

FlashBoot User Guide

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1 Introduction

Welcome, you're browsing FlashBoot user manual for version 3.3 of the software.

This topic provides general information about FlashBoot features and ordering information.

1.1 **Product Overview**

USB storage devices are extremely useful, but they would be so much more useful if they did more than just store your data. Imagine being able to install an entire operating system of your choice onto a USB device, then boot from that device on any machine. Now imagine that dream coming true, and you have FlashBoot.

FlashBoot enables you to install an instance of the Windows OS onto a USB device, empowering you to boot any PC from that device. With FlashBoot, you'll be able to walk about with a fully-functional installation of Windows 11, 10, 8.1 or 8 in your pocket, ready to go under any circumstance. Need your favorite app, document, game, or browser when you're sitting in front of a strange computer? Just break out your USB device formatted using FlashBoot!

Also FlashBoot can create installable clone of Windows 7, Windows 8.x or Windows 10/11 which can be used to instantly copy all your apps, settings, documents, games and browsers from old computer to a new computer (even with dissimilar hardware), move operating system from HDD to SSD, move it from/to RAID array, copy OS between virtual machine and real hardware (or between virtual machines of different vendors), or switch Windows boot method between UEFI and non-UEFI. This feature can be used to gain unpartitioned disk space for dual-boot configurations (such as Windows 10/11 and Windows 7, Windows 10/11 and Linux) by reinstalling your OEM copy of Windows in-place. Additionally, this self-extracting backup of Windows will be of good use in the case of next ransomware virus attack, failed Windows update, or accidently deleted file.

If you dislike Windows 10/11 because you don't want forced updates with untimely reboots, you don't want privacy intrusions like telemetry which can't be disabled, and you don't want your system preferences to reset on every major OS upgrade, then way to go is to return to Windows 7.

But hardware marches on, and older operating systems hardly can play catch-up. If you try to install Windows 7 on the contemporary laptop, you even won't get past the first screen: lack of builtin USB 3.x support makes USB mouse, keyboard and source USB thumbdrive inaccessible to Windows 7 setup.

Fortunately, FlashBoot can not only convert Windows setup DVD or image file to USB thumbdrive, but also integrate any drivers to it. Windows 7, supercharged with proper drivers, will support USB 3.x, NVMe, RAID, and any other modern hardware. For your convenience, FlashBoot already contains all necessary drivers for most popular hardware. FlashBoot can also integrate user-supplied drivers.

Also FlashBoot facilitates installation of older operating systems, such as Windows XP, from USB thumdrive, and running minified version of it (known as BartPE) from USB thumbdrive. You can even use FlashBoot to build self-extracting standalone EXE files that contain exactly what you want, for rapid deployment whenever you need it.

1.2 FlashBoot vs Other Tools

Unlike other tools, FlashBoot can create FAT32 filesystems on USB thumdrives larger than 32 Gb. This is especially important in UEFI environment, where filesystem on USB thumbdrive must be recognized by motherboard firmware, and so NTFS is not supported.

Unlike other tools, FlashBoot can work with USB thumdrives which have no drive letter assigned or have

no partitions. If capacity of USB thumdrive was reduced by other tools (for example, 64 Gb USB thumbdrive has become 32 Gb USB thumbdrive), then FlashBoot will automatically recover it to full capacity.

Unlike other tools, FlashBoot supports ESD format of source Windows installation images (in addition to ISO image files and directly-accessed DVD disks).

Unlike other tools, FlashBoot remains fully functional under Windows XP. This is because FlashBoot does not mount registry hives, FAT filesystems, WIM and VHD images via Windows kernel. These features are implemented inside FlashBoot, without invocation of platform-specific tools.

For specific formatting scenarios, where compatibility with older computers matters, FlashBoot formats USB thumbdrives in such way that they will boot both in USB-ZIP and USB-HDD mode, regardless of BIOS settings. For such cases, FlashBoot also allows to specify disk CHS geometry explicitly at format time, as well as target drive letter, i.e. A: or C:

FlashBoot supports command line interface as alternative to GUI for power users who need automation or unattended operation.

Last but not the least: FlashBoot is a good old-fashioned software. FlashBoot has free updates for lifetime. FlashBoot stands against the always-online, spy-on-everything, everything-is-a-service, subscribe-not-buy, force-updates-you-don't-want madness of recent years. FlashBoot does not interact with the internet in any way — it's up to you to decide if update is necessary. No toolbars, no ads, no spamming through e-mail database and no other crap in the installer and software.

1.3 Setting up BIOS

This chapter expains how to set up your computer to make it boot from USB storage device.

1. General approach

1.1. Change the BIOS boot order so the USB device option is listed first. The BIOS is rarely setup this way by default.

If the USB port is not first in the boot order, your PC will start "normally" (i.e. boot from your hard drive) without even looking at any boot information that might be on your USB device.

Note: After setting your USB device as the first boot device, your computer will check it for boot information each time your PC starts. Leaving your computer configured this way shouldn't cause problems unless you plan on leaving the USB device attached all the time.

1.2. Attach the USB device to your computer via any available USB port.

- 1.3. Restart your computer.
- 1.4. Watch for a Press any key to boot from external device... message.

On some bootable devices, you may be prompted with a message to press a key before the computer will boot to the flash drive or other USB device.

If you do nothing, your computer will check for boot information on the next boot device in the list in BIOS (see Step 1.1) which will probably be your hard drive.

Note: Most of the time when trying to boot to a USB device there is no key-press prompt. The boot process usually starts immediately.

1.5. Your computer should now boot from the USB flash drive or USB based external hard drive.

Note: What happens now depends on what the bootable USB device was intended for. If you're booting to an old version of MS-DOS on a flash drive, MS-DOS will load. If you're booting to the DSL version of Linux, it will start. You get the idea.

2. Newer BIOS Boot Menu

Many newer computers detect the USB device as a hard drive (USB-HDD0). In which case, you can press a specific key (F2, F10, F11 or ESC) during system post to access the "Boot Menu". Select your USB DISK from the Boot Menu and resume startup.

3. Troubleshooting

If you tried the above steps but your computer did not boot from the USB device, check out some of the tips below.

3.1. Recheck the boot order in BIOS (Step 1.1). The number one reason a bootable flash drive or other USB device won't boot is because BIOS is not configured to check the USB port first.

3.2. Didn't find a "USB Device" boot order listing in BIOS? If your computer was manufactured around 2001 or before, it may not have this ability. If your computer is newer, check for some other ways that the USB option might be worded. In some BIOS versions, it's called "Removable Devices" or "External Devices".

3.3. Switch to another USB port. The BIOS on some motherboards only check the first few USB ports. Switch to another USB port and restart your computer.

3.4. Be sure to keep an eye for BIOS updates from your board manufacturer.

1.4 Free vs Pro

	FlashBoot Free	FlashBoot Pro
Price	\$ O	\$ 29.95
Prepare USB thumbdrive for installation of Windows 10/11, Windows 8.x, Windows 7 or Windows Vista to internal HDD/SSD	~	\checkmark
Install full-featured Windows 10/11 or Windows 8.x to USB thumbdrive, which will boot independently from main OS on HDD/SSD	\checkmark	\checkmark
Save USB thumbdrive to image file	\checkmark	\checkmark
Restore USB thumbdrive from image file	\checkmark	\checkmark
Copy USB thumbdrive to another USB thumbdrive, retaining bootability	\checkmark	\checkmark

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Install DOS to USB thumbdrive	\checkmark	\checkmark
Install UEFI shell to USB thumbdrive	\checkmark	\checkmark
Quick format USB thumbdrive	\checkmark	\checkmark
Wipe USB thumbdrive (securely erase all data)	\checkmark	\checkmark
Create bootable clone of Windows 10/11 or Windows 8. x on USB thumbdrive, which will boot independently from main OS on HDD/SSD		✓
Create installable clone of Windows 10/11, Windows 8.x or Windows 7 with optional driver integration (USB 3.x, NVMe, AHCI/RAID or user-supplied drivers)		\checkmark
Prepare USB thumbdrive for installation of Windows 10/11, Windows 8.x, Windows 7 or Windows Vista to internal HDD/SSD with driver integration (USB 3.x, NVMe, AHCI/RAID or user-supplied drivers)		✓
Prepare USB thumbdrive for installation of Windows XP to internal HDD/SSD		\checkmark
Install mini version of Windows XP (BartPE) to USB thumbdrive, which will boot independently from main OS on HDD/SSD		✓
Create self-extracting archives (USB formatters with predefined content)		\checkmark

1.5 Ordering and Updates

FlashBoot Pro can be ordered via our website:

https://www.prime-expert.com/flashboot/

Instantly after your order, you will receive e-mail message with a private link to your copy of FlashBoot Pro.

FlashBoot Pro is not bound to hardware. You may install it on any number of computers you own, and use it to format any USB storage devices without limitation. FlashBoot Pro does not require activation and does not access network during installation or operation. You may transfer FlashBoot Pro to another computer at any time.

If you need to update your copy of the FlashBoot Pro to the latest version (with fixed bugs, added features etc), then just redownload from this link and reinstall the software. For you convenience, this link is also displayed on the "More Info..." screen of first page of FlashBoot wizard.

1.6 Support & Feedback

If you have any technical questions about FlashBoot, or if you need a technical support, or if you have any suggestions for further development of the project (feature request, etc), mail here: flashboot@prime-expert.com

If you have any problems or inquiries related to payment processing, credit cards and invoices, then

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please click here:

https://www.prime-expert.com/flashboot/billing_support/

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FlashBoot version 3.x End User License Agreement

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2 Install OS from USB device

2.1 Windows Vista/7/8.x/10/11 installer

Using this feature you can convert ISO image file (or DVD disc) of Windows setup to bootable USB thumbdrive intended for installation of Windows to internal HDD/SSD. This feature is useful for notebooks and other computers without DVD drive.

This example demonstrates conversion of Windows 11 setup ISO file to bootable USB installer thumbdrive in UEFI mode.

1) Run FlashBoot Free or FlashBoot Pro, click Next

🂣 FlashBoot 3.3n Free					X
	Welcome to FlashBo	oot 3.3n Free			
	This wizard will guide	e you through for	matting of bootable	e USB thumbdrive	or USB HDD.
	For more information	n, refer to <u>https://</u>	www.prime-expert.c	<u>:om/flashboot/</u>	
	Click Next to continu	e.			
		<u>H</u> elp	< <u>B</u> ack	Next >	Cancel
		Heih	< Dack	INEXT >	

2) Choose "OS installer -> USB" in the Main Menu

🧬 FlashBoot 3.3n Free		×
	FlashBoot Main Menu	
	 → OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD → Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD → USB imaging and duplication 	
	 Save USB thumbdrive to image file, restore from image file, USB to USB, SFX → Format as non-bootable Quick format and wipe 	
	Help < Back Cancel	

3) Choose "Windows Vista/7/8.x/10/11 installer (for BIOS-based computers)" or "Windows Vista/7/8. x/10/11 installer (for UEFI-based computers)" in this menu and click Next

UEFI mode must be chosen if you want to install Windows to 3Tb+ boot HDD. It may be chosen if you have UEFI-compatible computer. Most computers manufactured after 2012 are UEFI-compatible, but if you intend to install Windows to older computer, then use BIOS mode instead of UEFI mode.

Windows 11 officially supports UEFI + Secure Boot installation mode only (but FlashBoot can override that, see below).

🧬 FlashBoot 3.3n Free		×
	OS installer → USB	
	Free features: Windows Vista/7/8.x/10/11 installer (for BIOS-based computers) Windows Vista/7/8.x/10/11 installer (for UEFI-based computers) Pro features: Windows XP installer (for BIOS-based computers) Windows Vista/7/8.x/10/11 installer with added drivers (for BIOS-based computers) Windows Vista/7/8.x/10/11 installer with added drivers (for UEFI-based computers) Installable clone of Windows 7/8.x/10/11 (for BIOS-based computers) Installable clone of Windows 7/8.x/10/11 (for UEFI-based computers)	
	For your information: this computer is UEFI-based	
	Help < Back Next > Cancel	

4) Specify ISO image file (or DVD disc) of Windows setup and click Next

🂣 FlashBoot 3.3n Free					×
	Windows Vista/7/8.x	/10/11 installer ((UEFI) → USB: Spo	ecify source	
	Please specify source I	SO/ESD file or CD	/DVD disc		
	ISO or ESD file:	D:\en-us_windov	vs_11_business_ed	itions_x64_dvd_3	a304c08
	○ CD or DVD disc:				\sim
		Help	< Back	Next >	Cancel

5) The following screen is displayed for Windows 11 setup only. Here you can enable some options to bypass hardware checks during installation of Windows 11 (you can bypass checks for TPM chip, RAM and Secure Boot):

🂣 FlashBoot 3.3n Free					×
	Bypass restrictions	during Windows	1 setup		
	Should some hardwa)	stallation of Wind	iows 11?
	 Allow installation Should some software Allow creation of This option allow online account. 	n without Secure B re restrictions be by	oot /passed during firs it (offline). ser account in Win for reliability to un	ndows 11 instead o	of
		<u>H</u> elp	< <u>B</u> ack	<u>N</u> ext >	<u>C</u> ancel

🂣 FlashBoot 3.3n Free		×
	Windows Vista/7/8.x/10/11 installer (UEFI) \rightarrow USB: Specify target	
	Please specify target USB device:	
	F: 29.2 GB SanDisk Extreme	~
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel	

6) Specify target USB storage device and click Next

7) If necessary, change volume label and filesystem type, or leave them as is, and click Next If source ISO file or DVD contains \sources\install.wim file larger than 4GB (so it won't fit on FAT32), then filesystem choice option won't be presented (NTFS will be assumed). For UEFI mode, FAT32 filesystem will be always assumed.

🂣 FlashBoot 3.3n Free					×
	Windows Vista/7/	/8.x/10/11 installer (UEFI) → USB (F:)	: Formatting op	tions
	Formatting options				
	Volume label:	WIN11_SETUP			
	Set advance	d options			
+	Unallocated sp	pace at the end of the	disk: 0		
		Help	< <u>B</u> ack	<u>N</u> ext >	<u>C</u> ancel

8) Check summary information and click Format Now

🔗 FlashBoot 3.3n Free		×
	Summary	
	Scenario: Prepare Windows Vista/7/8.x/10/11 installer on USB (UEFI mode) Data source: ISO image file D:\en-us_windows_11_business_editions_x64_dvd_3a304c08.iso	
	Hardware restrictions to bypass in Windows 11 setup: Allow installation without TPM chip Allow installation without Secure Boot Software restrictions to bypass in first boot of Windows 11:	
	Allow creation of local user account (offline) Target: USB storage device: F: 29.2 GB SanDisk Extreme Filesystem: Auto Volume label: WIN11 SETUP	
	Help < Back Format Now Cancel	

9) Wait for process completion

🔗 (96%) FlashBoot Free is formatting bootable USB storage de 🚽		×
Formatting now		
	Cancel	
.og:		
Copying file support\logging\winsetupetw.dll to support\logging\winsetupetw.dll		
Copying file support\logging\en-us\actiongueueetw.dll.mui to		
support/logging/en-us/actionqueueetw.dll.mui		
Installing UEFI bootloader		
Unmounting VFAT filesystem in partition #1 of physical disk #2 (F:)		
Splitting install.wim		
Decompressing boot.wim		
Updating boot.wim		
Updating setup configuration in image #1 of boot.wim		
Commiting changes to image #1 of boot.wim		
Updating setup configuration in image #2 of boot.wim		
Commiting changes to image #2 of boot.wim		
Recompressing boot.wim		1
necompleting bootmin in		1

10) Bootable USB storage device is ready to use. Click OK to exit

🔗 FlashBoot Free completed successfully —		×
Completed successfully. Click OK to exit		
Log:		
support\logging\windeployetw.dll		
Copying file support\logging\winsetupetw.dll to support\logging\winsetupetw.dll		
Copying file support\logging\en-us\actionqueueetw.dll.mui to		
support\logging\en-us\actionqueueetw.dll.mui Installing UEFI bootloader		
Unmounting VFAT filesystem in partition #1 of physical disk #2 (F:)		
Splitting install.wim		
Decompressing boot.wim		
Updating boot.wim		
Updating setup configuration in image #1 of boot.wim		
Commiting changes to image #1 of boot.wim		
Updating setup configuration in image #2 of boot.wim		
Commiting changes to image #2 of boot.wim		
Recompressing boot.wim		
Done		1
Save log	ОК	

2.2 Windows Vista/7/8.x/10/11 installer with added drivers

If you dislike Windows 10/11 because you don't want forced updates with untimely reboots, you don't want privacy intrusions like telemetry which can't be disabled, then way to go is to return to Windows 7.

