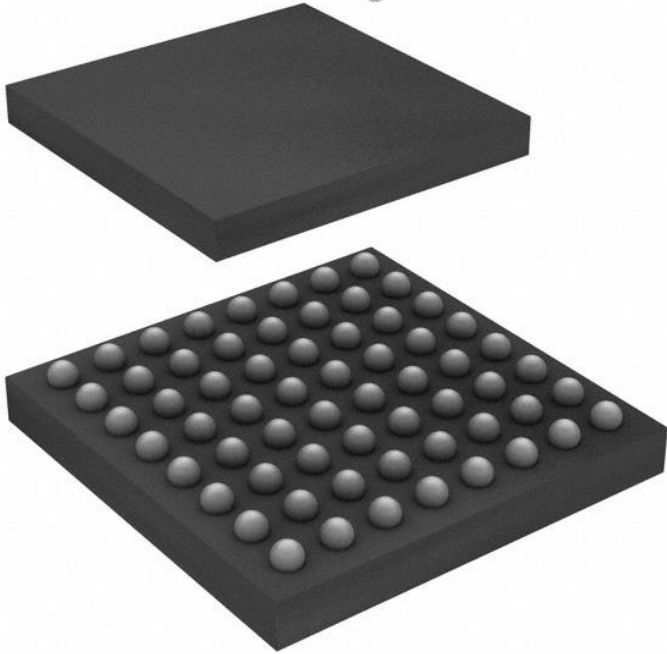


www.digi-electronics.com



EHDBP#20 Datasheet

DiGi Electronics Part Number

R5F5651EHDBP#20-DG

Manufacturer

[Renesas Electronics Corporation](#)

Manufacturer Product Number

R5F5651EHDBP#20

<https://www.DiGi-Electronics.com>

Description

IC MCU 32BIT 2MB FLASH 64TFBGA

This model R5F5651EHDBP#20 is available at DiGi Electronics.

Detailed Description

RXv2 RX651 Microcontroller IC 32-Bit Single-Core 1

DiGi Electronics offers a global database of semiconductor and electronic component datasheets.

20MHz 2MB (2M x 8) FLASH 64 TFBGA (4.5x4.5)

We welcome your inquiries regarding pricing, lead time, or other product-related questions.

 [Request a Quote](#)

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DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

R5F5651EHDBP#20

Series:

RX651

DiGi-Electronics Programmable:

Not Verified

Core Size:

32-Bit Single-Core

Connectivity:

I2C, LINbus, MMC/SD, QSPI, SCI, SPI, UART/USART, USB

Number of I/O:

41

Program Memory Type:

FLASH

RAM Size:

640K x 8

Data Converters:

Manufacturer:

Renesas Electronics Corporation

Product Status:

Active

Core Processor:

RXv2

Speed:

120MHz

Peripherals:

DMA, LVD, POR, PWM, WDT

Program Memory Size:

2MB (2M x 8)

EEPROM Size:

32K x 8

Voltage - Supply (Vcc/Vdd):

2.7V ~ 3.6V

Oscillator Type:

Contents List of RX65N Envision Kit Firmware

Demo Firmware

By writing this firmware to a USB memory stick, you can rewrite the firmware on the board during a demo.

| Documentation and demo software | Description |
|------------------------------------|---|
| Standard Firmware | Download the latest versions of four types of demo firmware (2D Drawing Engine, Bouncing Balls, Mandelbrot Calculation, and Firmware Bank Swap Demo). |
| Benchmark Firmware | Download demo firmware for benchmarking (dual bank rewriting image, storage benchmark, and system log). |

Documentation and so on can be downloaded below.

