YRCNR7F0C8021-BE

开发套件

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1. 介绍

1.1 目的

YRCNR7F0C8021-BE开发套件是一个用于评估瑞萨微控制器的工具套件，包括在线调试器EZ-CUBE和YRCNR7F0C80212-TB。

1.2 特点

此开发套件可用于评估以下内容：

(1) 瑞萨R7F0C8021的编程
(2) 用户代码的调试
(3) 用户电路，如按键，LED
YRCNR7F8021-BE开发套件包含所有微控制器R7F0C8021操作所需的电路。

2. 电源提供

2.1 需求

YRCNR7F0C8021-BE开发套件附带一个EZ-CUBE调试器。调试器可以给开发套件提供100mA 5V的供电。如果不使用调试器，需要单独供电。

2.2 供电行为

当购买YRCNR7F0C8021-BE开发套件，预编程了示例程序到R7F0C8021。在板通电后，用户LED指示灯将会开始进行闪烁。
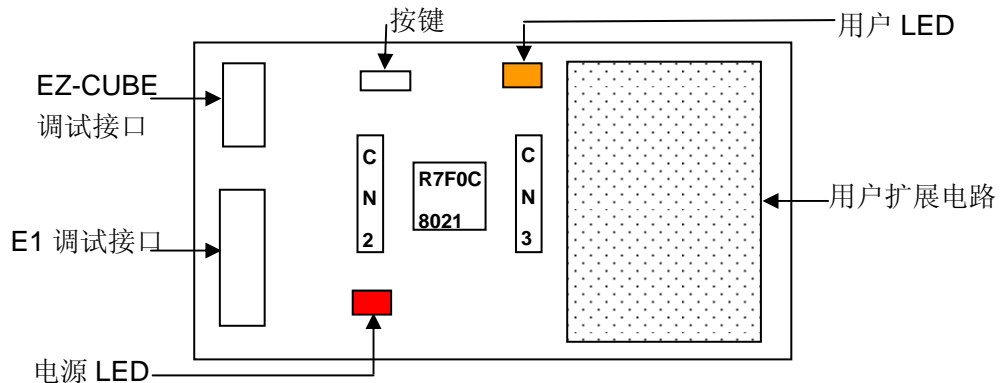
3. 电路板布局

图3-1列出了电路板的顶层元器件布局。

图3-1 电路板布局

4. 调试器连接

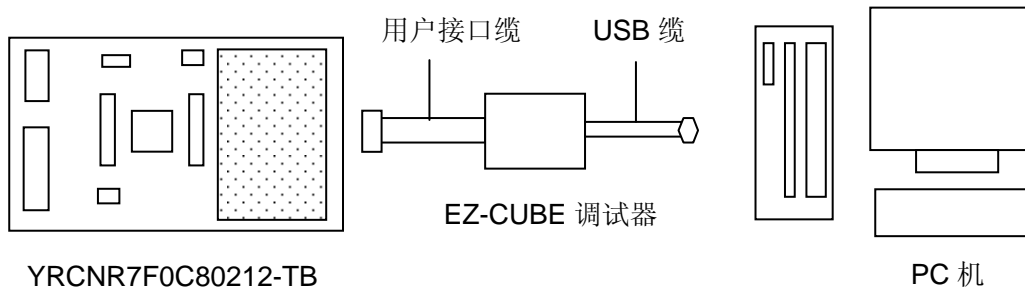下图显示了开发套件，调试器EZ-CUBE和PC机之间的连接。

图4-1 调试接口框图

5. 用户电路

5.1 复位电路

YRCNR7F0C8021-BE开发套件使用R7F0C8021芯片上的复位信号。请参阅R7F0C8021硬件手册关于复位部分。

5.2 按键

YRCNR7F0C8021-BE开发套件有一个按键，SW1用于INTP0输入，更多信息请查看YRCNR7F0C80212-TB原理图。

5.3 LED

有2个LED在板上，每个LED，它的颜色和功能如下表所示。

LED	颜色	功能	MCU 连接
POWER	红色	指示电源上电状态	没有连接
LED(D1)	黄色	用户操作LED	P04

表5-1 LED连接

5.4 电源

电源默认为仿真器插头供电. 用户可以通过添加气件(D3, JP1)和修改电路(J10)来选择供电来源(JP1: 1-2为仿真器供电, 2-3为目标板供电).