But hardware marches on, and older operating systems hardly can play catch-up. If you try to install Windows 7 on the contemporary laptop, you even won't get past the first screen: lack of USB 3.x support makes mouse, keyboard and boot device inaccessible to Windows 7 setup.

Using this feature, you can not only convert Windows setup DVD or image file to USB thumbdrive, but also integrate any drivers to it. Windows 7, supercharged with proper drivers, will support USB 3.x, NVMe, RAID, and any other modern hardware. For your convenience, FlashBoot already contains all necessary drivers for most popular hardware. FlashBoot can also integrate user-supplied drivers (.inf + .sys + .cat files).

This example demonstrates conversion of Windows 7 setup ISO file with simultaneous integration of all FlashBoot-builtin drivers to bootable USB installer thumbdrive. USB installer will boot in UEFI mode.

1) Run FlashBoot Pro, click Next

💣 FlashBoot 3.3n Pro	
	Welcome to FlashBoot 3.3n Pro
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to <u>https://www.prime-expert.com/flashboot/</u>
	This copy of FlashBoot Pro is registered to Mykhailo Kupchyk
	More info
	Click Next to continue.
	Help < Back Next > Cancel

2) Choose "OS installer -> USB" in the Main Menu

🧳 FlashBoot 3.3n Pro	
	FlashBoot Main Menu
	OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD
	Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX
	Format as non-bootable Quick format and wipe
	Help < Back Cancel

3) Choose "Windows Vista/7/8.x/10/11 installer with added drivers (for BIOS-based computers)" or "Windows Vista/7/8.x/10/11 installer with added drivers (for UEFI-based computers)" in this menu and

click Next

Modern computers are UEFI-compatible, but if you need to install Windows to older computer, then choose BIOS mode instead of UEFI mode.

🔗 FlashBoot 3.3n Pro	
	OS installer → USB
	Free features:
	Windows Vista/7/8.x/10/11 installer (for BIOS-based computers)
	Windows Vista/7/8.x/10/11 installer (for UEFI-based computers)
	Pro features:
4	Windows XP installer (for BIOS-based computers)
	O Windows Vista/7/8.x/10/11 installer with added drivers (for BIOS-based computers)
	Windows Vista/7/8.x/10/11 installer with added drivers (for UEFI-based computers)
	Installable clone of Windows 7/8.x/10/11 (for BIOS-based computers)
	Installable clone of Windows 7/8.x/10/11 (for UEFI-based computers)
	For your information: this computer is BIOS-based
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

4) Specify ISO image file (or DVD disc) of Windows setup and click Next

💣 FlashBoot 3.3n Pro			x
	Windows Vista/7/8.x,	/10/11 installer (UEFI) + drivers → USB: Specify source	
	Please specify source Is	SO/ESD file or CD/DVD disc	
	ISO or ESD file:	D:\win7_x64_setup.iso	
	CD or DVD disc:		•
7-6-			
		Help < Back Next > Can	cel

5) Choose which drivers should be integrated and click Next

Starting from version 3.3c, FlashBoot Pro adds **generic USB 3.x Host Controller driver**, compatible with Windows 7 (instead of collection of vendor-specific drivers). So, **unlike other tools**, FlashBoot Pro can aid in installation of Windows 7 to the modern computers which are based on Intel chipsets with USB 3.1/3.2 Host Controllers (B360, B365, B460, H370, H470, Z370, Z390, Z490) and AMD chipsets with USB 3.2 Host Controllers (B550, X570).

Starting from version 3.3d, FlashBoot Pro adds **generic NVMe driver**, which is compatible with any type of NVMe storage device from any vendor.

Also, if you are going to install Windows 7 on a modern computer (with pure UEFI firmware and without CSM support), you should apply the patch for Windows 7 UEFI loader. See details below.

🔗 FlashBoot 3.3n Pro		X
	Windows Vista/7/8.x/10/11 installer (UEFI) + drivers \rightarrow USB: Driver options	
	Which drivers should be integrated?	
	✓ USB 3.x drivers	
	W NVMe SSD drivers	
	AHCI/RAID drivers	
	Custom drivers from the specified folder (.inf + .sys + .cat files):	
\mathcal{F}		
	Patch Windows 7 UEFI loader for compatibility with modern computers (which have no VGA hardware). Enable this option if Windows Setup hangs	
	at startup when the OS logo is displayed.	
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ar	ncel

6) Specify target USB storage device and click Next

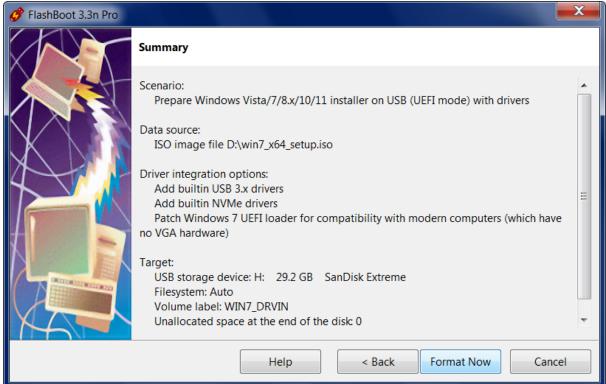
🔗 FlashBoot 3.3n Pro		X
	Windows Vista/7/8.x/10/11 installer (UEFI) + drivers \rightarrow USB: Specify target	
	Please specify target USB device:	
	H: 29.2 GB SanDisk Extreme	•
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> a	ncel

7) If necessary, change volume label and filesystem type, or leave them as is, and click Next If source ISO file or DVD contains \sources\install.wim file larger than 4GB (so it won't fit on FAT32),

then filesystem choice option won't be presented (NTFS will be assumed). For UEFI mode, FAT32 filesystem will be always assumed.

🧬 FlashBoot 3.3n Pro		
	Windows Vista/7	/8.x/10/11 installer (UEFI) + drivers → USB (H:): Formatting options
	Formatting option	s:
	Volume label:	WIN7_DRVIN
	Set advance	ed options
4	Unallocated s	pace at the end of the disk: 0
		<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

8) Check summary information and click Format Now



) Wait for process completion	
🧳 (67%) FlashBoot Pro is formatting bootable USB storage device	
Formatting now	
	Cancel
Log:	
Builtin driver stornvme.inf was integrated as oem2.inf	*
Builtin driver pantcore.inf was integrated as oem3.inf	
Builtin driver pantusb.inf was integrated as oem4.inf	
Builtin driver flxhcic.inf was integrated as oem5.inf	
Builtin driver flxhcih.inf was integrated as oem6.inf	
Builtin driver usbxhci.inf was integrated as oem7.inf	
Commiting changes to image #4 of install.wim	
Integrating drivers to Windows Recovery Image of install.wim	
Updating image #1 of install.wim	
Updating image #2 of install.wim	
Updating image #3 of install.wim	
Updating image #4 of install.wim	
Recompressing boot.wim	
Recompressing install.wim	=
	-

9) Wait for process completion

10) Bootable USB storage device is ready to use. Click OK to exit

FlashBoot Pro completed successfully	
Completed successfully. Click OK to exit	
Log:	
Builtin unver stonivine.ini was integrateu as oeniz.ini	
Builtin driver pantcore.inf was integrated as oem3.inf	
Builtin driver pantusb.inf was integrated as oem4.inf	
Builtin driver flxhcic.inf was integrated as oem5.inf	
Builtin driver flxhcih.inf was integrated as oem6.inf	
Builtin driver usbxhci.inf was integrated as oem7.inf	
Commiting changes to image #4 of install.wim	
Integrating drivers to Windows Recovery Image of install.wim	
Updating image #1 of install.wim	
Updating image #2 of install.wim	
Updating image #3 of install.wim	
Updating image #4 of install.wim	
Recompressing boot.wim	
Recompressing install.wim	
Copying install.wim	
Done	
	-
Save log	ОК
Save log	

Windows 7 installation to the modern UEFI-based computers without CSM support

If Windows 7 Setup halts at boot time when displaying OS logo, then you need to apply the **patch for Windows 7 UEFI loader**.

Windows 7 builtin drivers (VGA.SYS and VIDEOPRT.SYS) assume that VGA BIOS (INT 10H) is universally available, but this is no longer the case on modern computers with pure UEFI firmware (without CSM).

Patch for UEFI loader provides emulation of VGA BIOS (INT 10H) over UEFI GOP framebuffer, thus enabling installation of Windows 7 to the modern computers without CSM.

Also, without this patch, Windows 7 just freezes instead of displaying BSoD (blue screen of death) on the modern computers where VGA-compatible hardware is not available (Windows 7 can't switch to classic 640x480x4bpp VGA mode in order to display BSoD). With this patch, Windows 7 is able to display BSoD over the UEFI GOP framebuffer, if necessary.

In FlashBoot version 3.3a, this patch was improved to provide an entire area of LCD screen to the

Windows 7 via Standard VGA Driver. Previous versions of this patch restricted available resolution to 1024x768 and displayed black sidebars until vendor-provided GPU driver was installed by the user. Also we added compatibility with UEFI-based computers where video memory (UEFI GOP framebuffer) is mapped above 4 Gb boundary.

When installing Windows 7 on the computer which came with preinstalled OEM version of Windows 10/11, it's recommended to remove the previous EFI system partition with remaining components of Windows 10/11 (UEFI Loader and BCD hive) before starting installation of Windows 7.

2.3 Windows 8.1/10/11 installer from ESD file

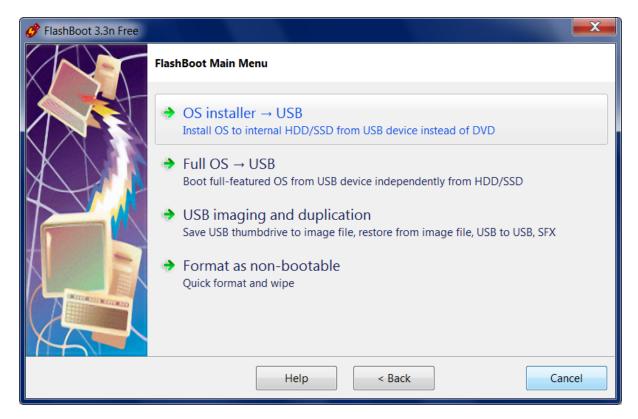
Modern versions of Windows are often distributed in the form of ESD files (Electronic Software Delivery).

This example demonstrates conversion of Windows 10 (Insider Preview) ESD file to bootable USB installer thumbdrive in UEFI mode.

🧳 FlashBoot 3.3n Free	
	Welcome to FlashBoot 3.3n Free
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to <u>https://www.prime-expert.com/flashboot/</u>
	Click Next to continue.
	Help < Back Next > Cancel

1) Run FlashBoot Free or FlashBoot Pro, click Next

2) Choose "OS installer -> USB" in the Main Menu



3) Choose "Windows Vista/7/8.x/10/11 installer (for BIOS-based computers)" or "Windows Vista/7/8. x/10/11 installer (for UEFI-based computers)" in this menu and click Next

UEFI mode must be chosen if you want to install Windows to 3Tb+ boot HDD. It may be chosen if you have UEFI-compatible computer. Most computers manufactured after 2012 are UEFI-compatible, but if you intend to install Windows to older computer, then use BIOS mode instead of UEFI mode.

🧳 FlashBoot 3.3n Free	
	OS installer → USB
	Free features:
	Windows Vista/7/8.x/10/11 installer (for BIOS-based computers)
	Windows Vista/7/8.x/10/11 installer (for UEFI-based computers)
	Pro features:
	O Windows XP installer (for BIOS-based computers)
	O Windows Vista/7/8.x/10/11 installer with added drivers (for BIOS-based computers)
	O Windows Vista/7/8.x/10/11 installer with added drivers (for UEFI-based computers)
	Installable clone of Windows 7/8.x/10/11 (for BIOS-based computers)
	Installable clone of Windows 7/8.x/10/11 (for UEFI-based computers)
	For your information: this computer is BIOS-based
	Help < Back Next > Cancel

4) Specify ESD image file of Windows setup and click Next

💣 FlashBoot 3.3n Free			X
	Windows Vista/7/8.x	/10/11 installer (UEFI) → USB: Specify source	
	Please specify source I	SO/ESD file or CD/DVD disc	
	ISO or ESD file:	D:\win10_rs2_rtm\build15063.pro.retail.x64fre.esd	
	CD or DVD disc:		•
74			
		Help < Back Next > Ca	incel

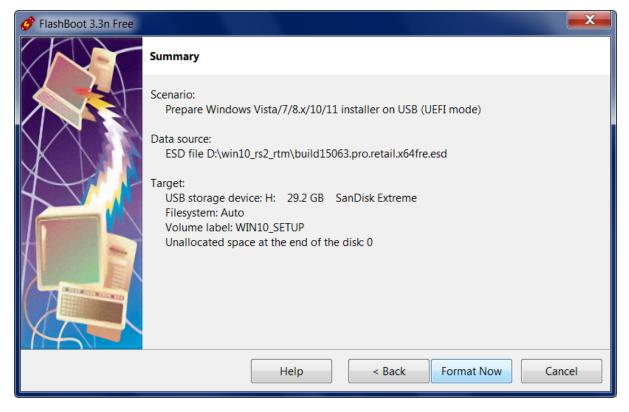
5) Specify target USB storage device and click Next

🧬 FlashBoot 3.3n Free		X
	Windows Vista/7/8.x/10/11 installer (UEFI) \rightarrow USB: Specify target	
	Please specify target USB device:	
	H: 29.2 GB SanDisk Extreme	•
	Help < Back Next > Car	ncel

6) If necessary, change volume label, or leave it as is, and click Next

🧬 FlashBoot 3.3n Free			X
	Windows Vista/7	/8.x/10/11 installer (UEFI) → USB (H:): Formatting options	
	Formatting option	S:	
	Volume label:	WIN10_SETUP	
	Unallocated s	ed options pace at the end of the disk: 0	
		Help < Back Next > Can	cel

7) Check summary information and click Format Now



8) Wait for process completion

🧳 (31%) FlashBoot Free is formatting bootable USB storage device	
Formatting now	Cancel
Verifying file D:\win10_rs2_rtm\build15063.pro.retail.x64fre.esd Formatting VFAT filesystem on target USB storage device Expanding setup media Preparing \sources\boot.wim Preparing \sources\install.esd	

9) Bootable USB storage device is ready to use. Click OK to exit

StashBoot Free completed successfully	
Completed successfully. Click OK to exit	
Log:	
Verifying file D:\win10_rs2_rtm\build15063.pro.retail.x64fre.esd Formatting VFAT filesystem on target USB storage device Expanding setup media Preparing \sources\boot.wim Preparing \sources\install.esd Installing UEFI bootloader Done	
Save log	ОК

2.4 Windows 8.1/10/11 installer from ESD file with added drivers

Modern versions of Windows are often distributed in the form of ESD files (Electronic Software Delivery).

This example demonstrates conversion of Windows 10 (Insider Preview) ESD file with simultaneous integration of FlashBoot-builtin NVMe drivers to bootable USB installer thumbdrive. USB installer will boot in UEFI mode.

1) Run FlashBoot Pro, click Next

🔗 FlashBoot 3.3n Pro			
	Welcome to FlashBoot 3.3n Pro		
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.		
	For more information, refer to <u>https://www.prime-expert.com/flashboot/</u>		
	This copy of FlashBoot Pro is registered to Mykhailo Kupchyk		
\mathbf{A}	More info		
	Click Next to continue.		
	Help < Back		

2) Choose "OS installer -> USB" in the Main Menu

🔗 FlashBoot 3.3n Pro	
	FlashBoot Main Menu
	OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD
\mathcal{K}	Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX
	Format as non-bootable Quick format and wipe
	Help < Back Cancel

3) Choose "Windows Vista/7/8.x/10/11 installer with added drivers (for BIOS-based computers)" or "Windows Vista/7/8.x/10/11 installer with added drivers (for UEFI-based computers)" in this menu and

click Next

UEFI mode must be chosen if you want to install Windows to 3Tb+ boot HDD. It may be chosen if you have UEFI-compatible computer. Most computers manufactured after 2012 are UEFI-compatible, but if you intend to install Windows to older computer, then use BIOS mode instead of UEFI mode.

