

Holtek EIC-100 User's Guide

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Holtek EIC-100 User's Guide

Introduction

The Holtek EIC-100 is a simple writer developed specifically for In-System Programming (ISP) of the HOLTEK Flash range of microcontrollers.

Features

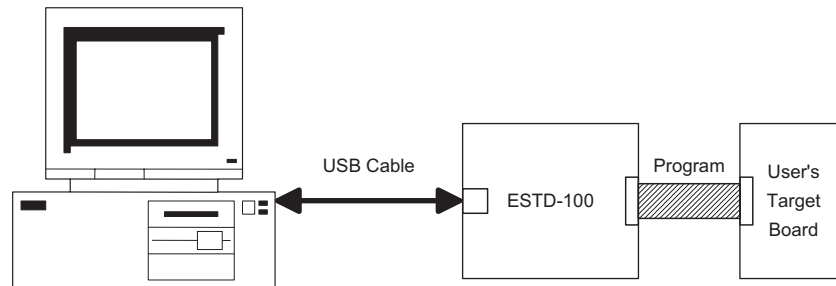
A range of useful features are included for user convenience some of which are listed below:

- Supports ESTD-100*
- Supports Flash type MCU devices
- USB interface PC communication
- Utilises USB port supply power - external power supply not required

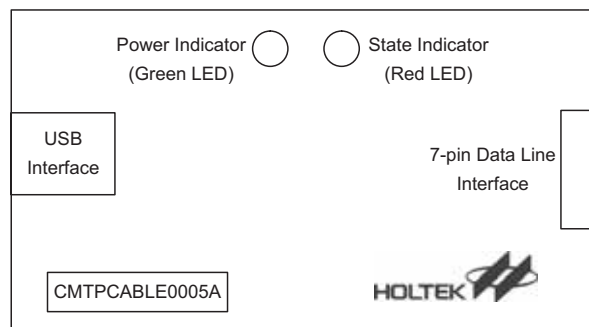
Note ESTD-100*: HOLTEK's 8-bit Flash MCU ISP standard interface. The entire series of Flash ISP programming equipment developed by HOLTEK utilises this standard interface. More details are located in the "ESTD-100 user's guide".

Packaging Information

- EIC-100 circuit board
- ESTD-100 interface line
- USB cable
- StarterKit.exe software



EIC-100 Component Part Connection



EIC-100 PC Board Structure

System Operation

Installation

- Step 1: Connects the EIC-100 hardware as shown in the diagram
- Step 2: Install the EverPro S1000 software
- Step 3: When the setup has finished, click the "start" menu → "Holtek MCU Development Tools" → "EverPro S1000" → "EverPro S1000", open EIC-100 operation Windows. See Figure 0.

The initial working window of the EIC-100 is as shown in Figure 1.

