





# Make your city safer and smarter

And reduce outdoor lighting energy costs by up to 40% While also simplifying security camera deployment

As a city planner, you want to create a safe and smart city with good video surveillance and good outdoor lighting. Yet, you also want to reduce running costs and get more value from your existing infrastructure. Now you can achieve all that – and more - with our IP video surveillance cameras.

## How cameras from Bosch reduce your costs

Our cameras are mounted on lampposts - both as IP video surveillance cameras and as intelligent detectors. They provide 24/7 security surveillance and improve the safety of citizens. During those times of night when no one is around and no movement is detected, the cameras automatically dim the LED lighting to 20%. But the instant someone appears (pedestrian, cyclist or car), the lights are instantly powered to full. The result? Smart, sustainable lighting with substantially reduced costs.

The monetary value of the cost saving depends on the light technology used. LED-based lighting is very energyefficient compared to traditional lighting, but even with LED lamps when the light

level is reduced to 20%, there are still substantial cost savings to be made up to 40%. An additional benefit is less 'light pollution' after dark.

## How cameras from Bosch simplify camera deployment

Our network cameras use the same electrical power supply as the lamppost. They also use available infrastructure to transmit video. Either wired via the power line, or wireless using WiFi. Hence, no new cables are needed for the cameras. This saves installation costs, but also means that you can quickly and easily add more temporary cameras to further enhance safety as and when necessary - perfect for occasions that attract large crowds of people such as concerts, festivals and sports events.



# How it all comes together

#### Even for existing, already installed cameras

We offer a smart solution that combines video surveillance and street light dimming - not only by deploying new IP video cameras but also, in many cases, by adapting Bosch IP surveillance cameras that are already installed in urban areas. Many streets and inner city areas are already equipped with our video surveillance cameras to help protect people and property. These cameras often have Intelligent Video Analysis (IVA) and are mounted on lampposts. Through our various power line Ethernet (Minos, Uvax) and wireless (Paradox) partnerships, it is now possible to link these IVA cameras to the street lighting - not only for the lamppost on which the camera is mounted, but also for other lampposts in the same street. Once this link has been created, our cameras pass on information that enables smart dimming. By using already installed IVA cameras you can maximize the value of your existing infrastructure. With IVA, the camera detects and analyses objects entering and leaving the street or adjacent area.

### Light the instant it is needed - always

When no approaching objects are detected, the street lighting levels can be reduced. If movement is detected, the camera's algorithm determines the size; for cats, dogs, foxes and other small animals, the lighting remains dimmed. However, when a person, cyclist or car is detected, the lighting level is increased. Based on the speed and direction it becomes possible for the illuminated area to 'follow' the movement. After a predetermined period without motion, the lights are dimmed again.

#### Motion detection even at low light levels

Significantly reducing the lighting level can make it difficult for a camera to detect and analyze motion. That's why some models of Bosch cameras incorporate 'starlight' technology combining a new class of sensor and the latest Intelligent Dynamic Noise Reduction technology. The result is a crystal clear image for accurate analysis and lighting control, even in extreme lowlight conditions.

#### No additional cabling

A major benefit is that cameras are added without additional power or data cables, simplifying installation and saving significant labor and material costs. When using power line ethernet technology from Minos or Uvax, up to 20 Mbit/sec data transfer is possible at distances of up to 300 meters; more than enough for high resolution IP video surveillance images to be transferred back to the lighting junction box, from where they can be sent to wherever you need them. But also in a wireless infrastructure like from Paradox, broadband connections can be realized for individual cameras.

#### Which products can I use?

All our solutions are easily scalable, and therefore suitable for situations ranging from a single street to an entire inner city or multiple district municipality. By, for example, using an AUTODOME camera with IVA on preset positions in a tour, you can control lighting in a big area with just one camera. The following equipment is typically used:

- ▶ FLEXIDOME IP starlight 7000 RD
- ► FLEXIDOME IP starlight 7000 VR
- ▶ AUTODOME IP starlight 7000 HD
- ▶ Minos Syra controller
- ▶ Minos Andros cabinets
- ▶ Uvax PLC Head End cn-900
- ▶ Uvax Node NT-8990
- ▶ Paradox PE.AMI Gateway
- ▶ Paradox PE.AMI Node



starlight 7000 RD



starlight 7000 VR



AUTODOME IP starlight 7000 HD

#### Security all round

In addition to our IP video surveillance cameras, Bosch offers a full line of security products and accessories, as well as a variety of tools to help you specify and design the optimum system for your operation. You can rely on our renowned quality and reliability, backed by our three-year warranty, and our world-class training and technical support. Also, compatibility with thirdparty products is assured, thanks to ONVIF1 and our Integration Partner Program.

For additional information, please refer to our website or contact one of our sales representatives.

### A tradition of quality and innovation

For over 125 years, the Bosch name has stood for quality and reliability. Bosch is the global supplier of choice for innovative technology, backed by the highest standards for service and support.

Bosch Security Systems proudly offers a wide range of security, safety, communications and sound solutions that are relied upon every day in applications around the world, from government facilities and public venues to businesses, schools and homes.

 $^{\, 1}$  ONVIF (Open Network Video Information Forum) ensures interoperability between different products, regardless of manufacturer.

#### **Bosch Security Systems**

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