🧳 FlashBoot 3.3n Pro	
	OS installer → USB
	Free features: © Windows Vista/7/8.x/10/11 installer (for BIOS-based computers)
	© Windows Vista/7/8.x/10/11 installer (for UEFI-based computers)
	Pro features:
4	Windows XP installer (for BIOS-based computers)
	O Windows Vista/7/8.x/10/11 installer with added drivers (for BIOS-based computers)
	Windows Vista/7/8.x/10/11 installer with added drivers (for UEFI-based computers)
	Installable clone of Windows 7/8.x/10/11 (for BIOS-based computers)
	Installable clone of Windows 7/8.x/10/11 (for UEFI-based computers)
	For your information: this computer is BIOS-based
	Help < Back Next > Cancel

4) Specify ISO image file (or DVD disc) of Windows setup and click Next

💣 FlashBoot 3.3n Pro			X
	Windows Vista/7/8.x,	/10/11 installer (UEFI) + drivers → USB: Specify source	
	Please specify source Is	SO/ESD file or CD/DVD disc	
	ISO or ESD file:	D:\win10_rs2_rtm\build15063.pro.retail.x64fre.esd	
A	CD or DVD disc:		•
		Help < Back Next > Ca	incel

5) Choose which drivers should be integrated and click Next

🧳 FlashBoot 3.3n Pro		X
	Windows Vista/7/8.x/10/11 installer (UEFI) + drivers \rightarrow USB: Driver options	
	Which drivers should be integrated?	
	USB 3.x drivers	
	NVMe SSD drivers	
4	AHCI/RAID drivers	
	Custom drivers from the specified folder (.inf + .sys + .cat files):	
	Help < Back Next > Ca	ncel

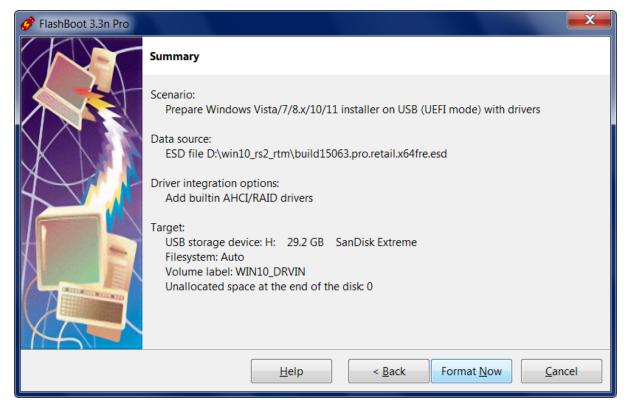
6) Specify target USB storage device and click Next

🧳 FlashBoot 3.3n Pro		X
	Windows Vista/7/8.x/10/11 installer (UEFI) + drivers \rightarrow USB: Specify target	
	Please specify target USB device:	
	H: 29.2 GB SanDisk Extreme	•
XA		
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ar	ncel

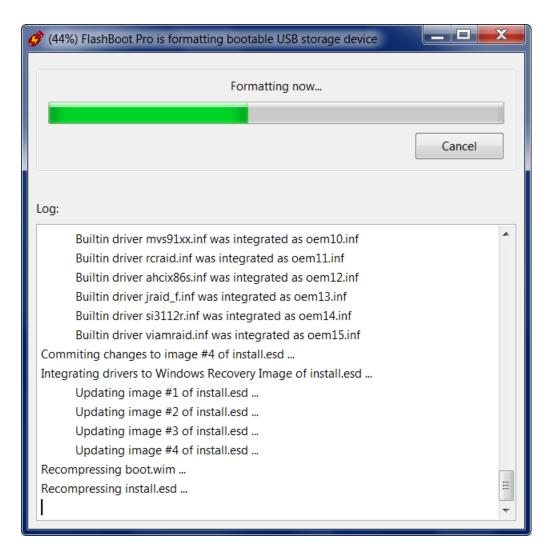
7) If necessary, change volume label, or leave it as is, and click Next

💣 FlashBoot 3.3n Pro		
	Windows Vista/7	/8.x/10/11 installer (UEFI) + drivers → USB (H:): Formatting options
	Formatting option	S:
	Volume label:	WIN10_DRVIN
	Unallocated s	ed options pace at the end of the disk: 0
		Help < Back Next > Cancel

8) Check summary information and click Format Now



9) Wait for process completion



10) Bootable USB storage device is ready to use. Click OK to exit

🔗 FlashBoot Pro completed successfully	
Completed successfully. Click OK to exit	
Log:	
Builtin driver rcraid.ini was integrated as demitt.ini	
Builtin driver ahcix86s.inf was integrated as oem12.inf	
Builtin driver jraid_f.inf was integrated as oem13.inf	
Builtin driver si3112r.inf was integrated as oem14.inf	
Builtin driver viamraid.inf was integrated as oem15.inf	
Commiting changes to image #4 of install.esd	
Integrating drivers to Windows Recovery Image of install.esd	
Updating image #1 of install.esd	
Updating image #2 of install.esd	
Updating image #3 of install.esd	
Updating image #4 of install.esd	
Recompressing boot.wim	
Recompressing install.esd	
Copying install.esd	
Installing UEFI bootloader	
Done	=
	-
Save log	ОК

2.5 Installable clone of Windows 7/8.x/10/11 (BIOS mode)

Using this feature, you can clone your existing installation of Windows from old computer to a new computer (even with dissimilar hardware), move Windows from HDD to SSD, move Windows from/to RAID array, copy Windows between virtual machine and real hardware (or between virtual machines of different vendors), or switch Windows boot method between UEFI and non-UEFI.

Also you may use this feature to gain unpartitioned disk space for dual-boot configurations (such as Windows 10/11 and Windows 7, Windows 10/11 and Linux) by reinstalling your OEM copy of Windows in-place.

Essentially, FlashBoot will prepare a self-extracting backup of Windows (which will be of good use in the case of next ransomware virus attack, failed Windows update, or accidently deleted file).

Optionally, you may choose to integrate drivers to an installable clone of Windows, which makes sense if you are going to reinstall Windows to a new PC with dissimilar hardware (such as USB 3.x controller or NVMe bootable storage device). Alternatively, drivers for target storage device (such as RAID controller or NVMe SSD) can be added later, during Windows reinstallation.

Existing files will be compressed, so for this operation usually you need smaller capacity USB storage

device than your disk C:. Typical compression ratio is 50-60%.

If source Windows installation on the internal HDD/SSD is 32-bit, then installable clone on USB storage device can be created in BIOS mode only. If source Windows installation on the internal HDD/SSD is 64-bit, then installable clone on USB storage device can be created in any mode (BIOS or UEFI). Boot method of source Windows installation on the internal HDD/SSD does not matter.

FAT32 filesystem is employed in this scenario, so reinstallable Windows image (WIM file) will be split to equal chunks of 4Gb minus 64Kb. Please note: FlashBoot supports cloning of system partitions with uncompressible files larger than 4Gb, that's why traditional "Split WIM" format is not used here.

This example demonstrates creation of installable clone of Windows 7 in BIOS mode.

🧬 FlashBoot 3.3n Pro	
	Welcome to FlashBoot 3.3n Pro
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to <u>https://www.prime-expert.com/flashboot/</u>
	This copy of FlashBoot Pro is registered to Mykhailo Kupchyk
	More info
THAT I	Click Next to continue.
	Help Next > Cancel

1) Run FlashBoot Pro, click Next

2) Choose "OS installer -> USB" in the the Main Menu



3) Choose "Installable clone of Windows 7/8.x/10/11 (for BIOS-based computers)" in this menu and click Next



4) Choose which files and folders are to be excluded from the clone. If you have large enough USB

🧬 FlashBoot 3.3n Pro		X
	Windows 7/8.x/10/11 installable clone \rightarrow USB (for BIOS-based computers): Files	&
	Which files and folders should be cloned?	
	Security Securit	
X)	PerfLogs Program Files Program Files Program Files	
	ProgramData Recovery	
	System Volume Information	
	Windows	
MA T		
	Help < Back	el

thumbdrive or USB HDD, then you can leave all files and folders included

5) Choose which drivers should be integrated and click Next

ở FlashBoot 3.3n Pro	
	Windows 7/8.x/10/11 installable clone \rightarrow USB (for BIOS-based computers): Driver
	Which drivers should be integrated?
	USB 3.x drivers
	VWMe SSD drivers
	AHCI/RAID drivers
	Custom drivers from the specified folder (.inf + .sys + .cat files):
MA T	
	Help < Back

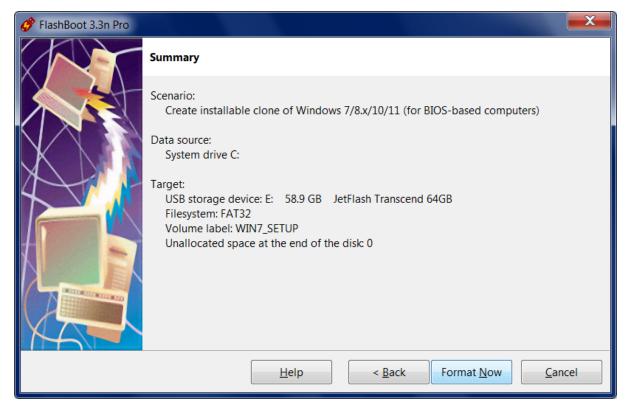
5) Specify target USB storage device and click Next

🔗 FlashBoot 3.3n Pro		x
	Windows 7/8.x/10/11 installable clone \rightarrow USB (for BIOS-based computers): Specif	y
	Please specify target USB device:	
	E: 58.9 GB JetFlash Transcend 64GB	•
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ance	el

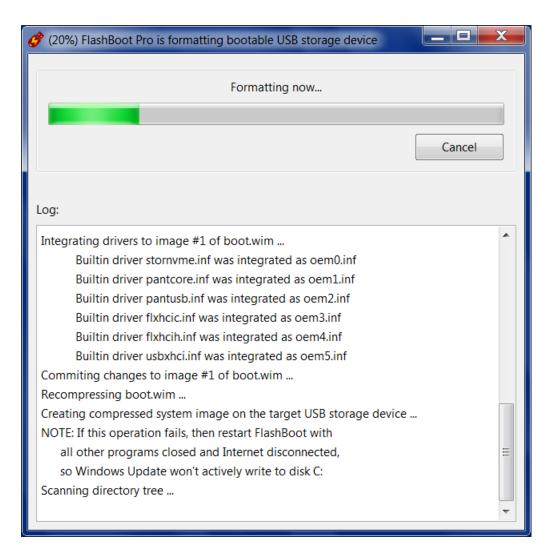
6) If necessary, change volume label, or leave it as is, and click Next

🧳 FlashBoot 3.3n Pro		
	Windows 7/8.x/1	0/11 installable clone \rightarrow USB (for BIOS-based computers) (E:):
	Formatting option	S:
	Volume label:	WIN7_SETUP
	Unallocated s	ed options bace at the end of the disk: 0
		Help < Back

7) Check summary information and click Format Now



8) Wait for process completion

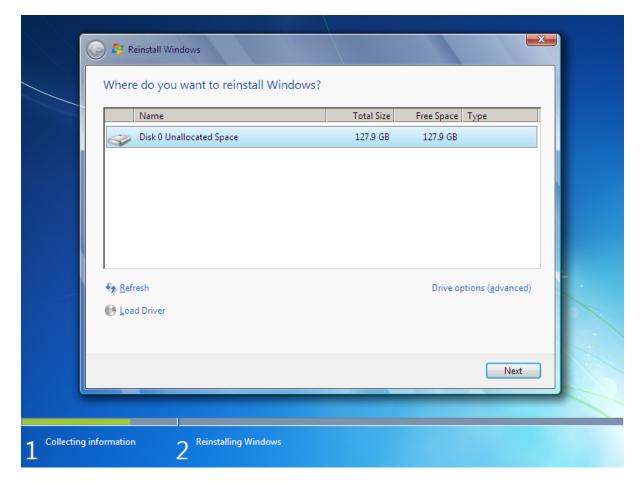


9) Bootable USB storage device is ready to use. Click OK to exit

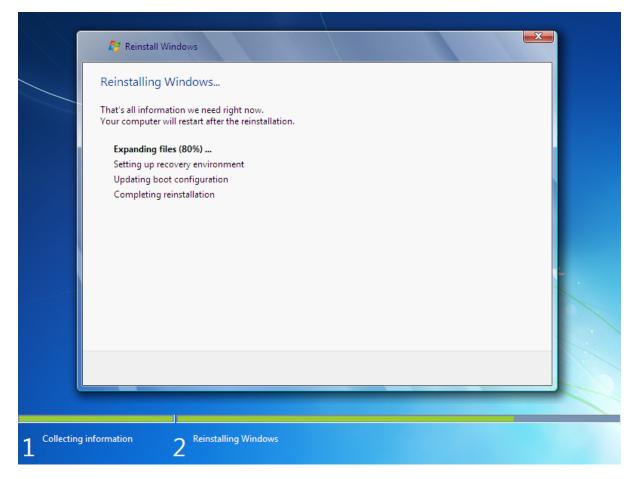
StashBoot Pro completed successfully		x
Completed successfully. Click OK to exit		
Log:		
ייי אס רפיה הא האר היא האר היא הא רפיה וח מה דגיר ייי		
5.96 GB of 6.85 GB processed so far		
6.03 GB of 6.85 GB processed so far		
6.07 GB of 6.82 GB processed so far		
6.11 GB of 6.82 GB processed so far		
6.13 GB of 6.71 GB processed so far		
6.19 GB of 6.68 GB processed so far		
6.24 GB of 6.68 GB processed so far		
6.29 GB of 6.68 GB processed so far		
6.32 GB of 6.67 GB processed so far		
6.37 GB of 6.66 GB processed so far		
6.41 GB of 6.61 GB processed so far		
6.50 GB of 6.61 GB processed so far		
6.57 GB of 6.61 GB processed so far		
6.61 GB processed total		
Done		Ξ
		-
Save log	OK	

Windows Reinstallation Wizard consists of two pages:

1) Disk repartitioning page:



2) Reinstallation progress page:



System Reserved Partition is not included to the backup image, it will be recreated automatically during the reinstallation (or just updated in dual-boot configurations).

2.6 Installable clone of Windows 7/8.x/10/11 (UEFI mode)

Using this feature, you can clone your existing installation of Windows from old computer to a new computer (even with dissimilar hardware), move Windows from HDD to SSD, move Windows from/to RAID array, copy Windows between virtual machine and real hardware (or between virtual machines of different vendors), or switch Windows boot method between UEFI and non-UEFI.

Also you may use this feature to gain unpartitioned disk space for dual-boot configurations (such as Windows 10/11 and Windows 7, Windows 10/11 and Linux) by reinstalling your OEM copy of Windows in-place.

Essentially, FlashBoot will prepare a self-extracting backup of Windows (which will be of good use in the case of next ransomware virus attack, failed Windows update, or accidently deleted file).

Optionally, you may choose to integrate drivers to an installable clone of Windows, which makes sense if you are going to reinstall Windows to a new PC with dissimilar hardware (such as USB 3.x controller or NVMe bootable storage device). Alternatively, drivers for target storage device (such as RAID controller or NVMe SSD) can be added later, during Windows reinstallation.

Existing files will be compressed, so for this operation usually you need smaller capacity USB storage device than your disk C:. Typical compression ratio is 50-60%.

If source Windows installation on the internal HDD/SSD is 32-bit, then installable clone on USB storage device can be created in BIOS mode only. If source Windows installation on the internal HDD/SSD is 64-bit, then installable clone on USB storage device can be created in any mode (BIOS or UEFI). Boot method of source Windows installation on the internal HDD/SSD does not matter.

UEFI mode must be chosen if you want to install Windows to 3Tb+ boot HDD. It may be chosen if you have UEFI-compatible computer. Most computers manufactured after 2012 are UEFI-compatible, but if you intend to install Windows to older computer, then use BIOS mode instead of UEFI mode.

