



UDRW G2

Application Manual

Rev. 1.01E

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■Revision History

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- Scope -

This document describes the features of UDRW G2 starter kit.

- NOTE-

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1. Software Outline

1.1. Package Contents

Package Contents		Description
Software	Writing Software (UD Creator)	Software tools that write your application / data onto the CD-ROM zone of UDRW G2.
	SetupUtility	Device configuration utility allowing you to change Drive configuration, Autorun Latency, Device Subclass settings.
	Unique ID Reader	Display Unique ID information
	UD-RUN	Allows Windows98SE / Me user to use Autorun function
	Windows98SE Driver	USB Mass Storage Driver for Windows98 Second Edition
Documents	UDRWG2 Application Manual	Manual of UDRW G2 Software (this document)
	UDRW G2 Device Specifications	Device specification of UDRW G2

1.2. System Requirements

All software should meet following requirements.

1.2.1. UDRW G2 Writing Software / Setup Utility / Unique ID Reader

System Requirements	<ul style="list-style-type: none"> - IBM PC/AT or compatible. - Pentium 400MHz or greater - System with one available USB port
Free HDD Space	Same capacity as UDRW G2 drive. ex.) 256MB drive requires minimum 256MB of available space on local HDD.
Compatible OS	Windows 2000 Professional Service Pack 3,4 * ¹
	Windows XP(32bit) * ¹

*¹: The DLL cannot be used under user mode. Please login as Administrator.

1.2.2 UD-RUN

System Requirements	<ul style="list-style-type: none"> - IBM PC/AT or compatible - Pentium 100MHz or greater - System with one available USB port
Compatible OS	Windows 98 Second Edition
	Windows Me

1.2.3. Windows98SE Driver

System Requirements	<ul style="list-style-type: none"> - IBM PC/AT or compatible - Pentium 100MHz or greater - System with one available USB port
Compatible OS	Windows 98 Second Edition

2. UDRW G2 Writing Software

Outline

UDRW G2 Writing Software allows developers to generate ISO file and write it onto the CD-ROM zone of UDRW G2 device. Contents of Scalable Hidden Memory Zone can also be updated with this software.

*¹ Optional library (included in the UDRW G2 Development Kit CD-ROM) is required to access Scalable Hidden Memory Zone.

UDRW G2 Writing Software consists of following two applications.

Application	Description
UD Creator	Output user data as ISO9660 image file and generate "UD update.exe" in the same folder.
UD Update	Write ISO image file (for CD-ROM zone) and/or binary file (for Scalable Hidden Memory) onto the UDRW G2 device.

2.1. UD Creator

2.1.1. Outline

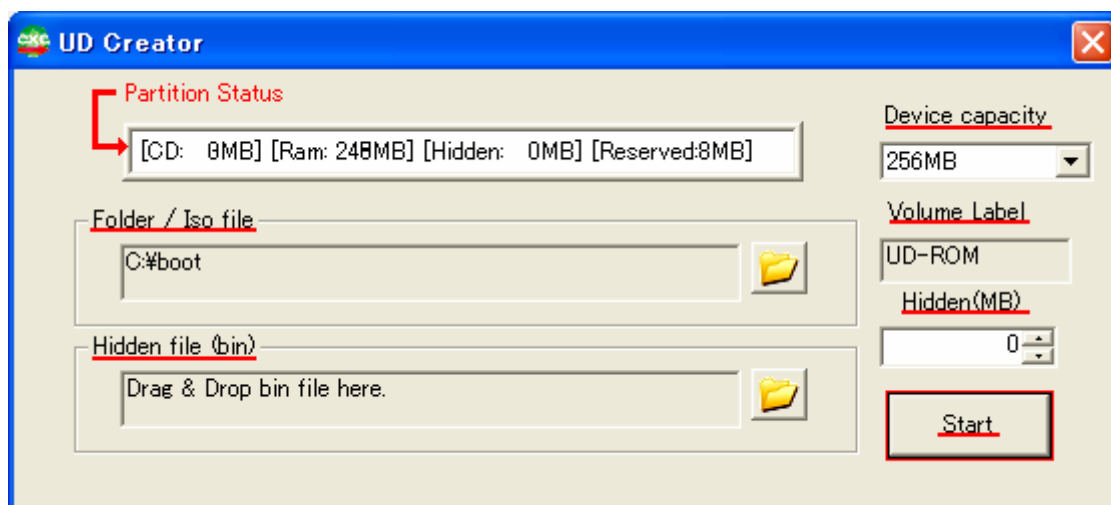
UD Creator outputs user data as ISO9660 image file and generate "UD Update.exe" in the same folder.

2.1.2. Software Description

UD Creator consists of following files.

