How to get back to business with intelligent video

HIKVISION®

Moving forward in a new world

‘Business as usual’ has never been so unusual.

In a world where it’s more important than ever that we avoid unnecessary close contact with those around us, it’s hard to imagine a return to busy travel hubs and bustling office blocks.

But intelligent video technology can make a difference.

We’ve reached a striking point in the world of video security, where intelligent cameras offer far more than security monitoring alone. Today, AI-powered cameras can take someone’s temperature to within ±0.3°C of accuracy... they can rapidly alert someone if they’ve forgotten to wear a face covering, and only allow them past when they comply... and they can carefully monitor the flow of people, to help them stay safe according to social distancing regulations. These reliable, always-on eyes are equipped to work carefully and tirelessly alongside their human counterparts. And this means that any densely-populated environment – such as hospitals, airports, schools, retail outlets and warehouses – have the opportunity to power forwards, while protecting the welfare of their staff, customers and visitors.

About this document

In this document, we discuss our full suite of Back to Business video solutions – for temperature screening, mask detection, density and flow control, and access control – and the benefits they can offer to your organization. We explain the importance of an optimal technical installation, so that your Hikvision technology always delivers the best results. And we explore the Health, Safety and Welfare issues that your business could consider as you implement this technology.

Choosing the technology

Densely populated locations are undoubtedly a hotspot for transmission of illness. Transport hubs, offices and warehouses, retail outlets and healthcare facilities are not only closely packed, but feature a high throughput of people, making them an ideal place for viruses and other bugs to spread.

To help prevent this spread, intelligent video technology has the potential to become a powerful tool in a broader range of safety precautions. Indeed, some of the more advanced cameras, powered by AI, can monitor densely populated locations to ensure vital safety precautions are adhered to – including social distancing, mask wearing and flow control – and also provide a first-line temperature screening.

However, for this technology to be worthwhile, it must inspire trust and be proven to work. It must also be suitable for the specific application, and easy to customize to local safety measures, which could well change regularly.

Hikvision intelligent video technology

Featuring advanced AI and machine learning capabilities, our cameras can accurately scan an individual at once for skin temperature, identify compliance with mask regulations, control the flow of people, and ensure only authorized individuals access key locations.

Reliable temperature screening

Temperature screening is a key activity in preventing the unnecessary spread of viruses like the novel coronavirus.

Hikvision temperature screening thermal cameras are ideal for rapid and safe initial temperature screening of staff, visitors and customers. If someone stops briefly in front of the camera, and it detects a skin temperature that is higher than the set parameters, it instantly triggers an embedded audio alarm. Staff can then take further tests for temperature verification.

Importantly, our thermographic cameras are ultra-accurate – to within ±0.5°C, or ±0.3°C with a blackbody – and use our custom AI technology to reduce false alarms. The built-in compensation algorithm also offsets the recorded temperature against ambient temperature, and the distance of the person from the camera, further reducing the room for error.

We offer a variety of high resolution cameras, from fixed cameras, to tripod-based devices that can be set up rapidly.

Hikvision technology can be customized to suit a range of different challenges, settings and industries.

Intelligent mask detection

Wearing a face covering in built-up public places is now standard practice in many countries around the world.

Hikvision's video technology can help to monitor for compliance with mask regulations. The AI algorithms built in to our cameras intelligently detect if a person is wearing a mask. If no mask is detected, the system triggers a pre-defined action, such as a voice prompt, or even prevention of entry through an integrated access system.

A variety of Hikvision cameras are equipped with mask detection, including our thermal and AcuSense camera ranges, as well as MinMoe temperature screening terminals. A specialized interface on Hikvision's DeepinMind NVRs can also be used to visually display temperature and mask status together, making monitoring much easier.

Hikvision cameras feature our own custom AI and machine learning algorithms built in, to deliver a variety of intelligent functionality.

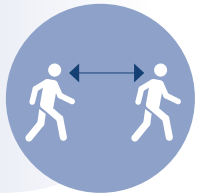
Smart density and flow control for social distancing

Hikvision's Flow Control system can manage the flow of people to support social distancing, even in locations with multiple entrances and exits, such as shopping malls and supermarkets.

Thanks to its highly accurate built-in people counting algorithm, the system will alert if pre-configured maximum numbers are reached. Through integrated digital signage at entrances, you can also inform customers of real-time occupancy data, so they know when it is safe to enter the premises. Plus, an alarm can sound if anyone attempts to enter before the numbers go below the threshold.

People counting can also be integrated with Hikvision 3D modelling technology to ensure customers and staff stick to social distancing guidelines. You can also change thresholds, rules and procedures quickly and easily, which means Hikvision technologies can adapt easily to fast-changing guidelines in different jurisdictions.

