



USB Disk Production Tool User Manual

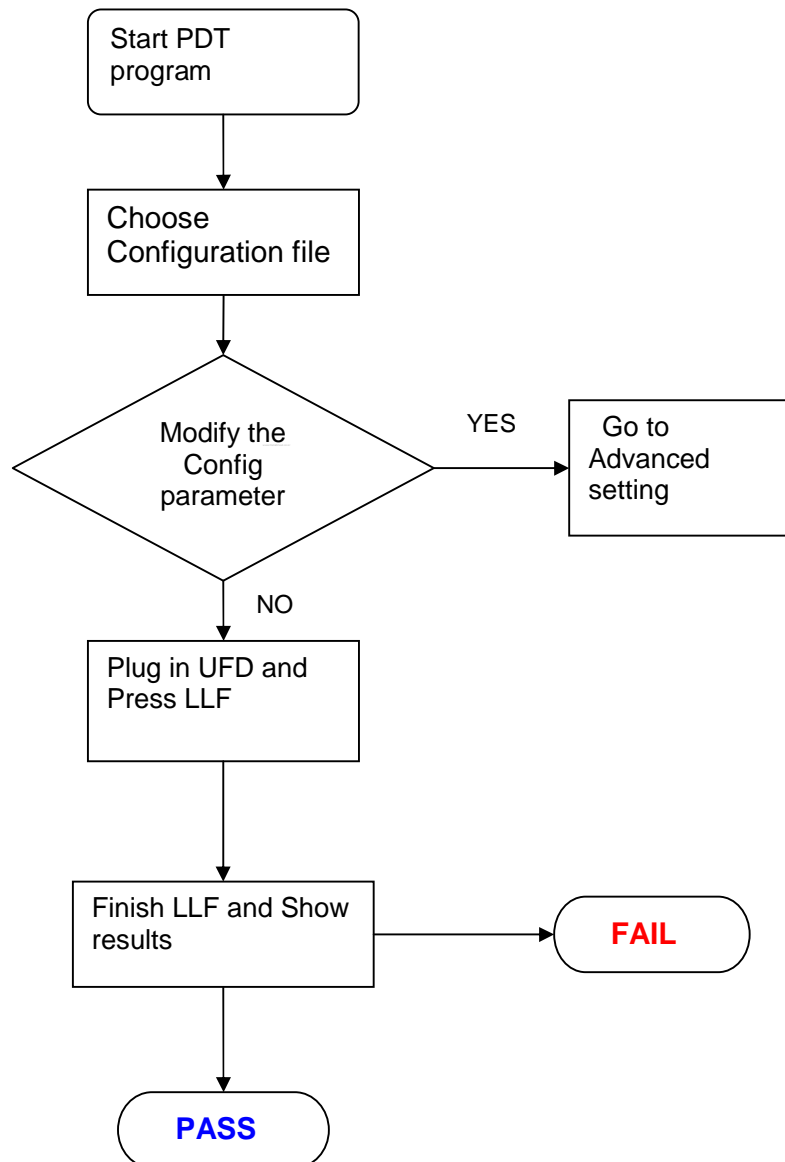
Rev: 3.0

Date:2007/10/01

1. Preface:

All UFD with SK62XX series , need to use PDT program to perform LLF before using to Device . PDT also provide FLASH basic testing & partition & CD Rom function .

