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M16C/62

Special Function Register Header Files for the M16C/62A MCU

1.0 Abstract

The following article describes how to use the special function register files sfr62a.h and sfr62a.inc.

2.0 Introduction

The Renesas M16C/62 is a 16-bit MCU, based on the M16C CPU core, with features including 10-bit A/D, D/A, UARTS, timers, DMA, and up to 256k bytes of user flash.

The files sfr62a.h and sfr62a.inc define the Special Function Register for the M16C/62A when using Renesas' NC30 complier and AS30 assembler respectively.

3.0 Usage

3.1 C Language Programs

By including the file "srf62a.h" in a C language program, all special function registers are defined as in the M16/62A datasheets and user's manuals.

Example:

```
#include "sfr62a.h"          // copy this into the working directory

 Main()
 {
   ta0 = 0xff00;             // sets timer A0 data register to FF00 hex
   p10 = 0x55;               // set port 10 data register to 55 hex
   p6_3 = 1;                 // sets bit 3 of port register p6 to 1
   ta0os = 1;                // sets timer A0 one shot start flag to 1

 }
```

If the wrong data type is used, the compiler will not generate an error.

3.2 Assembler Language Programs

By including the file "srf62a.inc" in an assembler language program, all special function registers are defined as in the M16/62A datasheets and user's manuals.

```
        .include sfr62a.inc         ;copy this into the working directory

              mov.w   #0ff00h,ta0   ;sets timer A0 data register to FF00 hex
              mov.b   #055h,p10     ;set port 10 data register to 55 hex
              bset    p6_3          ;sets bit 3 of port register p6 to 1
              bset    ta0os         ;sets timer A0 one shot start flag to 1
```

4.0 Reference

Renesas Technology Corporation Semiconductor Home Page

http://www.renesas.com

E-mail Support

support_apl@renesas.com

Data Sheets

- M16C/62 datasheets, 62aeds.pdf

User's Manual

- M16C/62 User's Manual, 62eum.pdf
- M16C/60 and M16C/20 C Language Programming Manual, 6020EC.pdf
- NC30 Ver. 4.0 User's Manual, NC30UE.pdf

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