

EZ-CUBE

具有编程功能的片上调试仿真器

1 序言

首先感谢您选择EZ-CUBE。

EZ-CUBE是一个能够被用于flash存储器编程的片上调试仿真器，可以用于调试程序或将程序烧写到内置Flash存储器微控制器中。

请您首先通读这篇文档；这将使您在使用EZ-CUBE前获得与其相关的一些基本信息，例如准备、启动、支持等。（注意：关于EZ-CUBE的详细使用手册可以在附带的光盘中或者从瑞萨电子的网站上获得）。

<1>检查包装内的组件

包装内应该有EZ-CUBE片上调试仿真器一个，USB一根，目标连接线一条，光盘一张。

如果发现有任何组件丢失或损坏，请咨询瑞萨电子(中国)有限公司的销售代表或者分销商。

<2> EZ-CUBE的产品信息

如想了解EZ-CUBE的具体信息，可访问以下RENESAS Electronics 的网站 <http://cn.renesas.com/index.jsp>

<3>EZ-CUBE软件

我们推荐您使用最新版本的软件。

2 软件安装

在使用EZ-CUBE之前必须安装EZ-CUBE的软件。下面介绍如何安装 RENESAS Electronics 的软件。安装CubeSuite+软件前，请先仔细阅读Read me文档。

注意事项：

1. 安装软件时，请不要使用中文目录名称、中文文件夹以及中文文件名称。
2. 软件安装完成之后才能将EZ-CUBE 连接到主机。

<1> 插入光盘到光驱。

将CubeSuite+下载到PC机，解压并运行安装文件Install.hta。

注意事项：

必须有.NET Framework 3.5 SP1和Visual C++ Libraries 的时间部件(Visual C++ 2008 SP1)。

请在安装CubeSuite+前安装这些软件。

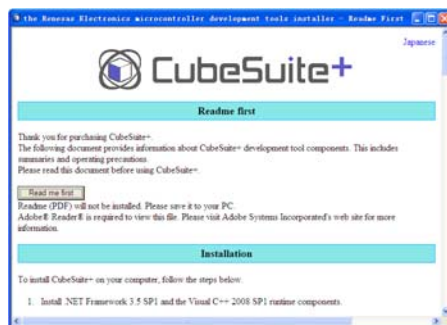


图2-1. 安装向导

<2> 点击[BEGIN CubeSuite+ Setup] 按安装向导指示，开始安装软件。

2 软件安装

<3> 确认认证协议。

安装程序询问您是否同意认证协议。阅读协议，选择"Accept" 或者"Do not accept"。如果同意，选择"Accept", 然后点击[Next]。如果不同意认证，则不能继续安装。

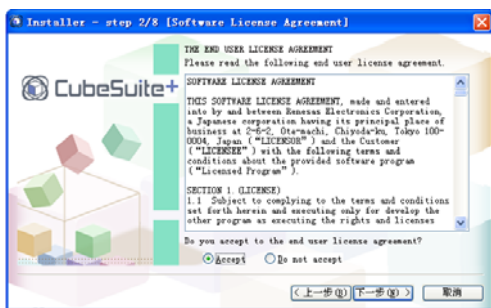


图 2-2. 软件认证协议窗口

<4>选择微控制器和安装位置。

选择想安装开发工具的微控制器的选择框。如果想改变安装地址，可在此时改变。设置完毕后，点击[Next]。

<5>完成安装

当完成所有安装相关的任务，显示安装结果。点击[Finish] 完成安装。

<6>安装USB驱动程序

使用USB 缆连接EZ-CUBE和PC机。根据OS从CD下载USB驱动程序，安装USB驱动。

3 设置和连接硬件

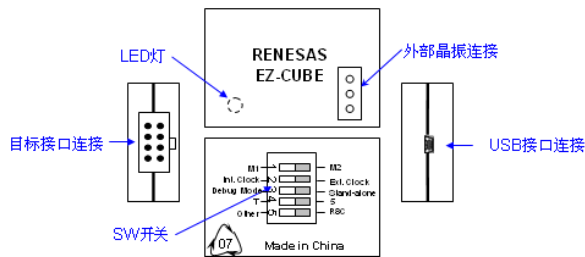
以78K0调试模式为例，其他系列调试或烧写的硬件设置和连接，请参阅EZ-CUBE用户手册。

<1>固件更新

- ①使用USB 缆连接EZ-CUBE和PC。不要将EZ-CUBE与目标板相连。
- ②启动【QBEZUTL.exe】，并指定"78K0_OCD_FW.hex"固件文件。
- ③点击[Start]按钮，然后指定用于78K0 的固件下载到EZ-CUBE。

<2>开关设置

- SW-1开关：请选择 "M2"
- SW-2开关：请根据实际目标设备使用，参考EZ-CUBE用户手册
- SW-3开关：请选择 " Debug Mode"
- SW-4开关：请根据实际目标设备使用，参考EZ-CUBE用户手册
- SW-5开关：请选择 "Other"



