

# 1KOSMOS



Enterprise-level identity  
protection against  
AI-powered threats

1Kosmos and Reality Defender have partnered to bring dual defense to modern identity verification, stopping both traditional fraud attacks and sophisticated AI-generated impersonations.

The integration combines 1Kosmos's certified IDV solution with Reality Defender's multimodal deepfake detection to distinguish authentic biometric inputs from AI-generated forgeries, protecting organizations from typical threats and AI-powered fraud.

# The AI-powered threat has reached critical scale

The democratization of generative AI has clearly shifted the threat landscape for identity verification.

What once required sophisticated technical expertise can now be accomplished with consumer-grade tools and minimal technical knowledge, exposing organizations to fraud that traditional systems can't combat.

## How modern attacks bypass traditional defenses

### Real-time face manipulation

Modern deepfake tools generate synthetic faces during live video capture. AI models swap faces in real-time and map genuine facial movements onto synthetic ones, creating convincing liveness cues.

### Injection attacks

Sophisticated threats bypass physical cameras entirely. Attackers feed synthetic biometric data directly into verification pipelines, making it appear authentic before systems can detect manipulation.

### The critical gap

Traditional Passive Liveness Detection was built to catch physical artifacts, not AI-generated content. Attackers exploit this gap with deepfakes, yet only 22% of financial institutions use AI-based prevention ([Signicat](#)).

## Emerging regulatory pressure

To meet evolving compliance standards, organizations now need identity verification that addresses both traditional presentation attacks and AI-generated impersonations:

### EU AI Act (2025)

Categorizes remote biometric verification as "high-risk," requiring documentation, safety testing, and transparency

### ISO 25456 standard

Will formally establish global testing procedures for injection-resistant systems

### CEN/TS 18099

Defines Injection-Attack Detection (IAD) requirements across Europe

## Deepfake fraud by the numbers

### Annual growth rate

Deepfake content exploded from 500,000 videos in 2023 to a projected 8 million in 2025 ([Deepstrike](#))

### Fraud attempt increase

2,137% rise in deepfake fraud attempts over 3 years, jumping from 0.1% to 6.5% of all fraud attemptss ([Signicat](#))

### Biometric fraud share

Deepfakes now account for nearly half of all biometric fraud attempts globally ([G2](#))

## Financial impact

### Q1 2025 losses

Financial losses from deepfake-enabled fraud in just the first quarter of 2025 ([Variety](#))

### \$39M single incident loss

Amount transferred by a Hong Kong finance worker to deepfake impostors on a video call ([Eftsure](#))

# The solution: 1Kosmos & Reality Defender

## Layered visual authentication with real-time deepfake detection

Reality Defender integrates in-line within 1Kosmos's identity verification workflow, adding AI-generation detection as a parallel security layer.

### How it works

#### User initiates verification

Captures government-issued ID document and selfie video via 1Kosmos

#### Parallel processing

Reality Defender analyzes the image or selfie video for AI-generation signatures while 1Kosmos processes for identity matching

#### Combined validation

Both authenticity verification (Reality Defender) and identity verification (1Kosmos) must pass

#### Authentication binding

Verified identity binds to non-phishable passwordless authentication

## Technical capabilities

### Image & video authentication

Reality Defender authenticates visual media in real-time, identifying AI-generated faces, forgeries, and manipulated content instantly.

### Continuous model evolution

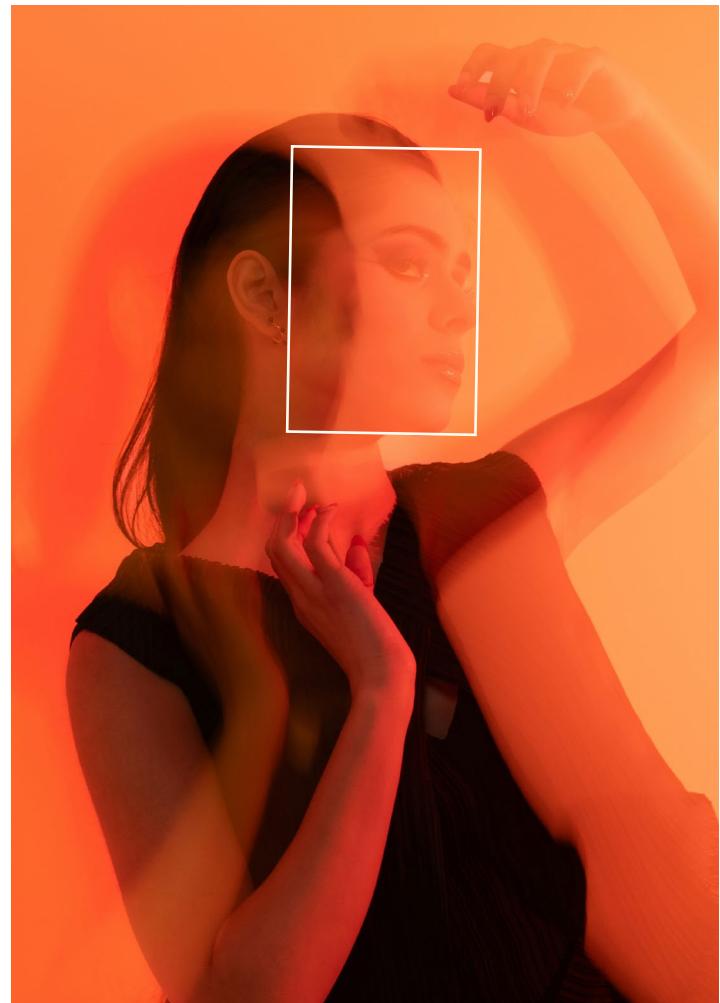
Reality Defender's models are rigorously updated to anticipate and prevent deepfakes, protecting against future AI techniques automatically.

