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.

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 alarm activated by SAFR facial recognition
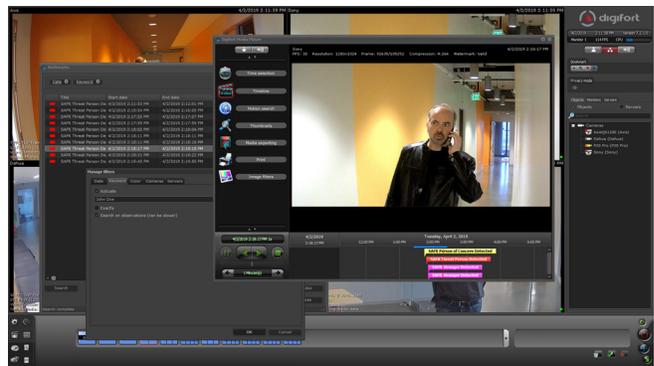
Digifort VMS bookmarks automatically generated with SAFR facial recognition

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	99.86% accuracy for Labeled Faces in the Wild[1] 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 April 2019 NIST results, SAFR tested as both the fastest and most compact algorithm among algorithms for wild images with less than 0.025 FNMR (False Non-Match Rate).[2]
Lack of Bias	SAFR is among the top five to perform consistently across black and white skin tones, and showed less bias 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.

[1] SAFR recognizes faces with proven 99.86 percent accuracy for Labeled Faces in the Wild (LFW), based on the University of Massachusetts benchmark.

[2] 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: https://www.nist.gov/programs-projects/face-recognition-vendor-test-frvt-ongoing.

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[1])
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

[1] GPU supported on Windows.

Digifort VMS

Digifort Mobile Client [1]	Android and iOS devices
Digifort VMS	Version 7.2.1

[1] 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

Cloud deployment: SAFR Desktop for Windows

Recommended	Minimum
SAFR Desktop Windows 10 Intel Core i9-7980XE 16GB RAM, 256GB Disk NVIDIA GeForce GTX 1070 Ti NVIDIA driver 418.96+ for GPU-enhanced performance	SAFR Desktop Windows 8.1 or later Intel Core i5-8259U or better 16GB RAM, 8GB available storage
This configuration supports up to 8 cameras (4K or 1080p)[1]	This configuration supports 2-3 cameras (4K or 1080p)[1]

[1] Number of cameras is based on an average of 5 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.

On premises: SAFR Platform & SAFR Desktop for Windows

Recommended	Minimum
SAFR Platform Windows 10 Intel Core i9-7980XE 32GB RAM, 1TB Disk Windows Server 2016 or later	SAFR Platform Windows 8.1 or later AMD Ryzen 7 2700X or better 16GB RAM, 8GB available storage Windows Server 2016 or later .NET Framework 4.6.2 or later
SAFR Desktop Windows 8.1 or later AMD Ryzen 7 2700X or better 16GB RAM, 8GB available storage NVIDIA GeForce GTX 1070 Ti NVIDIA driver 418.96+ for GPU-enhanced performance .NET Framework 4.6.2 or later	SAFR Desktop Windows 8.1 or later Intel Core i5-8259U or better 16GB RAM, 8GB available storage
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For more information:

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