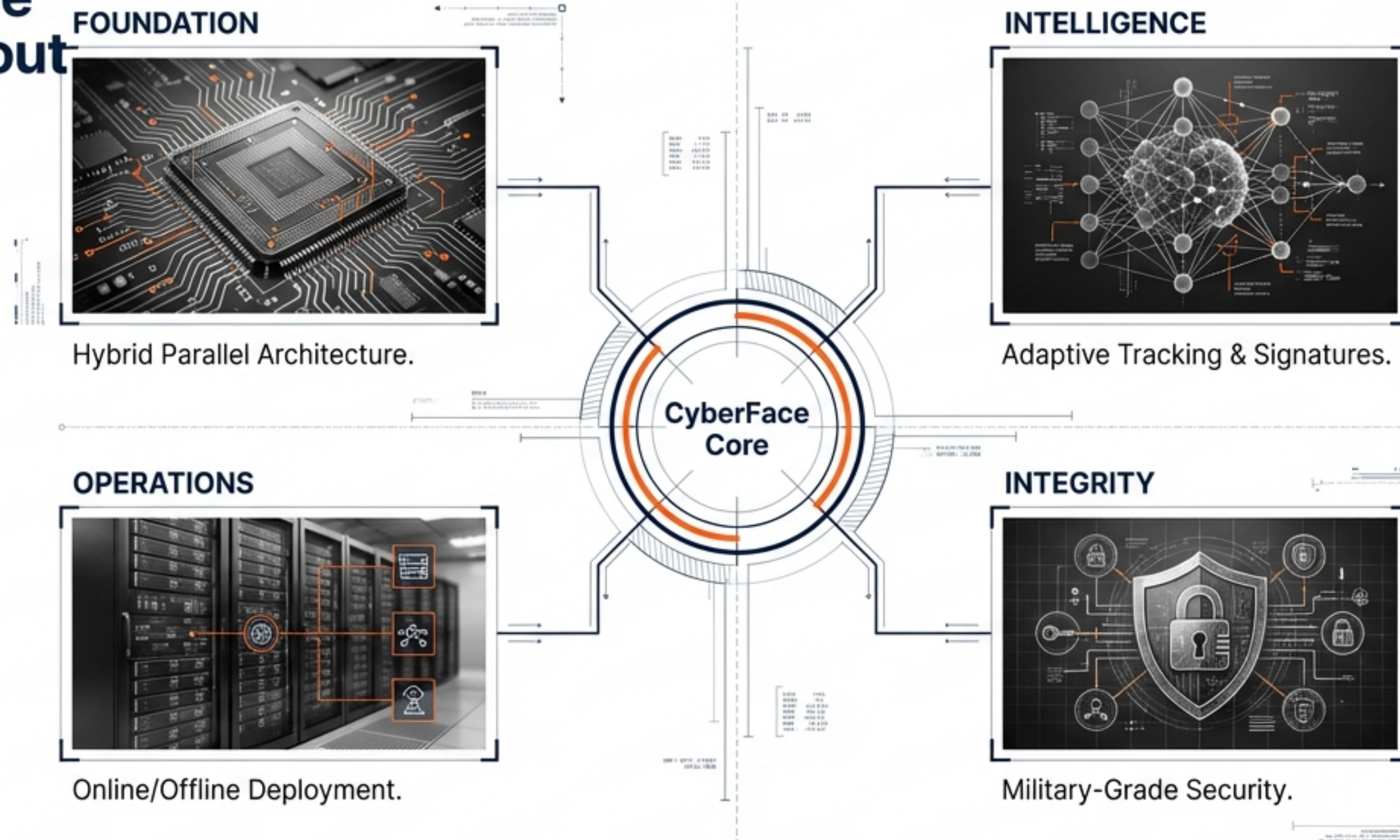


High-Performance Verification Without Hardware Compromise

CyberFace utilizes a hybrid parallel architecture designed to maximize hardware potential. It delivers military-grade security and real-time results across the most demanding surveillance and access control environments.



SPEED:
Real-time inference (50ms)
via decoupled ingestion.

SCALE:
Platform agnostic (x86
Server to NPU Edge).

ACCURACY:
Dynamic signatures
adapt to human aging.