2. Operation Flow Chart:



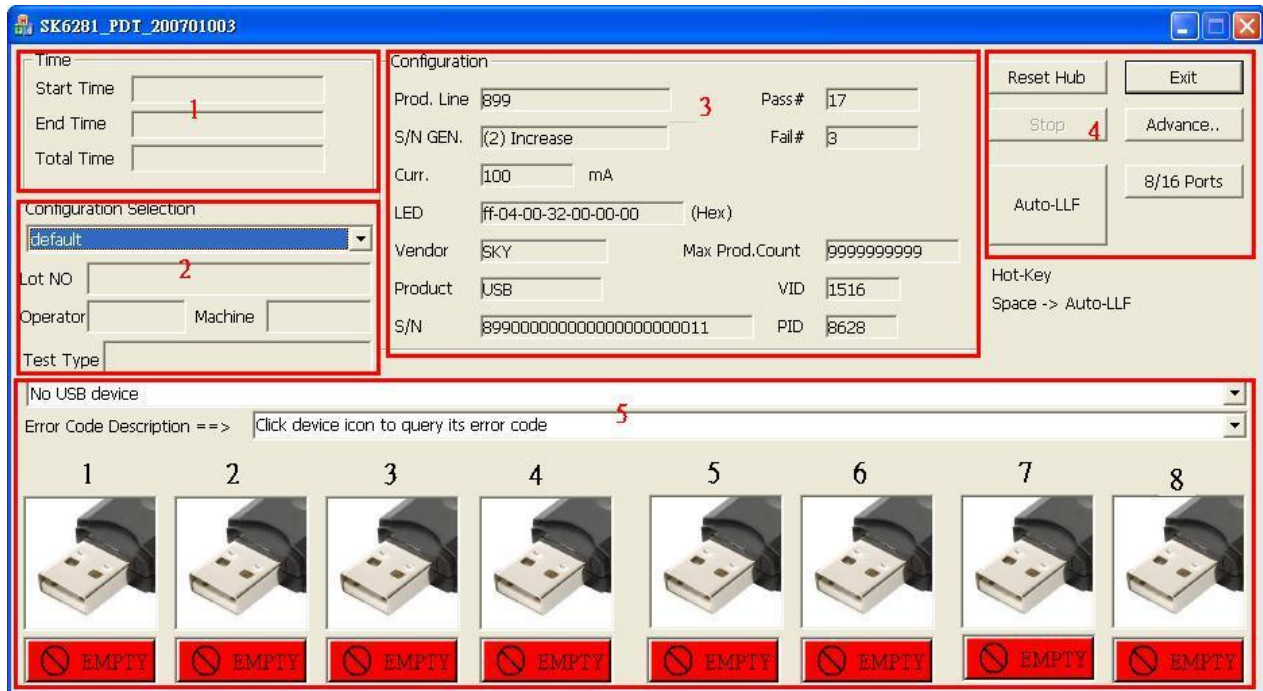
3. PDT Program:

Double Click the Icon to start Skymedi UFD PDT



3-1 Main Window

Following sections describe detail function of this operating window



3-1-1. Time

To record the elapse time of start test to finished

A dialog box titled "Time" with three input fields. The first field is labeled "Start Time" and contains the text "2006/01/24 14:59:46". The second field is labeled "End Time" and contains "2006/01/24 15:00:03". The third field is labeled "Total Time" and contains "17 Seconds".

3-1-2. Configuration Selection (Configuration File)

To select a configuration file

A dialog box titled "Configuration Selection" with a dropdown menu. The dropdown menu is open, showing a list of configuration files: "K9F4G08U0M_1_Byte", "default_config", "K9F4G08U0M_1_Byte" (highlighted in blue), "K9GAG08U0M_4_Byte", and "K9HAG08U0M_4_Byte".

User can press Advanced Button to open environment Setting window to edit the selected config file or create a new config file

3-1-3. Configuration

Display the summary of the selected config file

A dialog box titled "Configuration" with various input fields for configuration parameters. The fields are arranged in two columns. The left column contains: "Prod. Line" (988), "S/N GEN." ((2) Increase), "Curr." (100 mA), "LED" (18-04-64-32-07-07-00 (Hex)), "Vendor" (SKY), "Product" (USB), and "S/N" (00000000000000000000000013B36DB0). The right column contains: "Pass#" (249), "Fail#" (48), "Max Prod.Count" (999), "VID" (1516), and "PID" (1603).

