RENESAS

Renesas standalone flash programming tool

PG-FP6

https://www.renesas.com/pg-fp6

Standalone flash programmer best suitable for mass production and field programming

The Flash Memory Programmer PG-FP6 is a tool that can be used in a user system to write a program to flash memory in a Renesas microcomputer, verify the written program, and erase the written program. This is a standalone tool allowing high-speed writing.

The PG-FP6 tool also includes FP6 Terminal, a programming GUI that allows you to control this tool from a PC.

Main features

- **High-speed programming** of MCUs by the PG-FP6 for reduced production times
- Control panel suitable for **stand-alone** operation
- Simple and user-friendly GUI, FP6 Terminal
- Support for high-volume programming by **gang programming** with the use of multiple PG-FP6s
- **Security Enhancement** against theft of program files and the PG-FP6 main unit
- Security slot for theft prevention
- Useful functions for production line: programming using by buttons and automatic programming
  Able to use USB power: convenient for **programming in the field**

Control panel suitable for stand-alone operation
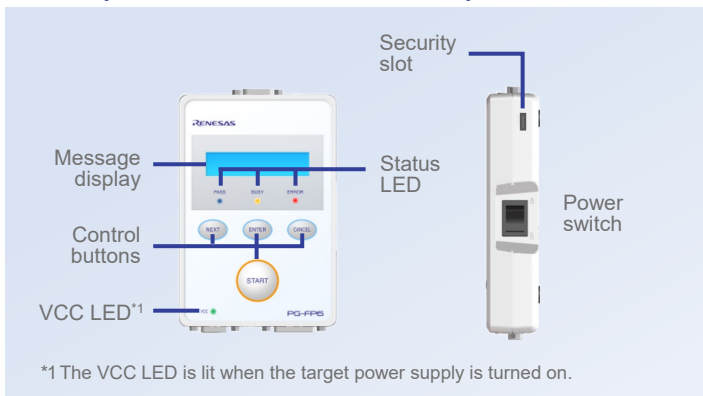
*1 The VCC LED is lit when the target power supply is turned on.

User-friendly GUI (FP6 Terminal)
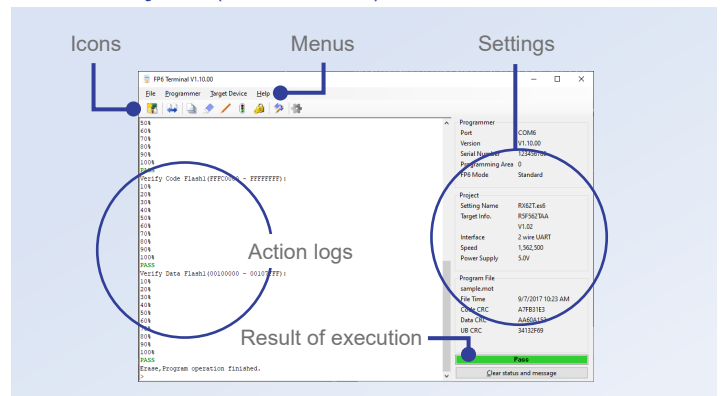
Support for high-volume programming by gang programming with the use of multiple PG-FP6s

Bundled control of multiple PG-FP6s
Programming GUI "FP6 Gang Programmer"

GUI panel where you can see the states of programming and pass or failure for each of the PG-FP6s.

Reduced times for high-volume programming
You can handle simultaneous programming by controlling up to 12 PG-FP6s from a single PC.