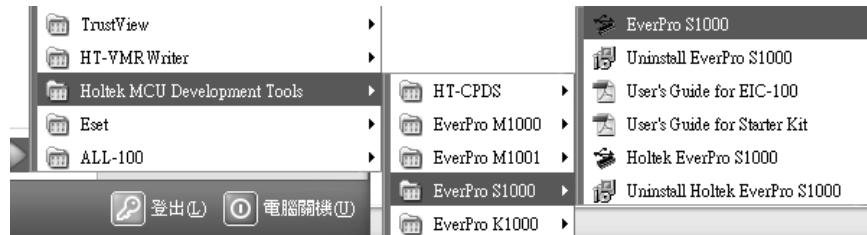


Figure 0

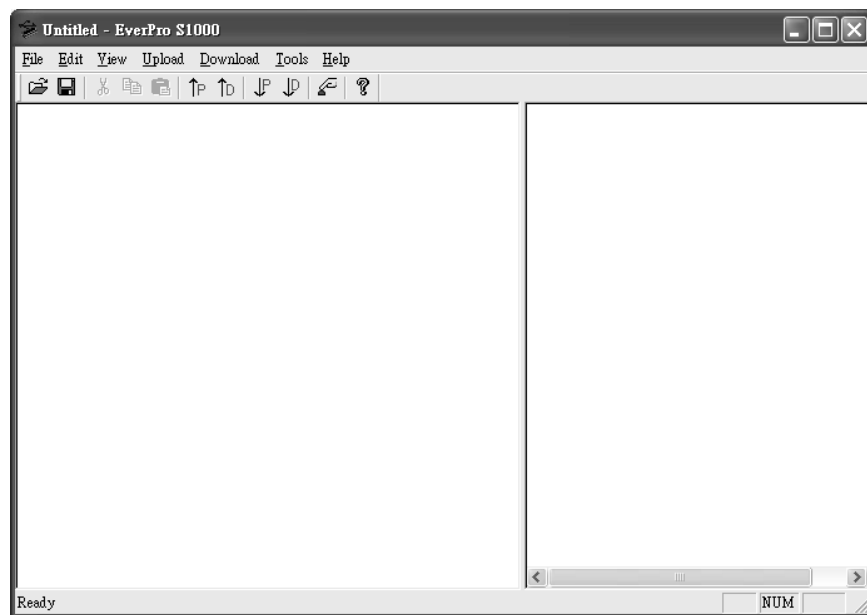


Figure 1

Auto Power On

Selecting "Auto Power On" from within the "Tools" menu will implement the auto power on MCU function. This auto-power on feature means that after the completion of various operations, such as download or upload, the power will be automatically supplied to the device. The MCU will begin to operate as shown in Figure 2.

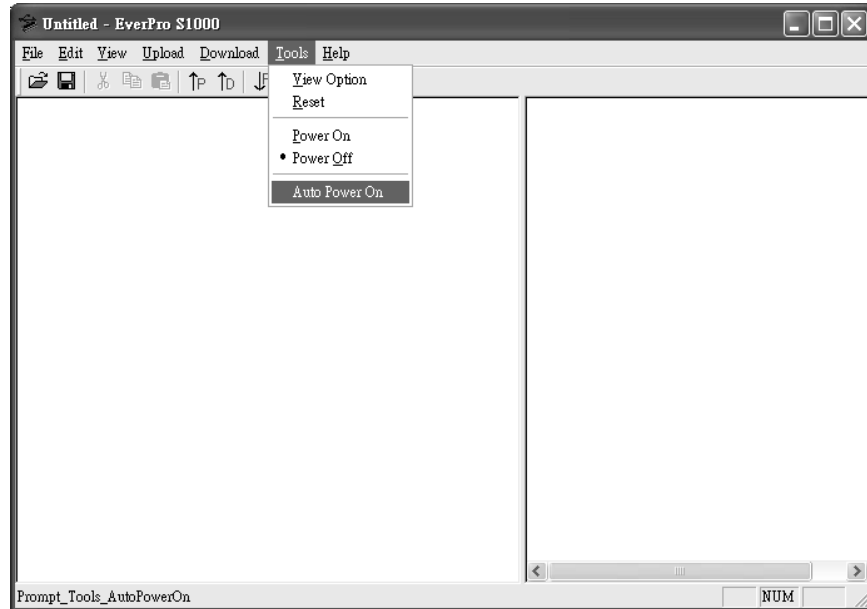


Figure 2

Power On

Selecting "Power On" from within the "Tools" menu can supply power to the MCU. The MCU will then operate when the power source is connected. The MCU and the procedure will then run from its initial state. See Figure 3.

Note The USB interface will supply 5 V with a maximum current of up to 500 mA, which can be used to meet the user's target board power requirements. If however this is inadequate, and more power is required, an additional power source can be connected. It is recommended that after download, the EIC-100 should be placed in a "Power down" state, the target board disconnected and only then the external power source connected. In this way the possibility of damage to the target board or the PC can be minimised.

