

# AI FACE RECOGNITION SYSTEM

## TECHNICAL SPECIFICATIONS

### System Type:

AI-Based Facial Recognition & Video Analytics Platform

### Recognition Mode:

1:N Identification / 1:1 Verification

### Performance:

- Real-time recognition up to 600 FPS (GPU optimized) :contentReference[oaicite:0]{index=0}
- Sub-second matching across large-scale databases (millions of records) :contentReference[oaicite:1]{index=1}

### Accuracy:

- High accuracy in real-world conditions (NIST benchmarked systems) :contentReference[oaicite:2]{index=2}
- Works with partial occlusions, masks, and low-quality input :contentReference[oaicite:3]{index=3}

### Detection Capability:

- Multi-face detection per frame (unlimited detection support) :contentReference[oaicite:4]{index=4}
- Recognition from low-resolution inputs (~40px face size) :contentReference[oaicite:5]{index=5}

### Environmental Tolerance:

- Low light / near darkness operation (~2 lux) :contentReference[oaicite:6]{index=6}
- Extreme angles and motion tolerance
- Crowded environment optimization

### Database:

- Unlimited watchlists and subject database :contentReference[oaicite:7]{index=7}
- Real-time search across millions of identities

### Camera Compatibility:

- Works with any IP camera infrastructure :contentReference[oaicite:8]{index=8}
- Supports HD, 4K, and up to 8K streams :contentReference[oaicite:9]{index=9}

### Deployment:

- On-premise / Edge / Cloud hybrid architecture
- GPU & CPU supported

### Security & Privacy:

- Signature-based biometric processing (no raw images stored) :contentReference[oaicite:10]{index=10}
- GDPR-compliant architecture :contentReference[oaicite:11]{index=11}
- Anti-spoofing / liveness detection

### Integration:

- REST API / SDK available
- VMS & access control integration
- Alarm & event export

Power Requirements:

- Standard server infrastructure
- GPU acceleration recommended