File Name	Description
UD Creator.exe	UD Creator
UD Creator.ud2	Configuration Files
Fmtcnv.exe	Dependent Files
mfc.dll	
msvcr71.dll	
msvc71.dll	

2.1.3. Screen shot



Symbol	Description	
Partition Status	Indicates approximate drive usage of each storage partition. *The capacities shown on this application might be different from actual usable drive capacity.	
	CD::	Size of CD-ROM Zone
	Ram:	Size of Flash Drive Zone
	Hidden:	Size of Scalable Hidden Memory Zone (1MB will automatically be reserved when 0MB is set.)
	Reserved:	Reserved by UDRW G2 Device This value is fixed and cannot be changed.
Folder / Iso file	Edit Box	Display the path to the ISO file/folder which will be written on the CD-ROM zone.
	Browse...	Click to locate and select the ISO file/folder.
Hidden File (bin)* ¹	Edit Box	Display the path to the binary file which will be written on the Scalable Hidden Memory Zone.
	Browse...	Click to locate and select the binary file.
Device Capacity		Device Capacity
Volume Label		Enter Volume Label (Default : UD-ROM) This option is not available when an ISO image file is selected.
Hidden (MB)		Capacity of Scalable Hidden Memory Zone
START		Click to generate ISO image file and UD update program.

*¹ Optional UDRW G2 Development Kit is required to use Scalable Hidden Memory Zone.

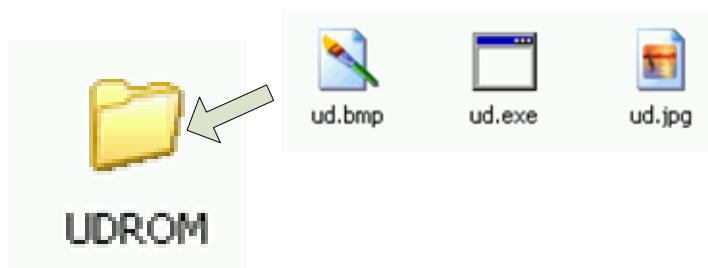
2.1.4. Using UD Creator

1. Data preparation

- CD-ROM Zone

Place all the files you want to write on the CD-ROM zone in single folder.

Ex): Put ud.jpg, ud.bmp, ud.exe into single folder named "UDROM".



- Hidden Memory Zone

The data for Hidden Memory Zone must be in binary file format (*.bin).

Ex) xxx.bin

NOTE: Do not place the bin file in the CD-ROM data folder.

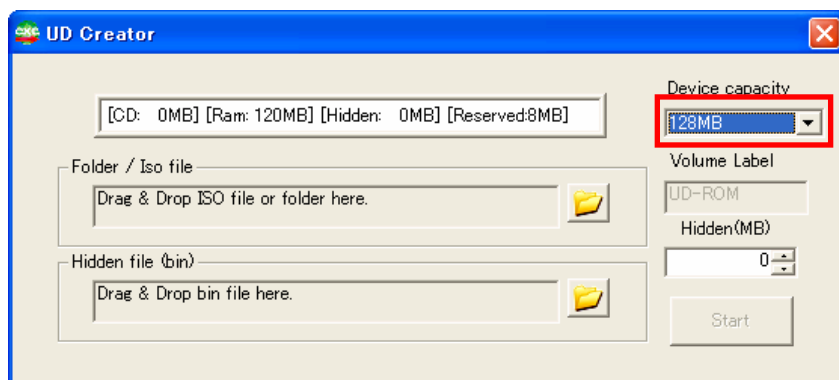
2. Start UDCreator.exe



Plug UDRW G2 to the computer, and then start UD Creator.exe.

3. Select Device Capacity

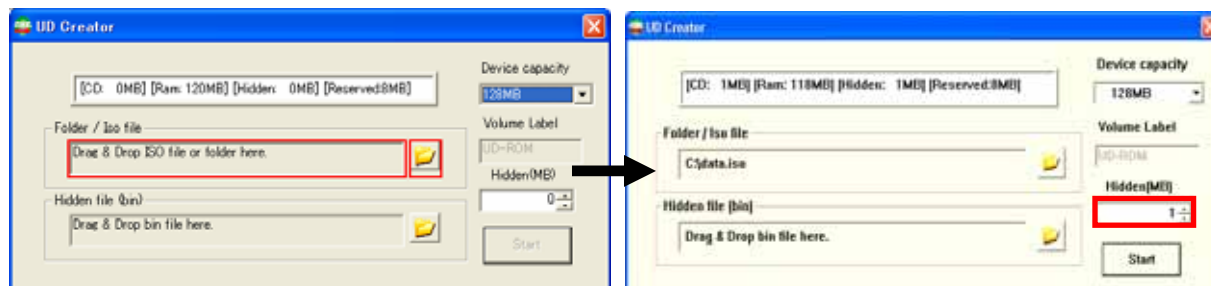
Please select the total memory size of your UDRW G2.



4. Selecting Data Folder or ISO file

Drag & Drop the folder that you have prepared at step 1 to the edit box. If you already have the ISO image, you can simply drag & drop it to the edit box. You may also browse the folder by clicking folder icon.

Once folder or ISO image file is selected, the partition status (capacity of CD) will be updated.

