Create a virtual USB thumb drive using the VHD Tool and Rufus

Using the virtual USB thumb drive image file (∗ .RMD),
it can be bootable in the motherboards that can not be booted with USB DVD-ROM.

It can be especially useful for cases where:

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- you need to create USB installation media from bootable ISOs
  (Windows, Linux, UEFI, etc.)

- you need to work on a system that doesn't have an OS installed

- you need to flash a BIOS or other firmware from DOS

- you want to run a low-level utility

Prerequisites

To follow this guide, you will need:

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- iODD-2531 or iODD-2541 with HDD or SSD.
  IODD2541 – 69_B04, 79_B04 or later /IODD 2531 – 1555 or later
- an Bootable ISO file

- Windows XP or higher

- VHD_Tool++ (It's free for iODD user)

- Rufus tool (free ware)

STEP 1. Make VHD file

What is the VHD file
VHD (Virtual Hard Disk) is Windows virtual hard disk drive image file.It is like physical HDD.
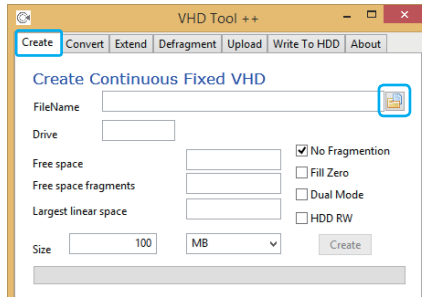Selecting a VHD file means Mounting a HDD drive.IODD 2531/2541 is Max 4 VHD files can be mounted.

1

Download VHD_Tool++ utility software.

You can download from followings,

- iODD Official Site download page

  http://iodd.kr/wordpress/support/download/

- iODD Official FTP

  ftp://sps.iodd.co.kr/

❷ Run VHD_Tool++

At first, connect iODD to PC. and run this tool.

This tool has many functions, but here is mentioned only 'Make VHD' function. If you select the first "Create" tab at the top, you will see a screen like the left. First, please click on the icon 🗔 to create a VHD file.
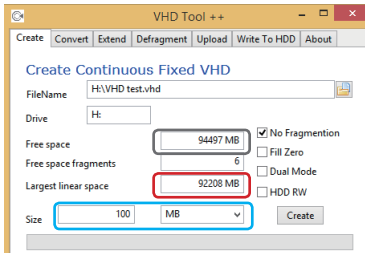
Navigate to the location (folder) that a VHD file will be created on. Enter the name of the VHD file on the area marked in blue box. and click [Open] .The file name can be changed after creating.

※ You can only create it on the HDD in iODD.
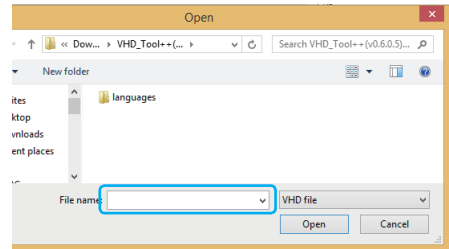
❸ size and options of VHD

Select the size and options of VHD. The picture below is sample.

How to find the largest size of VHD file to make.
- ● 'Free space' shows the total free space of HDD.
- ● 'Lagest linear space' shows the max size of VHD to make.
- ● If you enter a smaller size than 'Largest linear space' on 'Size' input window,the VHD file can be made.

About 'Largest linear space'

'Free space' does not means you can use all the free space. If 'Largest linear space' is lower than the target, please defrag the drive. The VHD file can be generated only in linear free space.

About the required size of VHD

The size of VHD must be larger than ISO file.

ex) if ISO file size is 5.6 GB , VHD file size must be larger than 5.6 GB

If all options are defined, press 'Create' [Create] button. A picture like the right will appear.
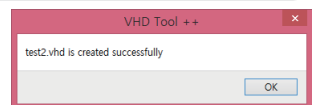
4 Change the file name and the extension.
Change VHD to RMD

Change *.VHD to *.RMD

※ According the extension, VHD is recognized as
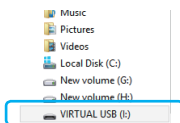external HDD.and RMD is external thumb drive.

VHD filename option

According to VHD filename, iODD LUN mode is determined. default is CD-MODE.

Ex) IODD.RMD : CD-MODE / IODD&D.RMD : DUAL-MODE / IODD&DW.RMD : DUAL-MODE, Real HDD is writable

5 Mount
Select the file in iODD like selecting *.ISO file.

If mount is successful, 'Formatting is needed' message box will appear.
Format the drive as FAT32 or exFAT or NTFS. and the drive like the left
picture will appear.

If you can not format.

VHD file is corrupted or not properly created.

Please delete the VHD file and re-create it.

STEP 2. Make a bootable USB drive with Rufus

what is Rufus?

Rufus is a utility that helps format and create bootable USB flash drives,

such as USB keys/pendrives, memory sticks, etc.
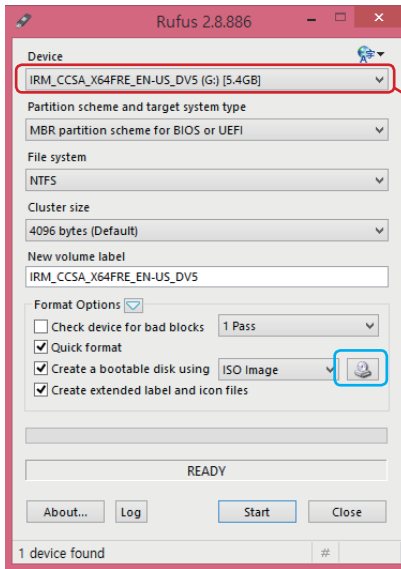
1 Download the latest version
You can download from Rufus official site.

