User's Guide



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# **Table of Contents**

1	Introduction	5
1.1 1.2	Welcome to RS1000 RS1000 special features	
2	Installing RS1000 Windows Software	6
2.1 2.2 2.3	System Requirements Installing RS1000 Windows Software Uninstalling RS1000 Windows Software	7
3	Installing RS1000 Windows Driver	8
4	Getting Started	14
5	Main Menu	15
6	Module Configuration Menu	16
6.1 6.2 6.3 6.4 6.5	Module Configuration Menu Screen Addr Configuration Menu Frq/Chp Configuration Menu ECC/REG Configuration Menu TCL/RCD Configuration Menu	17 18 19
7	Spd Configuration Menu	21
7.1 7.2	Spd Configuration Screen Spd Edit Screen	
8	Test Strategy Configuration Menu	23
8.1 8.2	Test Strategy Configuration Screen	
9	RS1000 Windows Software	25
9.1 9.2 9.3 9.4 9.5	Launching RS1000 Windows Software Main Window Main Menu and Buttons Connecting PC to RS1000 tester Disconnecting PC from RS1000 tester	26 27 29

10 M	Iodule Configuration in RS1000 Software3	<b>;1</b>
	Modify the module configuration	
11 T	est Strategy Configuration in RS1000 Software	3
	Modify the test strategy configuration3 Upload and download module configuration Error! Bookmark not defined	
12 S	PD Configuration in RS1000 Software3	5
	Modify the SPD configuration	
13 S	ystem Firmware Upgrade3	9

# **1** Introduction

#### 1.1 Welcome to RS1000

Welcome to the RS1000 memory tester. By using the RS1000 LCD display or the RS1000 Windows software, you can customize the RS1000 memory tester to test different DDR and DDR2 memory modules. You are able to modify the module configurations, edit the sequence of the testing logics, and alter the SPD data.

#### 1.2 RS1000 special features

- Test different types of DDR and DDR2 memory modules
- Alterable test logics sequences
- Read, write, and test SPD data
- Future system firmware upgrade

# 2 Installing RS1000 Windows Software

### 2.1 System Requirements

#### **Operating System**

- Microsoft Windows 2000 with .Net framework 1.1
- Microsoft Windows XP with .Net framework 1.1

#### Hardware

- Your PC system must have 800 MHz or higher.
- You must have at least 128MB RAM memory. Generally, more would be better.
- Graphics card with 8MB or higher (for video).
- 100MB of free hard drive space recommended. Generally, more would be better.
- One USB port.



RS1000 Windows USB driver does not currently work with SIS chipset based motherboard. Please don't install RS1000 Windows software and USB driver to the SIS chipset based system.

### 2.2 Installing RS1000 Windows Software

- **Step 1**: Double click on the "install.exe" file.
- **Step 2**: Follow prompts until you are finished installing the RS1000 software. A pop-up window will be shown: (Fig. 01)

 Image: Section of the section of th

#### Fig. 01

- **Step 3**: Type "y" and press "Enter" in the Dos prompt to install the SAM-PRO software (if not previously installed).
- **Step 4**: Follow prompts until you are finished installing the SAM-PRO software.
- Step 5: Restart your PC.

#### 2.3 Uninstalling RS1000 Windows Software

- **Step 1**: Go to Start  $\Rightarrow$  Settings  $\Rightarrow$  Control Panel  $\Rightarrow$  Add or Remove Programs
- **Step 2**: Select RS1000 in the Add or Remove Programs window and click "remove".
- **Step 3**: Select SAM-PRO in the Add or Remove Programs window and click "remove".
- **Step 4**: In some cases, you will find that when removing software, there will be one or two files that the operating system will ask if you want them removed since they may be shared by other programs. If you are unsure, always opt to keep these files.
- Step 5: Restart your PC.

# 3 Installing RS1000 Windows Driver



Please verify the correct setting of voltage (115V/230V) before turning on the tester.

