

### How a blind technology keeps an eye on your premises

Network radar for surveillance purposes



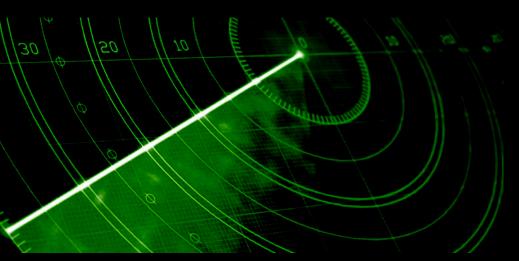


### Always on the radar.

Axis introduced the world's first radar detection solution for surveillance purposes as the perfect complement to Axis network cameras and other network security equipment. Now in its second generation, this proven blind technology offers a long list of possibilities.

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### Why radar?



Maybe you're wondering how – and why – radar made its way from the realms of military and aviation (for example) to the world of surveillance and security. The answer is simple: Radar detects moving objects and individuals and establishes their precise position, angle of movement, and speed completely accurately without relying on visibility. That makes it a particularly valuable tool for detecting trespassers who've made it past your first line of defense.

### Goodbye lights at night

Radar doesn't depend on visibility to detect – or follow – objects and individuals. Darkness, fog and even rain won't trip it up. So unlike visual cameras, it won't miss a threat it can't "see". And for those times when you do need to see, a radar detector can trigger a lamp, so you won't need costly, always–on lighting to keep your premises safe at night.



### Farewell false alarms

With radar, motion detection isn't based on changes in pixels. Instead, radio waves "bounce back" from moving objects. So visual effects caused by moving shadows and beams of light won't set off an alarm. And you can set your detector to react only to objects of a certain size. Which means no more alarms set off by spiders spinning, kitty cats on the prowl or rain drops on lenses. And less money wasted on false alarms.



### Hello lower costs

In addition to savings on lighting and the costs of false alarms, Axis radar technology is in itself a cost-effective alternative to other "blind" technologies including PIR sensors and even thermal cameras. Not least because it makes it possible to track objects without the need for staff intervention.



### Part of a complete Axis security solution

The best thing about Axis radar technology is the role it plays in a complete network security solution from Axis – where the whole is truly greater than the sum of its parts.



### Radar on the job

The role of **AXIS D2050-VE Network Radar Detector** plays out on your second layer of defense. It uses advanced radar technology and intelligent algorithms to detect, verify, and track intruders who've managed to penetrate your perimeter.

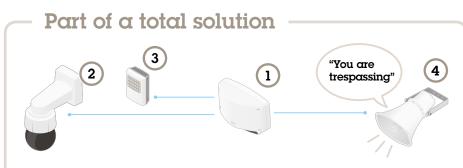
### Detect, deter and verify

A typical scenario might look like this: a radar device detects a trespasser on your premises and embedded analytics send a signal to the network. This sets off a pre-recorded announcement from an Axis network horn speaker, turns on floodlights to warn the intruder away, or triggers a camera to start recording so you can visually verify the threat. Or possibly all three.

### Identify and track

At the same time, information is delivered to an Axis PTZ camera about the exact coordinates, size and speed of the object, and the direction it's traveling. The PTZ camera automatically zooms in on the object and tracks it. And your security personal can make fast, informed decisions about what to do next.

Alternatively, you can choose to only trigger events or track an intruder that crosses a previously defined line or enters a predefined zone.



- **1.** AXIS D2050-VE Network Radar Detector for accurate motion detection with fewer false alarms. 120-degree horizontal coverage and up to a 50-meter (164 feet) range.
- 2. Axis PTZ network camera for automatically tracking detected objects.
- 3. Illuminator to facilitate visual verification and identification via, for instance, AXIS Q6125-LE PTZ Network Camera (triggered by radar detector).
- **4.** AXIS C3003-E Network Horn Speaker to deter intruders with automatic audio announcement (triggered by radar detector).

## When is radar right for you?

Radar for surveillance purposes is perfect for wide-open, outdoor areas with moderate activity. For example, for big retail stores that keep stock outside in a fenced-off area or for industrial sites, storage facilities and critical infrastructure with enclosed outdoor areas. It's particularly useful for detecting trespassers who've breached your perimeter and for detecting façade climbers and preventing intrusion from the roof.

### Why radar for surveillance?

By nature, radar isn't dependent on visibility. Darkness, fog, or even moderate rainfall doesn't impact its ability to detect motion. And it's not "fooled" into reacting erroneously to things like moving shadows, beams of light, small animals, or insects. So you get reliable detection and keep false alarms to a minimum. In contrast, because visual cameras detect motion based on changes in pixels, false alarms are all too common – and all too costly, of course.

### Choose an Axis radar solution when you want:

**Protection you can count on.** Radar is a proven technology that's been doing important work in the military, marine and airline applications for ages. Now it's a second-generation technology in surveillance too.