5.5 复位(RESET) / P125 功能选择

为配合连接仿真器，当Pin-2作为P125 I/O功能)时,需要使用连接仿真器的对应电路. 用户可以通过J1, J2, J3 和J4跳线来选择对应的仿真器电路 (Pin-2的功能(复位ESET)/P125)).

J1	J2	J3	J4	Pin 2 功能
S	S	C	S	RESET (默认设置)
C	C	S	C	P125

'S'为跳线短路,'C'为跳线断开

6. 外设接口

开发套件有外设连接接口（2.54mm pitch）2*5pin插头，可以轻松连接配置MCU管脚。

6.1 描述

表6-1表示外设连接接口

外设连接接口	
Pin	**MCU pin**
1	P40/KR0/TOOL0
2	P125/KR1/RESET
3	P137/TI00/INTP0
4	V_{ss}
5	V_{DD}
6	P00/SO00/TXD0/INTP1
7	P01/ANI0/SI00/RXD0/KR2
8	P02/ANI1/SCK00/PCLBUZ0/KR3
9	P03/ANI2/TO00/KR4
10	P04/ANI3/TI01/TO01/KR5

表6-1 外设接口

7. 代码开发

7.1 概述
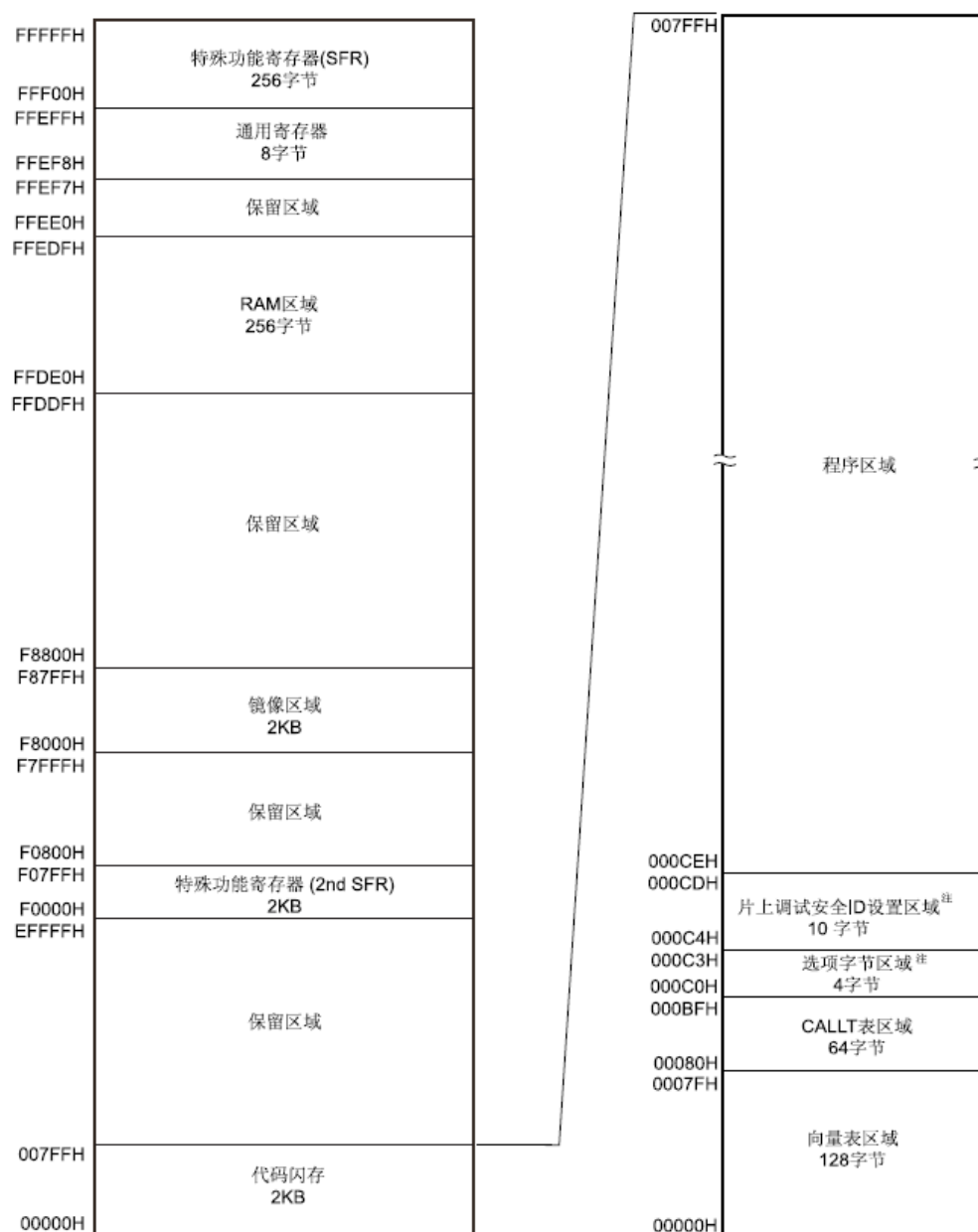
所有的代码调试使用瑞萨软件工具，开发套件必须连接调试器，如EZ-CUBE。有关调试器的功能，请参阅调试器的用户手册。

