

Flash API for AT89C51RE2

This application note provides a set of routines to access the embedded flash of the AT89C51RE2. Some of these routines are compatible with the Flash API provided for AT89C51xD2 products.

This application note also explains which routines are compatible and which ones are not.

The zip files contain:

Files	Description
flash_api.c	contains function
flash_api.h	contains public function prototype
example.c	Usage example of Flash functions
config.h	Type decription
at89c51re2.h	register description
flash_api.uv2	projet for keil compiler



8051 Microcontrollers

Application Note

Rev. 7725A-8051-04/07





Routines Comparison

This table below lists the routines provided for the AT89C51RE2 and the routines provided for the AT89C51xD2 that are not supported on the AT89C51RE2.

Warning: When a routine is **compatible**, this means that the function provided has the same prototype. You must not use the library of AT89C51xD2 product for a AT89C51RE2 product.

Two reasons are identified when a routines is not supported on the AT89C51RE2:

- **Not applicable** : Due to hardware feature difference
- **Not possible** : Due to bootloader limitation

AT89C51RE2 routines		
Routines Names	Routines Description	AT89C51xD2
__api_wr_code_byte	Allow to write a byte anywhere in the flash memory	compatible
__api_wr_code_page	Allow to write a block up to 255 bytes anywhere in the flash	compatible
__api_rd_code_byte	Allow to read a byte anywhere in the flash	compatible
__start_bootloader	Allow to start the bootlader from the application	compatible
__api_rd_HSB	Allow to read the Hardware Security Byte	not applicable
__api_wr_HSB	Allow to write the Hardware Security Byte	not applicable
__api_rd_FCB	Allow to read the Fuse Configuration Byte	not applicable
__api_wr_FCB	Allow to write the Fuse Configuration Byte	not applicable
__api_set_X2	Allow to set the bit X2 in the FuseConfiguration Byte	compatible
__api_clr_X2	Allow to clr the bit X2 in the Fuse Configuration Byte	compatible
__api_set_BRV_ROM0	Allow to set BRV to start on Bootloader after Reset	not applicable
__api_set_BRV_BANK0	Allow to set BRV to start on Bank0 after Reset	not applicable
__api_set_BRV_BANK1	Allow to set BRV to start on Bank1 after Reset	not applicable
__api_set_BRV_BANK2	Allow to set BRV to start on Bank2 after Reset	not applicable

Migration from AT89C51xD2 to AT89C51RE2

AT89C51xD2 extra routines		
Routines Names	Routines Description	AT89C51RE2
__api_rd_manufacturer	Allow to read manufactirer ID	not possible
__api_rd_device_id1	Allow to read Device ID1	not possible
__api_rd_device_id2	Allow to read Device ID2	not possible
__api_rd_device_id3	Allow to read Device ID3	not possible
__api_erase_SBV	Allow to read Device ID3	not applicable
__api_erase_block	Allow to erase flash block	not applicable
__api_wr_SSB	Allow to write the Software Security Byte	not applicable
__api_wr_SSB_RD_WR_SECURITY	Allow to set the Software Security Byte at level RD_WR protection	not applicable
__api_wr_SSB_WR_SECURITY	Allow to set the Software Security Byte at level WR protection	not applicable
__api_wr_SSB_RD_SECURITY	Allow to set the Software Security Byte at level RD protection	not applicable
__api_rd_SSB	Allow to read the Software security byte	not applicable
__api_rd_BSB	Allow to read the BSB	not applicable
__api_rd_SBV	Allow to read the SBV	not applicable
__api_rd_EB	Allow to read the EB	not applicable
__api_rd_bootloader_version	Allow to read the bootloader version	not possible
__api_wr_BSB	Allow to write the BSB	not applicable
__api_wr_SBV	Allow to write the SBV	not applicable
__api_wr_EB	Allow to write the EB	not applicable
__api_set_BLJB	Allow to set the bit BLJB	not applicable
__api_clr_BLJB	Allow to clear the bit BLJB	not applicable



Atmel Corporation

2325 Orchard Parkway
San Jose, CA 95131
Tel: 1(408) 441-0311
Fax: 1(408) 487-2600

Regional Headquarters

Europe

Atmel Sarl
Route des Arsenaux 41
Case Postale 80
CH-1705 Fribourg
Switzerland
Tel: (41) 26-426-5555
Fax: (41) 26-426-5500

Asia

Room 1219
Chinachem Golden Plaza
77 Mody Road Tsimshatsui
East Kowloon
Hong Kong
Tel: (852) 2721-9778
Fax: (852) 2722-1369

Japan

9F, Tonetsu Shinkawa Bldg.
1-24-8 Shinkawa
Chuo-ku, Tokyo 104-0033
Japan
Tel: (81) 3-3523-3551
Fax: (81) 3-3523-7581

Atmel Operations

Memory

2325 Orchard Parkway
San Jose, CA 95131
Tel: 1(408) 441-0311
Fax: 1(408) 436-4314

Microcontrollers

2325 Orchard Parkway
San Jose, CA 95131
Tel: 1(408) 441-0311
Fax: 1(408) 436-4314

La Chantrerie
BP 70602
44306 Nantes Cedex 3, France
Tel: (33) 2-40-18-18-18
Fax: (33) 2-40-18-19-60

ASIC/ASSP/Smart Cards

Zone Industrielle
13106 Rousset Cedex, France
Tel: (33) 4-42-53-60-00
Fax: (33) 4-42-53-60-01

1150 East Cheyenne Mtn. Blvd.
Colorado Springs, CO 80906
Tel: 1(719) 576-3300
Fax: 1(719) 540-1759

Scottish Enterprise Technology Park
Maxwell Building
East Kilbride G75 0QR, Scotland
Tel: (44) 1355-803-000
Fax: (44) 1355-242-743

RF/Automotive

Theresienstrasse 2
Postfach 3535
74025 Heilbronn, Germany
Tel: (49) 71-31-67-0
Fax: (49) 71-31-67-2340

1150 East Cheyenne Mtn. Blvd.
Colorado Springs, CO 80906
Tel: 1(719) 576-3300
Fax: 1(719) 540-1759

Biometrics/Imaging/Hi-Rel MPU/ High Speed Converters/RF Datacom

Avenue de Rochepleine
BP 123
38521 Saint-Egreve Cedex, France
Tel: (33) 4-76-58-30-00
Fax: (33) 4-76-58-34-80

e-mail

literature@atmel.com

Web Site

<http://www.atmel.com>

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