**Easy setup**
You can download setting files and program files as sets to multiple PG-FP6s at the same time.

Security Enhancement against theft of program files and the PG-FP6 main unit

Security for the program files and theft of the PG-FP6 unit itself is strengthened with the following functions: encrypting of program files, saving of encrypted data to the PG-FP6 unit, and writing of a program while simultaneously decrypting it.
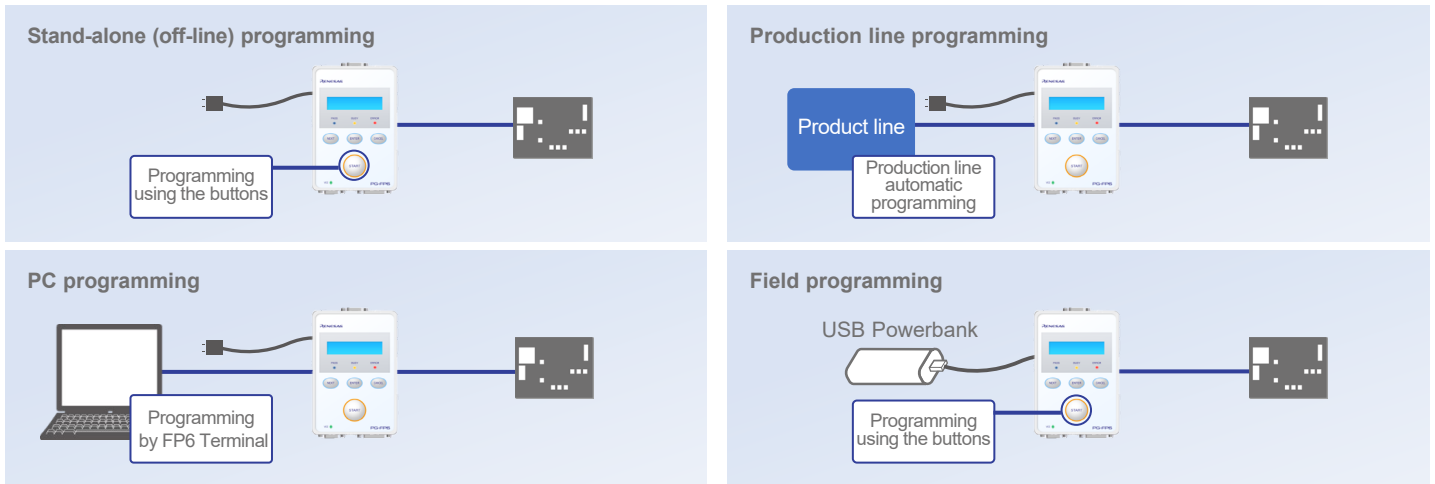
*The program file encryption function can be run by using the encryption utility program (RPE.exe) from the command line. The file is among those installed by the FP6 Terminal installer.
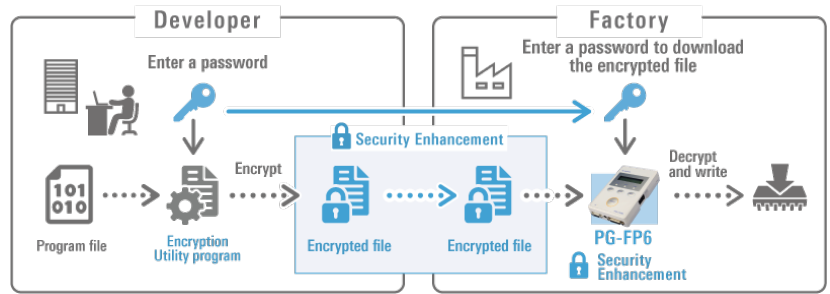
Rich programming methods usable according to the purpose

You can choose the programming method according to the purpose. For example, you can start programming manually with a button press or automatically.
The PG-FP6 can be powered via USB port for field programming.

Stand-alone (off-line) programming

Programming using the buttons

Production line programming

Product line
Production line automatic programming

PC programming

Programming by FP6 Terminal

Field programming

USB Powerbank

Programming using the buttons

Specifications

Product package contents	PG-FP6, GND cable, USB cable, Target cable, Power supply adapter*
External dimensions	140 × 90 × 30 mm (protruding parts excluded)
Weight	Approximately 245 g
Host PC interface	Target host PC: Refer to section 1.5, Operating Environments. USB connector: USB 2.0 (mini-B type) Serial port: 9-pin D-Sub male port for RS-232C
Target interface	15-pin D-Sub female target connector Power supply: 1.8 V to 5.5 V, 500 mA max.
Remote interface	15-pin D-Sub female remote connector Interface level: 3.3 V
Operating power supply	• Supplied via the power adapter (5 V, 2 A): recommended • USB-bus power supply (VBUS 4.5 V min./500 mA max.)
USB cable	Approximately 2 m
Target cable	14-pin type：Cable length: Approximately 42 cm
GND cable	Approximately 1 m

*The power adapter that comes with the PG-FP6 varies with the region where it is to be used.

Security functions of the PG-FP6 main unit	• Pattern authentication when the main unit is started • Password authentication when the settings of the security function are changed • A limit on the number of times authentication can be attempted • Reading of RPE files • Restricting the operation of the PG-FP6 main unit (in terms of the number of times the target device can be programmed and restriction of the execution of commands) • Encrypting the data stored in the PG-FP6 main unit
Selectable programming environment	Up to eight target environments are selectable for the programming area (384 MB max)
Target devices	RA, RE, RL78, RX, RH850, Renesas Synergy™, Some special-purpose ICs, SuperH, R8C, 78K or V850 (singular power supply flash memory)
Operating environment	Windows® 11 Windows® 10 (32- and 64-bit versions)

▶ Video

Tutorial videos for microcontrollers are available:

For RA Family	www.renesas.com/ra-how-to-video
For RL78 Family	www.renesas.com/rl78-how-to-video
For RX Family	www.renesas.com/rx-how-to-video

❓ FAQ
en-support.renesas.com/knowledgeBase

✅ Community
community.renesas.com

Contact information
For further information on a product technology, to most up-to-date version of a document, or your nearest office, please visit www.renesas.com/contact/

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