SAFR™ facial recognition for live video integrated with Milestone XProtect®

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

Key Features

Video Overlays

SAFR for Security VMS integration enables live video overlays that identify strangers, threats, and concerns, as well as employees, VIPs, or tagged individuals.

Alarms & Notifications

Security teams can customize real-time alarms to be instantly notified when persons of interest enter or leave a monitored area. No matter the use case — multi-factor authentication, building system integration, unobtrusive monitoring, threat detection, and more — notifications can be further customized to initiate any number of security responses.

Automatic Bookmarks

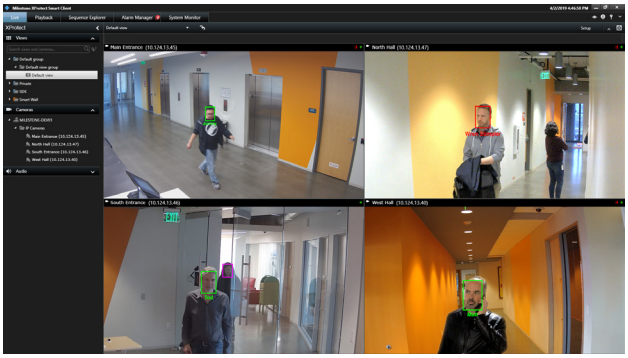
Teams can create automatic bookmarks for a variety of conditional scenarios. Bookmarks and searchable metadata enable more efficient investigative and forensic work with recorded video.

Live Analytics

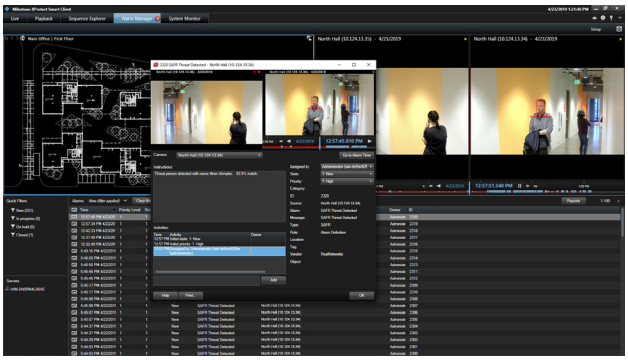
SAFR provides actionable data for live analytics with rich metadata. View traffic volumes, demographic composition, dwell times, and data exports. Configure powerful custom actions and alarms based on recognition events, from turning on lights to initiating a building lockdown.

SAFR for Security is compatible with Milestone XProtect® 2019 R1

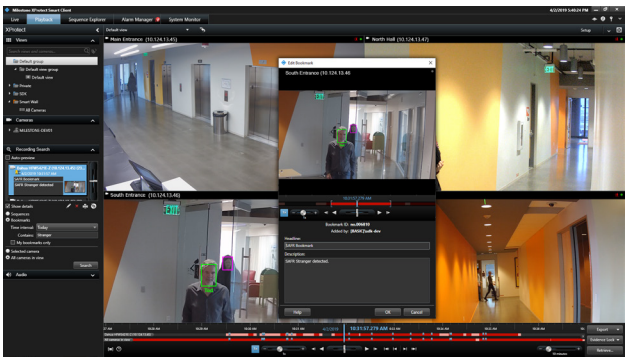
See reverse for more technical specifications



Milestone XProtect® monitoring with SAFR facial recognition overlays



Milestone XProtect® alarm activated by SAFR facial recognition



Milestone XProtect® bookmarks automatically generated with SAFR facial recognition

SAFR for Security Specifications

Technical Proof Points

Accuracy	99.87% 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 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).[2]
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.

[1] SAFR recognizes faces with proven 99.87 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.

Milestone XProtect®

Milestone Mobile[1]	Android[2] OS 5.0 or later iOS 10.0 or later iPhone, iPad, and iPod Touch
Milestone XProtect® 2019 R1	Version 13.1a

[1] Mobile app users connect to the mobile server to receive alarms based on SAFR detections, view live video streams and SAFR-generated video overlays, view mobile video playback of SAFR bookmarked events, monitor and control doors, and more

[2] The minimum recommended resolution for Android devices is 320 x 480.

System Requirements

SAFR Desktop for Windows

Recommended	Minimum
SAFR Desktop Windows Server 2016 or later Windows 10 Intel Core i9-7980XE, or AMD Ryzen 7 2700X or faster 1GB RAM per connected camera 1.5GB available storage NVIDIA GeForce GTX 1070 Ti NVIDIA driver 418.96+ for GPU-enhanced performance	SAFR Desktop Windows Server 2016 or later Windows 8.1 or later .NET Framework 4.6.2 or later Intel Core i5-8259U, or AMD Ryzen 7 2700X 1GB RAM per connected camera 1.5GB available storage
This configuration supports up to eight 4K cameras or 9+ 1080p cameras.[1]	This configuration supports 2-3 4K cameras or 4+ 1080p cameras.[1]

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

SAFR Actions for Windows

Recommended	Minimum
SAFR Actions Windows Server 2016 or later Windows 10 or later Intel Core i5-8259U, or AMD Ryzen 7 2700X 1GB available RAM 1GB available storage	SAFR Actions Windows Server 2016 or later Windows 8.1 or later Intel Core i5-726OU, or AMD Ryzen 7 2700X 1GB available RAM 1GB available storage

For more information:

visit the Milestone Marketplace | SAFR.com | email: bizdev@realnetworks.com

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