, see *Assign a user to a camera*.
LED: Docking status flashes amber	General error	Try the *General troubleshooting steps*. If the problem persists try *axis.com/support*.

Behavior	What it means	What to do
 LED: Docking status flashes amber, Storage red	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 *Dashboard*.
 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.

AXIS TW1201 Mini Cube Sensor

AXIS TW1201 Body Worn Mini Cube Sensor connects to an Axis body worn camera via a USB cable. It gives you more flexibility to choose how you want to wear the main body worn camera.

Number	Name	Description
1	Recording button	Use the recording button to start and stop recording. 1
2	Front recording indicator	Lights up red when recording
3	USB connector	Connects to the main body worn camera

1. You can choose to disable the Front button (used to start and stop recordings) on the main body worn camera, and use only the recording button on AXIS TW1201 Body Worn Mini Cube Sensor. To do this, go to the camera profile in AXIS Body Worn Manager.

Note

AXIS TW1201 Body Worn Mini Cube Sensor has no built in microphone. If audio recording is critical, make sure the microphone on the main body worn camera is free of any obstructions.

AXIS Body Worn Assistant

AXIS Body Worn Assistant is an application that lets you:

- view recorded video

- view live video

- view location data for a recording

- categorize and add description to recorded video if supported by your content destination

- access user help, including the Daily Use Guide

You can download AXIS Body Worn Assistant for Android and iOS, on Google Play and App Store, respectively.

Note

- Recorded video can't be saved to your mobile device.
- The visual watermark in the image is only visible when viewing video in AXIS Body Worn Assistant. The purpose of the visual watermark is to prevent anyone from spreading video without the possibility to trace its origin.
- You can view the recordings in AXIS Body Worn Assistant up until the moment you dock the camera. After docking, the system controller transfers the recordings to the content destination and empties the camera.

Connect AXIS Body Worn Assistant to a body worn camera

Note

Before you connect AXIS Body Worn Assistant to your body worn camera for the first time, the body worn system administrator must pair your body worn user with AXIS Body Worn Assistant on the mobile device.

1. Open AXIS Body Worn Assistant on your mobile device.

2. Tap **Connect**.

3. Follow the on-screen instructions in AXIS Body Worn Assistant.

Pair a body worn user with AXIS Body Worn Assistant

The connection between AXIS Body Worn Assistant and the body worn camera requires a pairing between the body worn user and AXIS Body Worn Assistant. The pairing involves AXIS Body Worn Assistant, AXIS Body Worn Manager, and the body worn camera. The QR Code® and the PIN code generated by AXIS Body Worn Manager are scanned and entered in AXIS Body Worn Assistant resulting in a secure pairing.

Pair and connect AXIS Body Worn Assistant

AXIS Body Worn Manager offers two ways to pair a body worn user with a mobile device.

Local pairing – You have access to the body worn user's camera and mobile device.

Remote pairing – You don't have access to the body worn user's camera and mobile device. The body worn user receives a pairing request per email.

> Note
>
> To complete the pairing, the camera to pair must be assigned to the body worn user.

1. Go to **Users**.

2. Click the user you want to pair with the mobile device.

3. Click to start pairing.

4. In the AXIS Body Worn Assistant option, click **Pair**.

5. Select **Local pairing** or **Remote pairing** and click **Next**.

6. Follow the on-screen instructions in AXIS Body Worn Manager and in AXIS Body Worn Assistant.

> Note
>
> - The QR Code® and the PIN code are valid for 24 hours.
> - You must enter the PIN code in AXIS Body Worn Assistant within 5 minutes after you undock the body worn camera.
> - A mobile device can be paired with one body worn user only.
> - AXIS Body Worn Assistant is paired with a body worn user. This means that you can connect any camera to AXIS Body Worn Assistant, once the camera is assigned to the paired user.
> - The pairing expires if AXIS Body Worn Assistant isn't connected to the camera for eight weeks. To reconnect, remove the old pairing and then create a new one according to the instructions in this section.

Replace existing pairing

1. Remove the existing pairing, see *Remove paired equipment*.

2. Tap the new pairing icon

in AXIS Body Worn Assistant.

3. Confirm that you want to remove the existing pairing in AXIS Body Worn Assistant.

4. Start a new pairing, see *Pair a body worn user with AXIS Body Worn Assistant*.

AXIS Body Worn Assistant user guide

I want to...	Action needed
Skip one frame forward or backward	Double-tap the right side of the video to go one frame forward. Double-tap the left side of the video to go one frame backward.
Watch recorded video in slow motion	Press and hold anywhere on the video.
Watch recorded video	Open **Recordings**. To view new recordings you may need to swipe down to refresh the view.

Watch live video from the camera	Open **Live view**.
Add a category to a recorded video	Open the video you want to categorize. Select one of the predefined categories. See *Category and notes on page 50* for more information.
Add notes to a recorded video	Open the video you want to add notes to. Add your notes. The notes are saved when you leave the **Information** view. See *Category and notes on page 50* for more information.

Category and notes

Categories and notes contain additional information about a recording. This information can for instance help investigators or evidence management systems when building a case, or when managing files. You can add a category and notes to a recording using AXIS Body Worn Assistant, while the recording is on the camera.