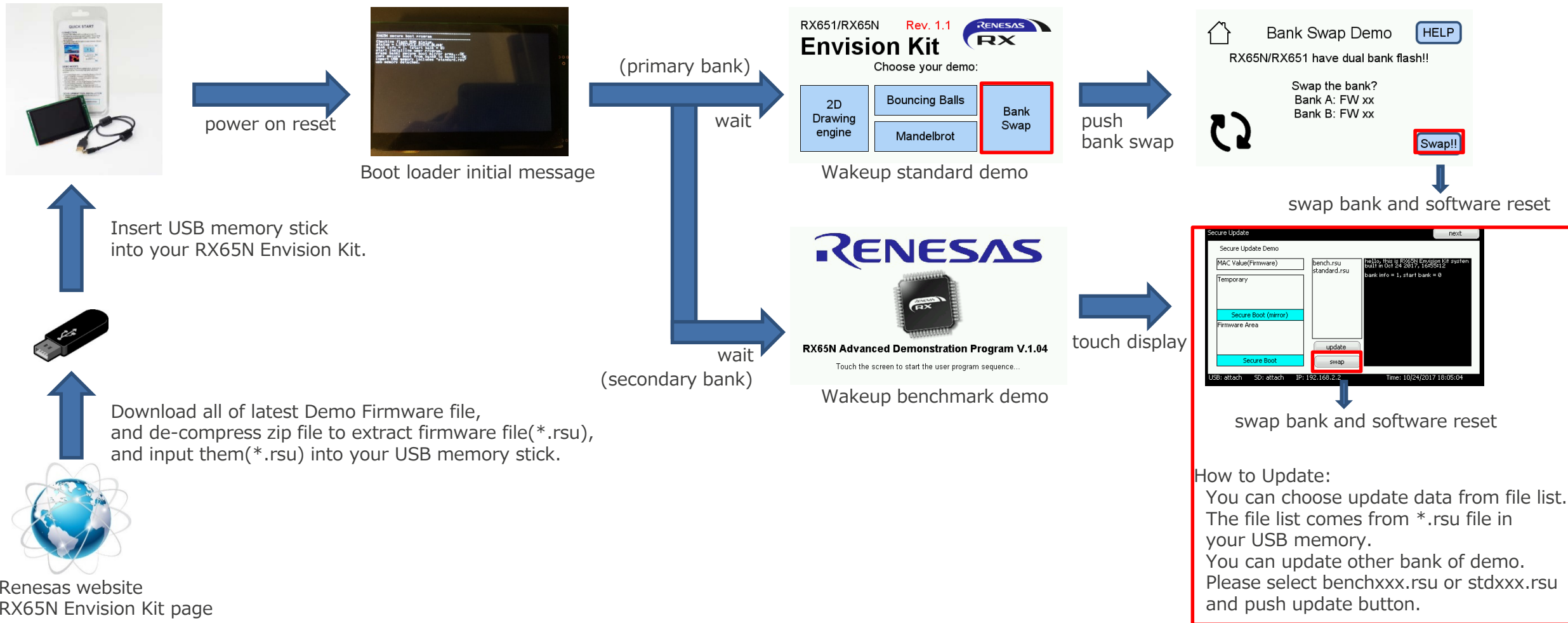
[\(Download Link\)](#)

| Documentation and demo software | Description |
|---------------------------------------|---|
| Demo firmware (source code) | Download the latest versions of four types of demo software (2D Drawing Engine, Bouncing Balls, Mandelbrot Calculation, and Firmware Bank Swap Demo). |
| User's manual (instruction manual) | Download the instruction manual for this kit. (Download Link) |
| Circuit diagram and bill of materials | Download the circuit diagram and bill of materials for this kit. |
| Declaration of conformity for CE logo | Declaration of conformity for the CE logo for Europe. |
| Declaration of conformity for China | Declaration of conformity for China. |

| name on website | download filename | contents | Description |
|--------------------|-------------------|--------------|---------------------|
| Standard Firmware | standard.zip | std.rsu | initial |
| | | stdxxx.rsu | update(xxx=version) |
| Benchmark Firmware | benchmark.zip | bench.rsu | initial |
| | | benchxxx.rsu | update(xxx=version) |

| name on website | download filename | contents | description |
|----------------------------|-----------------------|-----------------------------------|------------------------|
| Demo firmware(source code) | rx65n_envisionkit.zip | rx65n_secure_boot | boot loader project |
| | | standard | standard demo project |
| | | benchmark | benchmark demo project |
| | | convert.exe | mot file converter |
| | | rx65n_envisionkit_demo_readme.txt | readme |

Quick Start to Update



Insert USB memory stick into your RX65N Envision Kit.