**Step 1**: Turn on the RS1000 tester system by switching on the power switch. The following screen will first appear on the LCD display. (Fig. 02)

	Microtest System RS1000 マイクロチスト シスチムRS1000 Version 1.0	
(Main)	(Load) (Save)	

Fig. 02

**Step 2**: Plug one end of the USB cable to the RS1000 USB port and the other end to an available PC USB port.



The PC will only recognize the tester when the USB cable is connected on the first LCD screen as shown in Fig. 02. **Step 3**: Windows discovers a new USB device and "Found New Hardware Wizard" will appear on screen. Select "No, not this time" option and click on "Next" button to continue. (Fig. 03)

Found New Hardware Wizard				
	Welcome to the Found New Hardware Wizard			
	Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). <u>Read our privacy policy</u>			
	Can Windows connect to Windows Update to search for software?			
	<ul> <li>Yes, this time only</li> <li>Yes, now and every time I connect a device</li> <li>No, not this time</li> </ul>			
	Click Next to continue.			
	< <u>B</u> ack <u>N</u> ext > Cancel			

Fig. 03

**Step 4**: Select "Install from a list or specific location (Advanced)" and click on "Next" button to continue. (Fig. 04)

Found New Hardware Wizard				
It is wizard helps you install software for:         Memory Test System         Image: Constant of the provided of the prov				
< <u>B</u> ack <u>N</u> ext > Cancel				

Fig. 04

**Step 5**: Select "Don't search. I will choose the driver to install" and click on "Next" to continue. (Fig. 05)

Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
Include this location in the search:
BIowse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< <u>B</u> ack <u>N</u> ext > Cancel

Fig. 05

Step 6: Click on "Have Disk" button to continue. (Fig. 06)

Found New Hardware Wizard	
Select the device driver you want to ins	tall for this hardware.
Select the manufacturer and model of you have a disk that contains the driver you v	ur hardware device and then click Next. If you vant to install, click Have Disk.
Model	
atm6124.Sys ATMEL AT91xxxxx Test Board atm6124.Sys ATMEL AT91xxxxx Test Board System firmware download System firmware download	
This driver is not digitally signed! <u>Tell me why driver signing is important</u>	Have Disk
	< Back Next > Cancel

Fig. 06

**Step 7**: Browse to the "C:\Program Files\RS1000\Drivers" directory and click on "OK". Proceed by clicking on "Next". (Fig. 07)



Fig. 07

Step 8: Click on "Continue Anyway" button to continue. (Fig. 08)

Hardwa	re Installation
1	The software you are installing for this hardware: atm6124.Sys ATMEL AT91xxxxx Test Board has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway STOP Installation

Fig. 08

Found New Hardware Wizard

Completing the Found New Hardware Wizard

The wizard has finished installing the software for:
atm6124.Sys ATMEL AT91xxxxx Test Board
Click Finish to close the wizard.

Click Finish to close the wizard.

**Step 9**: Click on "Finish" button. The installation is done. (Fig. 09)

Fig. 09

# 4 Getting Started

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Please verify the correct setting of voltage (115V/230V) before turning on the tester.

Turn on the RS1000 tester system by switching on the power button. The following screen will first appear on the LCD display: (Fig. 10)

	Microtest System RS1000 マイクロチスト シスチムRS1000 Version 1.0	
(Main)	(Load) (Save)	

#### Fig. 10

There are three buttons on the first LCD screen. They are "Main", "Load", and "Save".

- Main Take you to the main menu screen of the RS1000 system.
- Load Load previously saved testing parameters.
- Save Save testing parameters.

### 5 Main Menu

The main menu screen is composed by 2 regions. (Fig. 11)

MAIN							
	64M X 64	1-Bank	Unbuffered	400	DDR2		
	Press START to run test						
2	(AutoID)	(ConfigD)	(Spd)	(Tests)	(Exit)		



① Test module configurations.

2 Buttons.

• AutoID: Automatically identify the test module parameters of address size, data width, number of external bank, BS, TCL, and TRCD by running the ID algorithm.



AutoID will not automatically detect the module frequency. Please update it through (ConfigD)  $\Rightarrow$  (Frq/Chp).

- ConfigD: Take you to the module configuration menu to set up the test module parameters manually.
- Spd: Take you to the Spd configuration menu to read or edit the Spd parameters manually.
- Tests: Take you to the test strategy configuration menu to set up test parameters.
- Exit: Return to the first screen.