Note

These features are available if supported by your content destination.

App permissions

Operating system	Function	Requires	
Android 10 and earlier	Camera	Permission	–
	Location	Permission	–
	Location	Activation	by user
	Wireless	Activation	by app
Android 10 and later	Camera	Permission	–
	Location	Permission	–
	Wireless	Activation	by user
iOS 11 and earlier	Camera	Permission	–
iOS 11 and later	Camera	Permission	–
	Local network	Permission	–

Troubleshooting

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 15*
		Camera is out of battery.	Charge the camera, see *Charging the camera.* If charging the camera doesn't help, see below.
			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: 1. Press and hold the power button on the camera for 4 seconds. 2. Charge the camera using a USB charger. 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*
		The protective film is still on the lens window.	Remove the protective film.

Axis body worn solution

Troubleshooting

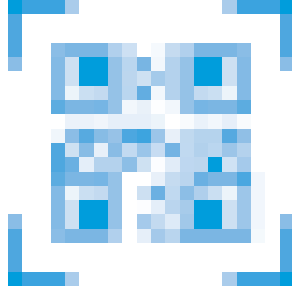|	Problem	Cause	Solution
	LED display doesn't work.	Camera is in silent mode which turns off the display.	Press the top button for 2 seconds, see *Daily use*
	No audio in recordings.	Audio is turned off in the camera profile.	Make sure audio is turned on in the camera profile in AXIS Body Worn Manager.
	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.
	No camera is assigned to the user when the user taps the RFID tag on the reader (using self-assign).	None of the cameras are currently 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.	Wait until a camera is ready for use.
	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 on page 33*
	Camera doesn't charge.	The pogo pins in the docking station are dirty or stuck, preventing proper contact with the camera.	Clean the pogo pins in the docking station using canned air intended for electronics
	Camera doesn't offload files.		

Troubleshooting

	Problem	Cause	Solution
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.
System controller	Can't find system controller in AXIS IP Utility.	You are using an old version of AXIS IP Utility.	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 *Dashboard on page 26* in AXIS Body Worn Manager.
		Many simultaneous offloads affect transfer speed.	Open the device in AXIS Body Worn Manager to check the transfer status. Wait for recordings to be transferred. Transfer status history is displayed for three days after the transfer is complete.
		Camera was undocked before the transfer of the recording was completed.	Open the device in AXIS Body Worn Manager to check the transfer status. Dock the camera and wait for all recordings to be transferred. Transfer status history is displayed for three days after the transfer is complete.
		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 recording 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	The camera has been removed from the content destination.	Rename the user that the camera is assigned to, and restart the system controller.

Troubleshooting

	Problem	Cause	Solution
	destination.	Content destinations normally accept recordings from body worn users and cameras that have been removed from the content destination. But if this isn't supported, and you remove users or cameras in the content destination instead of in AXIS Body Worn Manager, recordings might not be transferred from the system controller.	See *Retrieve recordings from system controller on page 34*
	Connection between the body worn system and the content destination is lost.	Certain configurations, such as the IP address of the content destination were changed.	*Change connection file on page 28*
AXIS Body Worn Assistant	Can't complete pairing	The wireless range between the mobile device and the body worn camera is limited.	Keep the mobile device and the body worn camera closer together.
	Can't connect to body worn camera		
	Can't use **Live view**		
	Can't see the full User ID in the visual watermark.	Only the first 12 characters of the User ID are shown in the visual watermark.	If the User ID is longer than 12 characters, we recommend including the most unique part of it first.
	Can't connect to body worn camera.	The pairing is expired, or removed from the body worn system.	Contact the system administrator and request a new pairing. Once you receive the information needed, open the app and tap the new pairing icon .
RFID reader	The LED on the reader doesn't turn green when connecting it to the system controller.	You are using an RFID reader that is not supported by the body worn system.	Use **External RFID Card Reader 125kHz + 13.56MHz with NFC (USB)**
Video	No location data in text overlay	Location data is turned off	Turn Location data on in the camera profile
		No GPS signal at the start of the recording	–
	No user ID in text overlay	The body worn user has no user ID	Add a user ID to the body worn user

	Problem	Cause	Solution
Holster sensor	Recording doesn't start when unholstering	The holster sensor is not connected to the camera	When you connect the camera to the holster sensor, make sure that it is 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.).
		The holster sensor is uncalibrated	Calibrate the holster sensor. See the *Yardarm Product Documentation* for information.
	Holster sensor doesn't pair or connect to camera	The Holster Aware Setup mobile application is connected to the holster sensor	Close The Holster Aware Setup mobile application and start the pairing process over

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*. 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*.

Also see *Monitor system controller storage on page 27* and *Monitor camera use on page 27* for more help on how to identify potential problems.

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*.

Sharing data with Axis

We collect anonymous data on how users interact with our products and how our products perform. This way we can improve our products and the user experience. We don't collect any personal data.

Please refer to our *Privacy Policy* for details. AXIS Body Worn Manager uses Google Analytics. See *Google Privacy & Terms* for information on How Google uses information from sites or apps that use their services.

To change your privacy settings, go to **Settings** > **Privacy.**