Hikvision technologies are easy to adapt to different and regularly changing social distancing guidelines.



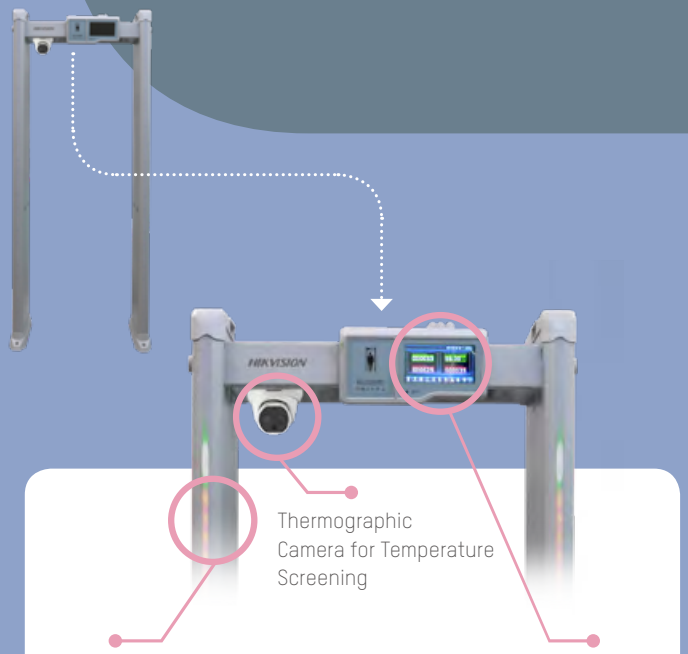
Multi-functional access control systems

For an all-in-one solution, Hikvision's MinMoe terminals unify temperature screening, mask detection, access control and time and attendance in one model. The system only grants entry when guidelines are met, making it especially useful in high footfall workplaces like industrial parks and office buildings.

Importantly, MinMoe employs Hikvision's cutting-edge face recognition and thermographic technology to make access control entirely touch-free. While traditional access control technologies typically use ID card swiping, PIN codes or fingerprint scans – requiring people to frequently touch shared surfaces – MinMoe is much more hygienic, and can reduce the risk of spreading infection. Contactless operation also enables a much higher throughput of people compared to manual keypads and terminals.

Hikvision solutions such as MinMoe offer a range of capabilities in one intelligent, great value package.

Making the best of the technology



Intelligent video technology can become an indispensable part of a safety monitoring program. But to get the most from it, it's important to appreciate its limitations.

Consider non-contact temperature screening, for example; this technology can:

- Detect the surface skin temperature of a person
- Reduce the potential risk associated with physical contact
- Indicate when temperature is outside of the 'normal' range that was set when the device was installed
- Provide a useful audit trail of steps taken to assist with someone's health, safety and welfare

However, non-contact temperature screening cannot:

- Detect viruses
- Detect a fever
- Work effectively if the skin is covered (for instance, by the peak of a cap)

Such technology should only ever be used as a first line of screening, before secondary measures to confirm. What's more, it's important for businesses to use it alongside a full program of additional health and safety procedures, which include but are not limited to handwashing, regular disinfection of surfaces, wearing protective clothing such as masks, and social distancing.

Staff, customers and all parties using these technologies must understand their limitations, and recognize how they work alongside other measures, in order to avoid setting incorrect expectations.

Vertical applications

Healthcare

Help patients, staff and visitors stay safe in a variety of healthcare settings.

Retail

Contribute to a safer environment and better shopping experience for customers and staff.

Industrial parks

Boost the safety of daily operations while enhancing long-term management efficiency.

Buildings

Integrate a reliable layer of added protection into security and access control systems.

Hotel

Enhance customer confidence with advanced products and safety measures.

Helping staff to help everyone

Hikvision also offers a range of discreet body-worn cameras. These can support essential workers as they work to uphold legal requirements such as social distancing, helping to keep both customers and staff safe.

Optimizing the installation and use

Importantly, for video cameras to deliver value as part of any health and safety programme, it's vital they are installed and used according to specific instructions.

Quite simply, installation and usage can affect the performance of the technology. While each of our devices has its own specific installation requirements, below are some general tips that your local Hikvision installer should follow when installing our devices. All installers should adhere to these tips prior to any installation of Hikvision technology.

