



Silicon Motion, Inc.

DYNA-SM32X

USB2.0 flash media controller

<h2>USB TEST PROGRAM</h2>

Ver : 3.0

Introduce:

The program is for SMI SM32X's Mass Production Tool can test up to 16 device at once, but need on Windows XP or Windows 98 (suggest use win98, to avoid the USB time out problem)

Test Steps:

In Win98, it needed install driver firstly, please run setup98factory.exe to install Win98 driver, then run sm32Xtest.exe for test program.

**(A) Scan USB**

Scan how many devices had been connected to USB, and determine how many device want to test at once. It only needs to scan once after testing, the green box showed the device is connected to PC or not.

(B) Setting

Password is "320", It will allowed the user to changed CID information.

Select load a ini file, which located in the same directory.

If no setting the program will loading default.ini file

Configuration:

1. Applications: Choose MemoryBar
2. VID: Set the USB Vendor ID
3. PID: Set the USB Product ID
4. bcdDevice: Set the user's USB Device ID version (customer can setting the version for different modal)
5. Serial Number: Select "no serial number" or "20 bytes" or "No Update Serial " of serial numbers.
6. Vendor Str: Set the Vendor Information 20 bytes
7. Product Str: Set the Product Information 20 bytes
8. Begin serial: Set the First serial number
9. End serial : Set the last serial number (count to this number start button will be disable)



10. Inquiry Vendor: Inquiry Vendor String 8 bytes
11. Inquiry Product: Inquiry Product String 16 bytes
12. auto clock : if enable , the clock is setting to optimize clock , disable is get setting from ini file READCLK and WRITECLK
13. Enable ISP Select: To manually select download 的 ISP file name (default auto selecting)
14. Disk Type: Set the USB Disk type to USB-ZIP or USB-HDD , (USB-ZIP is removable disk ,USB-HDD is fix disk)
15. USB Power: Set the USB max power 100mA to 500mA
16. Bad Block: Set the allowed Bad Block number, if bad block number then test will fail.(If the flash is SLC type minimal value is 20 , MLC type minimal is 44)
17. Disk Size : check after flash pretest disk capacity from 16M – 4G
18. Disk Label: for WinXP show on file explorer string (If null then is OS default string)
19. AutoRun Set : select a cd-rom image file for make cd-rom image , must iso format file

Test Item

1. Pretest: initial controller and Flash,
2. Write CID: Write Config Information.
3. DownLoad ISP: download ISP file to Flash's reserved memory.
4. Copy Compare: do simple read write test.
5. Make Auto Run: make a cd-rom image to disk
6. Format: high level FAT format.

All item selected, then click “ok” , will save to select ini file and load . If click “Save To File ” will save to another ini file and load.