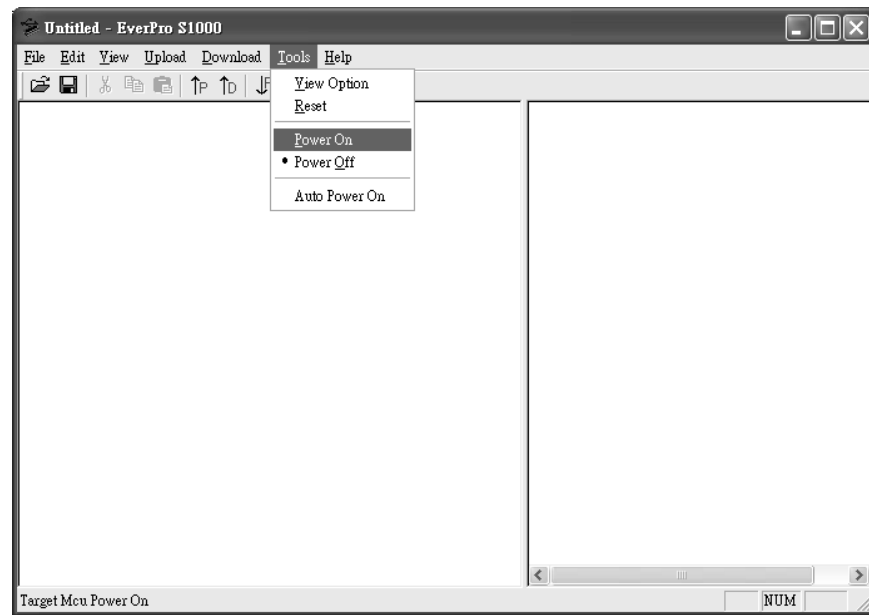


Figure 3

Power Down

Selecting "Power Down" from within the "Tools" menu will disconnect the MCU power supply. After execution, the power supply to the MCU will be disconnected, allowing the users to modify their target board circuits or to remove the target board. See Figure 4.

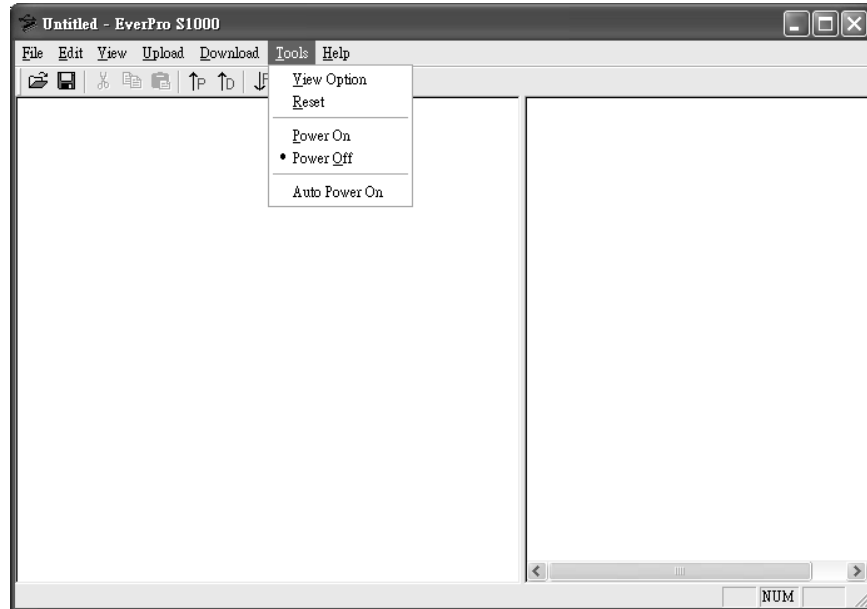


Figure 4

Download – Program

This command is used to program the device. Before downloading, the user must have first created an *.MTP file using the HOLTEK IDE3000 development system. If no *.MTP file exists then the demonstration files: light.mtp , melody.mtp can be selected. The operating steps are as follows:

- Step 1: Open the file that is to be programmed into the device (*.MTP).
- Step 2: There are three options in the Download menu: "Program", "EEData" and "ALL". Selecting "Program" will program the Program Memory, selecting "EEData" will program the EEPROM memory and selecting "ALL" will program both. See Figure 5.
- Step3: After the download operation has ended, "Power On" can be used to operate the MCU.