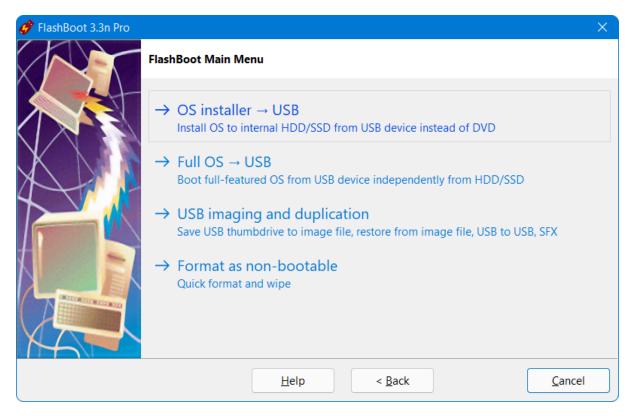
For compatibility with UEFI specification, FAT32 filesystem is employed in this scenario, so reinstallable Windows image (WIM file) will be split to equal chunks of 4Gb minus 64Kb. Please note: FlashBoot supports cloning of system partitions with uncompressible files larger than 4Gb, that's why traditional "Split WIM" format is not used here.

This example demonstrates creation of installable clone of Windows 11 in UEFI mode.

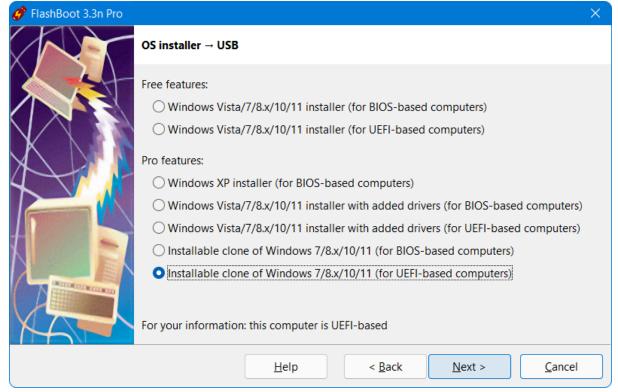
🧬 FlashBoot 3.3n Pro		\times
	Welcome to FlashBoot 3.3n Pro	
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.	
	For more information, refer to <u>https://www.prime-expert.com/flashboot/</u>	
XNN	This copy of FlashBoot Pro is registered to Mykhailo Kupchyk	
	More info.	
XATA	Click Next to continue.	
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel	

1) Run FlashBoot Pro, click Next

2) Choose "OS installer -> USB" in the the Main Menu



3) Choose "Installable clone of Windows 7/8.x/10/11 (for UEFI-based computers)" in this menu and click Next



4) Choose which files and folders are to be excluded from the clone. If you have large enough USB

🔗 FlashBoot 3.3n Pro		×
	Windows 7/8.x/10/11 installable clone \rightarrow USB (for UEFI-based computers): Files &	
	Which files and folders should be cloned?	
	Image: Second	
	pagefile.sys PerfLogs Program Files Program Files Program Files	
	ProgramData Recovery System Volume Information	
	Users	
	Help< Back	

thumbdrive or USB HDD, then you can leave all files and folders included

5) Choose which drivers should be integrated and click Next

🏈 FlashBoot 3.3n Pro		×
	Windows 7/8.x/10/11 installable clone \rightarrow USB (for UEFI-based computers): Driver	
	Which drivers should be integrated?	
	USB 3.x drivers	
	NVMe SSD drivers	
4	AHCI/RAID drivers	
	Custom drivers from the specified folder (.inf + .sys + .cat files):	
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel	

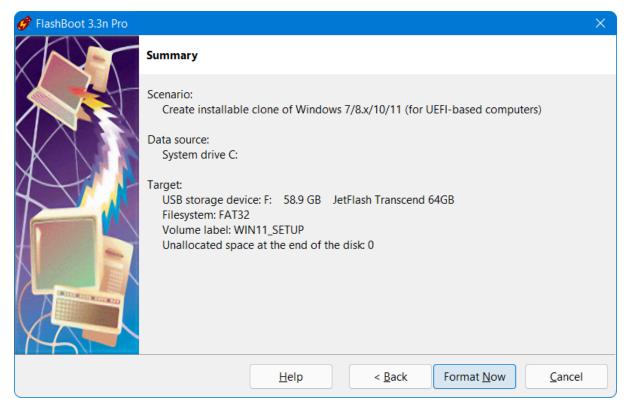
5) Specify target USB storage device and click Next

💣 FlashBoot 3.3n Pro					2	×
	Windows 7/8.x/1	0/11 installable clone	$e \rightarrow \text{USB}$ (for UEF	I-based compute	ers): Specify	
	Please specify targ	get USB device:				
	F: 58.9 GB JetF	lash Transcend 64GB				~
		Help	< <u>B</u> ack	<u>N</u> ext >	<u>C</u> ancel	

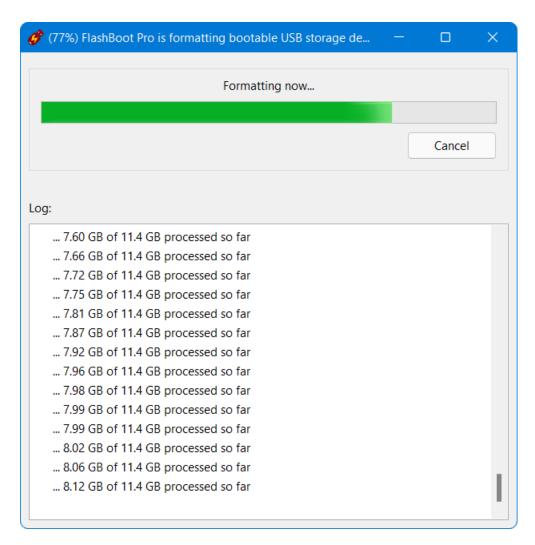
6) If necessary, change volume label, or leave it as is, and click Next

🂣 FlashBoot 3.3n Pro		×
	Windows 7/8.x/1	10/11 installable clone \rightarrow USB (for UEFI-based computers) (F:):
	Formatting option	ns:
	Volume label:	WIN11_SETUP
X	Set advance	space at the end of the disk: 0
		<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

7) Check summary information and click Format Now



8) Wait for process completion



9) Bootable USB storage device is ready to use. Click OK to exit

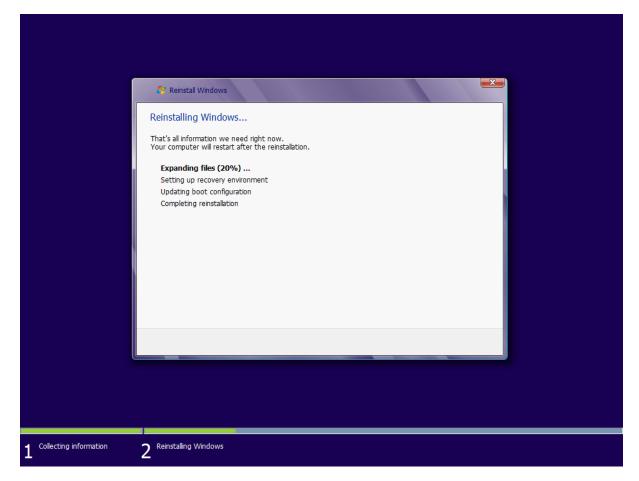
FlashBoot Pro completed successfully	—		×
Completed successfully. Click OK to exit			
Log:			
5.15 UD UT 11.2 UD PIOCESSEU SU TAI			
9.82 GB of 11.2 GB processed so far			
9.90 GB of 11.2 GB processed so far			
9.96 GB of 11.2 GB processed so far			
10 GB of 11.2 GB processed so far			
10.1 GB of 11.2 GB processed so far			
10.2 GB of 11.2 GB processed so far			
10.3 GB of 11.2 GB processed so far			
10.4 GB of 11.2 GB processed so far			
10.5 GB of 11.2 GB processed so far			
10.6 GB of 11.2 GB processed so far			
10.7 GB of 11.1 GB processed so far			
10.8 GB of 11.1 GB processed so far			
10.9 GB of 11 GB processed so far			
11 GB processed total			
Done			
Save log		OK	

Windows Reinstallation Wizard consists of two pages:

1) Disk repartitioning page:

ľ	Ar Reinstall Windows Where do you want to reinstall Window		
	Name Disk 0 Unallocated Space	Total Size Free Space Type	
	<i>€</i> ∌ <u>R</u> efresh	Drive options (<u>a</u> dvanced)	
	🚯 Load Driver		
		Next	

2) Reinstallation progress page:



EFI System Partition is not included to the backup image, it will be recreated automatically during the reinstallation (or just updated in dual-boot configurations).

2.7 Windows XP installer

1) Run FlashBoot Pro, click Next



2) Choose "OS installer -> USB" in the Main Menu



3) Choose "Windows XP installer (for BIOS-based computers)" in this menu and click Next

🧬 FlashBoot 3.3n Pro	
	OS installer → USB
	Free features:
	Windows Vista/7/8.x/10/11 installer (for BIOS-based computers)
	Windows Vista/7/8.x/10/11 installer (for UEFI-based computers)
	Pro features:
4	Windows XP installer (for BIOS-based computers)
	O Windows Vista/7/8.x/10/11 installer with added drivers (for BIOS-based computers)
	O Windows Vista/7/8.x/10/11 installer with added drivers (for UEFI-based computers)
	Installable clone of Windows 7/8.x/10/11 (for BIOS-based computers)
	Installable clone of Windows 7/8.x/10/11 (for UEFI-based computers)
	For your information: this computer is BIOS-based
	Help < Back Next > Cancel

4) Specify ISO image file (or CD disc) of Windows XP setup and click Next

🧳 FlashBoot 3.3n Pro			x
	Windows XP installer	→ USB: Specify source	
	Please specify source IS	SO image file or CD/DVD disc	
	ISO image file:	D:\windows_xp_professional_with_service_pack_3_x86.iso	
	CD or DVD disc:		•
		Help < Back Next > Cance	el

5) Specify target USB storage device and click Next

🔗 FlashBoot 3.3n Pro		X
	Windows XP installer \rightarrow USB: Specify target	
	Please specify target USB device:	
	F: 1000 MB Generic Flash Disk	•
	Help < Back Next > Ca	incel

6) If necessary, change volume label, or leave it as is, and click Next

🔗 FlashBoot 3.3n Pro		
	Windows XP insta	ller → USB (F:): Formatting options
	Formatting option	5:
	Volume label:	WINXP_SETUP
XNN	Filesystem:	Auto 👻
	Set advance	d options
	Allowed cluste	er sizes: 🔽 0.5K 📝 1K 📝 2K 📝 4K 📝 8K 📝 16K 📝 32K
	Disk geometry	r: Heads: 255 Sectors per track: 63
	Unallocated sp	bace at the end of the disk: 0
		Help < Back Next > Cancel

7) Check summary information and click Format Now

🔗 FlashBoot 3.3n Pro	
	Summary
	Scenario: Prepare Windows XP installer on USB Data source: ISO image file D:\windows_xp_professional_with_service_pack_3_x86.iso Target: USB storage device: F: 1000 MB Generic Flash Disk Filesystem: Auto Volume label: WINXP_SETUP Disk CHS geometry: Heads=255 SectorsPerTrack=63 Allowed cluster sizes: 0.5k 1k 2k 4k 8k 16k 32k Unallocated space at the end of the disk: 0
	Help < Back Format Now Cancel

8) Wait for process completion

🔗 (23%) FlashBoot Pro is formatting bootable USB storage device	
Formatting now	
	Cancel
Log:	
Mounting ISO9660/UDF filesystem on file D:\windows_xp_professional_with_service_pack_3_x86.iso Verifying read-only ISO 9660 file system in file D:\windows_xp_professional_with_service_pack_3_x86.iso Formatting VFAT filesystem on target USB storage device Creating helper image file (wntsetup.img)	

9) Bootable USB storage device is ready to use. Click OK to exit

Completed successfully. Click OK to exit Log: I386\WINNTUPG\OEM\SPX\MPS\NETMAP.INF Copying file I386\WINNTUPG\OEM\SPX\MPS\SPXUPGRD.DLL to I386\WINNTUPG\OEM\SPX\MPS\SPXUPGRD.DLL Copying file I386\WINNTUPG\OEM\TIGERJET\NETMAP.INF to I386\WINNTUPG\OEM\TIGERJET\NETMAP.INF Copying file I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL to I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL Copying file I386\WINNTUPG\OEM\TIGERJET\TJUPG.INF to I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL Copying file I386\WINNTUPG\SPXINF\NETUPG.INF to I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SPXINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying additional files to FAT16 helper image file (wntsetup.img) Unmounting FAT16 filesystem in helper image file (wntsetup.img) Unmounting VFAT filesystem in partition #1 of physical disk #7 (F:)	
I386\WINNTUPG\OEM\SPX\MPS\NETMAP.INF Copying file I386\WINNTUPG\OEM\SPX\MPS\SPXUPGRD.DLL to I386\WINNTUPG\OEM\SPX\MPS\SPXUPGRD.DLL Copying file I386\WINNTUPG\OEM\TIGERJET\NETMAP.INF to I386\WINNTUPG\OEM\TIGERJET\NETMAP.INF Copying file I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL to I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL Copying file I386\WINNTUPG\PERINF\NETUPG.INF to I386\WINNTUPG\PERINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying additional files to FAT16 helper image file (wntsetup.img) Unmounting FAT16 filesystem in helper image file (wntsetup.img) Creating config file for GRUB4DOS	
I386\WINNTUPG\OEM\SPX\MPS\NETMAP.INF Copying file I386\WINNTUPG\OEM\SPX\MPS\SPXUPGRD.DLL to I386\WINNTUPG\OEM\SPX\MPS\SPXUPGRD.DLL Copying file I386\WINNTUPG\OEM\TIGERJET\NETMAP.INF to I386\WINNTUPG\OEM\TIGERJET\NETMAP.INF Copying file I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL to I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL Copying file I386\WINNTUPG\PERINF\NETUPG.INF to I386\WINNTUPG\PERINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying additional files to FAT16 helper image file (wntsetup.img) Unmounting FAT16 filesystem in helper image file (wntsetup.img) Creating config file for GRUB4DOS	
I386\WINNTUPG\OEM\SPX\MPS\SPXUPGRD.DLL Copying file I386\WINNTUPG\OEM\TIGERJET\NETMAP.INF to I386\WINNTUPG\OEM\TIGERJET\NETMAP.INF Copying file I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL to I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL Copying file I386\WINNTUPG\PERINF\NETUPG.INF to I386\WINNTUPG\PERINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying additional files to FAT16 helper image file (wntsetup.img) Unmounting FAT16 filesystem in helper image file (wntsetup.img) Creating config file for GRUB4DOS	-
I386\WINNTUPG\OEM\TIGERJET\NETMAP.INF Copying file I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL to I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL Copying file I386\WINNTUPG\PERINF\NETUPG.INF to I386\WINNTUPG\PERINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying additional files to FAT16 helper image file (wntsetup.img) Unmounting FAT16 filesystem in helper image file (wntsetup.img) Creating config file for GRUB4DOS	
I386\WINNTUPG\OEM\TIGERJET\TJUPG.DLL Copying file I386\WINNTUPG\PERINF\NETUPG.INF to I386\WINNTUPG\PERINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying additional files to FAT16 helper image file (wntsetup.img) Unmounting FAT16 filesystem in helper image file (wntsetup.img) Creating config file for GRUB4DOS	
I386\WINNTUPG\PERINF\NETUPG.INF Copying file I386\WINNTUPG\SRVINF\NETUPG.INF to I386\WINNTUPG\SRVINF\NETUPG.INF Copying additional files to FAT16 helper image file (wntsetup.img) Unmounting FAT16 filesystem in helper image file (wntsetup.img) Creating config file for GRUB4DOS	
I386\WINNTUPG\SRVINF\NETUPG.INF Copying additional files to FAT16 helper image file (wntsetup.img) Unmounting FAT16 filesystem in helper image file (wntsetup.img) Creating config file for GRUB4DOS	
Unmounting FAT16 filesystem in helper image file (wntsetup.img) Creating config file for GRUB4DOS	
Creating config file for GRUB4DOS	
Upmounting VEAT filesystem in partition #1 of physical disk #7 (E)	
Done	Ξ
	-

Please Note: Installation of Windows XP may look like halted at this point:



If you see that screen does not update and installation looks like halted for a long time at this point, **please be patient and don't panic**. Wait at least for a 45 minutes before aborting Windows XP installation.

Click here to view gallery of screenshots made during installation of Windows XP from FlashBootformatted USB disk to netbook. Windows XP was installed to the newly-created disk C: (which took 20 Gb out of 64 Gb total SSD space). Intermediate filesystem of disk C: is FAT32, final filesystem of disk C: is NTFS.