# 6 Module Configuration Menu

### 6.1 Module Configuration Menu Screen

Press the (ConfigD) button in the main menu will take you to the module configuration menu. (Fig. 12)

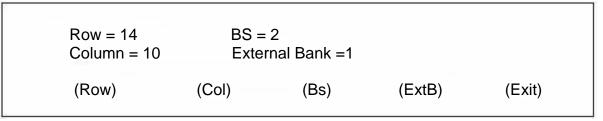
Device Setup						
	64M X 64	1-Bank	Unbuffered	400	DDR2	
2	(Addr) (Frq/Chp)		(Ecc/Reg)	(CL/Bst)	(Exit)	
Fig. 12						

① Test module configurations.

② Buttons.

- Addr: Take you to the Addr configuration menu.
- Frq/Chp: Take you to the Frq/Chp configuration menu.
- Ecc/Reg: Take you to the Ecc/Reg configuration menu.
- CL/Bst: Take you to the Tcl and Burst configuration menu.
- Exit: Return to the previous menu.

### 6.2 Addr Configuration Menu





- Row: Change the row value.
- Col: Change the Col value.
- Bs: Change the Bs value
- ExtB: Change the External Bank value.
- Exit: Return to the previous menu.

### 6.3 Frq/Chp Configuration Menu

```
Frequency = 200Mhz
Chip Width = 8 bit
Dut Type = Module
(Freq) (ChipWdh) (Type) (Timing) (Exit)
```



- Freq: Change the frequency.
- ChipWdh: Change the Chip Width.
- Type: Change the Dut type.
- Timing: Modifies default timing settings.
- Exit: Return to the previous menu.

### 6.4 Timing Setting

Time per tIS/tIH :[0 tDS/tDH :					
(tIS)	(tDQSS)	(tDS)	(tAC)	(Exit)	
		<b>—</b> : 45			



- tIS: Address and Control input setup time.
- tDQSS: Positive DQS latching edge to associated clock edge
- tDS: DQ and DM input setup time relative to DQS
- tAC: DQ output access time from CK
- Exit: Return to the previous menu.

### 6.5 ECC/REG Configuration Menu

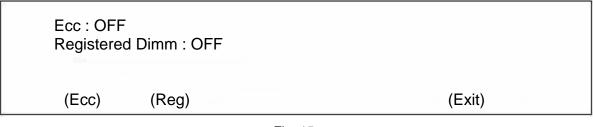


Fig. 15

- ECC: Enable or Disable ECC.
- REG: Enable or Disable Registered Dimm option.
- Exit: Return to the previous menu.

### 6.6 TCL/RCD Configuration Menu

TCL TRC	= 4 D = 4		
(Tcl)	(Trcd)	(Burst)	(Exit)

#### Fig. 16

- Tcl: Change the TCL value.
- Trcd: Change the TRCD Value.
- Burst: Change the burst type and burst length.
- Exit: Return to the previous menu.

# 7 Spd Configuration Menu

### 7.1 Spd Configuration Screen

Press the (Spd) button in the main menu will take you to the Spd configuration menu. (Fig. 17)

00 00	00 00	00 00	00 00	00
$\substack{00\\08}$			00 00	00
		00 00		
<li>(Next)</li>	(Prev)	(Edit)	(Read)	(Exit)



① Spd data.

2 Buttons.

- Next: Next page of Spd data.
- Prev: Previous page of Spd data.
- Edit: Take you to the Spd data edit menu.
- Read: Read Spd contents.
- Exit: Return to the previous screen.

### 7.2 Spd Edit Screen

Addr=00	Data=00				
(Addr+)	(Addr-)	(Data+)	(Data-)	(Exit)	



- Add+: Increase Address value.
- Add-: Decrease Address value.
- Data+: Increase Data value.
- Data-: Decrease Data value.
- Exit: Return to the previous menu.

# 8 Test Strategy Configuration Menu

### 8.1 Test Strategy Configuration Screen

Press the (Tests) button in the main menu will take you to the test strategy configuration menu. (Fig. 19)

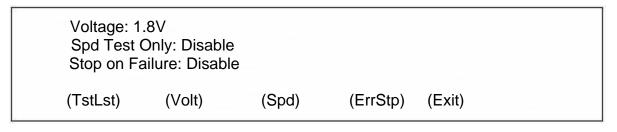


Fig. 19

- TestList: Bring up the test list configuration menu.
- Volt: Change the voltage value.
- Spd: Enable SPD function only, no patterns will be performed.
- ErrStp: Enable/Disable the Stop of failure function.
- Exit: Return to the previous menu.

