



MINIPROG



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Handheld standalone programmer



The **MINIPROG** features include:

- Provision of 3.3V/5V selection mode.
- One 14 pin FRC male connectors to accommodate MCU target.
- Provision of File id setting for programming.
- User has the option to set product count.
- Data Flash Erase selection option while programming.
- Li-ion integrated battery operation.

Introduction to Minipro Handheld Standalone Programmer for Renesas MCU.

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Mini prog is Handheld Programmer with 512 KB of memory plus USB PC interface and software for downloading hex files..It is a RL78/R8C Family device programmer that can program a single device at a time. The Hand Held Programmer is a completely portable device and you just plug it into your target boards and program your target microcontroller with a single button press.

The Miniprogram Programmer connects to a host PC using USB and provides flexible programming options that allow the user to fully customize the process. The Miniprogram programmer provides an economical and reliable means of programming a wide range of RL78/R8C microcontroller units (MCUs). It is designed with a versatile hardware platform to support programming of different MCUs of RL78/R8C Family. The Miniprogram programmer can be used to program single devices by copying data held in an internal flash memory to the MCUs' internal memory.

Miniprogram provides an USB PC interface for downloading HEX FILE and RS232 communication port for interfacing and automating the production programming process..

The **MINIPROG** features include:

- Range of RL78/R8C family of microcontroller units.
- Stand-alone programming mode of operation.
- Provision of 3.3V/5V selection mode.
- Single +5V, 1A dc power supply requirement.
- One 14 pin FRC male connectors to accommodate MCU target.
- Multicolor Status LED.
- Supports encryption of hex file with a 16 digit password key.
- Provision of File id setting for programming.
- Supports Factory reset & firmware upgrades.
- User has the option to set product count.
- Data Flash Erase selection option while programming.
- Software support: Crypto+ software
- Overview Crypto+ software
- Li-ion integrated battery operation.

Crypto+ software allows user to encrypt and download the hex-file from PC to Miniprogram using USB connection. Only if the encryption key in programmer and key used for hex-file encryption matches code will be successfully programmed. This help the user to share hex-file (encrypted) with EMS provider as the encrypted hex file can be used only with the respective programmer. In addition to this Crypto+ allows user to set number of targets to be programmed, once target count is reached programmer will wipe out its internal memory and won't program any further targets. 3 Crypto+ Also displays the current target and files loaded on the connected Miniprogram. User also can set a file ID, File ID helps to confirm the compatibility of required hex code on the programmer.

1.3 Miniprogram Programmer Connection