3 Full OS on USB device

3.1 Full Windows 8.x/10/11 (BIOS mode)

Using this feature, you can install Windows 8.x/10/11 to USB thumbdrive, and walk about with a full-featured installation of Windows 11, 10, 8.1 or 8 in your pocket, ready to go under any circumstance: at home, at friend's home, at work, at public library or internet-cafe. Need your favorite app, document, game, or browser when you're sitting in front of a strange computer? Just break out your USB device formatted using FlashBoot!

This example demonstrates installation of full-featured Windows 8.1 to bootable USB thumbdrive in BIOS mode.

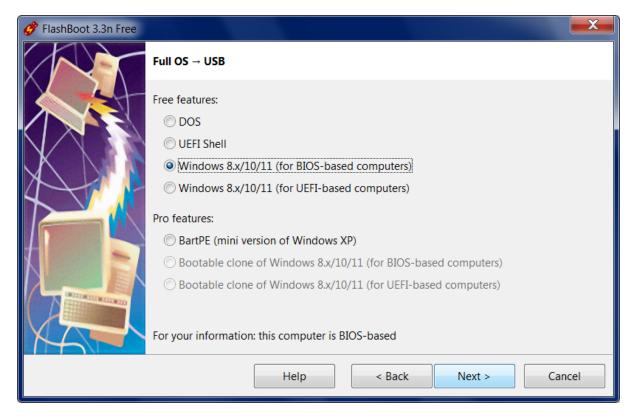
1) Run FlashBoot Free or FlashBoot Pro, click Next

💣 FlashBoot 3.3n Free	
	Welcome to FlashBoot 3.3n Free
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to https://www.prime-expert.com/flashboot/
	Click Next to continue.
	Help < Back Next > Cancel

2) Choose "Full OS -> USB" in the the Main Menu

💣 FlashBoot 3.3n Free		×
	FlashBoot Main Menu	
	OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD	
	Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD	
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX	
	Format as non-bootable Quick format and wipe	
	Help < Back Can	cel

3) Choose "Windows 8.x/10/11 (for BIOS-based computers)" in this menu and click Next



4) Specify ISO image file (or DVD disc, or ESD image file) of Windows setup and click Next

ở FlashBoot 3.3n Free			X
	Windows 8.x/10/11 -	ightarrow USB (for BIOS-based computers): Specify source	
	Please specify source I	SO/ESD file or CD/DVD disc	
	ISO or ESD file:	D:\windows_8.1_professional_with_update_x64.iso	
	CD or DVD disc:		•
		Help < Back Next > Cano	el

5) Choose whether a portable OS running from a USB device should or should not have access to local fixed disks (such as SATA, NVMe, IDE etc) and click Next

🔗 FlashBoot 3.3n Free		X
	Access to fixed disks for portable OS on USB device	
	Should the portable OS on the USB device have access to fixed disks (such as SATA, NVMe, IDE etc) on the target computer where it will run?	
	Yes, allow access to fixed disks (default) Portable OS will have access to all types of disks (USB, SATA, NVMe, IDE etc)	
	No, deny access to fixed disks Portable OS will have access only to non-fixed (i.e. USB) disks	
	If unsure, choose the first option.	
	Help < Back	ncel

6) Specify target USB storage device and click Next

🧳 FlashBoot 3.3n Free		X
	Windows 8.x/10/11 \rightarrow USB (for BIOS-based computers): Specify target	
	Please specify target USB device:	
	K: 58.9 GB JetFlash Transcend 64GB	-
	Help < Back Next > Ca	ancel

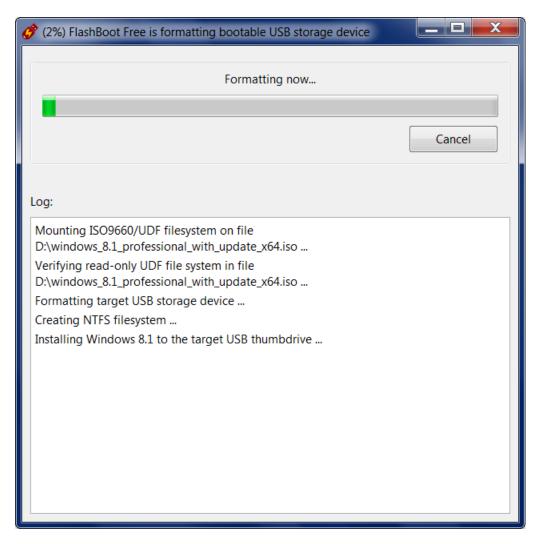
7) If necessary, change volume label, or leave it as is, and click Next

💣 FlashBoot 3.3n Free			X
	Windows 8.x/10/	11 \rightarrow USB (for BIOS-based computers) (K:): Formatting options	
	Formatting option	S:	
	Volume label:	WIN81_TOGO	
	Set advance	ed options	
4	Unallocated s	pace at the end of the disk: 0	
XAT			
		Help < Back Next > Cance	el

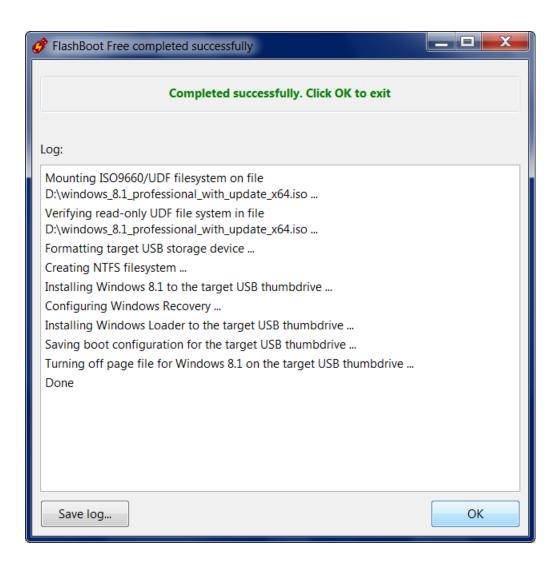
8) Check summary information and click Format Now

🔗 FlashBoot 3.3n Free	
	Summary
	Scenario: Install full-featured Windows 8.x/10/11 to USB thumbdrive (BIOS mode)
	Data source: ISO image file D:\windows_8.1_professional_with_update_x64.iso
	Disk access for the portable OS on the USB device: All types of disks are allowed (both fixed and non-fixed)
	Target: USB storage device: K: 58.9 GB JetFlash Transcend 64GB Filesystem: NTFS Volume Jabel: WIN81 TOGO
	Volume label: WIN81_TOGO Unallocated space at the end of the disk: 0
	Help < Back Format Now Cancel

9) Wait for process completion



10) Bootable USB storage device is ready to use. Click OK to exit



3.2 Full Windows 8.x/10/11 (UEFI mode)

Using this feature, you can install Windows 8.x/10/11 to USB thumbdrive, and walk about with a full-featured installation of Windows 11, 10, 8.1 or 8 in your pocket, ready to go under any circumstance: at home, at friend's home, at work, at public library or internet-cafe. Need your favorite app, document, game, or browser when you're sitting in front of a strange computer? Just break out your USB device formatted using FlashBoot!

Please note: this feature requires UEFI-capable computer to boot. Most computers manufactured after 2012 are UEFI-compatible, but if you intend to boot portable Windows on older computer, then use BIOS mode instead of UEFI mode.

This example demonstrates installation of full-featured Windows 11 to bootable USB thumbdrive in UEFI mode.

1) Run FlashBoot Free or FlashBoot Pro, click Next

💣 FlashBoot 3.3n Free	
	Welcome to FlashBoot 3.3n Free
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to https://www.prime-expert.com/flashboot/
	Click Next to continue.
	Help < Back Next > Cancel

2) Choose "Full OS -> USB" in the the Main Menu

🔗 FlashBoot 3.3n Free		×
	FlashBoot Main Menu	
	→ OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD	
	Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD	
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX	
	Format as non-bootable Quick format and wipe	
	Help < Back Can	cel

3) Choose "Windows 8.x/10/11 (for UEFI-based computers)" in this menu and click Next



4) Specify ISO image file (or DVD disc, or ESD image file) of Windows setup and click Next

🧬 FlashBoot 3.3n Free			x
	Windows 8.x/10/11 -	→ USB (for UEFI-based computers): Specify source	
	Please specify source IS	SO/ESD file or CD/DVD disc	
	ISO or ESD file:	D:\en-us_windows_11_business_editions_x64_dvd_3a304c08.	
X	CD or DVD disc:		•
		<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel	

5) In this example, Windows setup image contains multiple versions (editions) of Windows, so we choose one we want to install to USB storage device:

💣 FlashBoot 3.3n Free		X
	Choose Windows image to expand	
	There are multiple versions of Windows in the supplied image file. Choose one from the following list:	
	Name	Size
	Windows 10 Education	14.9 GB
	Windows 10 Enterprise	14.9 GB
	Windows 10 Pro	14.9 GB
	Windows 10 Pro Education	14.9 GB
	Windows 10 Pro for Workstations	14.9 GB
	If unsure, choose option with largest size.	
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext >	<u>C</u> ancel

6) Choose whether a portable OS running from a USB device should or should not have access to local fixed disks (such as SATA, NVMe, IDE etc) and click Next

🧳 FlashBoot 3.3n Free		X
	Access to fixed disks for portable OS on USB device	
	Should the portable OS on the USB device have access to fixed disks (such as SATA, NVMe, IDE etc) on the target computer where it will run?	
	 Yes, allow access to fixed disks (default) Portable OS will have access to all types of disks (USB, SATA, NVMe, IDE etc) No, deny access to fixed disks Portable OS will have access only to non-fixed (i.e. USB) disks 	
	If unsure, choose the first option. <u>H</u> elp < <u>Back</u> <u>Next ></u> <u>Car</u>	ncel

7) The following page is displayed only for Windows 11. With FlashBoot, you can skip creation of

🔗 FlashBoot 3.3n Free		X
	Bypass restrictions during Windows 11 first boot	
	Should some software restrictions be bypassed during first boot of Windows 11?	
	Allow creation of local user account (offline). This option allows to create local user account in Windows 11 instead of online account. It's recommended for reliability to unplug the network cable before the first boot of Windows 11 To Go.	
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ar	ncel

online account during the first boot of Windows 11 from the target USB storage device.

8) Specify target USB storage device and click Next

🏈 FlashBoot 3.3n Free		X
	Windows 8.x/10/11 \rightarrow USB (for UEFI-based computers): Specify target	
	Please specify target USB device:	
	K: 58.9 GB JetFlash Transcend 64GB	•
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ar	icel

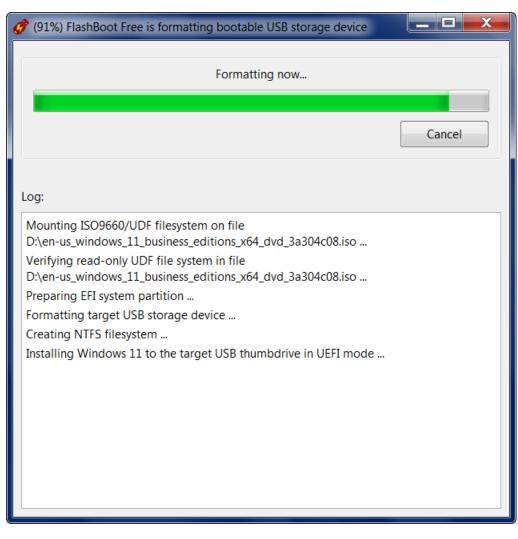
9) If necessary, change volume label, or leave it as is, and click Next

🔗 FlashBoot 3.3n Free			x
	Windows 8.x/10/	11 \rightarrow USB (for UEFI-based computers) (K:): Formatting options	
	Formatting option	s:	
	Volume label:	WIN11_TOGO	
	Set advance	ed options	
4	Unallocated sp	pace at the end of the disk: 0	
		Help < Back Next > Canc	el

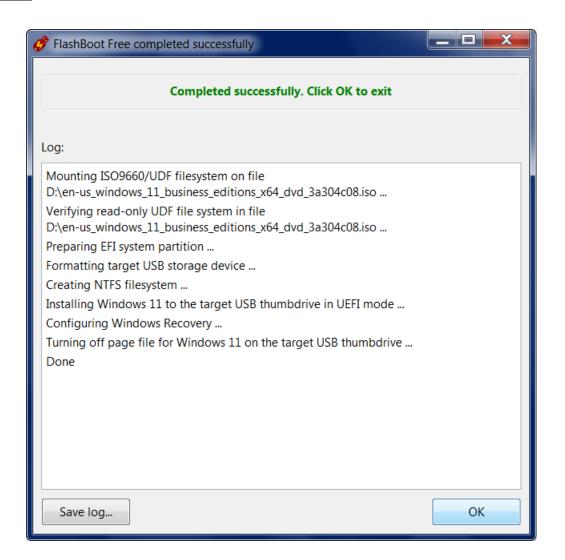
10) Check summary information and click Format Now

🔗 FlashBoot 3.3n Free		X
	Summary	
	Scenario: Install full-featured Windows 8.x/10/11 to USB thumbdrive (UEFI mode)	^
XVI	Data source: ISO image file D:\en-us_windows_11_business_editions_x64_dvd_3a304c08.iso	
\mathbf{T}	Software restrictions to bypass in first boot of Windows 11: Allow creation of local user account (offline)	Ш
	Disk access for the portable OS on the USB device: All types of disks are allowed (both fixed and non-fixed)	
	Target: USB storage device: K: 58.9 GB JetFlash Transcend 64GB Filesystem: NTFS	
	Volume label: WIN11_TOGO Unallocated space at the end of the disk: 0	-
	<u>H</u> elp < <u>B</u> ack Format <u>N</u> ow <u>C</u> a	incel

11) Wait for process completion



12) Bootable USB storage device is ready to use. Click OK to exit



3.3 Bootable clone of Windows 8.x/10/11 (BIOS mode)

Using this feature, you can clone your existing Windows 10/11 or Windows 8.1 installation (including apps, settings, documents, games, browsers etc) from internal HDD or SSD to external USB thumbdrive or USB HDD.

By default, existing files will be compressed, so for this operation usually you need smaller capacity USB storage device than your disk C:. Typical compression ratio is 35-45%. During live sessions, Windows on USB thumbdrive will store all new files and all updated files in decompressed form.

System partition on USB thumbdrive will have different unique identifier from original system partition on internal HDD/SSD, so there will be no conflicts or collisions when booting USB thumbdrive on the source PC.

This feature is particularly useful for travellers (who want to save time on reinstalling apps in Windows To Go installation) and as live backup copy (which will be of good use in the case of next ransomware virus attack, failed Windows update, or accidently deleted file).

If source Windows installation on the internal HDD/SSD is 32-bit, then cloned Windows installation on USB storage device can be created in BIOS mode only. If source Windows installation on the internal

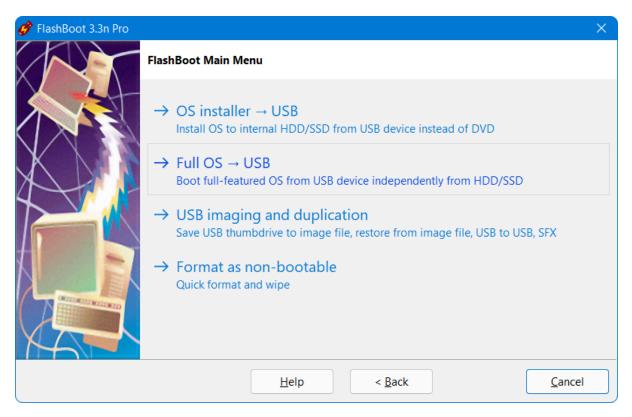
HDD/SSD is 64-bit, then cloned Windows installation on USB storage device can be created in any mode (BIOS or UEFI). Boot method of source Windows installation on the internal HDD/SSD does not matter.

This example demonstrates creation of Windows 11 bootable clone on USB thumbdrive in BIOS mode.