7.2 调试支持

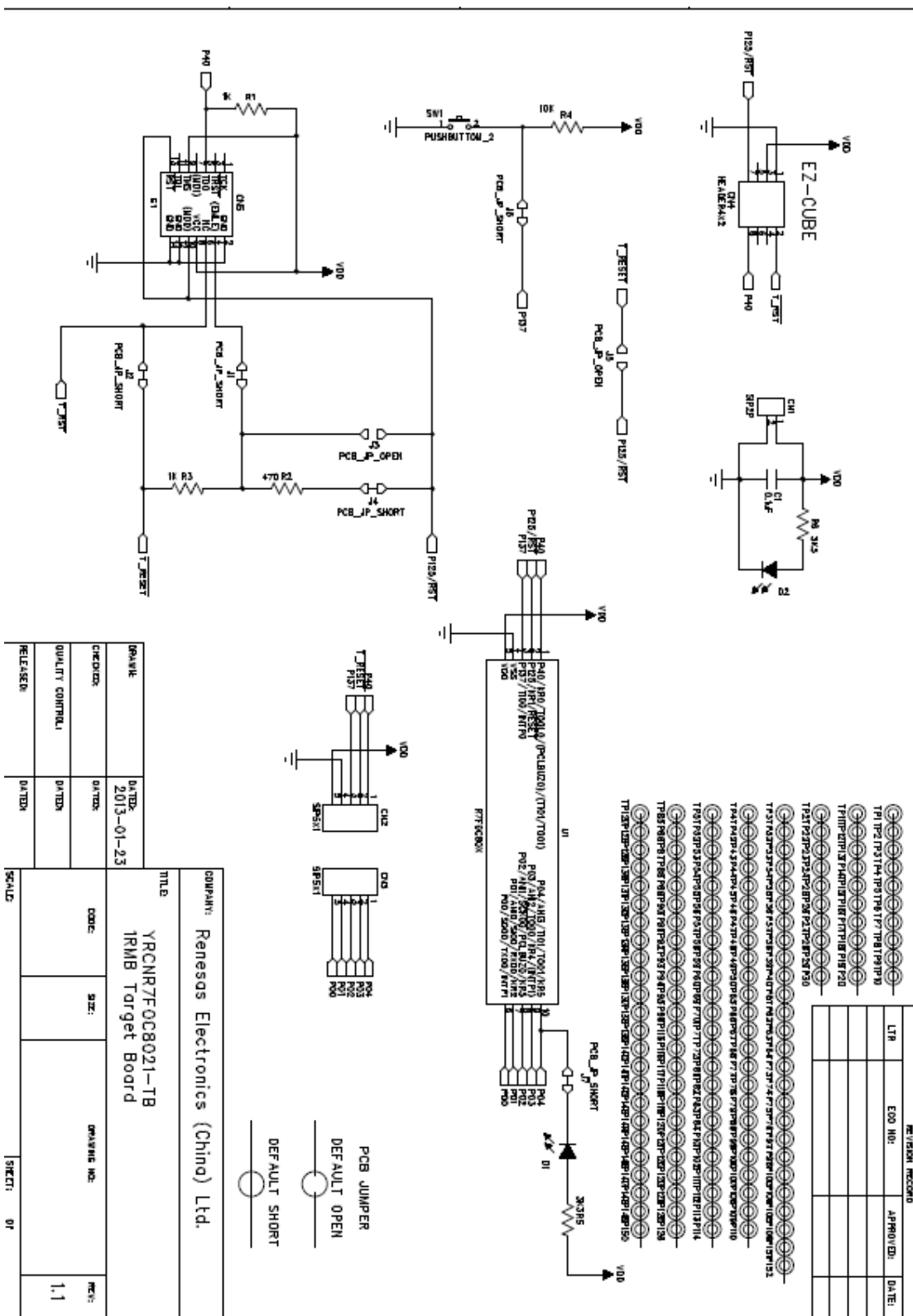该EZ-CUBE调试器（本开发套件提供）支持调试的基本功能。有关详细信息，请参阅EZ-CUBE的用户手册。