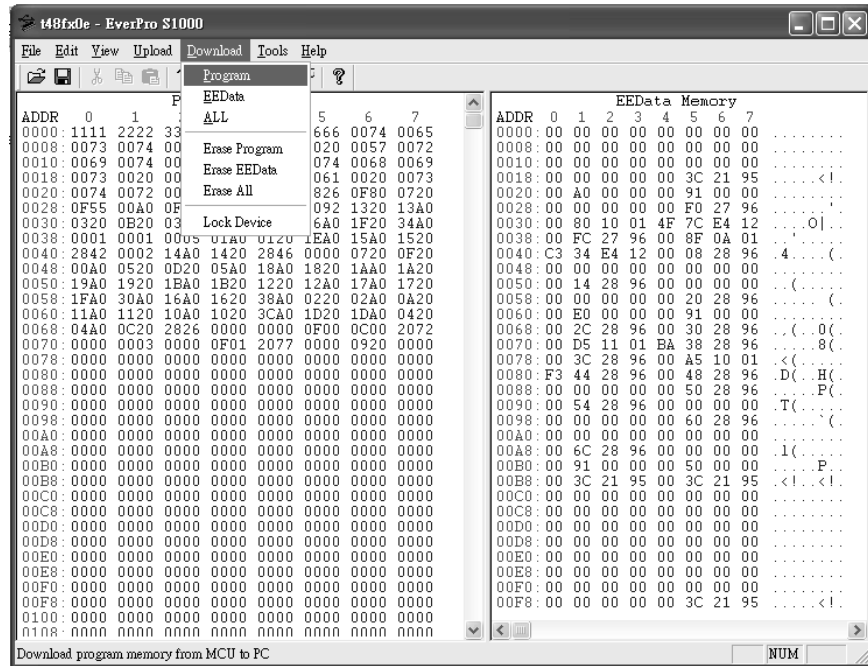


Figure 5

Upload – Read

Before executing an upload command, the file to be uploaded must first be opened using the "File" menu. Also select the MCU type required from "Select MCU Type". See Figure 6.

Within the Upload function are three commands, "Program", "EEData" and "ALL". Selecting the "Program" command, will only read the Program Memory data. Selecting the "EEData" command will only read the EEPROM Data Memory area. Selecting the "ALL" command, will read both the Program Memory data and the EEPROM Data Memory data. See Figure 7.

The data that is read out will be displayed in the corresponding Windows. If it is required to save the data, the "Save" command, located withing the "File" menu, can be used.