Key installation tips for Hikvision cameras, terminals and screening products

Camera positioning and height

- All cameras must be mounted appropriately to avoid loss of accuracy and performance
- The installation height of each camera must be adjusted according to camera resolution and focal length
- People-counting cameras must be mounted vertically above the passenger flow. The flow of people beneath the cameras should be in a vertical, up-and-down direction, and the width of the passageway should be the camera's counting width
- All Hikvision devices must be firmly installed, to avoid errors caused by shaking

Ambient conditions

- Avoid installing devices in hot or changeable environments. All cameras require indoor environments with calm air, consistent temperature and no direct sunlight
- For thermal cameras especially, avoid installation in semi-open locations that may be prone to changes in ambient conditions, such as doorways
- There should be enough stable, visible light. All devices should be installed so as to avoid backlighting, high temperature targets, and reflections in the field of view as far as possible

Setting up the detection area

- Plan a 'one-direction path', to ensure that cameras capture the full faces of all those passing by or stopping
- For flow control, avoid an uneven detection area; no slopes or steps
- For flow control through turnstiles, use one people-counting camera per turnstile
- Avoid obstacles in the field of view, such as glass doors that block the camera

Device start-up and usage

- After initial start-up of a temperature screening device, wait more than 90 minutes for preheating
- Before conducting a thermal scan, give people three to five minutes to allow their body temperature to stabilize
- When using MinMoe, people must stand at a fixed distance, pass one by one, make a short stop, and face directly to the camera
- Hikvision cameras support efficient group screening, but one-by-one screening is suggested for more accurate results

Considering the Health, Safety and Welfare Policy

Another essential matter to consider when implementing video screening is the Health, Safety and Welfare Policy that you run along with the technology. This includes key HR and legal matters that may affect all those coming into view of the cameras.

Each element of this process should be tailored to your business, your environment and your policies. To that end, each business is advised to seek legal counsel where appropriate, to tackle unique aspects and individual requirements.

The text below does not address every possible situation; however, it can be useful to include the points below in your considerations.

Operational considerations

Consideration needs to be given and a policy introduced for the effective screening and management of visitors to the facility.

For example, in the case of temperature screening, it's important to consider things such as:

- Who is going to be present to monitor the screening, and to pick up any events triggered by high temperature readings?
- What happens if members of the public object to either being screened or asked to undertake further screening?
- Will a visitor registering a temperature outside of set parameters be asked to leave, or to undergo further screening by use of a thermometer?
- What facility will be made available to that person?

In addition, for other technologies such as mask detection and MinMoe access control, you may also want to consider:

- Does a member of staff need to be present to guide users towards the MinMoe terminal?
- What happens when the system detects no mask? Will you have disposable masks on hand?

For flow control technologies, you may want to consider things like:

- How many people can you safely accommodate on your premises at any one time?
- What happens if people still proceed to enter a location that has reached full safe capacity?
- If the system sounds an alert to one or more individuals, asking them to maintain social distancing, how will you enforce this?

Consent to screening

Consideration should be given to who is being screened. If this is just your own staff, consent should be obtained by the completion of a simple form on the first day of their return, or in advance via HR.

There should also be clear communications to inform employees of the video technology, the nature and extent of the monitoring, and its purpose. We recommend telling staff what has changed from your normal policies.

Data considerations

The use of today's video techniques often requires consideration of privacy. Video techniques like facial recognition, for example, reveal 'personal data', which is defined as 'processing personal data', and privacy regulations apply (such as GDPR in the EU).

When using technologies like MinMoe for employee access control and time attendance, the facial information of employees must be processed, making consent essential. Consent for processing facial images should be obtained from each employee, and they should be clearly advised that this data will be used only for future access control/ time attendance. If employees change their mind, they should also be given the option to withdraw their consent.

The data of a human subject's body temperature generated during automated temperature measurement is not defined as a 'personal data' under certain data protection laws. However, it cannot be ruled out that data protection law does apply in the case that it's possible (even subsequently) to identify the persons passing the cameras.

Hikvision has endeavored to optimize our products and help our customers to reduce the compliance risks regarding data protection law. However, it is still important for you to check the guidance for your business and geography regularly, and seek legal advice if necessary.

Find out more

To find out more about the full range of Hikvision intelligent video camera products and solutions, and to explore how they could protect your staff, your customers and everyone that visits your premises, visit *www.hikvision.com/en/solutions/back-to-business*

About Hikvision

Hikvision is a world leading IoT solution provider with video as its core competency. Featuring an extensive and highly skilled R&D workforce, Hikvision manufactures a full suite of comprehensive products and solutions for a broad range of vertical markets. In addition to the security industry, Hikvision extends its reach to smart home tech, industrial automation, and automotive electronics industries to achieve its long-term vision. Hikvision products also provide powerful business intelligence for end users, which can enable more efficient operations and greater commercial success.

HIKVISION

Follow us on social media to get the latest product and solution information

www.hikvision.com

HikvisionHQ

HikvisionHQ

hikvisionhq

Hikvision

Hikvision_Global

Hikvision Corporate Channel