RA Ecosystem Partner Solution
Veridify's SDK for RA6 IoT Edge Devices

Solution Summary

Veridify Security's fast, small footprint, energy-efficient security methods are ideal for protecting RA6 devices and the low resource IoT points they connect to. The Veridify IoT Security SDK allows quick and easy evaluation of these quantum resistant security solutions for the RA Platform.

Features/Benefits

- Easily implement secure boot, secure firmware update, remote authentication and other common security features on RA series devices
- Compact and ultra-low-energy methods are ideal for the RA series and the low-resource IoT devices they connect to
- Quantum-resistance delivers future-proof authentication and data protection

Evaluation Steps

- Step 1: Order your Renesas RA6 Evaluation Kit and IDE
    - Renesas RA6 evaluations kits available here
    - Order your RA6 board from a distributor including Mouser or Digikey
    - Download and install e2 Studio IDE
- Step 2: Configure your RA6 Evaluation Kit
    - Use the latest Renesas RA e2studio version with Veridify's SDK
    - Connect the RA6 evaluation kit to your PC via micro USB.
- Step 3: Check PC Requirements
    - Ensure the PC operating system and hardware requirements meet Renesas e2 Studio recommendations
- Step 4: Download free RA6 SDK from Renesas' RA Partner Ecosystems Solutions page
    - Included in SDK: usage documentation, IDE project and configuration files, crypto library, sample C source code and keys, certificates and digital signatures
- Step 5: Install Veridify's SDK on target RA6 Evaluation kit
    - Unzip the security SDK
    - Open the Veridify SDK RA6 project within e2 Studio
      (See the RA6 Getting Started Guide for more information)

2020.03

![Veridify Security logo]

Award Winning Security for IoT Designs

Veridify Security (formerly SecureRF) provides fast, small footprint, ultra-low-energy, and quantum-resistant authentication and data protection solutions for 16- and 32-bit IoT endpoints like the Renesas RL78 and the RA MCU families.

Authenticate up to 45x Faster Than Other Methods

Our ultra-lightweight protocols, Walnut Digital Signature Algorithm™ (WalnutDSA™) and Ironwood Key Agreement Protocol™ (Ironwood KAP™), enable rapid and secure authentication of sensors, actuators, and other highly constrained devices.

- WalnutDSA™ - Verifies integrity and source authentication of digital data.

- Ironwood KAP™ - A Diffie-Hellman-like key agreement protocol that enables two parties to generate a shared secret over an open channel without any prior communication.

DOME Device Ownership Management and Enrollment™

DOME™ provides a comprehensive device provisioning and ownership platform that simplifies security, management and provisioning of IoT devices in the field without needing a pervasive cloud or network connection. DOME enables a truly scalable platform that consolidates security functions and reduces costs and complexity for device owners.

Post-Quantum Ready

Quantum computers will become powerful enough to break popular security methods like ECC and RSA. Veridify's cryptography is resistant to all known quantum attacks making your solutions future-proof today.

ISO 26262 ASIL D Certified

Our software development methods conform with the strictest requirements and are Automotive Safety Integrity Level (ASIL) D certified, the highest classification for safety-critical processes.

Markets

- Industrial/Building Automation
- Industrial IoT
- Energy and Metering
- Whitegoods
- Healthcare
- Automotive

Applications

- Authentication
- Identification
- Data Protection
- Secure Boot
- Secure Firmware Update
- Command Validation

Free Security Consultation

Our experts will provide an initial security consultation and can help accelerate time-to-market by creating a security solution design for your devices. Contact us at info@veridify.com

Free SDK to Get Started

Our IoT Embedded Security SDK allows easy implementation of our solutions. The toolkit includes: WalnutDSA, Ironwood KAP, and sample source code and provides support for the Renesas e^2 studio.

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