

Patent-Pending Dynamic Security Architecture for Zero-Risk Authentication Across IoT, Robotics, and Digital Platforms

A next-generation security architecture that unifies UDAS (Universal Dynamic Authentication System) and DSS (Dynamic Security System) into a single, mathematically unexploitable authentication model designed for IoT devices, robotics, industrial systems, cloud platforms, and large-scale digital services.

This architecture eliminates passwords, IC cards, certificates, fixed secrets, reusable tokens, and all forms of static authentication.

Instead, it generates **purpose-specific, one-time, self-destroying authentication keys** that cannot be reused, cloned, stolen, phished, extracted, or replayed.

Key Capabilities

- **Zero-Reuse, Zero-Risk Authentication** (keys destroy themselves automatically)
- **No Stored Secrets** (nothing exists for attackers to steal)
- **Replay Attack-Proof / Impersonation-Proof / Cloning-Proof**
- **Zero-Decompression Verification** (fast, lightweight, hardware-independent)
- **Real-time Key Generation & Destruction**
- Works on MCUs → Embedded Devices → Robots → Industrial Machines → Cloud Platforms

Patent Status

Patent-Pending (JP Application No. 2024-172823)

Includes rights for **licensing, joint development, or full acquisition**.

Whitepaper (DOI – Zenodo)

<https://doi.org/10.5281/zenodo.17845912>

Prototype & Technical Details (GitHub Files Below)

This repository contains sample code, schema designs, and implementation notes for early adopters evaluating the architecture.

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Open to discussions on **licensing, collaboration, or acquisition** for

organizations developing next-generation security solutions.