<3>连接目标系统

将EZ-CUBE连接到目标系统，在目标系统打开前确认完成连接。

<4>连接USB 线缆

请在目标系统上电前，将EZ-CUBE连接到主机。当USB 缆与PC 机间连接时，模式灯点亮为红色。

<5>目标系统上电

打开目标系统的电源。如果电源选择为“5”，则这一步并不是必需的。

4 保护用户资源和设置安全ID

在使用EZ-CUBE执行片上调试之前，用户资源（例如，存储器空间）必须保护起来。必须设置安全ID来阻止程序被未经授权的个人读取。如需了解这些设置的细节，请查阅EZ-CUBE用户手册。如果目标设备的flash存储器已经被擦除(整个flash存储器空间全部被写为0xFF)，调试器可以正常启动。这样可以检测目标系统电路设计。flash存储器已经被擦除的设备拥有安全ID“0xFFFFFFFFFFFFFFFFFFFFFFFF”(10字节)。对安全ID的设置R8C中是14字节。

5 启动调试器

启动调试器。关于启动后的操作，请参阅CubeSuite+用户手册。

6 启动编程器

启动编程器WriteEZ5。关于启动后的操作，请参阅WriteEZ5用户手册和EZ5_readme。

1. All information included in this document is current as of the date this document is issued. Such information, however, is subject to change without any prior notice. Before purchasing or using any Renesas Electronics products listed herein, please confirm the latest product information with a Renesas Electronics sales office. Also, please pay regular and careful attention to additional and different information to be disclosed by Renesas Electronics such as that disclosed through our website.
2. Renesas Electronics does not assume any liability for infringement of patents, copyrights, or other intellectual property rights of third parties by or arising from the use of Renesas Electronics products or technical information described in this document. No license, express, implied or otherwise, is granted hereby under any patents, copyrights or other intellectual property rights of Renesas Electronics or others.
3. You should not alter, modify, copy, or otherwise misappropriate any Renesas Electronics product, whether in whole or in part.
4. Descriptions of circuits, software and other related information in this document are provided only to illustrate the operation of semiconductor products and application examples. You are fully responsible for the incorporation of these circuits, software, and information in the design of your equipment. Renesas Electronics assumes no responsibility for any losses incurred by you or third parties arising from the use of these circuits, software, or information.
5. When exporting the products or technology described in this document, you should comply with the applicable export control laws and regulations and follow the procedures required by such laws and regulations. You should not use Renesas Electronics products or the technology described in this document for any purpose relating to military applications or use by the military, including but not limited to the development of weapons of mass destruction. Renesas Electronics products and technology may not be used for or incorporated into any products or systems whose manufacture, use, or sale is prohibited under any applicable domestic or foreign laws or regulations.
6. Renesas Electronics has used reasonable care in preparing the information included in this document, but Renesas Electronics does not warrant that such information is error free. Renesas Electronics assumes no liability whatsoever for any damages incurred by you resulting from errors in or omissions from the information included herein.
7. You should use the Renesas Electronics products described in this document within the range specified by Renesas Electronics, especially with respect to the maximum rating, operating supply voltage range, movement power voltage range, heat radiation characteristics, installation and other product characteristics. Renesas Electronics shall have no liability for malfunctions or damages arising out of the use of Renesas Electronics products beyond such specified ranges.
8. Although Renesas Electronics endeavors to improve the quality and reliability of its products, semiconductor products have specific characteristics such as the occurrence of failure at a certain rate and malfunctions under certain use conditions. Further, Renesas Electronics products are not subject to radiation resistance design. Please be sure to implement safety measures to guard them against the possibility of physical injury, and injury or damage caused by fire in the event of the failure of a Renesas Electronics product, such as safety design for hardware and software including but not limited to redundancy, fire control and malfunction prevention, appropriate treatment for aging degradation or any other appropriate measures. Because the evaluation of microcomputer software alone is very difficult, please evaluate the safety of the final products or system manufactured by you.
9. Please contact a Renesas Electronics sales office if you have any questions regarding the information contained in this document or Renesas Electronics products, or if you have any other inquiries.
(Note 1) "Renesas Electronics" as used in this document means Renesas Electronics Corporation and also includes its majority-owned subsidiaries.
(Note 2) "Renesas Electronics product(s)" means any product developed or manufactured by or for Renesas Electronics.

操作本产品的注意事项

瑞萨电子（中国）有限公司对于用户未遵照用户手册进行的非正常及非惯例使用造成的产品失效和其他相关损失不承担责任。

如需了解可在哪里查询，请访问以下 RENESAS Electronics 网页。
<http://cn.renesas.com/index.jsp>

REBJ-OS-MC-10017
Rev. 1.00