Dialog

Application: Memory Bar Serial Number: 20 Byte

USB

VID: 090C PID: 1000 bcdDevice: 3000

Vendor Str: SMI Corporation 20

Product Str: USB DISK 20

Begin Serial: AA04012700039 20

End Serial: AA04012799999 20

Inquiry

Vendor: SMI 8

Product: USB DISK 16

☐ Enable ISP Select ☒ auto clock

ISP File: SM323A.AISP.BIN

USB Power: 200 mA

Disk Type: USB-ZIP

Disk Size: NO Check

Disk Label: USB DISK

Bad Block: 20

SLC:20 MLC:44

Select TEST ITEM

☒ Pretest

☒ Write CID

☒ Download ISP

☒ Copy Test

☐ Make Auto Run

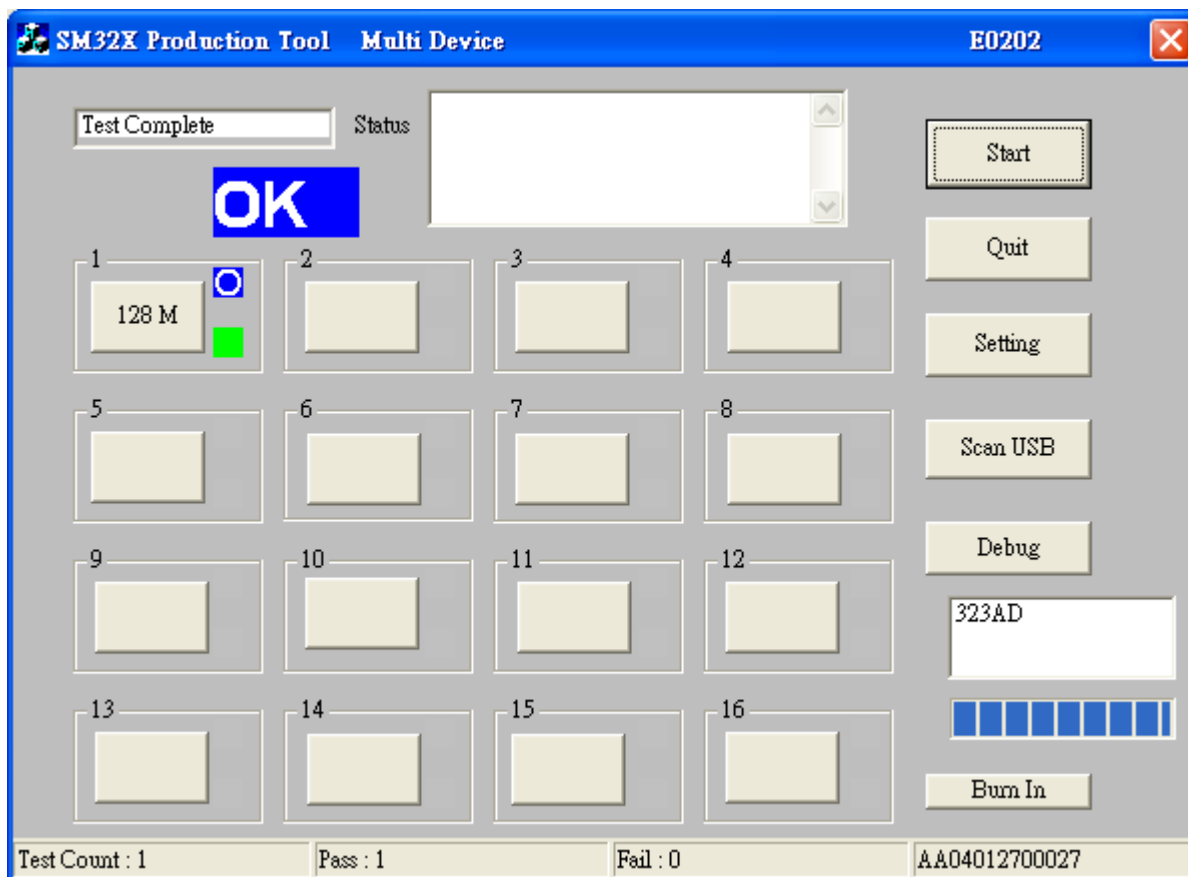
☒ Format

Auto Run Set

Image File: image.iso

(C) Begin Test

1. After "Scan USB" and "Setting" to start testing procedures.
2. Click "START" button ,
3. If test pass, it will show "OK" , otherwise will show "FAIL"
4. After test completed, it will show flash size on box
5. Status Bar will also show the test count, pass , and fail counter



Debug Button : is for internal debug use ,

Burn In Button: is for Burn In test , it will loop run by setting loop count

(D) Read CID

1. Click the Box button will display you select device setting

(1) VID : now the device USB vid string

(2) PID : now the device USB pid string

(3) Serial : now the device USB serial number

(4) Vendor Str : now the device USB vendor string

(5) Product Str : now the device USB product string

(6) Inquiry : now the device SCSI inquiry string

(7) ISP version : now the device ISP version

(8) System CLK : now the controller clock setting ,only for 320 controller clock setting.

(9) IC ver : now the device controller hardware version

(10) Bad Block : show after pretest , bad block information

(11) ISP Check sum : read back download isp check sum

(12) FLASH: show flash maker code and device code

Dialog [X]

VID: 090C

PID: 1000

Serial: AA04012700027

Vendor Str: SMI Corporation

Product Str: USB DISK

Inquiry: SMI USB DISK

ISP Ver: ISP 2004-12-27

System CLK: 1

IC Ver: 323AD

Bad Block: 4 01,00,02,00,01,00,00,00,

ISP Check Sum: 0003786A

FLASH

	Maker	Device
A CE0	EC	76
A CE1	EC	76
A CE2	00	00
A CE3	00	00
B CE0	00	00
B CE1	00	00
B CE2	00	00
B CE3	00	00

Cancel

(E) ini setting

Name	Bytes	Default Value	Descript
SERIALMETHOD	1	0	0: USB serial number is increase 1: USB seial number is 0 2: USB serial number no update
USBMAXPOWER	1	0	0: USB Power define 100mA 1: USB Power define 200mA 2: USB Power define 300mA 3: USB Power define 400mA 4: USB Power define 500mA
DISKTYPE	1	1	0: USB-HDD 1: USB-ZIP