3-1-4. Function description of each Push Buttons



- (1). Reset Hub
- (2). Stop: Test Stop
- (3). Exit: Finish and exit the Production Tool
- (4). Advance: Advance setting, the Environment Setting window will pop up and user can edit config file on this window
- (5). Auto-LLF: Start test when this button is pressed then Tool start execute USB Disk Low Level Format function
- (6). 8/16 Ports: Show 8 or 16 port

3-1-5. Status and Error Description



USB Port Status Icon



- (1). Empty: Indicate there is no device in the USB port



(2). No Match: There is a UFD in DUT port but the device configuration is different to the selected config file. The device configuration means:

- Controller Part Number
- Flash Part Number
- Number of Flash



(3). Matched: There is a UFD in DUT port and its configuration is matched to the selected config file.



(4). Busy: If click Auto-LLF or press Space bar, the Matched DUT port start perform the card initialization activity



(5). Fail: Show this icon if initial Fail. The icon also indicates the Error Code. Engineer can press the "Error Code Description" pull -down bar to check the Error Code meaning



(6). Pass: Indicate the Card Initial Pass

3.2 Test Configuration File Setting:

Be note, user should key in correct password otherwise any editing function are not available. The default password is "123456". Engineer can change password in this window. Following section describe each editing function.

Environment setting

LINE	899	0~999
VID	1516	Hex(EX: 023A)
PID	8628	Hex(EX: 023A)
Vendor Name	SKY	1
Product Name	USB	
S/N	89900000000000000000000000000011	Random
S/N Gen.	(2) Increase	SN Setting
Revision	1.00	Disk Type Removable

Modify

LED Idle	(0) FLASH VERY SLOWLY	
LED Strength	0	5
Curr.	100	(0~500 mA is valid)
Format Label	LUN0	Format Type Auto
Pattern Mode	Random Pattern	
Read/Write Test	Quick Test	0 % (0-100)
Scan Defect Coverage	0 %	
<input type="checkbox"/> Fixed Flash Size	2048 MB	<input type="checkbox"/> Erase All
<input type="checkbox"/> Enable Pre-Copy File		
PreCopy Path	D:\My Documents\My Music	Browse
Hidden Area	0	x 512 Bytes(Multiple of 8)

Flash Option

Code Bank Ver	4	C071002A_F071002A
Controller	SK6281	
Part Name in Config	K9G8G08U0M	
Flash Selection	Part Name in Config	
ExtInterleave in Config	None	
External Interleave	None	

Card Size Option

Card Size	(1) User Defined Density	6
Reserved Spare Area	By Flash Spec.	50 %
User Defined Card Size	0 0 0 0	minimum size(MB)
	0 0 0 0	

RESET PASS/FAIL RECORD

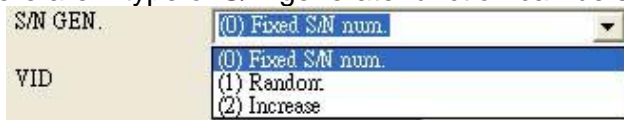
Max Passed Number	999999999	2
Config File	default	Delete Save

Password

Password	123456	3	Check
New		Change	

3-2-1. UFD Information Setting:

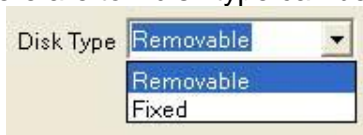
- (1). Prod. Line: Production Line ID
- (2). VID: Vender ID
- (3). PID: Provider ID
- (4). Vender Name: USB device vender name
- (5). Product Name: USB device Product name
- (6). Revision: USB device reversion code
- (7). S/N: Serial Number
- (8). S/N GEN.: Serial number generator selection
There are 4 type of S/N generate function can be selecte d.



- Fixed S/N num.: The assigned S/N is fixed for every USB Disk
- Random: Randomly assign S/N for each USB Disk
- Increase: Incrementally assign S/N for each USB Disk
- Don't Change SN:

- (9). Version: Set the version number of USB Disk.