### 8.2 TestList Configuration

Press the (TestList) button in the main menu will take you to the test list configuration menu. (Fig. 20)

[OS]					
[Loop:0001]	[ICC:	2000mA]	[SPD:N	one]	
(Pattrn)	(Loop)	(Icc)	(Spd)	(Exit)	



- Pattrn: Enable/Disable individual patterns.
- Loop: Change the number of loop(s) for module testing.
- Icc: Sets the threshold current for the module.
- Spd: Defines the type of SPD function to be performed.
- Exit: Return to the previous menu.

### 9.1 Launching RS1000 Windows Software

You can launch the software program either by

- Double click the software icon on the desktop OR
- Start  $\Rightarrow$  Programs  $\Rightarrow$  RS1000  $\Rightarrow$  RS1000

The program starts and displays the Main Window as follows: (Fig. 21)

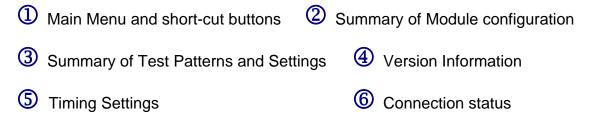
<u>D</u> ata <u>S</u> ystem	<u>Control R</u> un <u>H</u> elp		
😂 🖬 🚊	🔶 🗎 🔳 🚍 🎇 -	∃ 👫 🐔 😽 -	× 🛛 🖸
Test Module Type Module	DDR II 240P 32Mx64 256MB 64 1 200 4 4 4 13/10/2	Test Strategy I	
Burst Length tIS/tIH tDQSS tDS/tDH tAC Version Infor Sw Version Fw Version	0 0 0 0	SPD Operation Voltage (V) Test Mode Single Access ICC Limit (mA) Stop On Failure Loop	1.80 Interleave On 0
Connected	Serialization: OFF	Serial Number:	0x00000000

### 9.2 Main Window

The main window is composed by 6 regions. (Fig. 22)

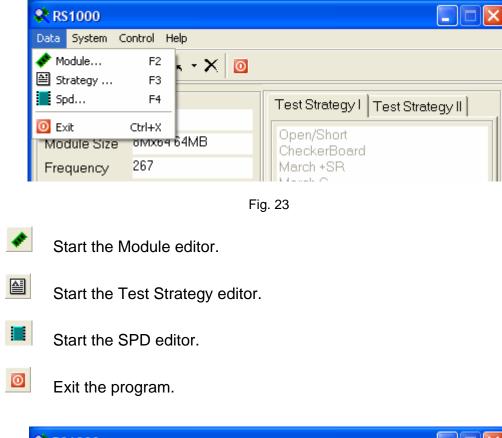
<u>D</u> ata <u>S</u> ystem	Control Run Help		
🖻 🖬 🚊	🔶 🗎 🔳 🖉 🕷 - 1	= 👫 🐔 🐂 🗉	× 🛛 🖸
Test Module	DDRII	Test Strategy I	
Туре			1
Module	240P	Open/Short	
Module Size	32Mx64 256MB		
Data Width	64		
Bank	1 ②		3
Frequency	200		
CL	4		
TRCD	4		
Row/Col/BS	13/10/2		
- Timing Para	ameters		
Burst Length	4		
tlS/tlH	0 (5)	SPD Operation	None
tDQSS	0	Voltage (V)	1.80
tDS/tDH	0	Test Mode	Interleave
tAC	0	Single Access	On
Version Infor	mation	ICC Limit (mA)	0
Sw Version	V2.2-B1 2006-4-10	Stop On Failure	Off
Fw Version	V1.8-R1 2006-4-29	Loop	1
	C Refresh		
Connected	Serialization: OFF	Serial Number:	0x0000000

Fig. 22



### 9.3 Main Menu and Buttons

User can access various functions via the main menu or the short-cut buttons. (Fig. 23)



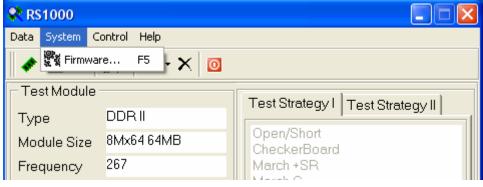


Fig. 24



Start the Firmware Maintenance tool.

