# SAFR®

Face Recognition for Tactical Drones and Ground Robots

SAFR® computer vision SDKs bring enhanced intelligence to military and public safety drones, making ISR missions more effective.

UAVs/UGVs with edge AI have the potential to provide tactical teams with unprecedented situational awareness, but to be useful in real-world deployments, computer vision products must be accurate under real-world conditions. The SAFR facial recognition algorithm has the highest effective accuracy for live video, as measured by the National Institute of Standards and Technology (NIST).* Sometimes you get just one look — and with SAFR, one look is enough, regardless of pose and lighting.
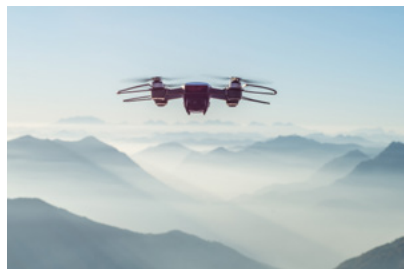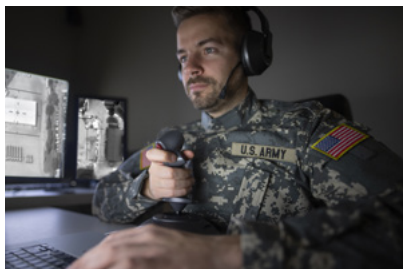
Next Gen ISR

- Instantaneously detect and recognize threats across large swaths of territory.
- Get on-board, real-time insights or perform forensic analysis on streamed or archived data.

Autonomous UAVs/UGVs

- Operate beyond visual line of sight (BVLOS) to enhance awareness and protect forces.
- Accurately identify or count occupants before clearing or entering buildings.
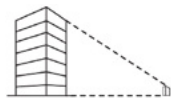
Public Safety

- Operate in unsafe or inaccessible terrain or buildings during emergency response missions.
- Detect survivors and recognize missing persons.
- Deploy on police bodycams.

99.87% ACCURACY
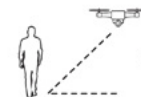99.87% accurate recognition in the wild

1 KM RANGE
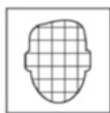Recognizes faces from 1 km away

≥50 PIXELS PER FACE
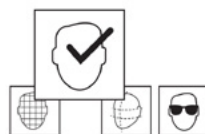Recognizes faces from ≥50 pixels per face

45° PITCH
Recognizes faces at up to 45° pitch

Supports low-res reference images

Auto-upgrades to higher-quality reference images

Detects and reports occluded faces

World-class accuracy and performance for a wide range of devices:

Military/Public Safety UAVs • Drone Swarms • Ground Robots • Bodycams • Quadcopters

Ten Reasons to Choose SAFR SDKs

1. **Best in the world for live video accuracy,** according to NIST*

2. **Lightest model** among NIST's most accurate

3. **Deploy entirely offline** or at the edge

4. **Small footprint,** perfect for memory- or power-constrained devices

5. **Data is private and secure**

6. **Flexible deployment options** to easily incorporate into your stack

7. **U.S.-based company** with a track record of innovation

8. **NVIDIA-optimized** for best-in-class performance and efficiency

9. **Predictable pricing model** at a fraction of the cost of cloud services

10. **Low recognition bias** across skin tone and gender

SDK Specifications

The SAFR SDK

Access the full capabilities of the SAFR platform through RESTful APIs on all major platforms and operating systems. Deploy on premesis or in the cloud.

PLATFORMS	Windows, Linux, macOS, Android, iOS, NVIDIA Jetson
FEATURES	• Detection and tracking in still images and live video streams
	• Recognition in stills and video
	• Person detection
	• Face tracking
	• Characterization (age, gender, sentiment)
	• Identity/watchlist management
	• Event generation and reporting
	• Configurable SAFR Actions
	• Access via REST APIs
	• Common and custom object detection — coming soon
ACCURACY	99.87% LFW, 0.0335 FNMR
DETECTION SPEED	~15-60ms, @1080p and 15FPS
RECOGNITION SPEED	<100ms per face
GPU SUPPORT	NVIDIA

The SAFR Embedded SDK

Optimized for embedded systems and devices with resource constraints as well as those that lack connectivity, the SAFR Embedded SDK runs entirely offline, with no cloud connection.

PLATFORMS	Windows, Android, NVIDIA Jetson
FEATURES	• Detection in still images
	• Recognition in still images
	• Identity management (+/-) 10,000 signatures
	• Access via CLI
	• Offline deployment
	• Characterization (age, gender, sentiment) — coming soon
	• Live video support — coming soon
	• Common and custom object detection — coming soon
SIZE	<25MB
ACCURACY	99.87% LFW, 0.0335 FNMR
DETECTION SPEED	900ms, @720p 1.8GHz ARM processor
RECOGNITION SPEED	300ms per face
GPU SUPPORT	NVIDIA

For more information or a 30-day free trial, visit SAFR.com/developer