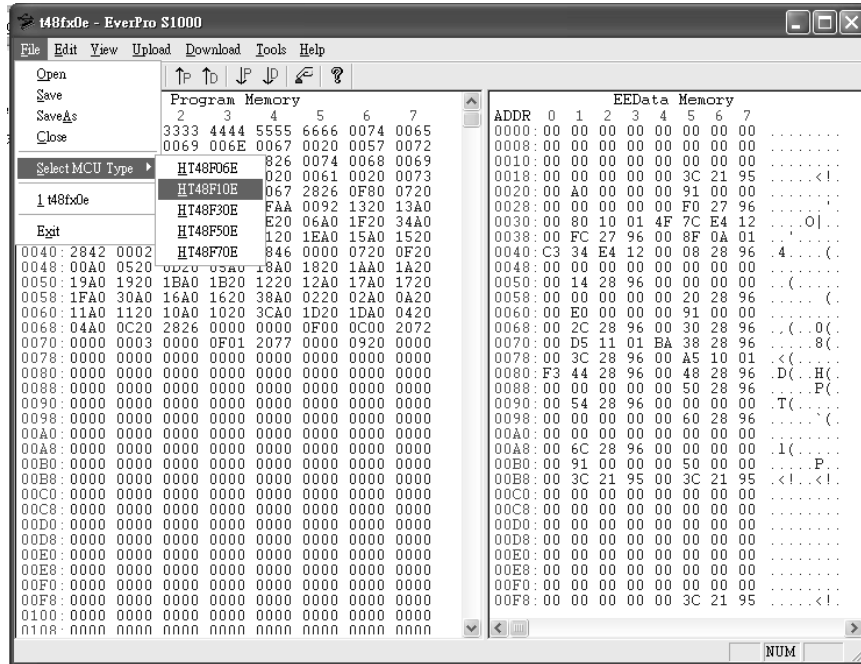


Figure 6

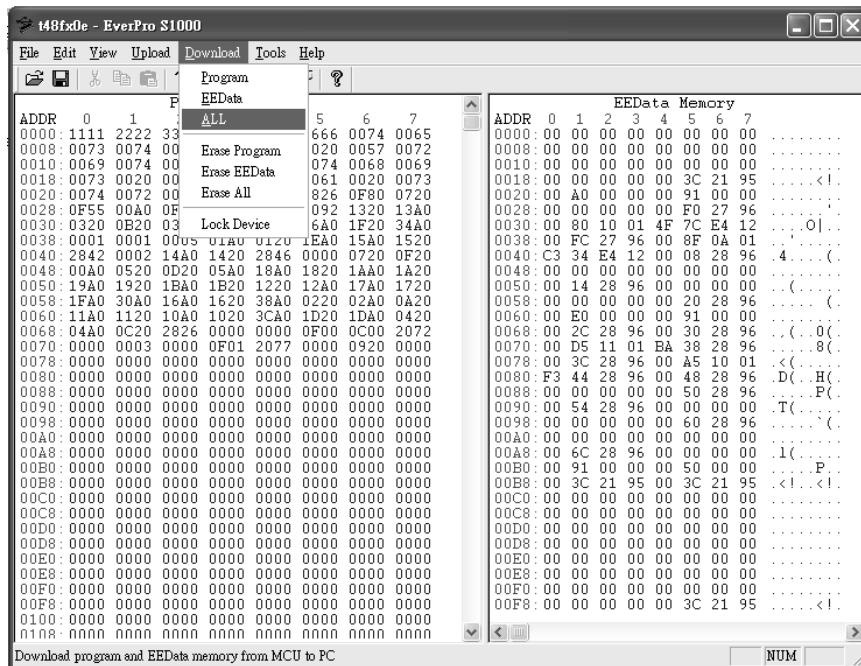


Figure 7

Verify Program

The "Verify Program", "Verify EEData" and "Verify All" commands, within the Upload menu, can be used to verify the Program and EEPROM Data Memory. The required *.MTP file must first be opened before any of these operations are carried out. See Figure 8.