TRUST:
AES-256 encryption with
"Veto" liveness detection.

Pillar 2: Precision Tracking in High-Density Crowds

Stability using full-body pose estimation, not just facial recognition.

The Logic: 17-Point Skeleton Detection acts as a visual anchor. We match facial keypoints (nose/eyes) to the body to maintain identity during occlusion.

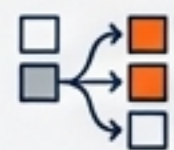
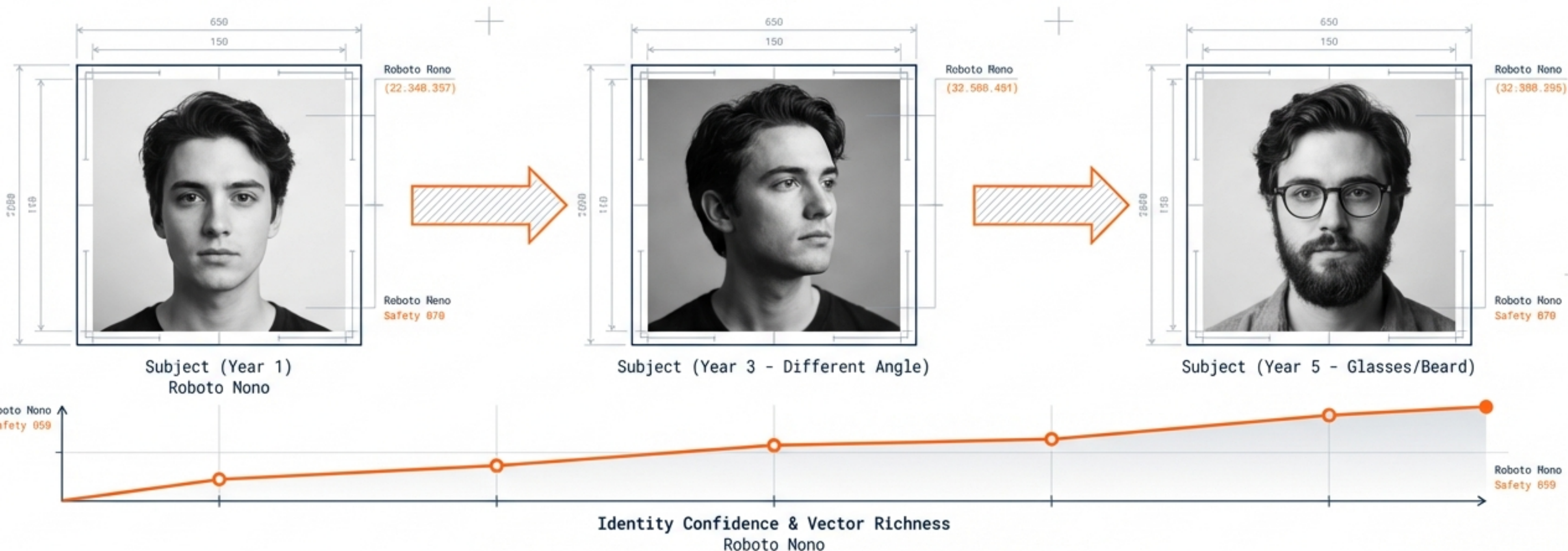
THE QUALITY GAUNTLET: Rejects high-speed blur and extreme angles before processing.

Smart Priority: System prioritizes the subject closest to entry (largest face) for immediate access control.



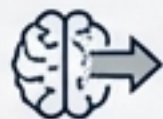
Pillar 3: The Living Database

Identity is dynamic. Our biometric signatures evolve with the user.



Continuous Feature Aggregation

Automatically aggregates high-quality feature embeddings from unique sightings over time.



Adaptive Learning

Merges old and new extracted features into a single, robust identity representation.