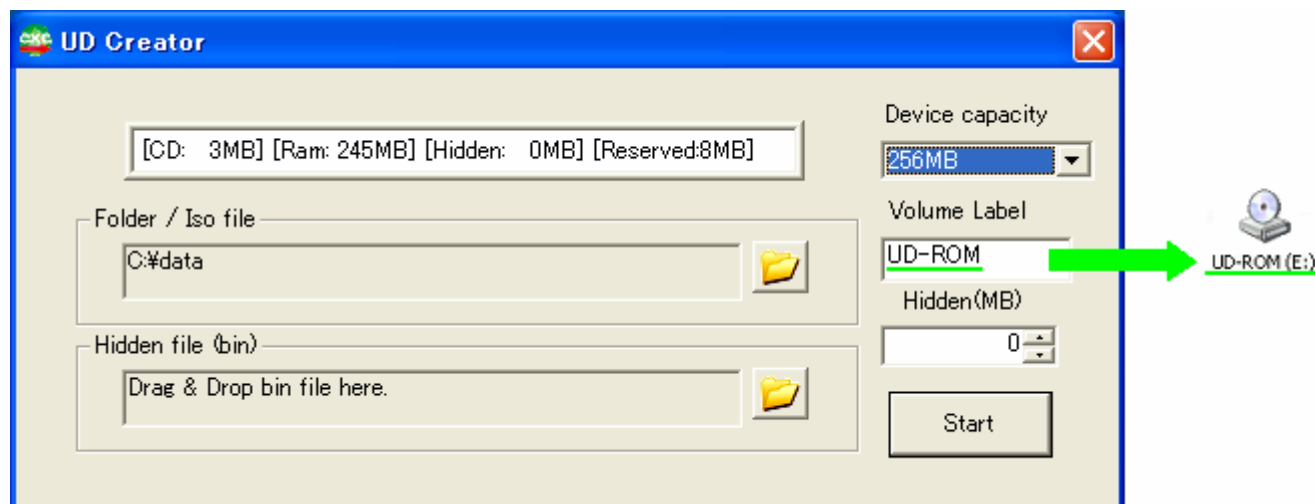


*Reserved capacity cannot be changed.

5. Entering Volume Label

If you have selected folder instead of ISO image file at step 4, you can name the volume label. Volume label must be alphanumeric character of 16 characters or less. The default volume label is "UD-ROM".

*The volume label is a name assigned to a storage unit such as a hard disk or CD-ROM and appears on "My computer" (See below).



NOTE:

You cannot use following characters and multi-code characters for volume label.

Max character length of volume label is 16

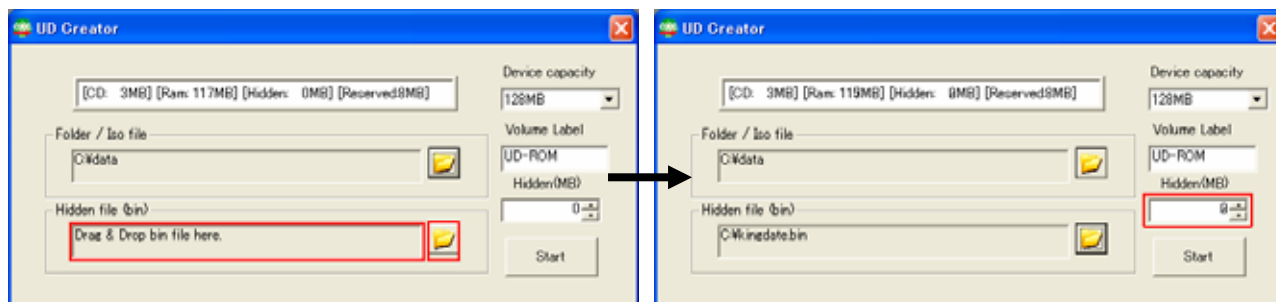
¥ / : , ; * ? " < > |

6. Selecting Binary file

This step is applicable only to those who purchased optional development kit.

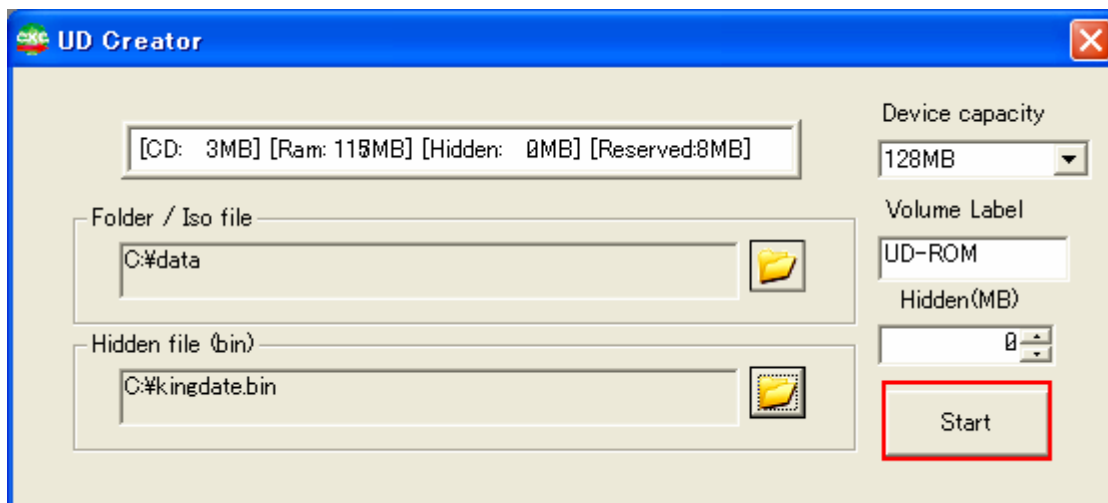
You can write the data onto Hidden Memory Zone by following similar procedure as writing data onto CD-ROM zone. Please note, however, data format must be binary (*.bin).