🛠 RS1000		
Data System	Control Help	
- Test Module	× Connect F7 ✓ Disconnect F8	
Type	DDRII	Test Strategy I
Module Size	8Mx64 64MB	Open/Short CheckerBoard
Frequency	267	March +SR



۳.

Connect PC to the RS1000 system.



1

Disconnect PC from the RS1000 system

The RS1000 software has to connect to the RS1000 system in order to perform the following operations: upload and download of module files, strategy files, SPD files, retrieve RS1000 system firmware version information, and upgrade the RS1000 firmware.

💸 RS1000		
Data System C	ontrol Help	
* 🗎 📕	About	
- Test Module		Test Strategy I Test Strategy II
Туре	DDRII	
Module Size 8Mx64 64MB		Open/Short CheckerBoard
Frequency	267	March +SR

Fig. 26



Pop up the About dialogue box.

### 9.4 Connecting PC to RS1000 tester

**Step 1:** Turn **ON** the RS1000 tester and connect USB cable to tester. Then, connect the other end of USB cable to the operating PC. The tester **MUST** be in the start-up screen as shown: (Fig. 27)



Fig. 27

<u>D</u> ata <u>S</u> ystem	<u>Control R</u> un <u>H</u> elp	
൙ 日 🚊	🔶 🗎 🔳 🖾 😪 -	🗏 🕾 🤹 🗙 - 🗙 🛛 🙆
– Test Module		Com3
Туре	DDRII	Test Strategy Com4
Module	240P	Open/Short
Module Size	64Mx64 512MB	CheckerBoard March +SR
Doto Width	R4	March C

Fig. 28

**Step 3:** Click on the "Connect" icon<sup>\*</sup>. The below pop-up window will be shown: (Fig. 29)



Fig. 29

**Step 4:** Click on "OK" and the RS1000 software is now connected to the tester. If you have chosen the incorrect serial port, the window will show: (Fig. 30)

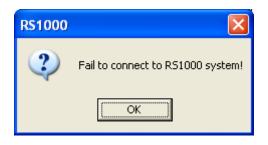


Fig. 30

You will then need to click "OK" and **QUIT** the software. Turn **OFF** the tester and wait for 5 seconds before turning it back **ON**. Proceed with **Step 2** to reconnect the PC to the tester.

9.5 Disconnecting PC from RS1000 tester

**Step 1:** Leave the tester **ON**. Click on the "Disconnect" icon X in the software. The following screen will be shown: (Fig. 31)

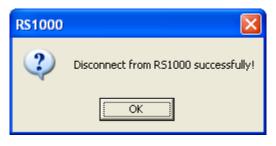


Fig. 31

If the tester is accidentally turned off before clicking on the "Disconnect" icon  $\times$ , simply exit the software and follow section **9.4** to reconnect the PC to the tester.

**Step 2:** Click "OK" and exit from the RS1000 software by clicking the *icon*.

**Step 3:** Unplug the USB cable from both ends. You have properly disconnected the tester.



The RS1000 software will only connect and disconnect **ONCE** from tester, you will need to exit the software and follow section 9.4 each time to reconnect the tester.

# **10 Module Configuration in RS1000 Software**

### 10.1 Modify the module configuration

Step 1: In the Main Window, click on the "Module" item under the "Data" menu.

OR Click the 💉 icon on the short-cut bar.