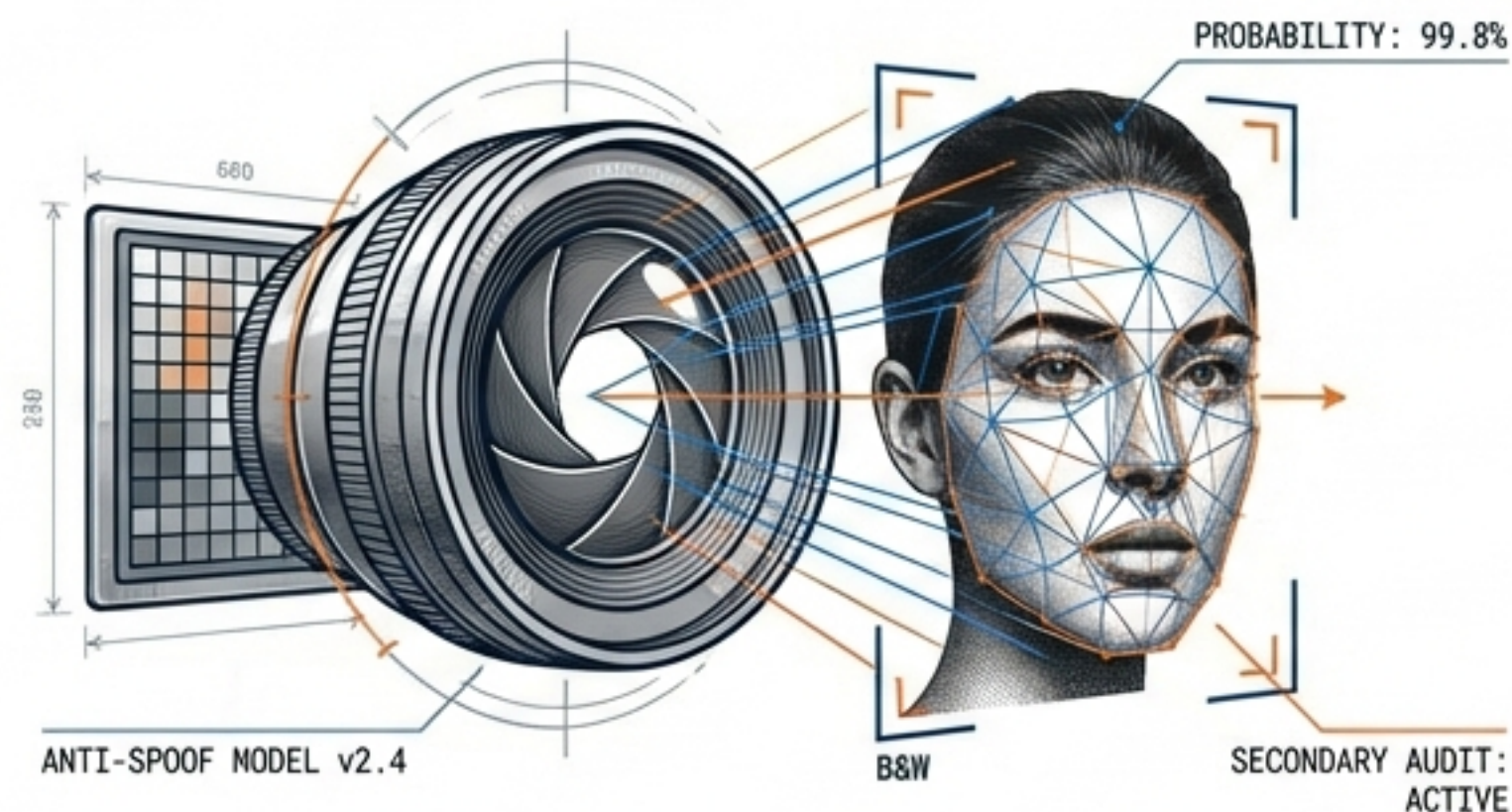
Real-World Robustness

Maintains accuracy despite age progression, viewing angles, or physical changes.

Pillar 4: Uncompromised Security Standards

Rigorous defense against spoofing and advanced data protection protocols.

EXTERNAL DEFENSE (ANTI-SPOOFING)



- **Ensemble Learning:** Multiple specialized models calculate real-time probability of face authenticity.
- **The Veto Mechanism:** A secondary, fine-tuned model acts as a high-security fallback to override uncertain results.