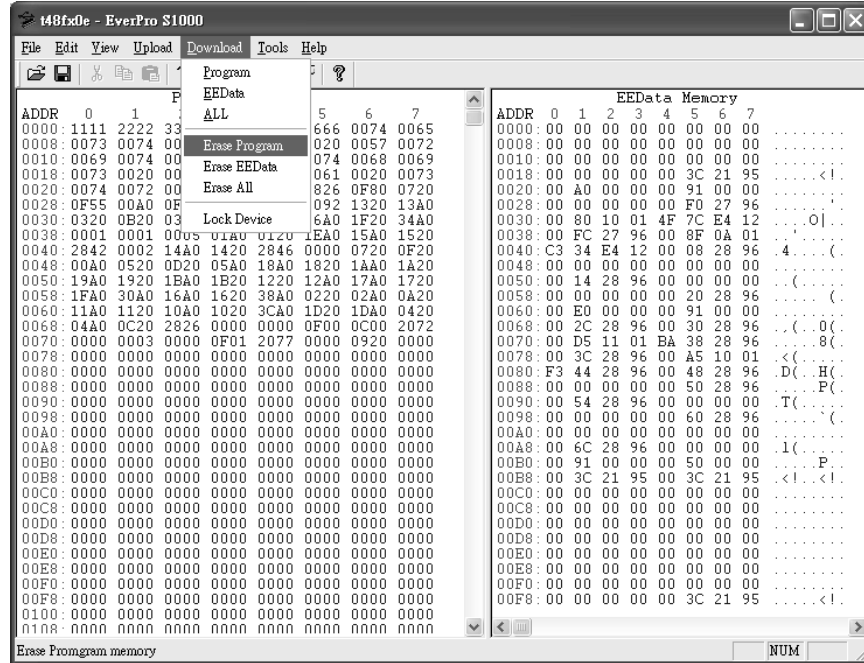


Figure 8

Device Lock

After the device has been programmed, if it is required to protect the programmed data, then "Lock Device" within the "Download" menu can be selected. After this operation has been executed it will not be possible to read back the source program within the MCU. See Figure 9.

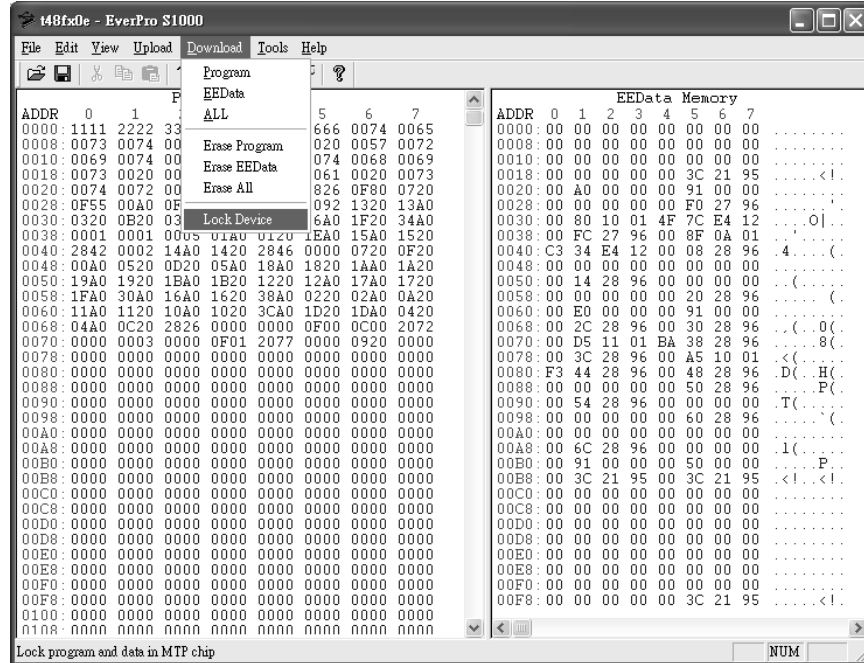


Figure 9

Erase

If it is required to update the program within the MCU, but if the data in the MCU has been protected, which prevents reading, the MCU should first be erased.

The "Erase" command is located within the download menu. When erasing the MCU data, it is recommended that the "Erase All" function is used. If the MCU was unlocked during the update operation, then there is no need to first erase the MCU. Programming can be carried out directly as shown in Figure 10.