Step 2: On the next window, user is ready to configure the module. (Fig. 32)

൙ 🖪 🚊	O							
- Module Co	nfiguration		– Data Bits A	ssignmer	nt —			
Туре	DDRI	•	Module Pin	s	Chip F	ins	_	
Module	240P	•						
Data Width	<mark>64</mark>							
Bank	1	•					Con	nect 🍾
Frequency	267	•						
CL	4	•						
TRCD	4	•						
Registered			Connection				7	
- Chip Config	guration		DQ0 -> Ch DQ1 -> Ch			<u></u>		
Chip Size	8		DQ2 -> Ch	ip0 DQ2			Disco	onnect X
	-	븨						
Row	14		DQ4->Ch DQ5->Ch				Clos	
Column	10		DQ6 -> Ch	ip0 DQ6				
B.S.	2	•	DQ7 -> Ch	ip0 DQ7		~		
- Timing Par	rameters							
-		-			_		0	
Burst Lengt	"]4	-	tIS/tIH	0	<u> </u>	tDS/tDH	0	<u> </u>
			tDQSS	0	-	tAC	0	-
Disconnector	4	M	lodulo Cizor 6	4My64 511	םאאכ			

Fig. 32

**Step 3:** Once all the modifications have been finished, user can save the module information by four simple ways. (Fig. 33)

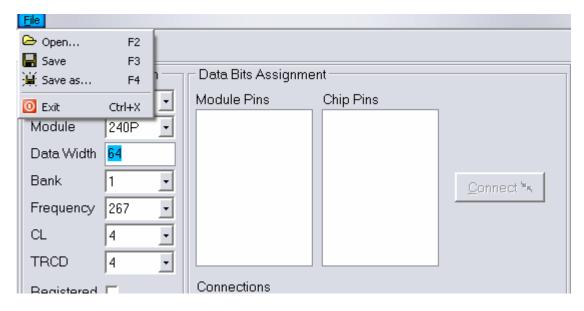


Fig. 33

Option 1: Click the "Save" item under the file menu to save the module information into the file with the same filename.

Option 2: Click the  $\blacksquare$  icon in the short-cut bar to save the module information into the file with the same filename.

Option 3: Click the "Save as..." item under the file menu to save the module information into the file with a different filename.

Option 4: Click the  $\overset{\textcircled{}}{\models}$  icon in the short-cut bar to save the module information into the file with a different filename.

# 11 Test Strategy Configuration in RS1000 Software

### 11.1 Modify the test strategy configuration

**Step 1:** In the Main Window, click the "Strategy" item under the "Data" menu.

	OR
Click the 🗎 id	con on the short-cut bar.

**Step 2:** From this next window, user is now ready to configure the test logic sequence. RS1000 can have a maximum of 8 different patterns in one single test.

🖙 🖬 🚊 🔟			
Test Strategy I			
Test Logics	1	Test Strategy	7
Open/Short CheckerBoard		1 Open/Short	
March +SR		2 CheckerBoard	
March G PMOVI	Add 🗸	3 March +SR	
March B		4 March G	
AutoRefresh		5 PMOVI	
PreHeat	Remove 🗙	6 March B	
	Temove	7 AutoRefresh	
		8 PreHeat	<u>E</u> dit ∠
	-		
Spd Operation Test	]	Test mode Interleave	•
Voltage (V) 1.80	]	Single address location access	•
ICC Limit (mA) 2000	]	Stop on Failure Enable	•
Loop 2			

Fig. 35

**Step 3:** Once all the modifications have been finished, user can save the test logics sequence by four simple ways. (Fig. 36)

File           Open         F2           Save         F3           Save as         F4	
Exit Ctrl+X Open/Short CheckerBoard March +SR March G PMOVI March B AutoRefresh PreHeat	Add     Add     Add     Test Strategy     1   Open/Short   2   CheckerBoard   3   March +SR   4   March G   5   PMOVI   6   March B   7   AutoRefresh   8   PreHeat     Edit
Spd Operation     Test       Voltage (V)     1.80       ICC Limit (mA)     2000       Loop     2	Test mode     Interleave     Interleave     Single address     Iocation access     Stop on Failure     Enable

Fig. 36

Option 1: Click the "Save" item under the file menu to save the currently editing test logic sequence into the file with the same file name.

Option 2: Click the  $\blacksquare$  icon in the short-cut bar to save the currently editing test logic sequence into the file with the same file name.

Option 3: Click the "Save as..." item under the file menu to save the currently editing test logic sequence into the file with different filename.

Option 4: Click the  $\overline{\#}$  icon in the short-cut bar to save the currently editing test logic sequence into the file with different filename.

# **12 SPD Configuration in RS1000 Software**

### 12.1 Modify the SPD configuration

**Step 1:** In the Main Window, click on the "SPD" item under the "Data" menu.

#### OR

Click the *licon* on the short-cut bar.

