

Edge to Cloud Infrastructure for effortless IoT development

RZ Gateway Solution

Edge computing gateways are growingly used to process large volumes of data collected from various local devices in real time and to act as a bridge between those devices and the cloud.

The RZ Series gateway solution, combining scalable performance with AWS IoT Greengrass, enables fast, flexible development of IoT applications across a wide range of industries.

Features

- Edge Computing and Cloud integration enabled by AWS IoT Greengrass
- Highly reusable and flexible OSS environment, featuring core components such as OpenSSL
- Firmware Over-The-Air (FOTA) updates for Security vulnerabilities and IoT applications
- A Python-based framework that allows a practical and compile free applications run
- IoT Applications example compatible with Yocto (VLP) / Ubuntu / Debian support

Infrastructure Configuration

Software

- ✓ RZ Verified Linux Package (VLP), **Ubuntu & Debian** support compatible
- ✓ AWS IoT Greengrass
- ✓ Robust Auto-Update Controller (RAUC) for FOTA

Hardware

- ✓ RZ/G2L & RZ/G3S Evaluation Bord Kit (EVKit)
- ✓ High Performance CPU Cortex-A55 (over 1GHZ)

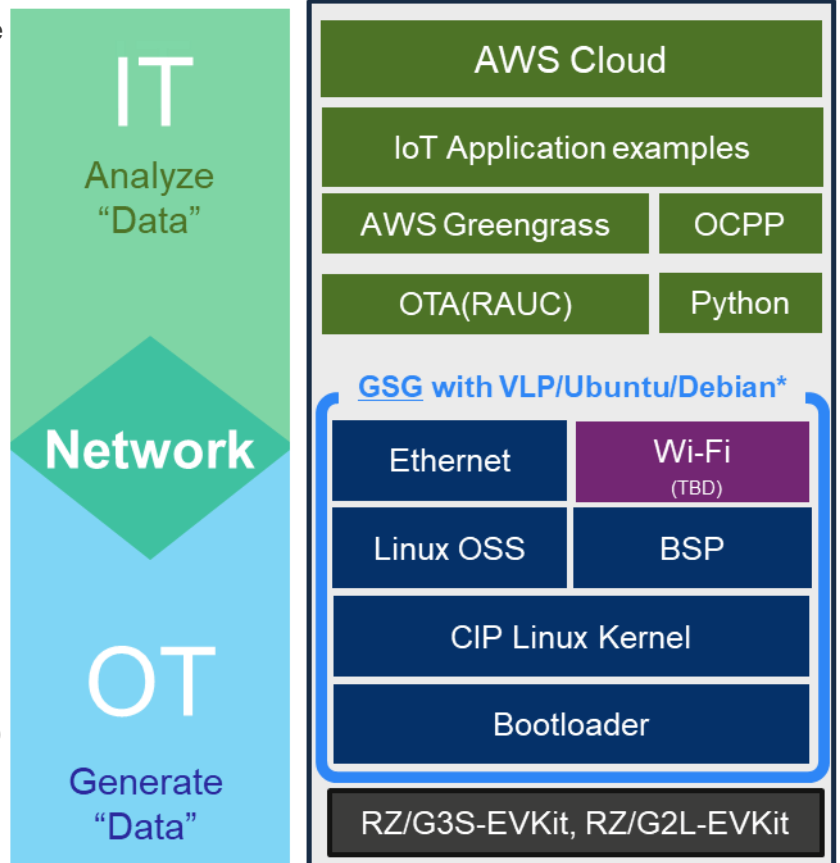
Network I/F

- ✓ Ethernet
- ✓ Wi-Fi

IoT Application Example

- ✓ Firmware OTA Update
 - A/B seamless update
 - x.509 Public Key Infrastructure (PKI) key ring file
- ✓ EV Charger Station App
 - OCPP Protocol Implementation
 - Web-Socket Communication
- ✓ Home Automation App
 - (Available by Nov/2025)

IoT Architecture



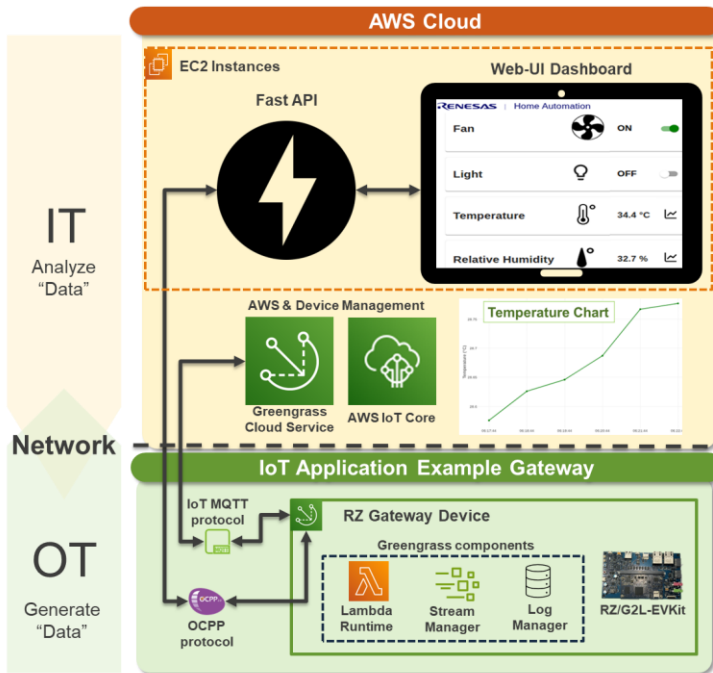
VLP : Verified Linux Package

GSG : Getting Started Guide

* Ubuntu/Debian support on RZ/G2L only

IoT Application Example

EV Charger Station Application (Ubuntu / Debian support available) & FOTA Implementation



Software Component	Firmware OTA Update	EV Charging Station	Home Automation
EC2 Instance			
- Web-UI	✓	✓	✓
- Fast API			
AWS IoT Core	✓	✓	✓
S3 Bucket	✓		
Amazon Timestream			✓
Device Shadow			✓
Greengrass Custom Component		✓	✓
Lambda Function	✓		
Stream Manager			✓
OCPP v.2.0.1		✓	
MQTT	✓	✓	✓

✓ component used

Quick Start Procedure

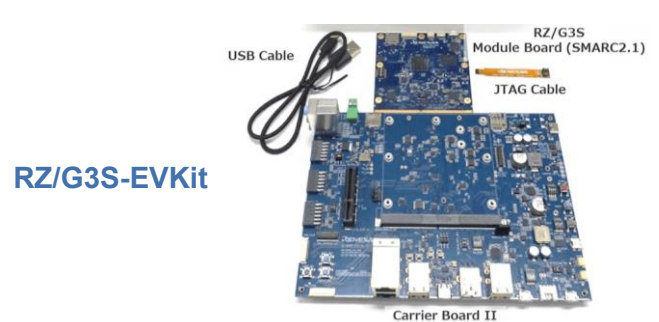
An extensive Getting Started Guide (GSG) detailing how to build the Linux environment and run the sample demo is provided on the [Renesas Wiki page](#).

Patch files for the RZ Verified Linux Package (VLP) and script files for the sample projects can be downloaded from the [RZ GitHub repository](#)

The following evaluation board supports the RZ Gateway Solution:



RZ/G2L-EVKit



RZ/G3S-EVKit

Visit us for more information on Renesas IoT Cloud Solutions



The RZ Gateway Solution is provided as one of the scalable IoT Cloud Solutions platforms offered by Renesas broad lineup of MCUs and MPUs.



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