● Rufus official site

https://rufus.akeo.ie/

2 Run Rufus

Connect iODD with mounted RMD, and Run Rufus.

The same picture on the left will appear.

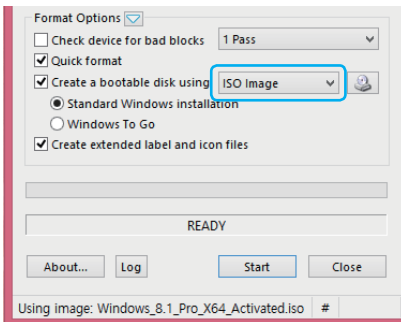※ Caution : You must select the drive of iODD virtual drive.

● This label will be the volume label name of the drive.

If all options are selected, click the button in blue rectangle.

3 Select an ISO file to make USB drive.

You can make a bootable devie to install OS or to boot Windows to go

Select and open ISO file.

Automatically the combobox in blue rectangle will be changed appropriately.

Free dos > ISO image

※ If the ISO file is Windows 8.1+, you can select 'Windows-To-Go' button.

If all options are selected, press the Start button below.

Press the button OK

WARNING: ALL DATA ON DEVICE 'IRM_CCSA_X64FRE_EN-US_DV5 (F:) [5.4GB]' WILL BE DESTROYED.
To continue with this operation, click OK. To quit click CANCEL.

OK   Cancel
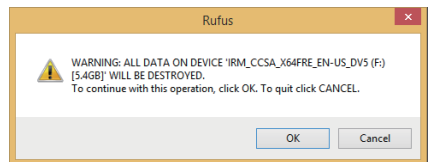
If the existing VHD(RMD) file that was in use?

Creating a bootable USB drive existing data will be deleted. if the VHD (RMD) containing important data.

back up your data on another drive.

4 bootable USB completion and verification
Check the virtual USB drive

Creating file system: Task 11/12 completed

About...   Log   Start   Cancel

Using image: Windows_8.1_Pro_X64_Activated.iso   #   00:00:02
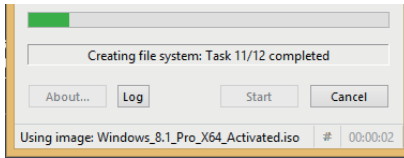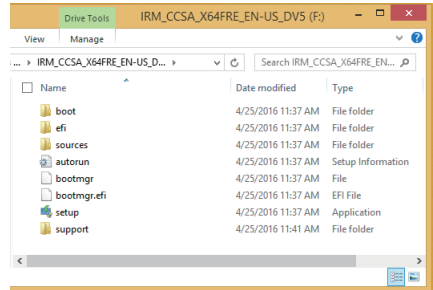
All operations will be completed.

Check the file and folder structure and properly are created.

Congratulation.

set the priority of boot device in BIOS,

and all done.

IRM_CCSA_X64FRE_EN-US_DV5 (F:)

View   Manage

... ▸ IRM_CCSA_X64FRE_EN-US_D... ▸   Search IRM_CCSA_X64FRE_EN... 🔍

Name	Date modified	Type
boot	4/25/2016 11:37 AM	File folder
efi	4/25/2016 11:37 AM	File folder
sources	4/25/2016 11:37 AM	File folder
autorun	4/25/2016 11:37 AM	Setup Information
bootmgr	4/25/2016 11:37 AM	File
bootmgr.efi	4/25/2016 11:37 AM	EFI File
setup	4/25/2016 11:37 AM	Application
support	4/25/2016 11:41 AM	File folder

Setting BIOS

It depends on the motherboard manufacturer.

It is The best way to refer to the manual or to contact the motherboard manufacturer.

Tip. Using RMD(VHD) file in iODD

Using RMD(VHD) file

you can use RMD files like mounting ISO files.

There are some differents in them, please refer to the followings.

1 RMD(VHD) drive can be modified.
RMD(VHD) drive is writable, and can be modified. It is unlike ISO file.

2 iODD VHD drive function works only in fixed VHD.
Not compatible in dynamic VHD or VHDx.

3 RMD(VHD) unmount short-key

2541 : [7] key pressing 3 sec. [all RMD(VHD) unmount]

2531 : [Backup] key pressing 3 sec (Firmware version 1558 or later) [all RMD(VHD) unmount]

Warning

!! Most important !!

This warning is only in the case when using virtual drive as an operating system.

If the LUN mode is DUAL-MODE and real drive(iODD main drive) is write enabled, you must check the followings.

1 You must not defrag the real drive (iODD main drive).

2 You must disable any automatic defrag service.

3 You must not move the RMD(VHD) file that is currently used.

!! Most important !!

In these case the following fatal errors will occur.

If acceording to the defrag of real drive the *.RMD(VHD) file has been moved,

Of Course the OS of the RMD file will read or write.Therefore the OS will generate fatal errors.

and real drive will be in data corruption.As a result you may not use simultaneously

DUAL-MODE and Write-Enable option in booting virtual drive OS.