Boot loader initial message

RX651/RX65N Rev. 1.1
Envision Kit
Choose your demo:
2D Drawing engine | Bouncing Balls | Bank Swap
Mandelbrot
Wake up standard demo

Bank Swap Demo HELP
RX65N/RX651 have dual bank flash!!
Swap the bank?
Bank A: FW xx
Bank B: FW xx
Swap!!

RENESAS
RX65N Advanced Demonstration Program V.1.04
Touch the screen to start the user program sequence...

Secure Update Demo next
MAC Value(Firmware) | bench.rsu | update | swap
Temporary | standard.rsu
Secure Boot (mirror) |
Secure Boot |
Firmware Area

Download all of latest Demo Firmware file, and de-compress zip file to extract firmware file(*.rsu), and input them(*.rsu) into your USB memory stick.

Renesas website
RX65N Envision Kit page

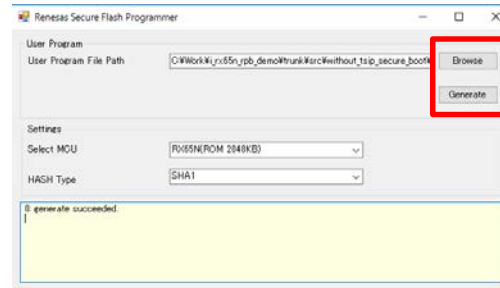
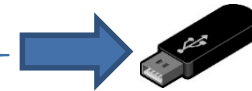
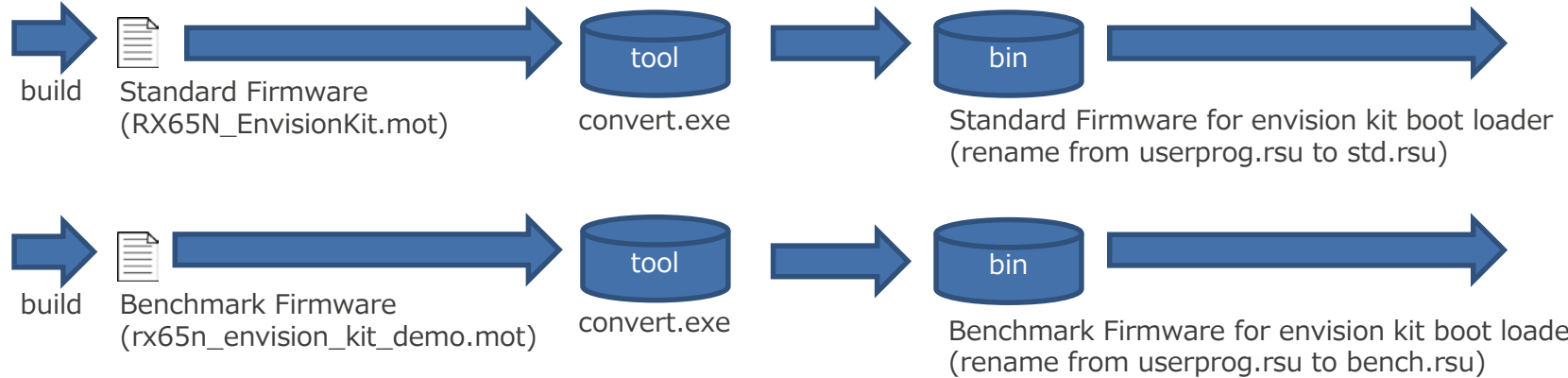
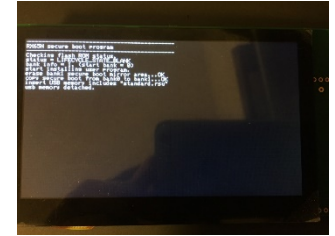
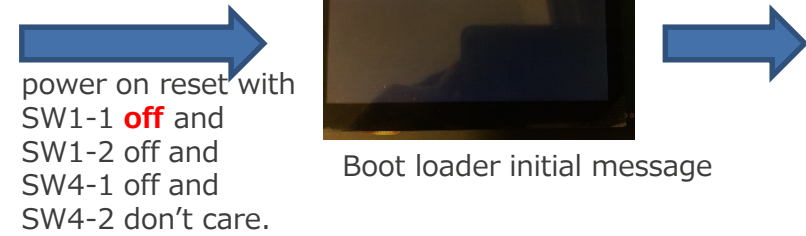
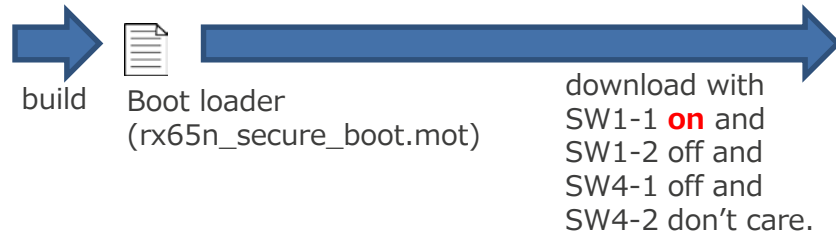
Please refer to this data flow if you need customization for demo, confirm behavior of demo, etc.