Fewer false alarms. Radar is not sensitive to things that often trigger false alarms. Like moving shadows or light beams, small animals, or insects.

**Information cameras can't provide.** Such as an object's precise position, speed and direction of movement as well as accurate object classification (is it a person or a vehicle?).

Automatic PTZ tracking. AXIS D2050-VE Network Radar Detector delivers exact coordinates, size and speed and direction of objects, so Axis PTZ cameras, can track them without human involvement.

**Flexible coverage.** 120-degree coverage and up to a 50-meter (164 feet) range as well as near-distance coverage and vertical detection when appropriately mounted.

**Detection with privacy.** When visual video surveillance is not possible or permitted, Axis network radar detectors provide detection without compromising privacy.

A cost-efficient complement to video surveillance. Axis network radar detectors are reasonably priced, they don't rely on always-on lighting, false alarms are much likely, and you'll need fewer guards thanks to remote monitoring and alarms.

Easy integration. Axis network radar detectors are based on an open platform. So they're easy to integrate with Axis network cameras, audio and access control solutions as well as video management systems from Axis and our partners.

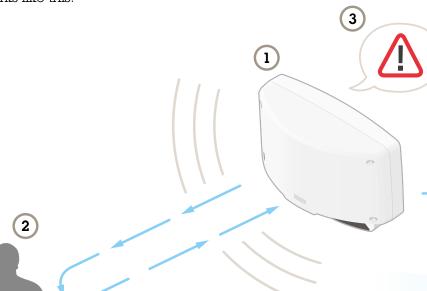
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that was hit.

### How does radar work?

First developed in the 1940s for military purposes, radar technology has been accurately detecting moving objects in low or no light ever since. Since those early days, radar has proved useful in applications and industries as diverse as weather forecasting, fishing, aviation and automotive. And now, Axis has brought radar to the world of surveillance and security.

Radar uses a system similar to the one bats use to navigate in the dark. It works like this:



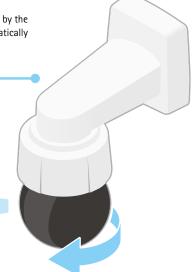
- **3.** A receiver in the radar device detects the reflected signal, which provides information that indicates the precise location, size, and velocity of the object
- 4. In the case of an Axis network radar detector, the information provided by the radar can be used to detect the object, verify its location and automatically activate and steer a PTZ camera to track it.



### Who benefits from radar?

These are just a few examples of industries and applications where our radar detector plays a role:

- > Manufacturing
- > Storage
- > Critical infrastructure
- > Shopping centers
- > Factories
- > Warehouses
- > Schools



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- 1. A radar device transmits signals consisting of radio waves or electromagnetic waves in the radio frequency spectrum.
- 2. When a radar signal hits an object, the signal is reflected or scattered in many directions, with a small portion reflected back to the radar device.

# How network surveillance protects your premises.

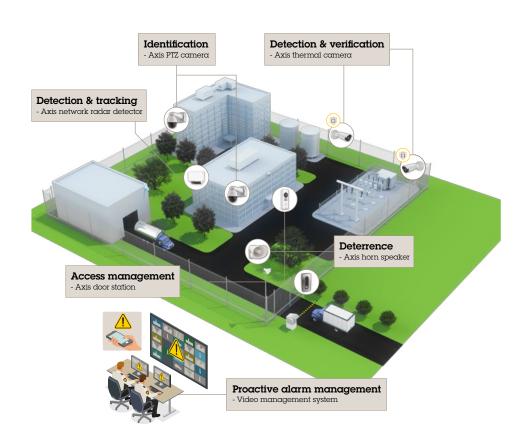


### A complete portfolio of solutions.

Axis network radar detectors are part of a complete portfolio of products that protect your premises from the outside in.

In addition to Axis network radar detectors, our offering includes visual and thermal network cameras, door stations and audio equipment. They provide a cost-effective complement to traditional approaches to security such as fences and guard patrols. Because they all support intelligent analytics that let you monitor your premises and reduce the need for constant staff presence. And open industry standards make integration with your other systems simple and adding to and upgrading your system easy.

We also provide system components like smart switches and media converters for long-distance fiber-optics connection. In fact, our encoders and coax converters mean you can migrate to an Axis surveillance solution at your own pace.



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### **About Axis Communications**

Axis enables a smarter and safer world by creating network solutions that provide insights for improving security and new ways of doing business. As the industry leader in network video, Axis offers products and services for video surveillance and analytics, access control, and audio systems. Axis has more than 3,000 dedicated employees in over 50 countries and collaborates with partners worldwide to deliver customer solutions. Axis was founded in 1984 and has its headquarters in Lund, Sweden.

For more information about Axis, please visit our website www.axis.com.