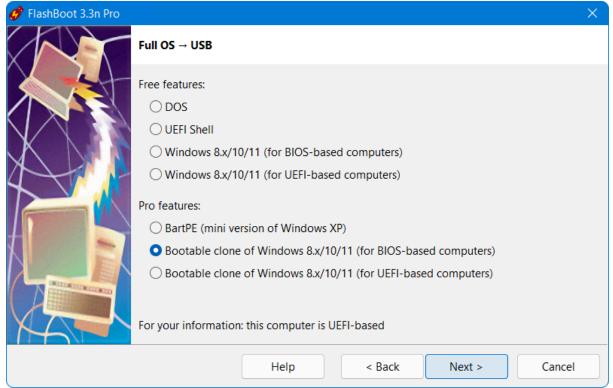
🂣 FlashBoot 3.3n Pro					×
	Welcome to FlashBo	oot 3.3n Pro			
	This wizard will guide	e you through for	matting of bootabl	e USB thumbdrive	or USB HDD.
	For more information	n, refer to <u>https://</u>	www.prime-expert.	<u>com/flashboot/</u>	
XN	This copy of FlashBoo	ot Pro is registere	d to Mykhailo Kupo	chyk	
					More info
TA T	Click Next to continue	e.			
		<u>H</u> elp	< <u>B</u> ack	<u>N</u> ext >	<u>C</u> ancel

1) Run FlashBoot Pro, click Next

2) Choose "Full OS -> USB" in the the Main Menu



3) Choose "Bootable clone of Windows 8.x/10/11 (for BIOS-based computers)" in this menu and click Next



4) Choose which files and folders are to be excluded from the clone. If you have large enough USB

💣 FlashBoot 3.3n Pro		×
	Windows 8.1/10/11 bootable clone \rightarrow USB (for BIOS-based computers): Files & folder	s
	Which files and folders should be cloned?	
	Image: Second Sections Image: Second Sections	L
A	Documents and Settings DumpStack.log.tmp pagefile.sys	
	PerfLogs	
	Program Files (x86) ProgramData	
	Recovery System Volume Information	
	Users	
	Help < Back Next > Cancel	
	Help < Back Next > Cancel	

thumbdrive or USB HDD, then you can leave all files and folders included

5) Specify whether clone should be compressed or not, and click Next

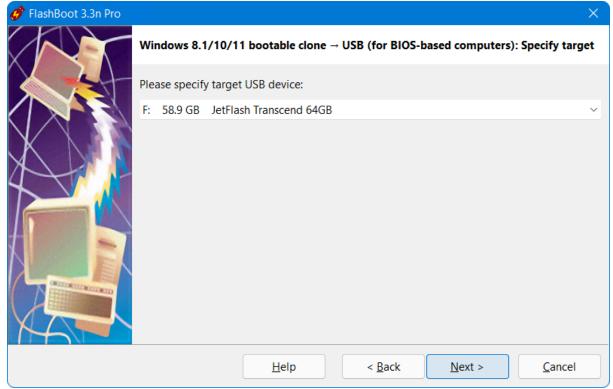
🔗 FlashBoot 3.3n Pro		×
	Compression of bootable clone	
	 Clone without compression (default) Needs less RAM and saves power at run time, takes more space on USB storage device 	e
	○ Clone with compression Needs more RAM and CPU power at run time, takes less space on USB storage device	
	Help < Back Next > Cancel	

6) Choose whether a portable OS running from a USB device should or should not have access to local

ở FlashBoot 3.3n Pro		×
	Access to fixed disks for portable OS on USB device	
	Should the portable OS on the USB device have access to fixed disks (such as SATA, NVMe, IDE etc) on the target computer where it will run?	
	 Yes, allow access to fixed disks (default) Portable OS will have access to all types of disks (USB, SATA, NVMe, IDE etc) No, deny access to fixed disks Portable OS will have access only to non-fixed (i.e. USB) disks 	
	If unsure, choose the first option. Help < Back Next > 0	Cancel

fixed disks (such as SATA, NVMe, IDE etc) and click Next

7) Specify target USB storage device and click Next



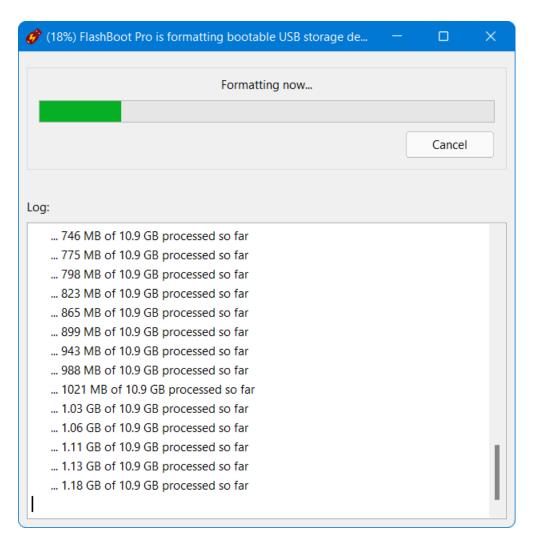
8) If necessary, change volume label, or leave it as is, and click Next

🧳 FlashBoot 3.3n Pro		×
	Windows 8.1/10/	'11 bootable clone \rightarrow USB (for BIOS-based computers) (F:): Formatting
	Formatting option	S:
	Volume label:	WIN11_TOGO
XDA	Set advance	
	Unallocated s	pace at the end of the disk: 0
M		
		<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

9) Check summary information and click Format Now

🧬 FlashBoot 3.3n Pro		×
	Summary	
	Scenario: Create bootable clone of Windows 8.1/10/11 (for BIOS-based computers)	
X	Data source: System drive C:	
4	Clone without compression	
	Disk access for the portable OS on the USB device: All types of disks are allowed (both fixed and non-fixed)	
	Target: USB storage device: F: 58.9 GB JetFlash Transcend 64GB Filesystem: NTFS Volume label: WIN11_TOGO Unallocated space at the end of the disk: 0	
	<u>H</u> elp < <u>B</u> ack Format <u>N</u> ow <u>C</u> ancel	

10) Wait for process completion



11) Bootable USB storage device is ready to use. Click OK to exit

FlashBoot Pro completed successfully		×
Completed successfully. Click OK to exit		
Log:		
10.6 GB of 10.9 GB processed so far		
10.6 GB of 10.9 GB processed so far		
10.6 GB of 10.9 GB processed so far		
10.7 GB of 10.9 GB processed so far		
10.7 GB of 10.9 GB processed so far		
10.8 GB of 10.9 GB processed so far		
10.8 GB of 10.9 GB processed so far		
10.9 GB of 10.9 GB processed so far		
10.9 GB of 10.9 GB processed so far		
10.9 GB of 10.9 GB processed so far		
10.9 GB of 10.9 GB processed so far		
10.9 GB processed total		
Turning off page file for Windows on the target USB thumbdrive		
Configuring Windows Recovery		
Done		
Save log	O	<

3.4 Bootable clone of Windows 8.x/10/11 (UEFI mode)

Using this feature, you can clone your existing Windows 10/11 or Windows 8.1 installation (including apps, settings, documents, games, browsers etc) from internal HDD or SSD to external USB thumbdrive or USB HDD.

By default, existing files will be compressed, so for this operation usually you need smaller capacity USB storage device than your disk C:. Typical compression ratio is 35-45%. During live sessions, Windows on USB thumbdrive will store all new files and all updated files in decompressed form.

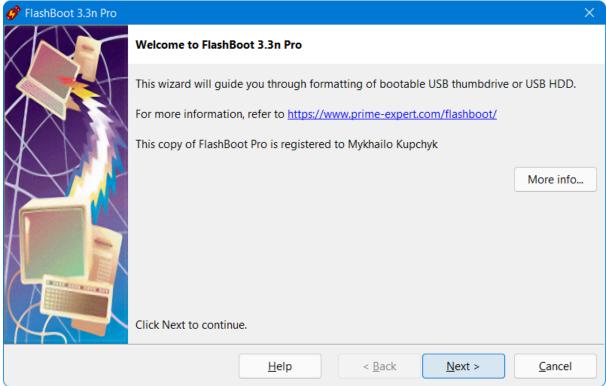
System partition on USB thumbdrive will have different unique identifier from original system partition on internal HDD/SSD, so there will be no conflicts or collisions when booting USB thumbdrive on the source PC.

This feature is particularly useful for travellers (who want to save time on reinstalling apps in Windows To Go installation) and as live backup copy (which will be of good use in the case of next ransomware virus attack, failed Windows update, or accidently deleted file).

If source Windows installation on the internal HDD/SSD is 32-bit, then cloned Windows installation on USB storage device can be created in BIOS mode only. If source Windows installation on the internal

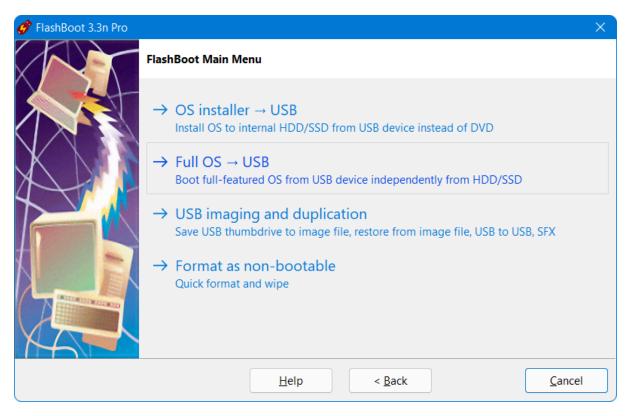
HDD/SSD is 64-bit, then cloned Windows installation on USB storage device can be created in any mode (BIOS or UEFI). Boot method of source Windows installation on the internal HDD/SSD does not matter.

This example demonstrates creation of Windows 11 bootable clone on USB thumbdrive in UEFI mode.

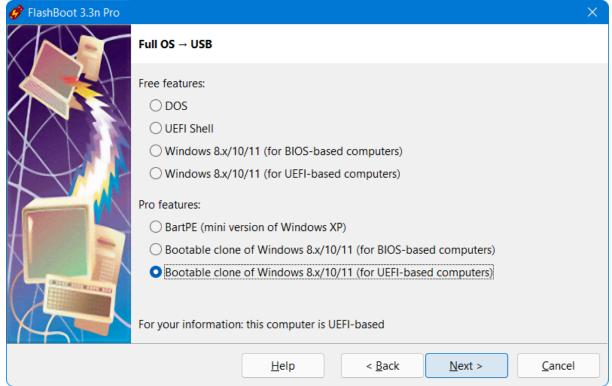


1) Run FlashBoot Pro, click Next

2) Choose "Full OS -> USB" in the the Main Menu



3) Choose "Bootable clone of Windows 8.x/10/11 (for UEFI-based computers)" in this menu and click Next

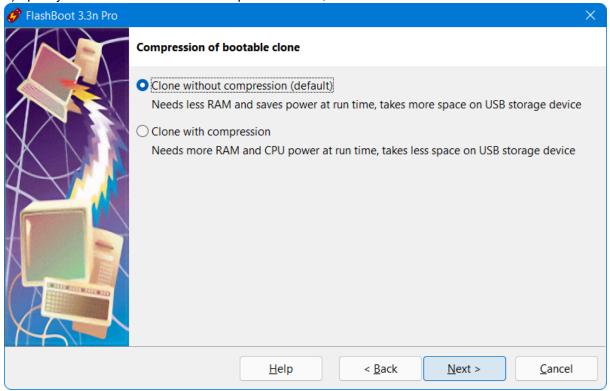


4) Choose which files and folders are to be excluded from the clone. If you have large enough USB

💣 FlashBoot 3.3n Pro		×			
	Windows 8.1/10/11 bootable clone \rightarrow USB (for UEFI-based computers): Files & folde	rs			
	Which files and folders should be cloned?				
	SRecycle.Bin SwinREAgent	L			
	Documents and Settings				
	pagefile.sys				
	PerfLogs				
	Program Files	н			
	Program Files (x86)	н			
	ProgramData Recovery	н			
	swapfile.sys	н			
N CONTRACTOR DI	System Volume Information	н			
	Users	1			
	Windows				
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel				

thumbdrive or USB HDD, then you can leave all files and folders included

5) Specify whether clone should be compressed or not, and click Next



6) Choose whether a portable OS running from a USB device should or should not have access to local

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fixed disks (such as SATA, NVMe, IDE etc) and click Next

💣 FlashBoot 3.3n Pro		×
	Access to fixed disks for portable OS on USB device	
	Should the portable OS on the USB device have access to fixed disks (such as SATA, NVMe, IDE etc) on the target computer where it will run?	
	 Yes, allow access to fixed disks (default) Portable OS will have access to all types of disks (USB, SATA, NVMe, IDE etc) 	
	 No, deny access to fixed disks Portable OS will have access only to non-fixed (i.e. USB) disks If unsure, choose the first option. 	
	Help < Back Next > Cancel	

7) Specify target USB storage device and click Next

🏈 FlashBoot 3.3n Pro					×
	Windows 8.1	I/10/11 bootable clone	e → USB (for UEFI-b	pased computers)	: Specify target
	Please specify	y target USB device:			
	F: 58.9 GB	JetFlash Transcend 64G	B		~
		<u>H</u> elp	< <u>B</u> ack	<u>N</u> ext >	Cancel

8) If necessary, change volume label, or leave it as is, and click Next

💣 FlashBoot 3.3n Pro		×
	Windows 8.1/10/	/11 bootable clone \rightarrow USB (for UEFI-based computers) (F:): Formatting
	Formatting option	S:
	Volume label:	WIN11_TOGO
	Unallocated s	ed options pace at the end of the disk: 0
		<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

9) Check summary information and click Format Now

🧬 FlashBoot 3.3n Pro		×
	Summary	
	Scenario: Create bootable clone of Windows 8.1/10/11 (for UEFI-based computers)	
X	Data source: System drive C:	
	Clone without compression	
	Disk access for the portable OS on the USB device: All types of disks are allowed (both fixed and non-fixed)	
	Target: USB storage device: F: 58.9 GB JetFlash Transcend 64GB Filesystem: NTFS Volume label: WIN11_TOGO Unallocated space at the end of the disk: 0	
	<u>H</u> elp < <u>B</u> ack Format <u>N</u> ow <u>C</u> ancel	

10) Wait for process completion

ở (9%) FlashBoot Pro is formatting bootable USB storage devi	—		×
Formatting now			
		Cancel	
Log:			
Validating registry hive Windows\System32\SMI\Store\Mad	hine\	SCHEMA.DA	т
Validating registry hive Windows\ServiceProfiles\LocalServ			
Validating registry hive Windows\ServiceProfiles\NetworkS	ervice	NTUSER.DA	T
Validating registry hive Windows\AppCompat\Programs\A	mcach	e.hve	
Validating registry hive Users\Default\NTUSER.DAT			
Validating registry hive Users\User\NTUSER.DAT			
Validating registry hive			
Users\User\AppData\Local\Microsoft\Windows\UsrClass.dat			- 1
Formatting target USB storage device			- 1
Creating NTFS filesystem			- 1
Duplicating system volume to the target USB thumbdrive			- 1
Scanning directory tree			- 1
145151 files and 35117 folders have been scanned total			1
Processing data			

11) Bootable USB storage device is ready to use. Click OK to exit

FlashBoot Pro completed successfully		×
Completed successfully. Click OK to exit		
Log:		
ווי סט ניו וו ט אוויט מט ווו		
10.6 GB of 11 GB processed so far		
10.6 GB of 11 GB processed so far		
10.7 GB of 11 GB processed so far		
10.7 GB of 11 GB processed so far		
10.7 GB of 11 GB processed so far		
10.8 GB of 11 GB processed so far		
10.8 GB of 11 GB processed so far		
10.8 GB of 11 GB processed so far		
10.9 GB of 11 GB processed so far		
10.9 GB of 11 GB processed so far		
10.9 GB of 11 GB processed so far		
11 GB processed total		
Turning off page file for Windows on the target USB thumbdrive		
Configuring Windows Recovery		
Done		
Save log	Ok	

3.5 BartPE

BartPE is a third-party tool which allows a mini-version of Windows XP to be run from CD/DVD disc without installation on internal HDD. BartPE builder is a freeware and it can be downloaded from here.

FlashBoot can convert ISO file produced by BartPE builder into bootable USB storage device.