- (10). Disk Type
There are tow disk type can be select

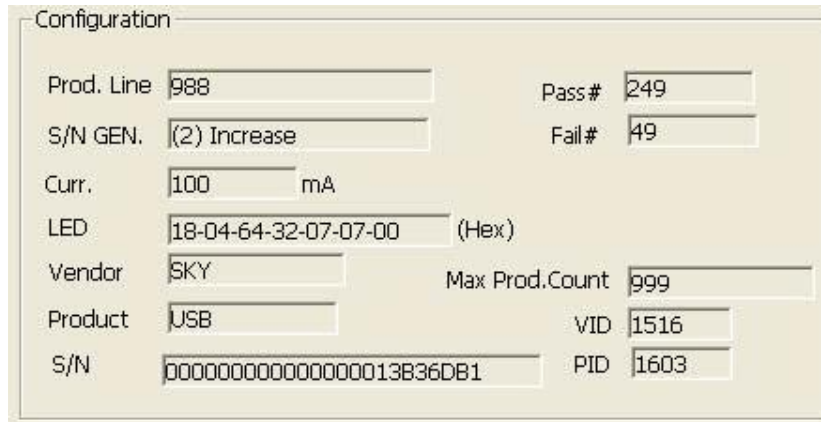


- Removable
- Fixed

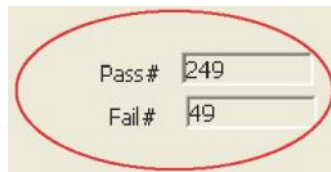
3-2-2. Save File

(1). Reset Pass/Fail Record

To reset the Pass and Fail count. When this button is pressed, the main window Pass/Fail count will be reset.



Prod. Line	988	Pass#	249
S/N GEN.	((2) Increase)	Fail#	49
Curr.	100 mA		
LED	18-04-64-32-07-07-00 (Hex)		
Vendor	SKY	Max Prod.Count	999
Product	USB	VID	1516
S/N	0000000000000000000013B36DB1	PID	1603



(2). Max Pass Number

The maximum Pass Count to be allowed when production.

(3). Congig File: Config file name

(4). Delete: Press to delete the Config File

(5). Save: Press to save the Config File

3-2-3. Change Password :

Provide the change password function of Environment Window.

- (1). Password:
- (2). Check:
- (3). New:
- (4). Change:

3-2-4. Flash Option :

- (1). Code Bank Ver :
- (2). Controller
For controller part number select. If there is a USB disk on USB port, the tool will auto detect the controller part number and display on this field.
- (3). Part Name in Config
Show the selected Flash part number of Config file.
- (4). Flash Selection
For Flash Memory part number select. If there is a USB disk on USB port, the tool will auto detect the Flash Memory ID and display its part number this field. However, some

Flash ID may map to more than two Flash PN. In this case tool will display all mapped Flash PN for use select. User has to select correct Flash PN here.

(5).ExtInterleave in Config

Show the selected Interleave level of the selected Config file.

(6). External Interleave

Allow user set Inter Leave Level here. If there is a USB disk on USB port, tool will auto detect the data bus channel of controller and Flash and the number of Flash CE and shows all available interleave level for selection.

There are 4 possible Interleave Level for selection.

- None (or Disable), disable interleave function.
- 2-Way, 2 Level interleave.
- 4-Way, 4 Level interleave.

Following table shows all possible interleave level for different Bus channel and FCE number.

CE	Byte Mode		Word Mode	
	Interleave 2	Interleave 4	Interleave 2	Interleave 4
1	X	X	X	X
2	O	X	O	X
4	X	O	O	X

3-2-5. UFD Property Setting:

Modify

Format Label

Format Type

Allocation Unit Size of Format

Pattern Mode

Read/Write Test % (0-100)

Scan Defect Coverage %

Fixed Flash Size MB

Enable Pre-Copy File Erase All

PreCopy Path

Hidden Area x 512 Bytes(Multiple of 8)