### Enterprise performance

Supports one billion daily authentications with minimal latency while preserving under-one-minute workflows and <0.1% false match rates.

### Deployment flexibility

Offers API integration, on-premises, containerized cloud, and private cloud deployment, all aligned with GDPR, SOC2, and ISO 27001 standards.



# Use cases

## Workforce identity verification

1Kosmos, ranked highest in Gartner's 2025 Critical Capabilities for Workforce Use Cases, now provides additional visual deepfake protection for:

### Remote employee onboarding

- Identity proofing for new hires without in-person verification gains AI-generation detection layer
- Contractor and third-party vendor verification with enhanced confidence
- Global hiring processes with government-issued credential verification across 150 countries

### Privileged access management

- Executives and workers with privileged access requiring highest assurance with liveness detection benefit from deepfake protection
- Mission-critical systems access remains tied to verified, identity-backed biometrics with AI-generation validation
- Multi-million dollar transaction authorizations with enhanced authentication assurance

### IT service desk protection

- Socially engineered ransomware attacks targeting weak identity verification at IT help desks face additional AI-detection barriers
- Account recovery and password reset workflows gain visual authentication layer
- Helpdesk impersonation attempts detected before granting system access

### Virtual collaboration security

- Verified credential tokens for Microsoft Teams, Slack, Discord, Google Chat, Mattermost, and RingCentral enhanced with visual deepfake detection
- Executive video conferences with sensitive information protected by real-time video authentication
- Board meetings and investor presentations with verified participant identity

## Customer identity verification

1Kosmos Customer modernizes the customer journey by differentiating legitimate users from fraudsters hiding behind stolen or synthetic identities, now with enhanced visual authentication:

### Financial services onboarding

- Digital banking account origination with AI-generation detection
- Know Your Customer compliance workflows meeting NIST 800-63-3 certification standards
- Wealth management client verification with enhanced security assurance

### High-value transaction authentication

- Wire transfer authorization with step-up authentication including visual deepfake detection
- Large purchase approvals requiring biometric verification
- Investment transactions exceeding risk thresholds

### Account recovery workflows

- Password reset requests validated against AI-generated impersonation attempts
- Account takeover prevention with enhanced biometric verification
- Credential recovery processes protected by visual authentication layer

### Regulated industry compliance

- Healthcare telemedicine identity verification with liveness checks enhanced for controlled substance authorization
- Insurance claim processing with identity-verified video submissions
- Government benefit distribution with AI-resistant identity proofing

# Active implementations across enterprise sectors



## Financial services

Digital account opening, wire transfer authorization, wealth management onboarding



## Healthcare

Telemedicine consultations, controlled substance prescriptions, patient portal access



## Government & public sector

Citizen services (NIST IAL2/AAL2), benefit distribution, classified system access



## Retail & enterprise

Customer loyalty enrollment, equipment rental, e-commerce account protection, workforce authentication

# Market positioning & industry leadership

The Reality Defender + 1Kosmos partnership represents the industry's first comprehensive response combining:

Capability	Strength
Certified identity verification	NIST 800-63-3, FedRAMP High, Kantara certification, FIDO2
AI-generation detection	Enterprise-grade multimodal detection for images and video
Proven enterprise scale	1 billion daily authentications, 75+ million users
Continuous innovation	Rigorously updated detection models
Privacy by design	Distributed architecture with user-controlled identity wallets

# The path forward

Traditional IDV is not enough to protect against both real and AI-generated biometrics. Multi-layered defenses are required for the next era of digital trust.

Organizations deploying 1Kosmos have already achieved **more than a 40% reduction in identity fraud**, and the addition of Reality Defender's visual deepfake detection extends this protection even further by defending against the **2,137% increase in deepfake fraud attempts** seen across the industry in recent years.

The Reality Defender and 1Kosmos partnership delivers exactly what the market now demands: **integrated visual authentication** that shields against both human and AI-powered threats while ensuring regulatory compliance and operational efficiency.

You now have access to the only IDV solution that protects against **traditional presentation attacks and AI-generated deepfakes** with certified, enterprise-proven technology.

Or call **+1(833)850-5464**