1) Run FlashBoot Pro, click Next

🔗 FlashBoot 3.3n Pro	
	Welcome to FlashBoot 3.3n Pro
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to <u>https://www.prime-expert.com/flashboot/</u>
	This copy of FlashBoot Pro is registered to Mykhailo Kupchyk
	More info
	Click Next to continue.
	Help < Back

2) Choose "Full OS -> USB" in the the Main Menu

🔗 FlashBoot 3.3n Pro	
	FlashBoot Main Menu
	OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD
	Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX
	Format as non-bootable Quick format and wipe
	Help < Back Cancel

3) Choose "BartPE (mini version of Windows XP)" in this menu and click Next



4) Specify BartPE builder output ISO image file (or CD disc) and click Next

🧳 FlashBoot 3.3n Pro			X
	BartPE (mini version o	of Windows XP) \rightarrow USB: Specify source	
	Please specify source Is	SO image file or CD/DVD disc	
	ISO image file:	D:\bartpe_based_on_windows_xp_sp3.iso	
	CD or DVD disc:		•
		Help < Back Next > Can	cel

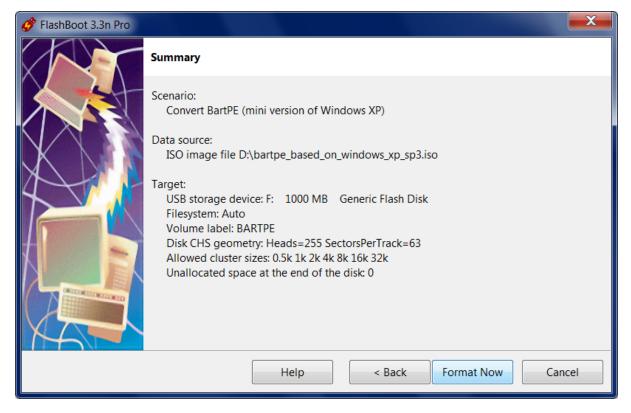
5) Specify target USB storage device and click Next

🧬 FlashBoot 3.3n Pro		X
	BartPE (mini version of Windows XP) \rightarrow USB: Specify target	
	Please specify target USB device:	
	F: 1000 MB Generic Flash Disk	
	Help < Back Next > Ca	ncel

6) If necessary, change volume label, or leave it as is, and click Next

🔗 FlashBoot 3.3n Pro		
	BartPE (mini vers	ion of Windows XP) \rightarrow USB (F:): Formatting options
	Formatting option	S:
	Volume label:	BARTPE
	Filesystem:	Auto
	Set advance	ed options
	Allowed cluste	er sizes: 🗹 0.5K 🗹 1K 🗹 2K 🗹 4K 🗹 8K 🗹 16K 🗹 32K
	Disk geometry	r: Heads: 255 Sectors per track: 63
	Unallocated sp	pace at the end of the disk: 0
		Help < Back Next > Cancel

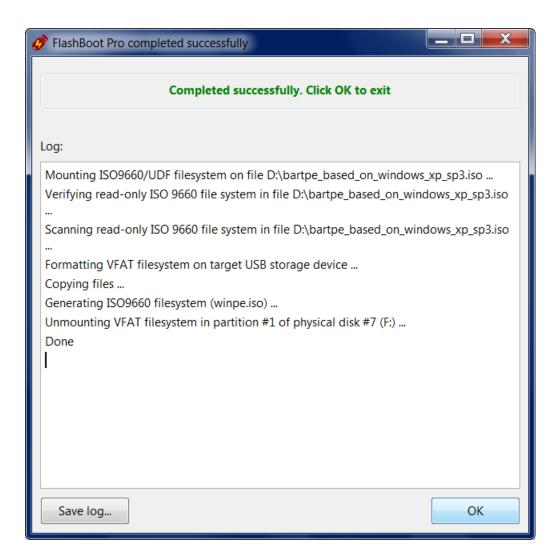
7) Check summary information and click Format Now



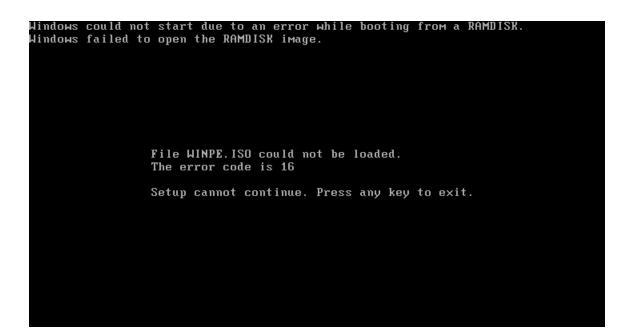
8) Wait for process completion

🧳 (78%) FlashBoot Pro is formatting bootable USB storage device	
Formatting now	Cancel
Log:	
Mounting ISO9660/UDF filesystem on file D:\bartpe_based_on_windo Verifying read-only ISO 9660 file system in file D:\bartpe_based_on_v Scanning read-only ISO 9660 file system in file D:\bartpe_based_on_v Formatting VFAT filesystem on target USB storage device Copying files Generating ISO9660 filesystem (winpe.iso)	windows_xp_sp3.iso

9) Bootable USB storage device is ready to use. Click OK to exit



Please Note: BartPE will not boot from USB if size of source ISO image file is larger than 500 Mb



3.6 UEFI Shell

FlashBoot can install UEFI shell to the USB thumbdrive.

Using UEFI shell, you can configure boot menu items for your UEFI-compliant motherboard or notebook, load/unload UEFI drivers, execute other UEFI applications, nsh scripts, etc.

You can use this option to quickly test FlashBoot compatibility with your computer without supplying external data (OS installation CD, ISO image file etc). This option requires UEFI-capable computer to boot. Most computers manufactured after 2012 are UEFI-compatible

1) Run FlashBoot Free or FlashBoot Pro, click Next

💣 FlashBoot 3.3n Free	
	Welcome to FlashBoot 3.3n Free
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to https://www.prime-expert.com/flashboot/
M	Click Next to continue.
	Help Next > Cancel

2) Choose "Full OS -> USB" in the the Main Menu

🔗 FlashBoot 3.3n Free		X
	FlashBoot Main Menu	
	→ OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD	
	Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD	
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX	
	Format as non-bootable Quick format and wipe	
	Help < Back Can	cel

3) Choose "UEFI Shell" in this menu and click Next



4) Specify target USB storage device and click Next

🔗 FlashBoot 3.3n Free		X
	Builtin UEFI shell \rightarrow USB: Specify target	
	Please specify target USB device:	
	F: 1000 MB Generic Flash Disk	•
	Help < Back Next > C	ancel

5) If necessary, change volume label, or leave it as is, and click Next

🔗 FlashBoot 3.3n Free			X
	Builtin UEFI shell	→ USB (F:): Formatting options	
	Formatting options	S:	
	Volume label:	UEFI_SHELL	
	Set advance	ed options	_
4	Unallocated sp	pace at the end of the disk: 0	
		Help < Back Next > Cancel	

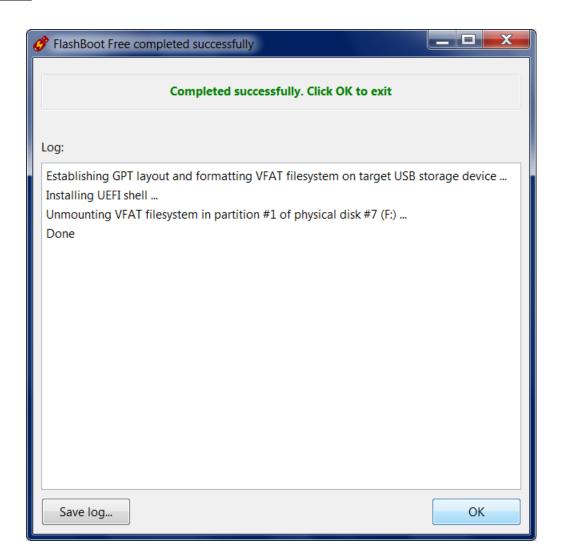
6) Check summary information and click Format Now

🔗 FlashBoot 3.3n Free	
	Summary
	Scenario: Install UEFI shell Data source: FlashBoot builtin Target: USB storage device: F: 1000 MB Generic Flash Disk Filesystem: Auto Volume label: UEFI_SHELL Unallocated space at the end of the disk: 0
	Help < Back Format Now Cancel

7) Wait for process completion

🧬 (85%) FlashBoot Free is formatting bootable USB storage device	X
Formatting now Cancel	
Log:	
Establishing GPT layout and formatting VFAT filesystem on target USB storage devi Installing UEFI shell Unmounting VFAT filesystem in partition #1 of physical disk #7 (F:)	ce

8) Bootable USB storage device is ready to use. Click OK to exit



3.7 DOS

FlashBoot can install DOS to USB thumbdrive and make it bootable. You can use this option to quickly test FlashBoot without supplying external data (OS installation CD, ISO image file etc).

Minimalistic DOS created by FlashBoot also contains Volkov Commander: a file manager for DOS, formerly shareware, now defunct.

DOS on USB thumbdrive is useful for upgrading BIOS on your notebook or motherboard (just add latest BIOS file and vendor-supplied flash update utility like AFUDOS). Also it can be used for running DOS applications and games without emulation.

1) Run FlashBoot Free or FlashBoot Pro, click Next

🔗 FlashBoot 3.3n Free	
	Welcome to FlashBoot 3.3n Free
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to https://www.prime-expert.com/flashboot/
14	Click Next to continue.
	Help Next > Cancel

2) Choose "Full OS -> USB" in the the Main Menu

🔗 FlashBoot 3.3n Free	
	FlashBoot Main Menu
	OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD
	Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX
	Format as non-bootable Quick format and wipe
	Help < Back Cancel

3) Choose "DOS" in this menu and click Next



4) Specify target USB storage device and click Next

🔗 FlashBoot 3.3n Free		X
	Builtin DOS \rightarrow USB: Specify target	
	Please specify target USB device:	
	F: 1000 MB Generic Flash Disk	•
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> a	incel

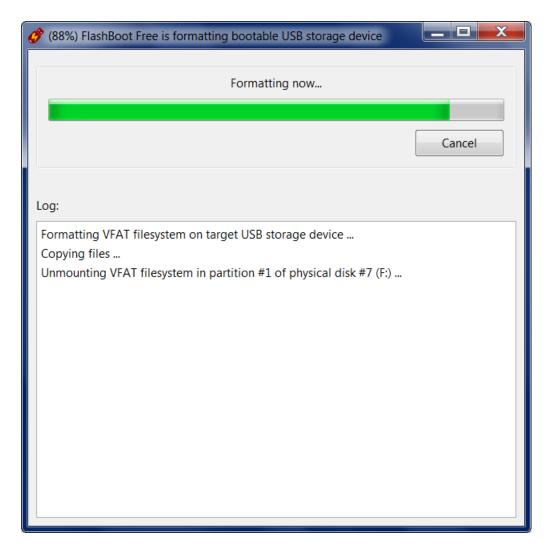
5) If necessary, change volume label, or leave it as is, and click Next

🔗 FlashBoot 3.3n Free		x
	Builtin DOS \rightarrow USB (F:): Formatting options	
	Formatting options:	
	Volume label: MINI_DOS	
	Filesystem: Auto ▼ Map to (at boot time): A:	•
4	Set advanced options	
	Allowed cluster sizes: 🗸 0.5K 🗸 1K 🖉 2K 🗹 4K 🖉 8K 🖉 16K 🖉 32K	
	Disk geometry: Heads: 255 Sectors per track: 63	
	Unallocated space at the end of the disk: 0	
	Help < Back	

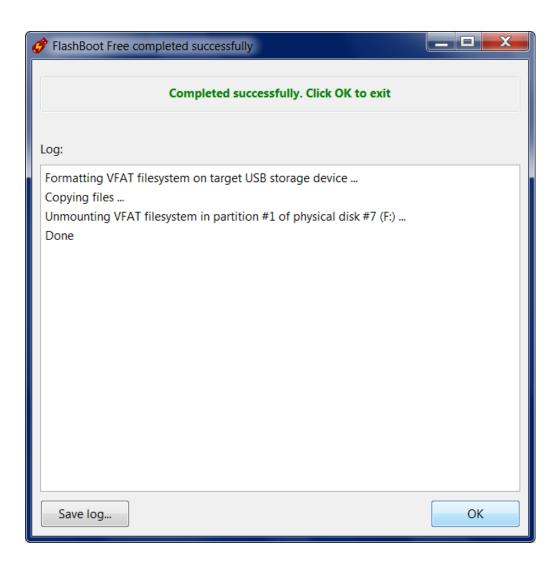
6) Check summary information and click Format Now

🔗 FlashBoot 3.3n Free	
	Summary
	Scenario: Install builtin mini-DOS Data source: FlashBoot builtin Target: USB storage device: F: 1000 MB Generic Flash Disk Filesystem: Auto Volume label: MINI_DOS Map to (at boot time): A: Disk CHS geometry: Heads=255 SectorsPerTrack=63 Allowed cluster sizes: 0.5k 1k 2k 4k 8k 16k 32k Unallocated space at the end of the disk: 0
	<u>H</u> elp < <u>B</u> ack Format <u>N</u> ow <u>C</u> ancel

7) Wait for process completion



8) Bootable USB storage device is ready to use. Click OK to exit



4 USB device imaging and duplication

4.1 Save USB storage device to image file

If you have bootable USB thumbdrive with some useful content, and want to temporarily reuse it for other purpose, then you can save its contents to image file, and restore it later.

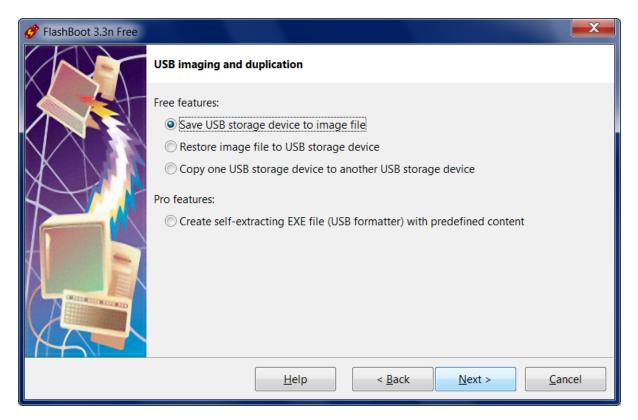
1) Run FlashBoot Free or FlashBoot Pro, click Next

💣 FlashBoot 3.3n Free	
	Welcome to FlashBoot 3.3n Free
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to https://www.prime-expert.com/flashboot/
X-A-	Click Next to continue.
	Help < Back Next > Cancel

2) Choose "USB imaging and duplication" in the the Main Menu

🔗 FlashBoot 3.3n Free		×
	FlashBoot Main Menu	
	 → OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD → Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD 	
	 USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX 	
	Format as non-bootable Quick format and wipe	
	Help < Back Can	cel

3) Choose "Save USB storage device to image file" in this menu and click Next



4) Specify source USB storage device and click Next

🔗 FlashBoot 3.3n Free		X
	Save USB storage device to image file: Specify source	
	Please specify source USB device:	
	F: 1000 MB Generic Flash Disk	-
	Help < Back Next > Ca	ancel

5) Specify target image file click Next

🧳 FlashBoot 3.3n Free		X
	Save USB storage device to image file: Specify target	
	Please specify target image file:	
	d:\my_saved_image.img	
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> an	icel

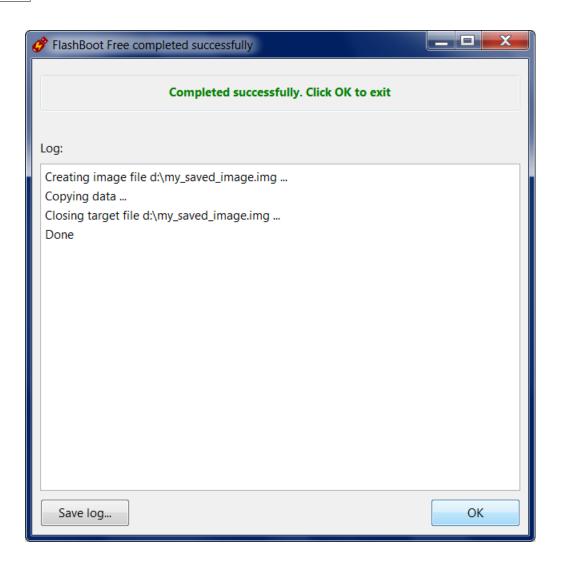
6) Check summary information and click Save Now

FlashBoot 3.3n Free	
	Summary
	Scenario: Save USB storage device to image file
XIII	Data source: USB physical disk #7 (F:)
	Target: Image file d:\my_saved_image.img
	<u>H</u> elp < <u>B</u> ack Save <u>N</u> ow <u>C</u> ancel

7) Wait for process completion

🤣 (25%) FlashBoot Free is saving image of USB storage device	
Saving now	
	Cancel
Log:	
Creating image file d:\my_saved_image.img Copying data	

8) Image file is ready for use. Click OK to exit



4.2 Restore USB storage device from image file

If you have bootable USB thumbdrive with some useful content, and want to temporarily reuse it for other purpose, then you can save its contents to image file, and restore it later.