Data flow of firmware installation

Demo firmware (source code)

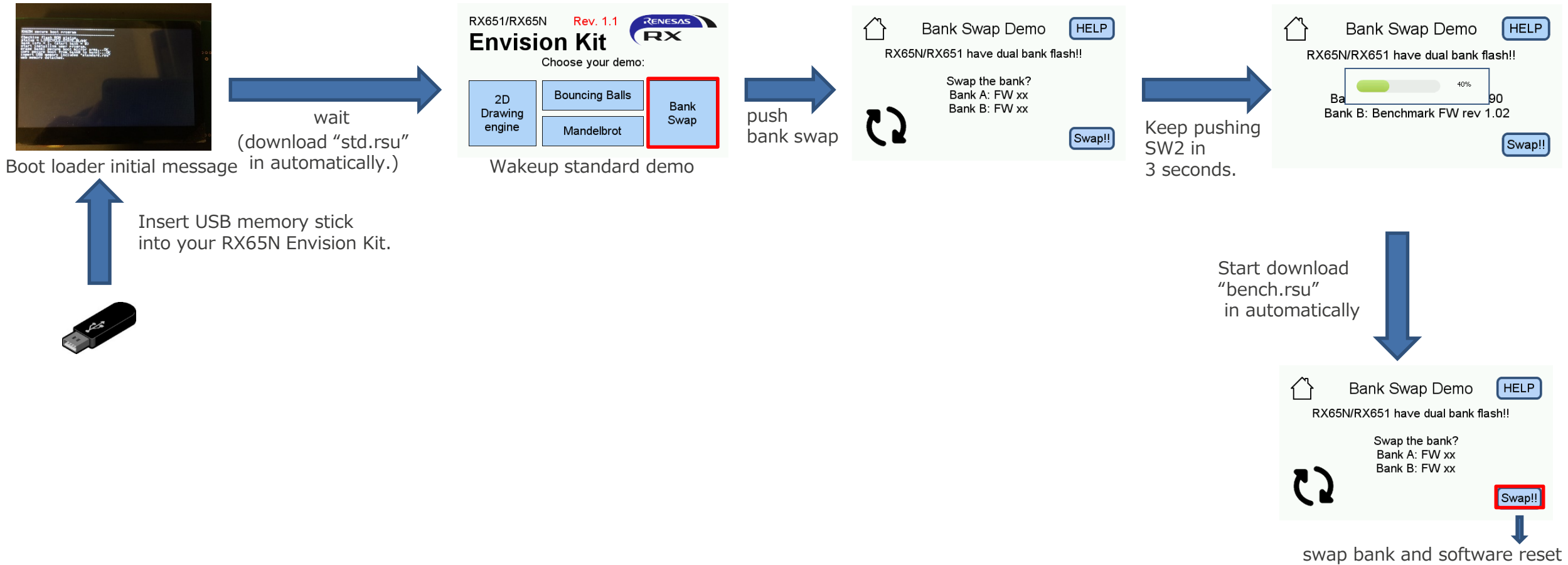


import 3 folders
rx65n_secure_boot,
standard,
benchmark,
in rx65n_envisionkit.zip



Convert from *.mot to *.rsu.

Data flow of firmware installation



OUR CERTIFICATE

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