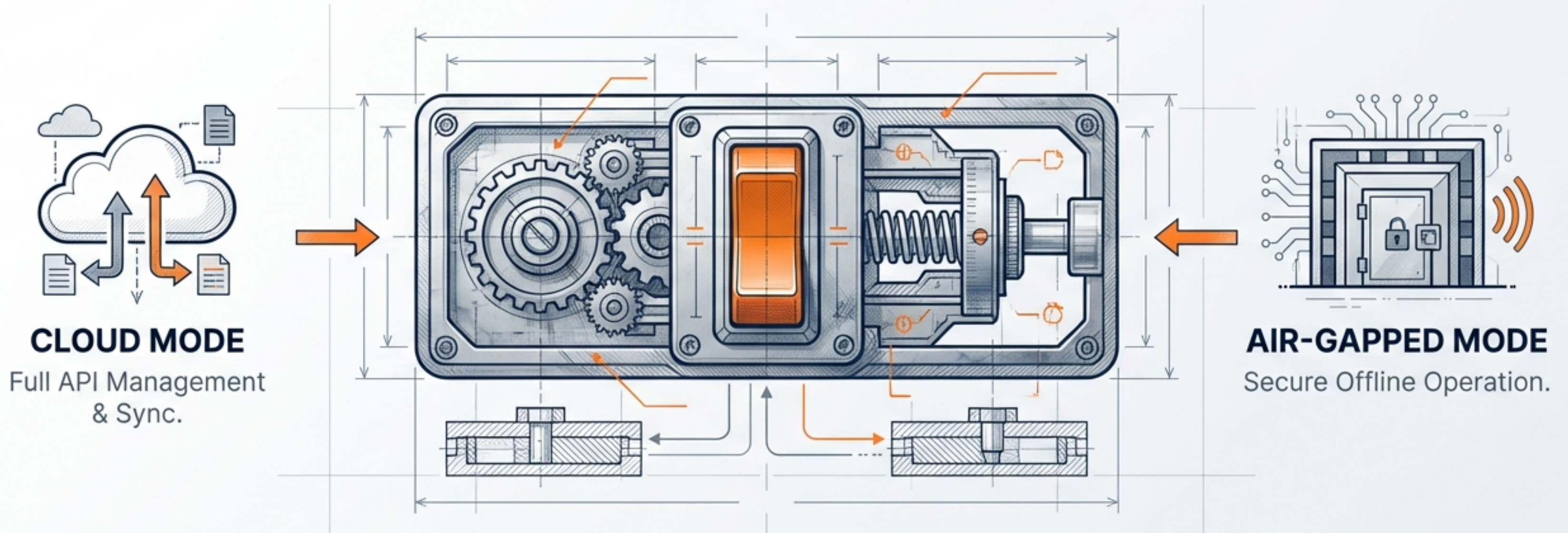
INTERNAL DEFENSE (DATA PROTECTION)



- **Biometric Encryption:** 512-dimensional vectors encrypted via AES-256 (CBC Mode).
- **Code Obfuscation:** Logic and neural networks hidden to prevent reverse engineering.
- **Just-in-Time Decryption:** Models decrypt to memory only during inference.

Operational Readiness for Any Network

Full functionality from the connected cloud to the air-gapped bunker.



Offline Capability

Supports facilities where external internet is restricted. No dependency on backend connectivity.



Universal API

Consistent control over health checks, stream management, and enrollment regardless of connectivity.



Mobile Optimization

High FPS on edge hardware via optimized computation layers.

Technical Specifications & Standards

LATENCY	50ms – 200ms response time
ENCRYPTION	AES-256 (CBC Mode) for 512-dimensional vectors
HARDWARE EFFICIENCY	95% CPU utilization; 100% NPU usage via TensorRT
TRACKING LOGIC	17-point Skeleton Keypoint detection + Face Association
SUPPORTED ARCH	x86 (GPU Acceleration), ARM64 (NPU Optimization)
PROTECTION	Just-in-Time Decryption; Code Obfuscation; Anti-Spoofing Veto
DEPLOYMENT	Containerized (Docker); Air-Gapped or Cloud Connected

CyberFace: The Standard for Modern Verification

By decoupling video ingestion from verification and employing a "Quality Gauntlet" for data integrity, CyberFace solves the trade-off between speed and security. It is the only platform-agnostic solution capable of evolving with its users while protecting their data with military-grade encryption.

CyberFace