

YRCNR7F0C3056-TB

R20AN0255CC0100

示例程序

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介绍

示例程序包括以下函数和功能:

- 微控制器的硬件初始化
- 按键响应及处理
- A/D转换器功能
- CMP(比较器)功能
- AMP(放大器)功能

目标器件

R7F0C3056

当应用此示例程序于其他微控制器时，请根据目标微控制器规格修改程序，并对修改的程序充分进行评估。

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1. 执行示例程序

示例按以下顺序执行：

- (1) 上电，电源灯（D5）点亮，D6 ~ D10同时闪烁5次；
- (2) D6 ~ D10 LED灯闪烁停止后，才可进行功能选择；
- (3) 用户可以使用按键S2（RESET）实现复位功能，程序重新开始执行；
- (4) 用户可以使用按键S1，用于功能选择（循环选择AD、CMP和AMP）；
- (5) “ANI3”用于A/D转换功能，“CMPARATOR”用于CMP功能，“AMPLIFIER”用于AMP功能；

在使用示例前，请先明确MINICUBE2/EZ-CUBE硬件设置和与目标连接是否正确。

具体细节请参见MINICUBE2/EZ-CUBE用户手册。

并请检查MINICUBE2/EZ-CUBE是否使用了最新固件。

2. 操作环境

工作频率	内部8MHz高速时钟
综合开发环境	瑞萨电子综合开发环境 CubeSuite+ V1.03.00

3. 函数说明

此节描述示例程序中的各个函数。

[函数名称] hw_init	
概要	硬件初始化
头文件	无
声明	void hw_init (void)
说明	设置内部时钟 (8MHz)及其他硬件
返回值	无
备注	无

[函数名称] ADC_Pro_Int	
概要	AD中断响应程序
头文件	无
声明	void ADC_Pro_Int (void)
说明	AD转换处理
返回值	无
备注	无

[函数名称] CMP_Pro_Int	
概要	CMP中断响应程序
头文件	无
声明	void CMP_Pro_Int (void)
说明	比较器响应处理
返回值	无
备注	无

[函数名称] IntervalTimer_Int	
概要	2ms间隔定时器中断
头文件	无
声明	void IntervalTimer_Int (void)
说明	2ms时间间隔用于LED控制基准时间
返回值	无
备注	无

[函数名称] KeyCheck_Int	
概要	按键中断响应
头文件	无
声明	void KeyCheck_Int (void)
说明	进行AD、AMP和CMP功能循环选择
返回值	无
备注	无

[函数名称] ADCStartupPro	
概要	AD转换器功能设置
头文件	无
声明	void ADCStartupPro (void)
说明	设置操作AD功能
返回值	无
备注	无

[函数名称] AMStartupPro	
概要	放大器功能设置
头文件	无
声明	void AMStartupPro (void)
说明	设置操作放大器
返回值	无
备注	无

[函数名称] CMStartupPro	
概要	比较器功能设置
头文件	无
声明	void CMStartupPro (void)
说明	设置操作比较器
返回值	无
备注	无

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修订记录

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		页	概要
1.00	Apr, 2013	—	第一版发行

产品使用时的注意事项

本文对适用于单片机所有产品的“使用时的注意事项”进行说明。有关个别的使用时的注意事项请参照正文。此外，如果在记载上有与本手册的正文有差异之处，请以正文为准。

1. 未使用的引脚的处理

【注意】将未使用的引脚按照正文的“未使用引脚的处理”进行处理。

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，由于感应现象，外加LSI周围的噪声，在LSI内部产生穿透电流，有可能被误认为是输入信号而引起误动作。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。

2. 通电时的处理

【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。

4. 关于时钟

【注意】复位时，请在时钟稳定后解除复位。

在程序运行中切换时钟时，请在要切换成的时钟稳定之后进行。复位时，在通过使用外部振荡器（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再进行切换。

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