Step 2: On the next window, user is ready to modify the SPD data. (Fig. 38)

File				
Module Type DDR II				
Addr	Addr Hex Ascii Spd Data Format Mask			
0	0x80		128 Bytes of SPD	no
1	0x08		256 Total Bytes	no
2	0x08		DDR2	no
3	0x0c		Bank 1: 12 Rows; Bank 2: 12 Rows	no
4	0x0a		Bank 1: 10 Cols; Bank 2: 10 Cols	no
5	0x02		2 Module Banks	no
6	0x40	0	Module Data Width: 0 Bits	no
7	0x00		Reserved	no
8	0x01		ТВО	no
9	0xa0		DDR2 Cycle Time (highest CAS Latency)	no
10	0x75	u	DDR2 Access Time (highest CAS Latency)	no
11	0x00		Error Detect/Correct: None	no
12	0x80		Self Refresh, Normal (15.625 us)	no
13	0x00		DDR2 Width: Undefined	no
14	0x0e		Error Width: Bank1: 14 Bits, Bank2: 14 Bits	no
15	0x01		Min Clock Delay for Random Col Addr: 1	no
16	0x8f		Burst Lengths Supported = 1, 2, 4, 8, Page	no
17	0x02		Number of Internal Banks: 2	no
18	0x07		CAS Latency Supported = 1, 1.5, 2,	no
19	0x01		Reserved	no
20	0x01		Undefined	no
21	0xff		DDR2 Module Attributes	no 🗸
Disconnected				

**Step 3:** By double click on the byte that is desired to edit, a data input window pops up for data entry. (Fig. 39)

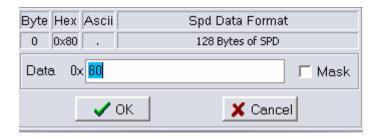


Fig. 39

**Step 4:** Once all the modifications have been finished, user can save the SPD information by four simple ways. (Fig. 40)

Eile						
) ڪ	Open	F2	1			
<b>   </b>   :	Save	F3				
<b>)</b> 	Save as	F4				
0 Exit Ctrl+X			Data	Format	Mask 😭	
0	0×80	. 1	28 Bytes	Bytes of SPD no		
1	0×08	. 2	56 Total Bytes no			
2	0×08	. C	DDR2 no			
3	0x0c	. E	Bank 1: 12 Rows; Bank 2: 12 Rows no			
4	0x0a	. E	Bank 1: 10 Cols; Bank 2: 10 Cols no			
5	0×02	. 2	2 Module Banks no			
C.	040	@ \	ladula Data Width: 0 Dita			

III (a) INtedule Dete Midth: II Pite

Fig. 40

Option 1: Click the "Save" item under the file menu to save the SPD information into the file with the same file name.

Option 2: Click the  $\blacksquare$  icon in the short-cut bar to save the SPD information into the file with the same file name.

Option 3: Click the "Save as..." item under the file menu to save the SPD information into the file with different filename.

Option 4: Click the is icon in the short-cut bar to save the SPD information into the file with different filename.

# **13 Test Configuration Download and Upload**

### 13.1 Upload and download test configuration

User can upload or download the module configurations to the RS1000 system if the PC is connected to the RS1000 system. (Fig. 34)

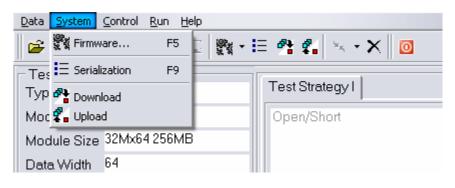


Fig. 34

Download: Select the "Download" item under the system menu.

OR Click the **P** icon in the short-cut bar.

Upload: Select the "Upload" item under the system menu.

#### OR

Click the 💶 icon in the short-cut bar.