If you wish to secure larger Scalable Hidden Memory capacity than the current binary file size (for future update purpose, etc...), use [Hidden (MB)] box to increase the required capacity. When the binary file is selected, the capacity of hidden memory will be updated.



7. Creating ISO image & output UD Update.exe

Verify the configuration you have done so far and then click "Start". UD Creator converts the data files into ISO image and creates "UD Update" folder that includes associated files shown below.



You will find a folder contains following 4 files in the same folder where the UDCrator.exe resides.

Folder Name	File Name	Description
UDUpdate	UDUPDATE.exe	UDUPDATE Program
	UDRW.iso	ISO9660 image
	UDRW.bin	Hidden memory data (when selected)

*The capacities shown on this application might be different from actual usable drive capacity.

2.2. UD Update

2.2.1. Outline

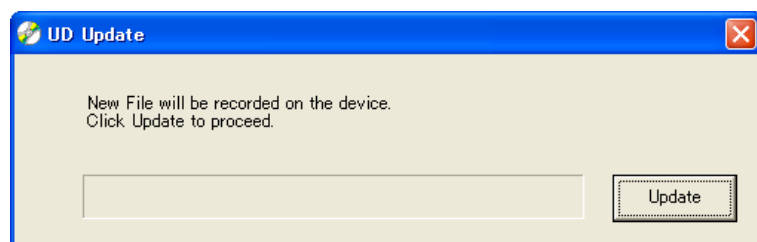
UD Update is the application program generated by UD Creator.exe and allows developers to write data on the CD-ROM zone and Scalable Hidden Memory Zone of UDRW G2 hardware.

2.2.2. Software Description

UD Update consists of following files.

File Name	Description
UDUpdate.exe	UDUpdate program
UDRW.iso	ISO 9660 image
UDRW.bin	Hidden memory data (when selected)

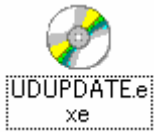
2.2.3. Screenshot



Symbol	Description
Update	Starts writing data (UDRW.iso) onto the CD-ROM zone and Scalable Hidden Memory Zone (UDRW.bin)

2.2.4. Writing data onto CD-ROM Zone

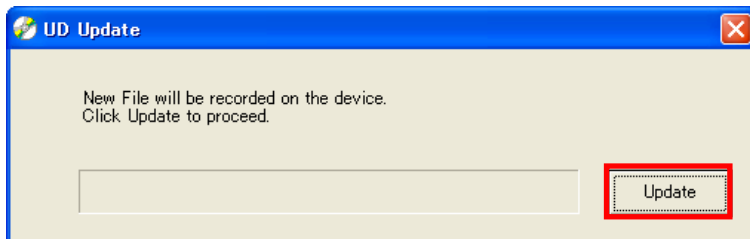
1. Start UDUPDATE.exe



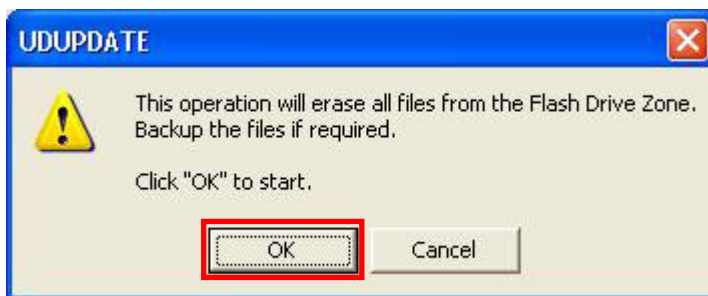
Connect the UDRW G2 to a USB port of your computer then click UDUPDATE.exe.

2. Start Writing

Click "Update". The application starts writing data (UDRW.iso) onto the CD-ROM zone and Scalable Hidden Memory Zone (UDRW.bin).



Warning message appears. Click "OK" if it is OK to proceed.



Completion message appears once write operation is successfully completed.

Please unplug and reconnect the device to take changes into effect.

3. SetupUtility

3.1. Outline

SetupUtility is the configuration tool for the advanced features of UDRW G2.

Drive Combination

Change the device's drive combination which will appear on "My Computer".

Autorun latency

Change the start-timing of Autorun process.

Inquiry Information

Change Inquiry information.



USB Device Subclass

Change the setting of USB Device Subclass. This option might solve boot issues on USB CD boot-enabled computer.

