

RX Ecosystem Partner Solution

Tops Plug&Go for RX MCUs



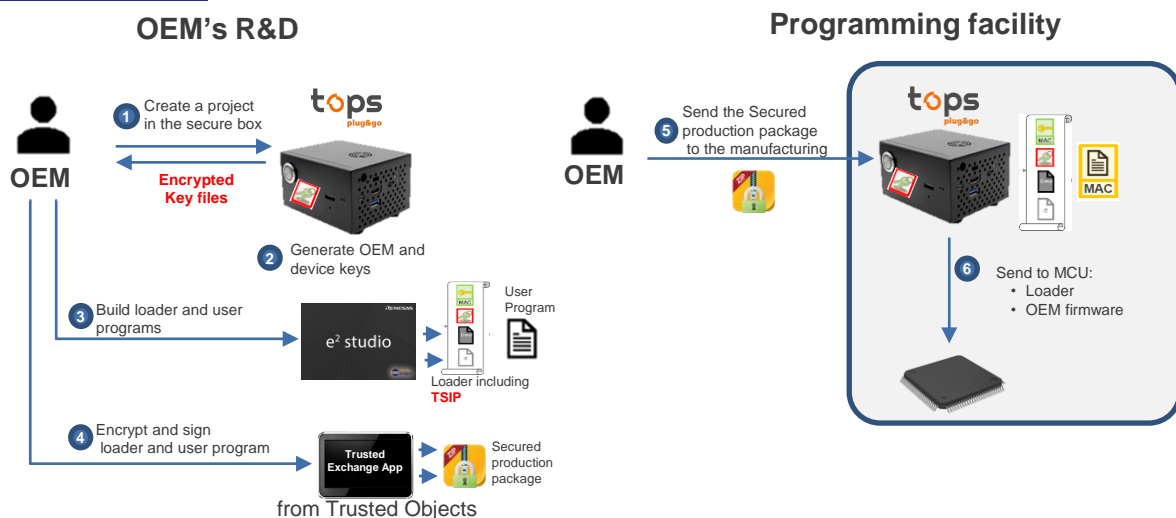
Solution Summary

Tops Plug&Go is a secure and automated programming solution for production facilities. The solution is based on a secure box connected to the programmer which allows end-to-end encryption using the [Renesas Trusted Secure IP Driver \(TSIP\)](#) on [RX family of MCUs](#). This solution is already qualified on all [System General](#) (Acroview Group) programmers.

Features/Benefits

- Simplify the OEM process for secure programming on RX MCUs:
 - Design: secure environment unnecessary
 - Limited number of secret key exchange
 - Single operation to transfer a secure package to the programming facility
- Improve the security level of the programming operations:
 - Secrets keys generated and secured by the box's HSM
 - OEM does no longer need to secure any sensitive key by itself
 - TSIP loader secured by the box's HSM

Diagrams/Graphics



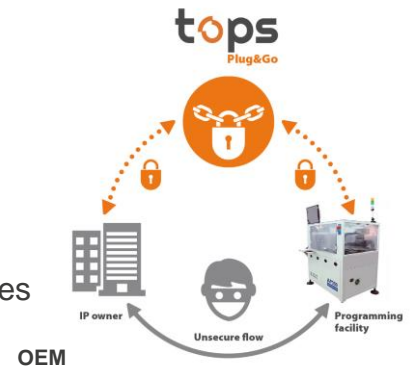
Target Markets and Applications

- Industry 4.0
- Automotive
- Smart Cities
- Medical
- Secure programming
- Software IP protection
- Secure generation: keys and certificates
- Secure provisioning
- Application server commissioning



Secure programming for MCU-based systems

- Secure channel between the OEM and the programming facility
- Secure storage at the programming facility
- Secure programming up to the MCU in standalone mode (no external server needed during programming operations)
- Signed batch report to control the number of programmed devices
- Solution for programming in uncontrolled environment



Services enablers

- Secure box with a display screen
- Trusted Exchange App to exchange data between OEM and tops plug&go box
- Preset number of programming operations
- Technical support for the adaptation and installation
- Full set of documentation, including user manual



Portable computer
240 GB SSD
Hardware Security Module (HSM)
System services
Application server with UI

Qualified on System General programmers

- Already qualified on all System General programmers (for instance, manual programmer H/T9800, SG8000; Automatic programming system AP350/SG5000 etc)
- Software library enabling the communication between the programming machine and tops plug&go.
- Full technical support from System General



SG8000



H/T9800



SG5000



AP350