

WHITE PAPER

# Simplifying camera sensor installation with wireless dongle

June 2026

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# 1 Introduction

The traditional process of installing and fine-tuning a multi-sensor camera often involves logistical challenges. Previously, installers relied on colleagues in the office to review the live feed and confirm if the camera had been installed in the right position. This necessitated constant communication, with the colleague in the office directing the installer to make incremental adjustments until the optimal position was reached.

Operating a lift or ladder while listening to these instructions and making adjustments is challenging. By utilizing a wireless dongle, the installation of multi-sensor cameras becomes significantly easier.

With AXIS TU9005 Wireless Dongle, you can make real-time, independent adjustments on-site. It also eliminates the need for a physical network cable. AXIS Q6020-E Panoramic Camera and AXIS Q6300-E Panoramic Camera have USB-A ports which you can connect the wireless dongle to. When you plug the dongle into the camera's USB-A port, it creates a network access point (IEEE 802.11) and this allows the installer to connect to the camera live view and settings interface from a mobile device or laptop, see *USB-A port for wireless dongle*.

## 2 Advantages of AXIS TU9005 Wireless Dongle

AXIS TU9005 enhances installation efficiency and accuracy, thereby resulting in easier and faster deployment.

By connecting the camera directly to a mobile device, installers get an immediate live view. This allows for real-time adjustments to the field of view, zoom, and focus, eliminating guesswork and the need for back-and-forth communication with the office.

Positioning the camera to achieve the optimal view becomes a simple, one-person task. Furthermore, by removing the need for physical cable management during the configuration phase, the time required for each installation is substantially reduced.

Designed for durability and reusability, the wireless dongle is a tool that serves as a long-term asset for many camera projects.

## 3 Compatibility

AXIS TU9005 Wireless Dongle is currently compatible with the following cameras:

- AXIS Q6020-E Panoramic Camera
- AXIS Q6300-E Panoramic Camera

## 4 Secure connectivity

Security is paramount when accessing a camera's live view. AXIS TU9005 creates a dedicated local connection, protected by stringent firewall rules to block unauthorized traffic. You need to connect your device to the camera's network through the wireless dongle.

The dongle utilizes two robust layers of protection, iptables and Network Filter Tables (NFTs). These act as traffic controllers that validate every device attempting to communicate with the system.

- **iptables:** This firewall tracks active connections and ensures that only authorized responses to the camera's own requests are permitted. Iptables remember previous conversations and know to only allow a response back in when your camera sends out a connection request. It effectively prevents unsolicited devices from connecting to the network.
- **NFTs:** This layer inspects every data packet moving between your mobile device and the camera and filters out every unwanted connection.

The system uses TCP 443 and TCP 80 for secure data transmission and uses UDP 67 and TCP 67 to get network addresses. Through that, it ensures that the camera is correctly identified within your secured environment.

## 5 Operational best practices

When you use this wireless dongle, you connect directly to the camera's private access point and not to a public wireless network. For enhanced security, the connection automatically deactivates after two hours, preventing the access point from remaining open indefinitely.

Enabling the wireless connection will deactivate the network between the panoramic camera and any attached PTZ camera, as well as the primary wired network connection to the panoramic camera.

The panoramic camera's USB-A port is powered with 5V, only when `enableOnReboot` is set to true, a supported dongle is inserted and the camera is restarted through the restart button. For the product overview and more information, see *AXIS Q6020-E User Manual* and *AXIS Q6300-E User Manual*.

We recommend that you activate the USB-A port during the installation process and deactivate it once the installation is done. To do this, set `enableOnReboot` to false and restart the camera.



## About Axis Communications

Axis enables a smarter and safer world by improving security, safety, operational efficiency, and business intelligence. As a network technology company and industry leader, Axis offers video surveillance, access control, intercoms, and audio solutions. These are enhanced by intelligent analytics applications and supported by high-quality training.

Axis has around 5,000 dedicated employees in over 50 countries and collaborates with technology and system integration partners worldwide to deliver customer solutions. Axis was founded in 1984, and the headquarters are in Lund, Sweden.