Removable Disk Lock

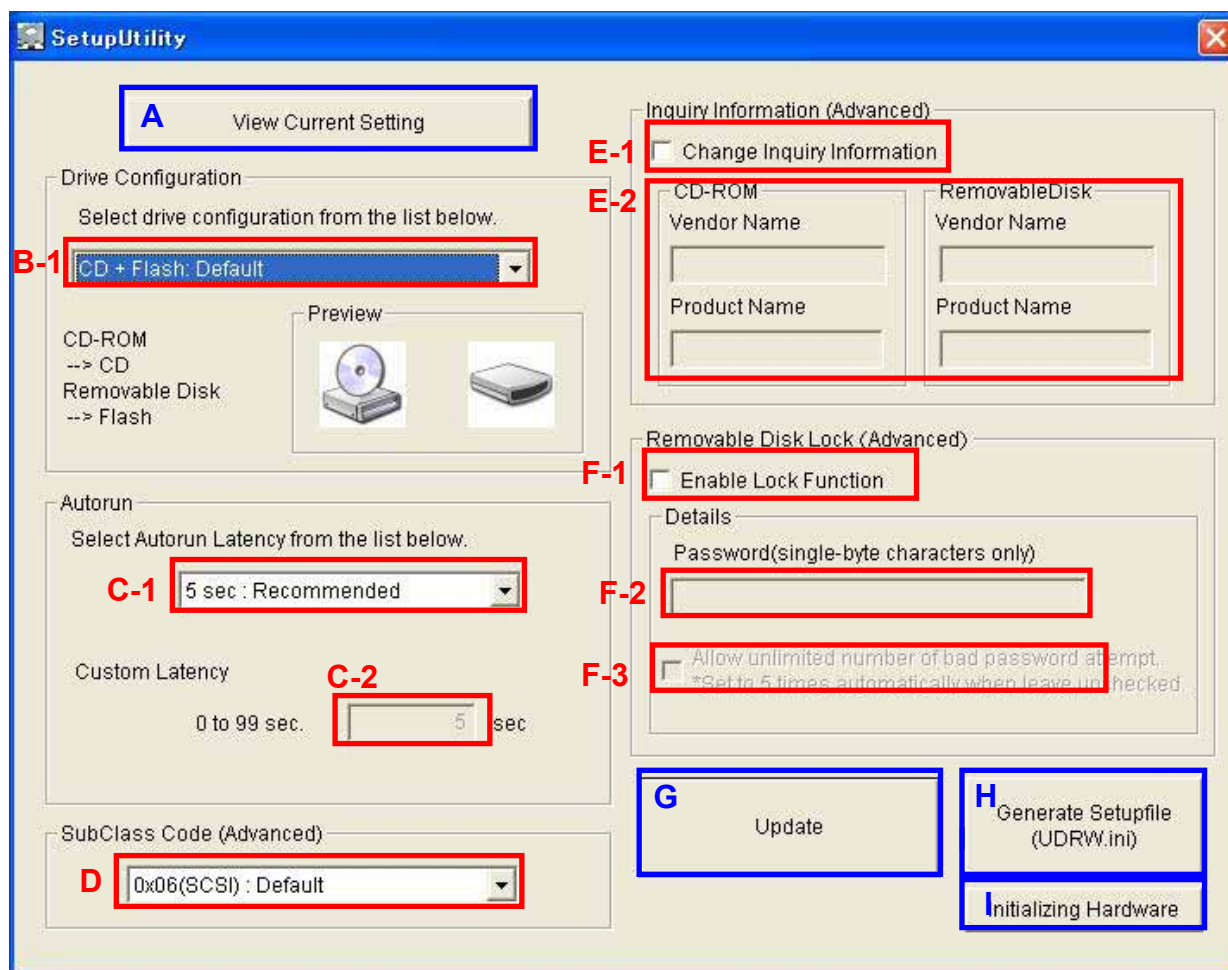
Enable / Disable the lock function. By enabling this function, you can protect the flash drive zone with password. It also monitors the number of failed password attempt and can be configured to reject further attempts once such failed attempt reaches its maximum allowed number.

3.2. Software Description

Setup Utility consists of following file.

Filename	Description
SetupUtility.exe	Setup Utility Program

3.3. Screenshot



A. View Current Settings

Device's current settings will be reflected on respective sections.

B. Drive Configuration

Change the device's drive combination which will appear on "My Computer".

B-1 Combination Box	CD + Flash: Default	2 drives appear on "My computer". Suitable for typical Autorun application. (Default)
	CD + Flash: USB CD-ROM Boot	2 drives appear on "My Computer". *Please select this option for USB CD Boot application. *BIOS setting might be required on the host computer.
	CD Only**	1 CD-ROM Drive appears on "My Computer".
	Flash Only	1 Flash Drive appears on "My Computer". *This option turns UDRW G2 into regular USB flash drive.

**UDUPDATE.exe cannot be used under CD-Only mode. Please reconfigure the device to dual drive (CD+Flash) mode to perform update.

C. Autorun

Change the start-timing of Autorun process.

C-1 Latency	5 sec Recommended	Autorun starts in 5 seconds
	Custom	Custom latency (0 sec – 99sec)
	0 sec USB CD-ROM Boot	This configuration will automatically be applied when “CD + Flash : USB CD-ROM Boot” is selected.
C-2 Custom Time	Input desired value. *This option is available when “Custom” is selected above.	