Capacity Size Option

Capacity Size

User Defined Capacity Size

Flash Option

Code Bank Ver

Controller

Part Name in Config

Flash Selection

ExtInterleave in config

External Interleave

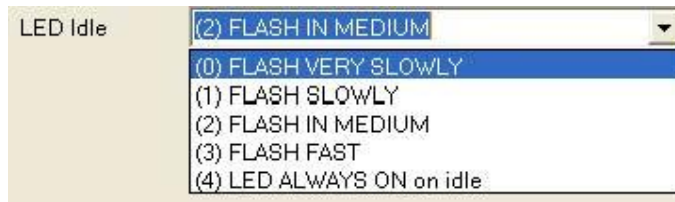
LED Idle

LED Strength

Curr. (0~500 mA is valid)

Reserved Spare Area %

(1). LED Idle: LED flash frequency setting, there are 5 different flash frequency are allowed to be set for USB Disk LED.

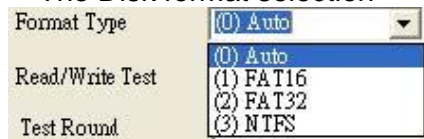


(2). LED Strength : LED brightness adjusting , there are 7 brightness levels can be selected. The higher level makes the higher brightness.

(3). Current (0~500mA) : The max. current consumption setting.

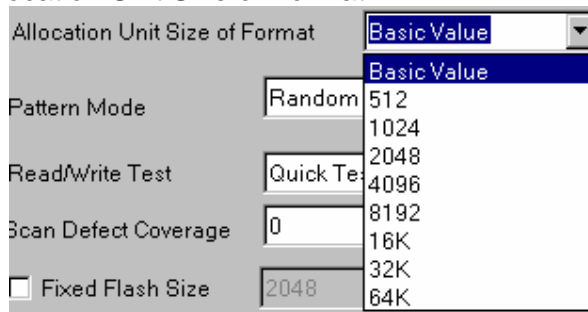
(4). Format Label: Disk Label of FAT format

(5). Format Type: FAT Type
The Disk format selection



- Auto: Tool will automatic select format type depends on density of disk size.
- FAT16: FAT16 format
- FAT32: FAT32 format
- NTFS: NTFS format

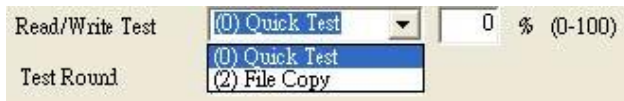
(6). Allocation Unit Size of Format



(7). Pattern Mode: 3 kinds test Pattern ◦

- Random Pattern ◦
- Fixed Pattern (0xFFFF)
- Fixed Pattern (0x0000)

(8). RW Test: Write and Read Test when device is formatted



- Quick Test: Partial size test
When Quick Test is selected, user should set how many percentage of card size would expect to be tested.
- File Copy: Full size test with file copy

(9). Scan Defect Coverage

(10). Fixed Flash Size

When this function is enabled, tool will fix the disk size as the defined value. If a disk that size not matched to the defined size, the tool will show error when test done.

(11). Enable Pre-Copy File

When this function is enabled, tool will copy the data(files) that user wanted after UFD completed the LFF procedures.

(12). Erase All

When this function is enabled, all of the data of flashes will be erased.

Including the ODBT or the original data of flash maker (Warning : It's not recommends to enable the function for formal use)

(13). PreCopy Path

The PreCopy Path is reference to the items “(11) Enable Pre-Copy File “,if user enable Pre-Copy File , user should provide the data or file path.

(14). Hidden Area: (Max 4KB)

When user make a hidden area, user should use AES AP to check the content of the hidden area.