8. 地址空间

R7F0C8021存储器映射图如图8-1。详细内容，请参阅R7F0C8021硬件手册。

注 将选项字节设于 000C0H 至 000C3H，片上调试安全 ID 设于 000C4H 至 000CDH。

图8-1 R7F0C8021存储器映射图

9. YRCNR7F0C80212-TB原理图

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http://www.renesas.com/inquiry

YRCNR7F0C80212-TB

http://cn.renesas.com/applications/platform_cn/index.jsp#page=targetboard

修订记录	YRCNR7F0C8021-BE 说明文档

Rev	发行日	修订内容	
		页	修订处
1.00	2014.05.16	—	初版发行

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   CMOS产品的输入引脚的阻抗一般为高阻抗。如果在开路的状态下运行未使用的引脚，由于感应现
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   未使用的引脚，请按照正文的"未使用引脚的处理"中的指示进行处理。

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   【注意】通电时产品处于不定状态。
   通电时， LSI内部电路处于不确定状态，寄存器的设定和各引脚的状态不定。通过外部复位引脚
   对
   产品进行复位时，从通电到复位有效之前的期间，不能保证引脚的状态。
   同样，使用内部上电复位功能对产品进行复位时，从通电到达到复位产生的一定电压的期间，不
   能
   保证引脚的状态。

3. 禁止存取保留地址（保留区）
   【注意】禁止存取保留地址（保留区）
   在地址区域中，有被分配将来用作功能扩展的保留地址（保留区）。因为无法保证存取这些地址时
   的运行，所以不能对保留地址（保留区）进行存取。

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   【注意】复位时，请在时钟稳定后解除复位。
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   （或者外部振荡电路）的时钟开始运行的系统中，必须在时钟充分稳定后解除复位。另外，在程
   序
   运行中，切换成使用外部振荡器（或者外部振荡电路）的时钟时，在要切换成的时钟充分稳定后
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