*The Autorun is a function of Windows operating system and might not be available depending on the environment.

D. SubClass Code

Change the USB Device SubClass value.

D-1 SubClass code	SCSI 0x06 [default]	0x06 (SCSI)
	ATAPI 0x02	0x02 (ATAPI)

E. Inquiry Information (Advanced)

Change Inquiry information.

E-1 Inquiry Information Change Check box	Inquiry information of the drive can be changed when marked.		
E-2 Inquiry Information Box	CD-ROM	Vendor Name	Input Vendor Name *Maximum 8 characters. Use single-byte characters, space, hyphens (-) or underscore (_).
		Product Name	Input Product Name *Maximum 16 characters. Use single-byte characters, space, hyphens (-) or underscore (_).
	Removable Disk	Vendor Name	Input Vendor Name *Maximum 8 characters. Use single-byte characters, space, hyphens (-) or underscore (_).
		Product Name	Input Product Name *Maximum 16 characters. Use single-byte characters, space, hyphens(-) or underscore(_).

F. Removable Disk Lock (Advanced)

Enable password lock of Flash Drive Zone (= Removable Disk Drive) when this checkbox is marked.

*Optional UDRW library package is required if you wish to develop the application that controls the lock function.

*When this lock option is enabled, Flash Drive Zone will be locked and cannot be accessed. Unmark the checkbox to disable the lock function.

F-1 Lock check box	Enable password lock of Flash Drive Zone (= Removable Disk) when marked.
F-2 Password	Password to unlock Flash Drive Zone.
F-3 Failed password attempt counter Check box	The maximum allowed number of failed password attempts.

G. Update

Perform update to reflect all changes. You have to unplug and reconnect the device in order to take changes into effect.

H. Generate Seutup file (UDRW.ini)

Generate UDRW.ini file in the same directory having SetupUtility. The ini file will be required for mass duplication at Hagiwara Sys-Com.

I. Initialize the Hardware

Initialize the device configuration. The data stored on Flash Drive and CD-ROM zone will NOT be deleted.

3.4. Using SetupUtility

3.4.1 Changing device configuration

1. Start SeupUtility.exe

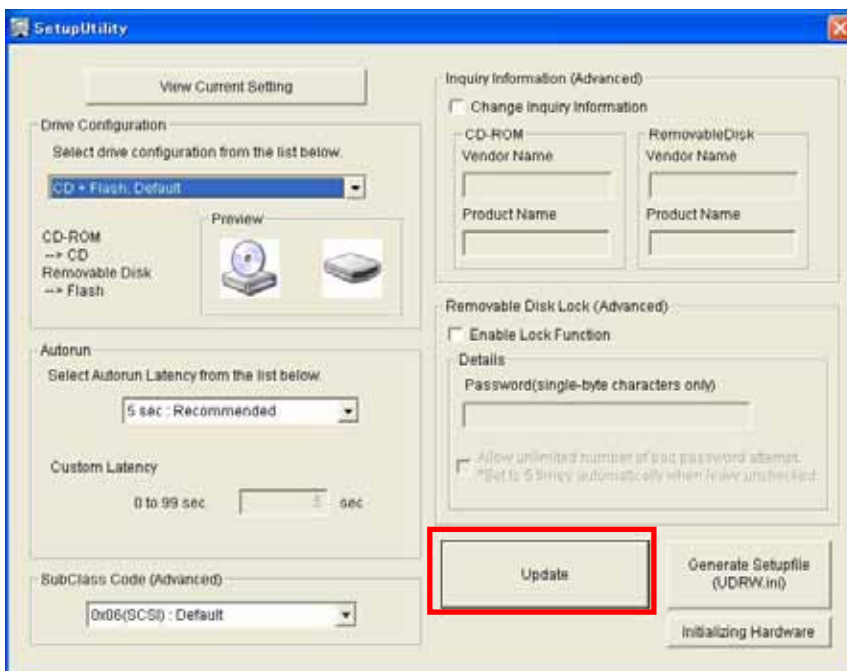
Plug UDRW G2 to a USB port of your computer, and then start SetupUtility.exe.



SetupUtility.exe

2. Select desired configuration

Select the configuration you want to apply, then click [Update]



Please unplug and reconnect the device to take changes into effect.

3.4.2. Initializing the Hardware

The hardware initialization will reset the UDRW G2 device settings to factory default.