(15). Reserved Spare Area

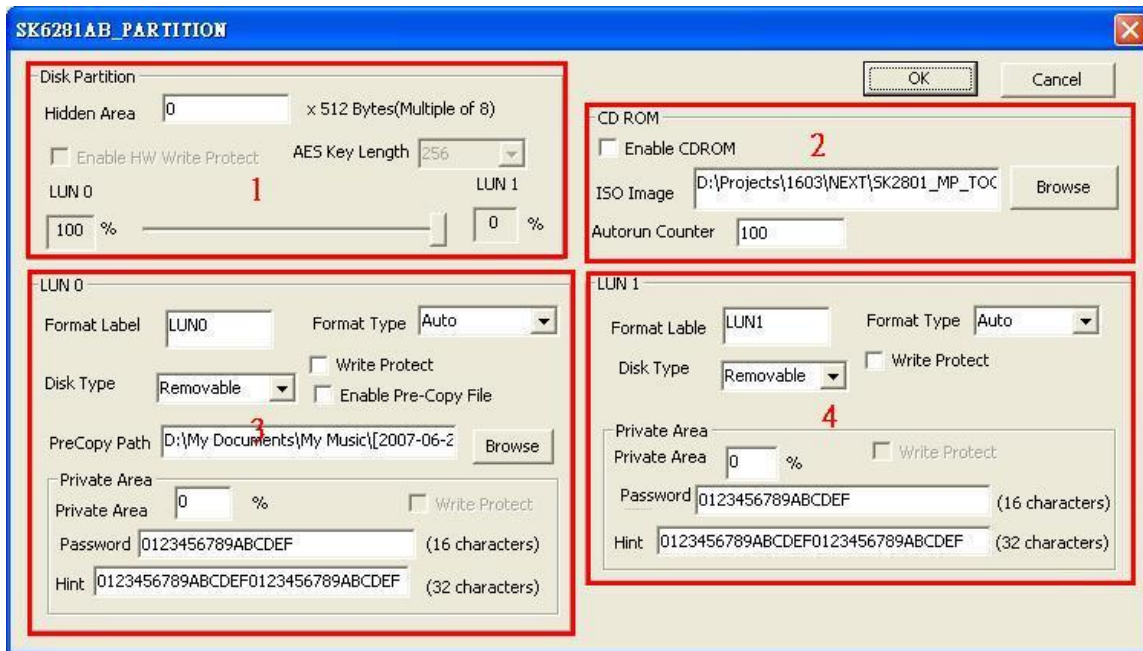


The reserved block size setting. There are 2 reserve types for selection:

- **By Flash Spec:** Depend on the Flash memory, Tool will automatic set the reserved block number.
- **Manual Set:** Allow use define reserved block size. Be note, the larger reserved block size make smaller disk size. The available reserved range are depends on Bus channel.

Bus Channel	Spare Area Range (%)
Single	0 ~ 99
Dual	0 ~ 49

4. Multi-Partition: (For SK6281AB only)



4-1. Disk Partition:

- (1). Hidden Area: (Max 8KB)
- (2). Enable HW Write Protect:
- (3). AES Key Length:
- (4). LUN0/1:

4-2. CD ROM:

- (1). Enable CDROM:
- (2). ISO Image path:
- (3). Autorun Counter: (second)

4-3. LUN0:

- (1). Format Label: Set label name
- (2). Format Type:
 - Auto: Base on Flash density
 - FAT16: Format FAT16
 - FAT32: Format FAT32

- (3). Disk Type
 - Removable:
 - Fixed:
- (4). Write Protect:
- (5). Enable Pre-Copy File:
- (6). PreCopy Path:
- (7). Private Area:
 - Write Protect:
- (8). Password:
(Max 16 digi)
- (9). Hint:
(Max 32 digi)

4-4. LUN1:

- (1). Format Label: Set label name
- (2). Format Type:
 - Auto: Base on Flash density
 - FAT16: Format FAT16
 - FAT32: Format FAT32
- (3). Disk Type
 - Removable:
 - Fixed:
- (4). Write Protect:
- (5). Enable Pre-Copy File:
- (6). PreCopy Path:
- (7). Private Area:
 - Write Protect:
- (8). Password:
(Max 16 digi)
- (9). Hint:
(Max 32 digi)