

RA Ecosystem Partner Solution

**Cypherbridge uLoadXL™**



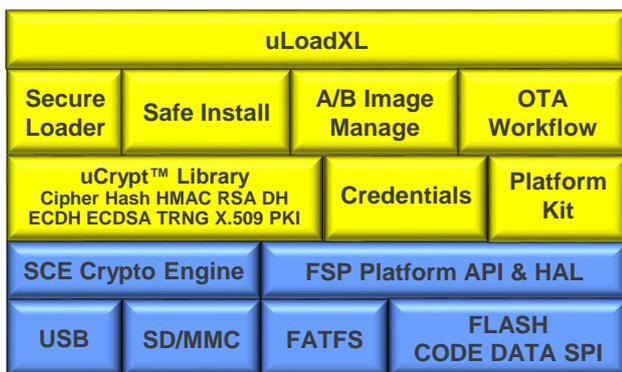
**Solution Summary**

The Cypherbridge uLoadXL SDK secure boot and safe software update is a software lifecycle solution. uLoadXL for Renesas RA is integrated with FSP (Flexible Software Package) based development kits for a total project-ready solution.

**Features/Benefits**

- Secure boot loader
- Safe software update with encrypted and authenticated managed images
- Reliability, integrity, safety, trust
- Anti-rollback, anti-cloning, counterfeit and over-production, block malware injection and product tampering
- A/B image manage, install ARM and trigger, failsafe boot
- GUI progress framework
- Offline WSLAM software management station optional manufacturing fixture applications
- OTA firmware update option
- Platform kit for EK-RA6Mx targets: debug port, internal and external flash drivers, file system interface, timers, NV install log, event handlers
- uCrypt library integrated with RA SCE (Secure Crypto Engine)
- Supported on toolchains including e2studio

**Block Diagram**



**Target Markets and Applications**

- IoT Cloud Edge Gateway
- Smart Building
- Energy Metering
- Industrial Control
- Medical Device
- Smart White Goods

<https://www.cypherbridge.com/partners/renesas-partner-page/>

## Delivering IoT Device Solutions

From concept to production, Cypherbridge delivers solutions for device platform, connectivity, security and IoT cloud.

### Planning and Design

Cypherbridge works with our partners at greenfield product planning or refresh stages, helping to review product requirements for connectivity, data in-flight and at-rest. Identify vulnerabilities and security measures tailored to project, designed to achieve safety, reliability, integrity and trust.

### IoT Device Software Solutions

The Cypherbridge SDKPac solution framework includes SDKs and Toolkits to fit a wide range of device level applications and vertical markets. Integrated with off-the-shelf Renesas RA Evaluation Kits and toolchains, SDKPac delivers a tailored project ready solution.

### Platform and System Integration

Cypherbridge technical solutions and design services span device level software, platform integration, end-to-end system test, and full-stack IoT Cloud Computing.

### Product Lifecycle and Long Term Support

Cypherbridge is an industry proven partner for the long haul with product lifecycle solutions and technical support, working with our industry partners to deliver technical solutions & customer satisfaction.

Cypherbridge offers comprehensive solutions for the software product life cycle from R&D through pilot and production. The uLoadXL SDK includes a device level secure boot loader and advanced safe software update installer, together with off-line software management station applications providing root-of-trust and image file management.

**Cypherbridge**<sup>®</sup>  
*Trusted, safe and secure*

**Cypherbridge Systems LLC**

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## About Us

Cypherbridge Systems was established in 2005 to develop security and connectivity solutions. Our range of solutions and services continues to expand with long-term growth and design wins in a diverse range of vertical markets.

### Industry Focus

IoT Device to Cloud Data, Intelligence and Analytics is transforming industries across the board including Consumer Products, Industrial Control, Manufacturing and Factory Automation, Medical Device, Smart Building, and Transportation.

Proven value and benefits include increased efficiency and productivity, lower operating costs, and shift towards predictive analytics.

The intersection of IoT with vertical industries is driving solutions that can deliver connectivity, security, reliability and trust at scale.

### The SDKPac Solution

Accelerate your journey to the IoT Cloud with the SDKPac Solution. Unlock opportunity and business value through reporting, analytics and machine learning.

### Partner with Cypherbridge

IoT systems demand a broad range of skills, including embedded device software, networking, cloud computing and expert security practices. Cypherbridge offers comprehensive design services for end-to-end line of business applications including IoT device platform integration, differentiating features, and full-stack cloud computing and data systems engineering.