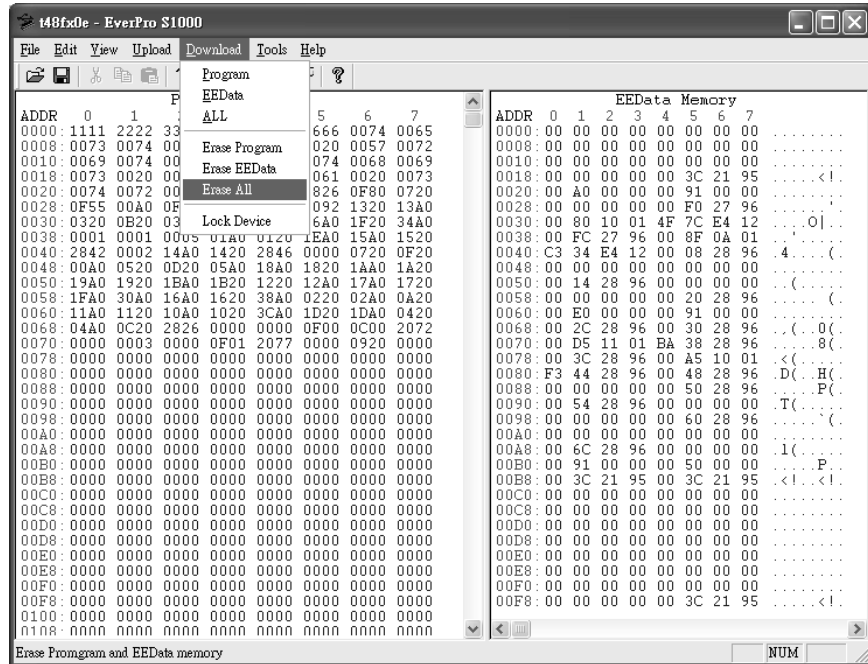


Figure 10

Reset

The "Reset" command is located within the "Tools" menu and is used to reset the MCU condition.

If the device is in the "Auto Power On" condition, executing the "Reset" command will force the MCU to return to its initial condition and restart its program. If the device is in the "power on" state, executing the "Reset" command may place the MCU in a "power down" state, requiring the execution of a "power on" command for the MCU to restart operation. See Figure 11.

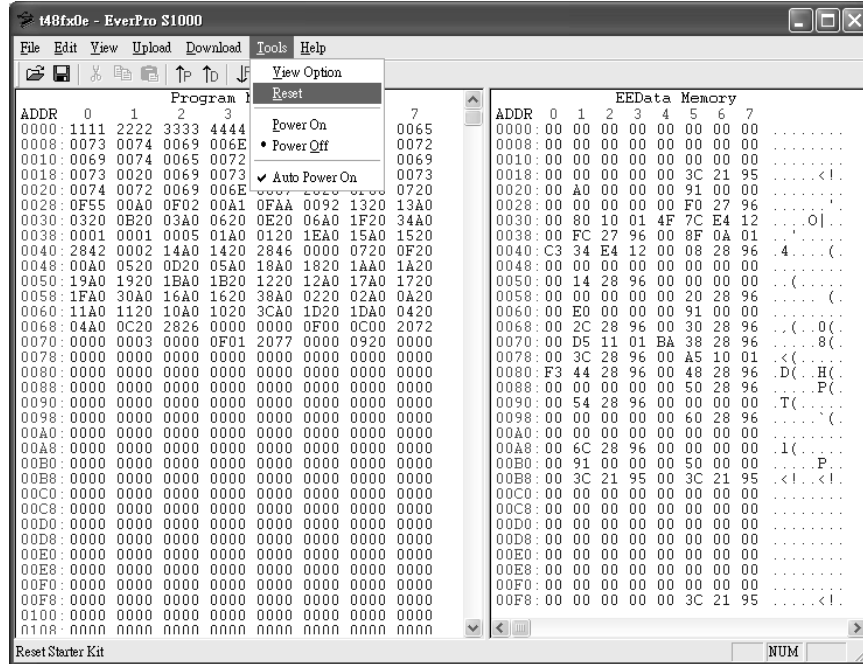


Figure 11

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