1. Start SetupUtility.exe

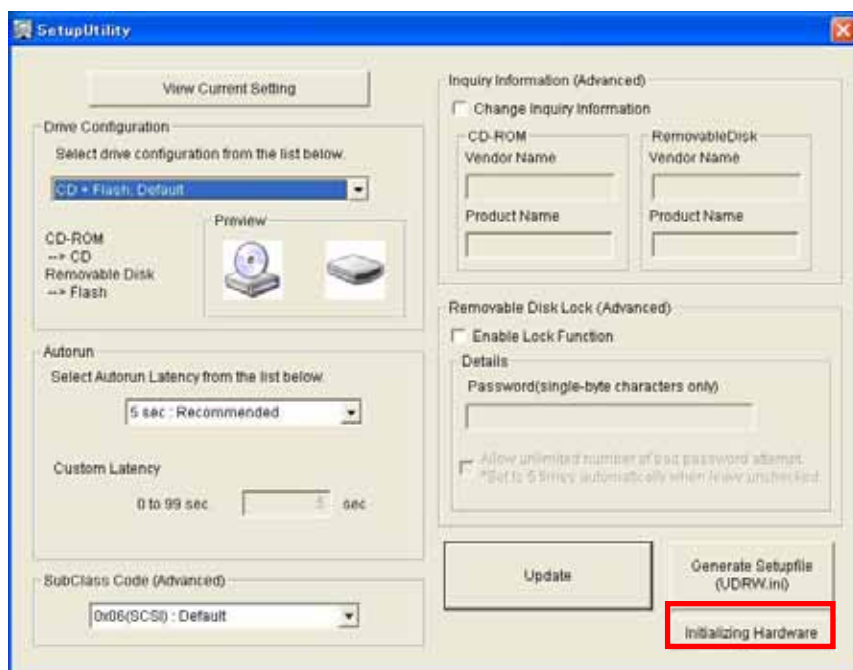
Plug UDRW G2 to the computer, and then start SetupUtility.exe.



2. Click “Initializing Hardware”.

Device will be reset to its factory default setting.

Please unplug and reconnect the device to take changes into effect.



4. Unique ID Reader

4.1. Outline

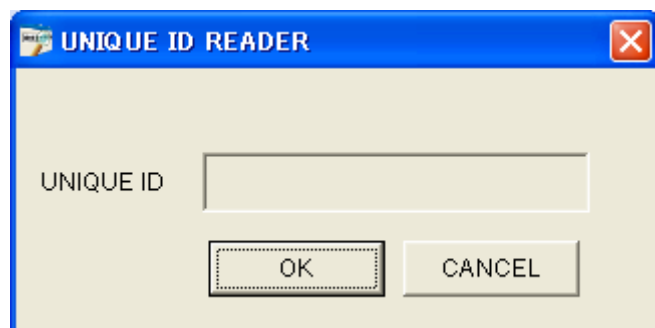
Unique ID reader displays factory assigned unique ID on the UDRW G2.

4.2. Software Description

Display value of Unique ID of the device.

File Name	Description
IDReader.exe	Unique ID Reader

4.3. Screenshot



Symbol	Description
Unique ID box	Display device's unique ID
OK button	Click to display unique ID

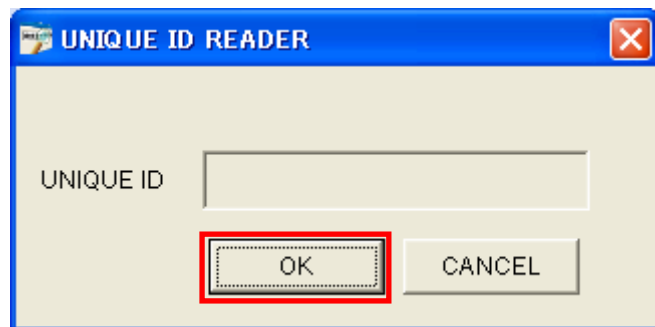
4.4. Using Unique ID Reader

1. Plug UDRW G2 to a USB port of your computer, and then start Unique ID Reader.



IDReader

2. Click [OK]. The unique ID will be displayed in the box..



5. OEM: Mass Duplication Service

5.1. Outline

Mass duplication service is available at optional cost. Please refer to following information and submit the data in compatible file format.

Acceptable file formats

File Types	Correspondent data partition
UDRW.ini	Device configuration file that is generated by SetupUtility.
00000000.iso	CD-ROM zone (If applicable)
G00000000.bin	Scalable Hidden Memory (If applicable)
A000000000.bin	Fixed Hidden Memory Data (If applicable)
000000000.bin	UDRW G1 Hidden Memory (If applicable)
Folder Name 00000000	Removable disk (If applicable)

* Please refer to the “UDRW G2 Device Specifications” for the definition of respective data partitions.

Data submission

Create the folder named “data” and place all required files in it. If you want us to copy device-unique data to the all zones on UDRW G2 for 3 units, “data” folder should look like following.

00000000	ファイル フォルダ
00000001	ファイル フォルダ
00000002	ファイル フォルダ
00000000.bin	0 KB BIN File
00000001.bin	0 KB BIN File
00000002.bin	0 KB BIN File
A000000000.bin	0 KB BIN File
A000000001.bin	0 KB BIN File
A000000002.bin	0 KB BIN File
H000000000.bin	0 KB BIN File
H000000001.bin	0 KB BIN File
H000000002.bin	0 KB BIN File
00000000.iso	0 KB ISO File
00000001.iso	0 KB ISO File
00000002.iso	0 KB ISO File
UDRW.ini	0 KB 構成設定

5.2 CD-ROM Zone

CD-ROM Zone	Format	File Name	Filename prefix	Filename Numbering	Remark
Data is identical for every device:	*.iso (ISO9660)	Submit single ISO file with following file name. 00000000.bin	None	00000000 (Fixed)	-
Data is unique to each device:	*.iso (ISO9660)	Submit a unique ISO file with incremental numeric Filename for each device. 00000001.bin 00000002.bin 00000003.bin	None	Incremental 8 - digit Decimal	-
ISO file generation	Use UD Creator to generate the ISO file. We will not provide support for the ISO file which is generated by 3rd party application.				

