Cypherbridge
Trusted, safe and secure

RA Ecosystem Partner Solution
# Cypherbridge uLoadXL™

Solution Summary

The Cypherbridge uLoadXL SDK secure boot and safe update software lifecycle solution uLoadXL is RA Ready, integrated with Flexible Software Package (FSP) and RA MCU family evaluation kits including the EK-RA6M4 Cortex-M33 TZ platform.

Features/Benefits

- Secure boot loader
- Safe Software update with encrypted, signed and authenticated managed images
- Reliability, integrity, safety and platform root of trust
- Block malware injection, product tampering
- Supply chain integrity, chain of custody, NIST 800-193 Platform Firmware Security
- Anti-rollback, anti-cloning, counterfeit and over-production
- A/B image manage, install ARM and trigger, failsafe boot
- GUI progress framework
- Offline Windows WSLAM Software Management Station
- OTA firmware update option
- Platform Kit for EK-RA6MX targets: debug port, internal and QSPI flash drivers, file system interface, timers, NV install log, event handlers
- uCrypt library integrated with SCE hardware crypto engine
- Supported on toolchains including e2studio

Block Diagram
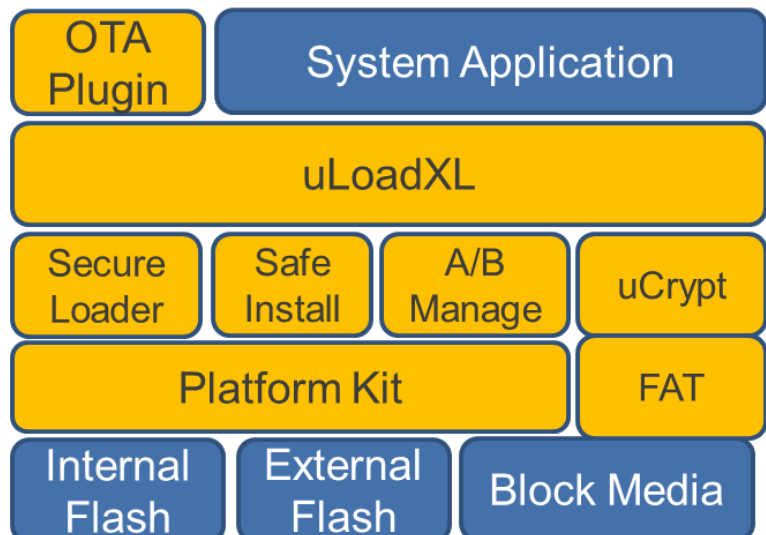
Target Markets and Applications

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

https://www.cypherbridge.com/partners/renesas

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.

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.

Cypherbridge Systems LLC
www.cypherbridge.com
7040 Avenida Encinas #104211
Carlsbad, CA 92011 USA
Email: renesas@cypherbridge.com
Phone +1 760.814.1575.