DISKSIZE	1	0	0: No Check DiskCapacity 1: 16M , 2: 32M , 3: 64M , 4: 128M 5: 256M , 6: 512M , 7: 1G , 8: 2G 9: 4G
APPLICATION	1	1	0: Card Reader 1: Flash Disk 2: CardReader+FlashDisk
VID	4	090C	USB Vendor ID
PID	4	1000	USB Product ID
VENDORSTR	20		USB Vendor String
PRODUCTSTRING	20		USB Product String
SERIALBEGIN	20		USB Serial number begin
SERIALEND	20		USB Serial number end , when serial number count to the number , program will stop
INQUIRYSTRING	16		SCSI Inquiry Product String
INQUIRYVENDOR	8		SCSI Inauiry Vendor String
DISKLABEL	32		Disk Volume Label
DID	4	1000	USB bcdDevice version number
DEFAULTISP	1	0	0: Auto Select ISP file download 1: Force select a ISP file download
ISPFIL	256		IF DEFAULTISP equal 1 then download the ISP File
BADBLOCK	1	20	Setting Pretest bad block range SLC must large than 20 , MLC must large than 44
CUSTOMER	1	1	For different customer LED control type setting use
READCLK (for not 320)	1	0	Read Clock Setting
WRITECLK (for not 320)	1	0	Write Clock Setting
AUTORUNFILE	256		AutoRun Image Size
RESERVEZONE	1	0	Reserve data zone , size= n*1024 sector
BOOTTYPE	1	0	0: when format MBR offset 0x1BE=0 1: when format MBR offset 0x1BE=0x80

Test Item

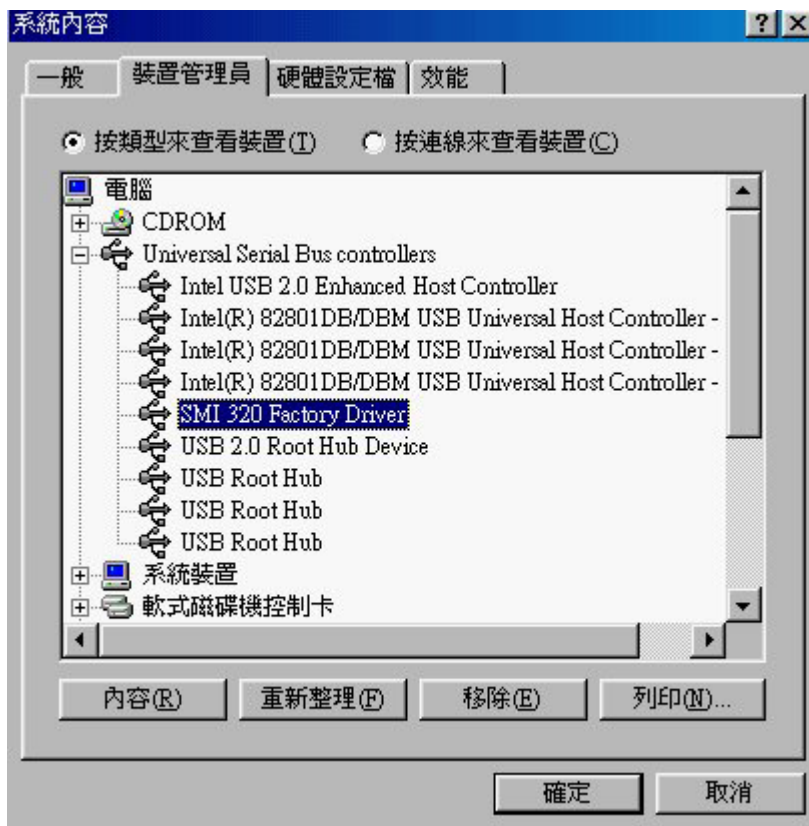
PRETEST	1	1	0:disable pretest 1:enable pretest
WRITECID	1	1	0:disable write CID 1:enable write CID
FORMAT	1	1	0:disable format 1:enable format
COPYCOMPARE	1	1	0:disable copy compare 1:enable copy compare
DOWNLOADISP	1	1	0:disable download ISP 1:enable download ISP
MAKEAUTORUN	1	0	0:disable AUTORUNt 1:enable AUTORUN

Below item not show on setting UI , must modify ini file

- (1) CUSTOMER
- (2) READCLK
- (3) WRITECLK
- (4) RESERVEZONE

(F) FAQ

1. Win98 Scan no USB, please check “device manager” for “SMI 320 Factory Driver”



2. Fail device: if Pass device will LED will flash, otherwise is failed.