5.3 Scalable Hidden Memory Zone

Scalable Hidden Memory Zone	Format	File Name	Filename prefix	Filename Numbering	Remark
Data is identical for every device:	*.bin	Submit single bin file with following file name. G00000000.bin	G (Capital)	G00000000 (Fixed)	-
Data is unique to each device:	*.bin	Submit a unique bin file with incremental numeric filename along with prefix for each device. G00000001.bin G00000002.bin G00000003.bin	G (Capital)	Incremental 8 - digit Decimal	Total 9-digit
*.bin file	Binary file must contain the exact contents of Scalable Hidden Memory zone and no additional information is allowed in the file. Please refer to Sample data (HiddenSampleData.bin) included in the UDRW G2 Development Kit.				
Future Expansion	<p>If you plan to increase the size of Scalable Hidden Memory Zone in the future, we highly recommend that you set possible maximum data size for the Scalable Hidden Memory as default for smooth transition.</p> <p>ex) Current requirement : 1MB Possible maximum size of Scalable Hidden Memory: 10MB → Fill 9MB of Scalable Hidden Memory with dummy data</p>				

5.4 Fixed Hidden Memory

Fixed Hidden Memory Zone	Format	File Name	Filename prefix	Filename Numbering	Remark
Data is identical for every device:	*.bin	Submit single bin file with following file name. A00000000.bin	A (Capital)	A00000000 (Fixed)	-
Data is unique to each device:	*.bin	Submit a unique bin file with incremental numeric filename along with prefix for each device. A00000001.bin A00000002.bin A00000003.bin	A (Capital)	Incremental 8 - digit Decimal	Total 9-digit
*.bin file	Binary file must contain the exact contents of Fixed Hidden Memory zone and no additional information is allowed in the file. Please refer to Sample data (HiddenSampleData.bin) included in the UDRW G2 Development Kit.				
Size	Maximum size is 512Byte. If the size of bin file exceeds 512 byte, further data will not be written.				

5.5. G1 Hidden Memory

G1 Hidden Memory Zone	Format	File Name	Filename prefix	Filename Numbering	Remark
Data is identical for every device:	*.bin	Submit single bin file with following file name. 00000000.bin	None	00000000 (Fixed)	-
Data is unique to each device:	*.bin	Submit a unique bin file with incremental numeric filename for each device. 00000001.bin 00000002.bin 00000003.bin	None	Incremental 8 - digit Decimal	-
*.bin file	Binary file must contain the exact contents of G1Hidden Memory zone and no additional information is allowed in the file. Please refer to Sample data (HiddenSampleData.bin) included in the UDRW G2 Development Kit.				
Size	Maximum size is 1024 Byte. If the size of bin file exceeds 1024 byte, further data will not be written.				

5.6. Removable Disk

Removable Disk Zone	Format	Folder Name	Filename prefix	Folder Numbering	Remark
Data is identical for every device:	Folder	Submit single folder with following folder name. REM	None	REM (Fixed)	-
Data is unique to each device:	Folder	Submit the file folder that contains unique data for each device. Folder name must be incremental numeric value starting from 00000001. 00000001 00000002 00000003	None	Incremental 8 - digit Decimal	-
Folder path length	The maximum length of folder path is 250 characters.				
Size	Data size should not exceed the total size of available memory on the device.				

5.7. Device configuration (ini) file

ini file creation	Please use UDRW G2 SetupUtility to create ini file. Please refer to Section 3 of this manual.
File Name	File name must be "UDRW.ini".

5.8 Other Remarks

ISO and Binary file Naming conventions	When preloading is required to multiple zones such as CD-ROM + Hidden memory, please apply same file name to both ISO image and binary file.		
	Good Example	ISO file name	Bin file name
	Device #1	00000001.iso	00000001.bin
	Device #2	00000002.iso	00000002.bin
	Device #3	00000003.iso	00000003.bin
	No Good	ISO file name	Bin file name
	Device #1	00000003.iso	00000110.bin
	Device #2	00000004.iso	00000111.bin
	Device #3	00000005.iso	00000112.bin
Data Submission	<p>Please submit the data in CD-ROM medium.</p> <p>We only accept the data for following zones in compatible format.</p> <p>CD-ROM zone Device configuration Scalable Hidden Memory Zone Fixed Hidden Memory Zone Removable disk drive</p>		
NOTE	<p>*Resubmission of the data might be required if it does not meet the requirements described in this document.</p> <p>*Please ensure that you carefully review the contents and it contains no virus or harmful contents.</p>		

6. Contact Us

UDRW G2 Product Portal: <http://www.udrw.com/>

Please submit your questions / inquiry from online webform at UDRW.COM or contact our local offices directly.

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