### 14 System Firmware Upgrade

**Step 1:** Power **OFF** the RS1000. Exit from RS1000 software and unplug the USB cable (if plugged).

**Step 2:** In the Main Window, click on the "Firmware" icon under the System menu or on the short-cut bar.

#### OR

Click on the icon next to the "Firmware" icon icon to locate the SAM-PRO program for firmware upgrade (Fig. 42). Look for the executable file "AT91SAM-PRO.exe" under the SAM-PRO folder. (Fig. 43)

<u>D</u> ata <u>S</u> ystem	<u>C</u> ontrol <u>R</u> un	<u>H</u> elp		
൙ 日 🚊	🔶 🔛 📕		• <b>I</b> E	🕾 🚓 🐂 • 🗙 🛛 🧿
– Test Module – – – – –				are Program Location
Туре	DDRII			Fest Strategy I
Module	240P			Open/Short
Madula Size 64My64 512MB CheckerBoard			CheckerBoard	

Fig. 42

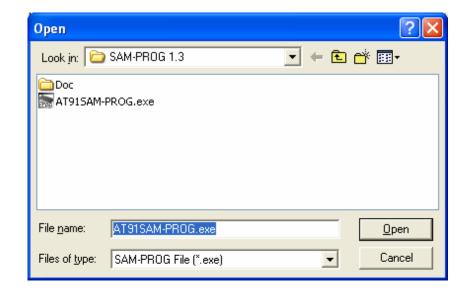


Fig. 43

**Step 3:** The SAM-PRO window will pop up and the user is now ready for firmware upgrade operation. (Fig. 44)

💽 SAM-PROG v1. 3		
	•	Browse
File Size :		
		Prog
PIO indicator for successfull pro	ogramming	
	🔲 None	Write Flash
		🔲 Auto-mode
Status		🔲 Set Security Bit
Success:	0	
Failed:	0	
In progress:	0	EXIT
Active Connection:	0	About
-		

Fig. 44

**Step 4:** Click on "Browse" and select the correct firmware file (.bin extension) from the open file dialogue box. (Fig. 45)

Open 🥐	×
Look jn: 🛅 RS1000 💽 🗢 🛍 📸 📰 🗸	
Bitmap       StrategyFile         Document       SysFile         Drivers       Installation         ModuleFile       SpdFile	
File <u>n</u> ame: <u>Open</u>	
Files of type: Binary Files (*.bin)	

Fig. 45

Step 5:

- Select "None" for the "PIO indicator for successful programming".
- Uncheck "Auto-mode".
- Uncheck "Set Security Bit".

**Step 6:** Press and hold the green button located at the back of the RS1000. System should still be **OFF.** 

**Step 7:** While **Holding** the green button at the back of the RS1000, turn **ON** the RS1000. **For systems with the serial no. ending with 'R', proceed to step 10.** 

**Step 8:** Wait for 10 seconds and turn **OFF** the tester while still holding the green button. Now the firmware has been erased.

Step 9: Release the green button and turn back ON the tester.

**Step 10:** Plug in the USB cable and it will prompt you for the driver.

**Step 11:** Go thru the same process as **Chapter 3 – Installing RS1000 Windows Driver**. Follow the remaining steps and click on "Finished" when prompted.

**Step 12:** The "Write Flash" button will be clickable. You should see the window shown below: (Fig. 46)

💽 SAM-PROG v1.3		
\RS1000_800_firmware_v1.24.bir		Browse
File Size :		Diowse
		Prog
PIO indicator for successfull progra	amming	
PIOA 🔻 0 👻	🔽 None	Write Flash
		🔲 Auto-mode
_ Status		🔲 Set Security Bit
Success:	0	
Failed:	0	
In progress:	0	EXIT
Active Connection:	1	About

Fig. 46

**Step 14:** Click on the "Write Flash" button to download and upgrade the tester firmware. The *Status* window will show *Success* to be 1 (Fig. 47). If not, repeat Step 1.

SAM-PROG v1.3		
NRS1000_800_firmware_v1.24.b	in 🔽	Browse
File Size :		Prog
PIO indicator for successfull prog	Iramming	
PIOA 🔽 0 丈	🗹 None	Write Flash
		🔲 Auto-mode
Status		🔲 Set Security Bit
Success:	1	
Failed:	0	
In progress:	0	EXIT
Active Connection:	0	About

Fig. 47

**Step 15:** The firmware is being updated. **EXIT** from both SAM-PRO program and RS1000 software and restart the tester. You should now see the latest version of firmware on the startup screen.

# Thank you for purchasing the RS1000 tester from Microtest System!