

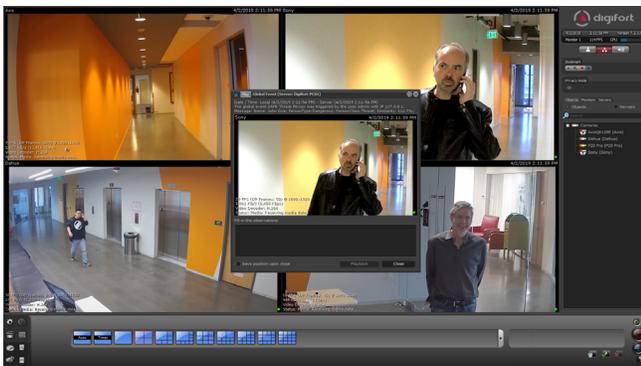
# SAFR™ facial recognition for live video integrated with Digifort VMS

Optimized for live video, SAFR™ for Security delivers exceptionally accurate facial recognition to integrate seamlessly with Digifort VMS. Through vigilant 24/7 monitoring, real-time global events, and automatic bookmarks, SAFR taps the power of AI to overcome the limits of physical security by providing enhanced visibility and situational awareness.

## Key Features

### Global Events

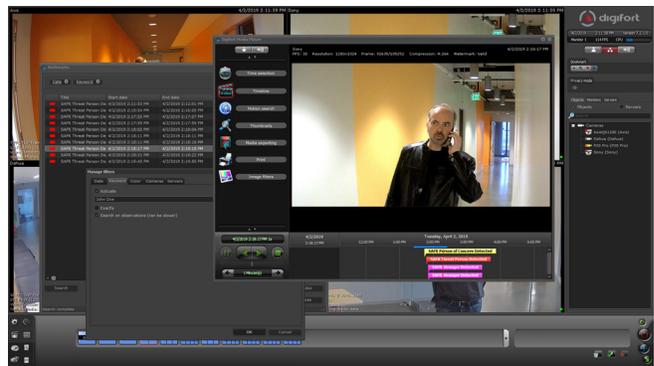
Security professionals can customize real-time alarms and be instantly notified when persons of interest enter or leave a monitored area, marking a global event. The Digifort video player displays the time between when the global event occurred and when a security response was initiated.



Digifort VMS alarm activated by SAFR facial recognition

### Automatic Bookmarks

Teams can create automatic bookmarks for a variety of conditional scenarios. Bookmarks contain rich searchable metadata to enable more efficient investigative and forensic work with recorded video.



Digifort VMS bookmarks automatically generated with SAFR facial recognition

SAFR for Security is compatible with Digifort VMS Version 7.2.1

*See reverse for more technical specifications*

### Live Analytics

SAFR provides actionable data for live analytics with rich metadata. View traffic volumes, demographic composition, dwell times, and data exports. Configure powerful custom actions and alarms based on recognition events, from turning on lights to initiating a building lockdown.

# SAFR for Security Specifications

## Technical Proof Points

|  |  |
|--|--|
| Accuracy   | 99.87% accuracy for Labeled Faces in the Wild <sup>1</sup> with industry-leading performance.  |
| Performance  | SAFR edge intelligence recognizes a face moving through live video in under 100 milliseconds, 3-5x as fast as competing algorithms. In the July 2019 NIST results, SAFR tested as both the fastest and most compact algorithm among algorithms for wild images with less than 0.0335 FNMR (False Non-Match Rate). <sup>2</sup> |
| Low Bias   | SAFR is among the top algorithms to perform consistently across a range of skin tones, and is one of the least-biased algorithms with respect to gender and skin tone when compared to market leaders, as tested by NIST.  |
| Total Cost of Ownership  | SAFR's compact algorithm efficiently uses 1/5th the compute power of comparable solutions to achieve similar recognition results, equaling nearly \$500K in savings on a 250-camera deployment.  |
| <p><sup>1</sup> SAFR recognizes faces with proven 99.87 percent accuracy for Labeled Faces in the Wild (LFW), based on the University of Massachusetts benchmark.</p> <p><sup>2</sup> This means SAFR is able to sample a face multiple times during the same period of time of other algorithms, subsequently compounding SAFR's accuracy. Results shown from the National Institute of Standards and Technology (NIST) do not constitute an endorsement of any particular system, product, service, or company by NIST: <a href="https://www.nist.gov/programs-projects/face-recognition-vendor-test-frvt-ongoing">https://www.nist.gov/programs-projects/face-recognition-vendor-test-frvt-ongoing</a>.</p> |  |

## Basic Specifications

|   |  |
|---|--|
| Facial detection speed                  | 15-20 milliseconds   |
| Facial recognition speed – local        | 60-100 milliseconds  |
| Facial recognition speed – cloud        | 200 milliseconds   |
| Maximum number of detection cameras     | Unlimited: Up to 20 cameras per server (limited only by available CPU and GPU <sup>1</sup> )                                       |
| Maximum number of cameras               | Horizontally scalable to any number of IP cameras  |
| Supported camera types                  | SAFR supports any IP camera, as well as USB and integrated cameras. Cameras are configured manually, or automatically using ONVIF. |
| Maximum number of faces in DB           | 2 million  |
| Maximum number of histories per face    | Unlimited  |
| Facial image dimensions for recognition | Minimum 40 pixels, chin to forehead; for maximum accuracy, we recommend 160 pixels.  |
| File types of images for import         | JPG, PNG   |
| File types of video for import          | MOV, MP4   |
| <sup>1</sup> GPU supported on Windows.  |  |

## Digifort VMS

|   |                         |
|---|-------------------------|
| Digifort Mobile Client <sup>1</sup>   | Android and iOS devices |
| Digifort VMS  | Version 7.2.1           |
| <sup>1</sup> Mobile app users connect to the mobile server to receive alarms based on SAFR detections, view live video streams and video playback of SAFR bookmarks, global events, and more. |                         |

## System Requirements

### SAFR Desktop for Windows

| Recommended   | Minimum   |
|---|---|
| SAFR Desktop<br>Windows Server 2016 or later<br>Windows 10<br>Intel Core i9-7980XE, or AMD Ryzen 7 2700X or faster<br>1GB RAM per connected camera<br>1.5GB available storage<br>NVIDIA GeForce GTX 1070 Ti<br>NVIDIA driver 418.96+ for GPU-enhanced performance | SAFR Desktop<br>Windows Server 2016 or later<br>Windows 8.1 or later<br>.NET Framework 4.6.2 or later<br>Intel Core i5-8259U, or AMD Ryzen 7 2700X<br>1GB RAM per connected camera<br>1.5GB available storage |
| This configuration supports up to eight 4K cameras or 9+ 1080p cameras. <sup>1</sup>  | This configuration supports 2-3 4K cameras or 4+ 1080p cameras. <sup>1</sup>  |
| <sup>1</sup> Number of cameras is based on an average of five visible faces in a 4K resolution camera, running at 15 frames per second. Using fewer faces per camera and lower resolution will enable support for more cameras.                                   |   |

### SAFR Server for Windows

| Recommended  | Minimum  |
|--|--|
| SAFR Server<br>Windows Server 2016 or later<br>Windows 10 or later<br>.NET Framework 4.6.2 or later<br>Intel Core i9-7980XE, or AMD Ryzen TR 1950 or faster<br>32GB available RAM<br>1TB available storage | SAFR Server<br>Windows Server 2016 or later<br>Windows 8.1 or later<br>.NET Framework 4.6.2 or later<br>Intel Core i5-8259U, or AMD Ryzen 7 2700X<br>16GB available RAM<br>8GB available storage |

For more information:

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