Also you can use this feature to write USB thumbdrive images downloaded from the internet.

This FlashBoot feature supports restoring of any bootable USB image files, but let's take MFSBSD as an example of particularly useful bootable USB image file. MFSBSD (by Martin Matuška) is a trimmed down version of FreeBSD operating system which acts as standalone live media for FreeBSD recovery purposes: http://mfsbsd.vx.sk/

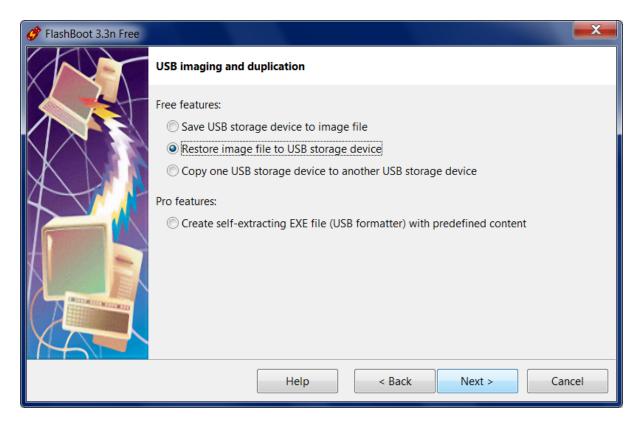
1) Run FlashBoot Free or FlashBoot Pro, click Next

🧳 FlashBoot 3.3n Free	
	Welcome to FlashBoot 3.3n Free
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to https://www.prime-expert.com/flashboot/
	Click Next to continue.
	Help < Back Next > Cancel

2) Choose "USB imaging and duplication" in the the Main Menu

🔗 FlashBoot 3.3n Free		X
	FlashBoot Main Menu	
	 OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD USB imaging and duplication 	
	 Save USB thumbdrive to image file, restore from image file, USB to USB, SFX Format as non-bootable Quick format and wipe 	
	Help < Back Car	ncel

3) Choose "Restore image file to USB storage device" in this menu and click Next



4) Specify source image file and click Next

🧳 FlashBoot 3.3n Free		x
	Restore image file to USB storage device: Specify source	
	Please specify source image file:	
	D:\mfsbsd-se-13.0-RELEASE-amd64.img	
	Help < Back Next > Can	cel

5) Specify target USB storage device and click Next

🧬 FlashBoot 3.3n Free		X
	Restore image file to USB storage device: Specify target	
	Please specify target USB device:	
	F: 1000 MB Generic Flash Disk	•
	Help < Back Next > Car	ncel

6) Check summary information and click Format Now

🔗 FlashBoot 3.3n Free	
	Summary
	Scenario: Restore image file to USB storage device Data source: Image file of USB storage device D:\mfsbsd-se-13.0-RELEASE-amd64.img
	Target: USB storage device: F: 1000 MB Generic Flash Disk
	Help < Back Format Now Cancel

7) Wait for process completion

🧳 (20%) FlashBoot Free is formatting bootable USB storage device 📃 💻 💌
Formatting now
Formatting now
Cancel
Log:
Opening target USB storage device PLEASE NOTE: When raw-copying source (file D:\mfsbsd-se-13.0-RELEASE-amd64.img) to destination (physical disk #7 (F:)), destination will be zero-padded because size of source (386957312 bytes) is smaller than size of destination (1048576000 bytes) Copying data

8) Bootable USB storage device is ready to use. Click OK to exit

🧳 FlashBoot Free completed successfully
Completed successfully. Click OK to exit
Log:
Opening target USB storage device PLEASE NOTE: When raw-copying source (file D:\mfsbsd-se-13.0-RELEASE-amd64.img) to destination (physical disk #7 (F:)), destination will be zero-padded because size of source (386957312 bytes) is smaller than size of destination (1048576000 bytes) Copying data Padding output stream with zeroes Closing target physical disk #7 (F:) Done
Save log OK

4.3 Duplicate USB storage device

Using FlashBoot, you can quickly copy one USB storage device into another USB storage device without loosing bootability.

Capacity of destination USB storage device must be no less than capacity of source USB storage device. If there's a difference in capacity, it will be zero-filled.

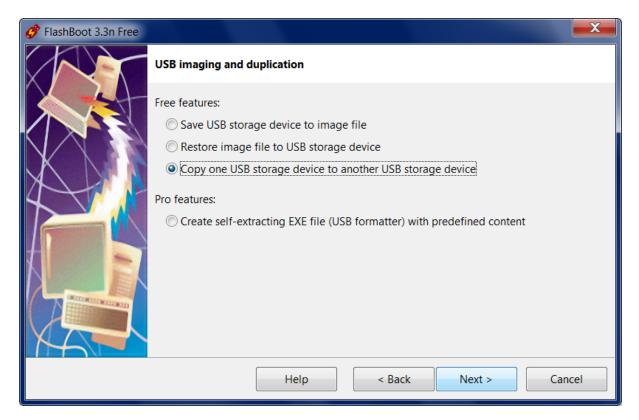
1) Run FlashBoot Free or FlashBoot Pro, click Next

💣 FlashBoot 3.3n Free	
	Welcome to FlashBoot 3.3n Free
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to https://www.prime-expert.com/flashboot/
	Click Next to continue.
	Help < Back Next > Cancel

2) Choose "USB imaging and duplication" in the the Main Menu

🔗 FlashBoot 3.3n Free		X
	FlashBoot Main Menu	
	→ OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD	
X	Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD	
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX	
	Format as non-bootable Quick format and wipe	
	Help < Back Car	ncel

3) Choose "Copy one USB storage device to another USB storage device" in this menu and click Next



4) Specify source USB storage device and click Next

🔗 FlashBoot 3.3n Free		X
	Duplicate USB-to-USB: Specify source	
	Please specify source USB device:	
	F: 1000 MB Generic Flash Disk	T
	Help < Back Next > Car	ncel

5) Specify target USB storage device and click Next

💣 FlashBoot 3.3n Free		X
	Duplicate USB-to-USB: Specify target	
	Please specify target USB device:	
	I: 1.91 GB Ut163 TS2GJF168	•
	Help < Back Next > Car	icel

6) Check summary information and click Format Now

🔗 FlashBoot 3.3n Free	
	Summary
	Scenario: Duplicate one USB storage device to another USB storage device Data source: USB physical disk #7 (F:) Target: USB storage device: I: 1.91 GB Ut163 TS2GJF168
	USB storage device: I: 1.91 GB ULIOS ISZOFIO8
	Help < Back Format Now Cancel

7) Wait for process completion

🧬 (20%) FlashBoot Free is formatting bootable USB storage device	_ □	x
Formatting now		
	Cancel	
Log:		
Opening target USB storage device PLEASE NOTE: When raw-copying source (physical disk #7 (F:)) to destinat disk #9 (I:)), destination will be zero-padded because size of source (1048 is smaller than size of destination (2055208448 bytes) Copying data		

8) Bootable USB storage device is ready to use. Click OK to exit

🧬 FlashBoot Free completed successfully	
Completed successfully. Click OK to exit	
Log:	
Opening target USB storage device PLEASE NOTE: When raw-copying source (physical disk #7 (F:)) to destinat disk #9 (I:)), destination will be zero-padded because size of source (104) is smaller than size of destination (2055208448 bytes) Copying data Padding output stream with zeroes Closing target physical disk #9 (I:) Done	
Save log	ОК

4.4 Create self-extracting archive with FAT filesystem

FlashBoot can create standalone self-extracting EXE file (USB formatter) with predefined contents. This file will run in end-user environment under Windows XP or any later version of Windows and extract its content to USB storage device specified by end user without asking any additional questions. This USB thumbdrive will contain FAT filesystem (of variable size) and, if necessary, will be bootable. Self-extracting archive can have customized icon, title, description text, and commands to run after extraction.

Let's take lightweight Linux distribution called Slax to demonstrate how FlashBoot can create self-extracting archives with FAT filesystem: https://www.slax.org/

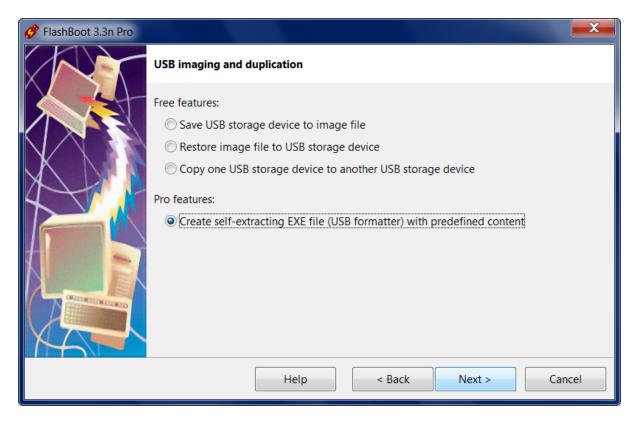
1) Run FlashBoot Pro, click Next

💣 FlashBoot 3.3n Pro	
	Welcome to FlashBoot 3.3n Pro
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to <u>https://www.prime-expert.com/flashboot/</u>
	This copy of FlashBoot Pro is registered to Mykhailo Kupchyk
	More info
	Click Next to continue.
	Help < Back Next > Cancel

2) Choose "USB imaging and duplication" in the the Main Menu

🔗 FlashBoot 3.3n Pro	
	FlashBoot Main Menu
	 → OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD → Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX
	Format as non-bootable Quick format and wipe
	Help < Back Cancel

3) Choose "Create self-extracting EXE file (USB formatter) with predefined content" in this menu and click Next



4) Choose "stretching FAT filesystem" in this menu and click Next

🔗 FlashBoot 3.3n Pro	
	Create self-extracting EXE file (USB formatter)
	Choose type of filesystem this EXE file should contain:
	Help < Back Next > Cancel

5) Set volume label and specify folder with input files. Allow all filesystems except FAT12. Allow all cluster sizes. Click Next.

💣 FlashBoot 3.3n Pro		x
	Create self-extracting EXE file (USB formatter to FAT filesystem)	
	Volume label: SLAX	
	Folder with input files: D:\slax-64bit-9.11.0	
	Allow formatting to FAT32, boot sector:	
4	Allow formatting to FAT16, boot sector:	
	Allow formatting to FAT12, boot sector:	
	Allowed cluster sizes: 🔽 0.5K 🖉 1K 🖉 2K 🖉 4K 🖉 8K 🖉 16K 🖉 32K	
	Override default MBR:	
	Help < Back Next > Canc	el

6) Customize self-extracting archive: set icon, command to run after extraction (current directory in this context will be new filesystem on USB storage device, separate multiple commands with && if necessary), title and description text for end user. Then click Next.

ở FlashBoot 3.3n Pro		
	Create self-extractin	g EXE file (USB formatter to FAT filesystem)
	Icon for end user:	D:\slax.ico
	Run after extraction:	slax\boot\bootinst.bat
	Title for end user:	SLAX
	Text for end user:	Slax is a modern, portable, small and fast Linux operating system with modular approach and outstanding design. It runs directly from your USB flash drive without installing, so you can carry it everywhere you go in your pocket. Despite its small size, Slax provides nice graphical user interface and wise selection of pre-installed programs, such as a Web browser, Terminal, and more. https://www.slax.org/
	[Help < Back Next > Cancel

7) Specify target EXE file:

🔗 FlashBoot 3.3n Pro		X
	Create self-extracting EXE file (USB formatter to FAT filesystem)	
	Please specify target EXE file:	
	D:\slax-sfx.exe	
	Help < Back Next > Can	cel

6) Check summary information and click Compress Now

🧬 FlashBoot 3.3n Pro		X
	Summary	
	Scenario: Create self-extracting EXE with embedded FAT filesystem	^
	Data source: Folder D:\slax-64bit-9.11.0	_
	FAT SFX options: Volume label: SLAX Allowed filesystems: FAT32 FAT16 Allowed cluster sizes: 0.5k 1k 2k 4k 8k 16k 32k	н
	Target: EXE file D:\slax-sfx.exe	
	SFX customization:	
	Icon for end user: D:\slax.ico Title for end user: SLAX	Ŧ
	Help < Back Compress Now Car	ncel

7) Wait for process completion

🤣 (23%) FlashBoot Pro is creating self-extracting archive		x
Compressing now		
	Cancel	
Log:		
Scanning input filesystem Creating target EXE file Writing SFX stub Integrating icon file D:\slax.ico Writing compressed data		

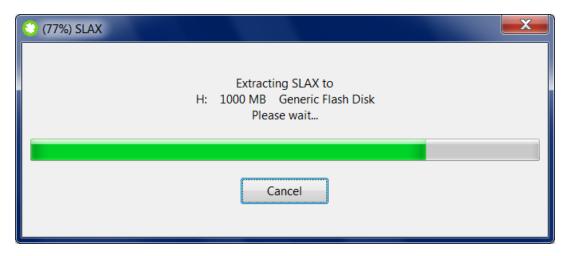
8) Self-extracting EXE file is ready to use. Click OK to exit

🔗 FlashBoot Pro completed successfully	_ 🗆 🗙
Completed successfully. Click OK to exit	
Log:	
Scanning input filesystem Creating target EXE file Writing SFX stub Integrating icon file D:\slax.ico Writing compressed data Writing footer Done	
Save log	ОК

Let's test just created self-extracting archive. Here's now it looks like:

😳 sla:	x	
	Slax is a modern, portable, small and fast Linux o and outstanding design. It runs directly from your so you can carry it everywhere you go in your poo	r USB flash drive without installing,
	provides nice graphical user interface and wise se such as a Web browser, Terminal, and more. https://www.slax.org/	•
Target	t USB device: H: 1000 MB Generic Flash Disk	
Power	ed by FlashBoot	OK Cancel

Progress window looks like this:



When extraction is finished, custom command is executed:

C:\Windows\system32\cmd.exe	
	< III
wait please	
	-

4.5 Create self-extracting archive with NTFS filesystem

FlashBoot can create standalone self-extracting EXE file (USB formatter) with predefined contents. This file will run in end-user environment under Windows XP or any later version of Windows and extract its content to USB storage device specified by end user without asking any additional questions. This USB thumbdrive will contain NTFS filesystem (of variable size) and, if necessary, will be bootable. Self-extracting archive can have customized icon, title, description text, and commands to run after extraction.

Let's take Windows 7 with integrated generic USB 3.x Host Controller drivers, generic NVMe drivers and patched UEFI loader (for VGA emulation) as useful example of self-extracting archive with bootable NTFS filesystem. This feature is particularly useful if you have installed Windows 7 with customized drivers to internal HDD/SSD of your computer, and now want to reuse USB storage device for regular data storage, but want to keep customized version of Windows around for reinstallation, just in case it

becomes necessary.

1) Run FlashBoot Pro, click Next

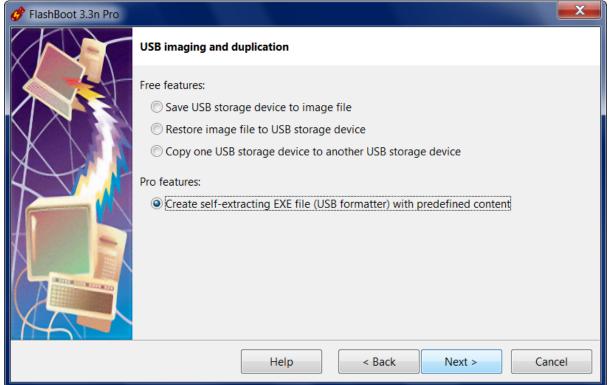
🧳 FlashBoot 3.3n Pro			
	Welcome to FlashBoot 3.3n Pro		
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.		
	For more information, refer to https://www.prime-expert.com/flashboot/		
	This copy of FlashBoot Pro is registered to Mykhailo Kupchyk		
	More info		
	Click Next to continue.		
	Help < Back		

2) Choose "USB imaging and duplication" in the the Main Menu

💣 FlashBoot 3.3n Pro		x
	FlashBoot Main Menu	
	 → OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD → Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD 	
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX	
	Format as non-bootable Quick format and wipe	
	Help < Back Cance	el

D

3) Choose "Create self-extracting EXE file (USB formatter) with predefined content" in this menu and click Next



4) Choose "stretching NTFS filesystem" in this menu and click Next

🔗 FlashBoot 3.3n Pro		×
	Create self-extracting EXE file (USB formatter)	
	Choose type of filesystem this EXE file should contain:	
	Stretching FAT filesystem	
	stretching NTFS filesystem	
	fixed-size image with any filesystem(s)	
	Help < Back Next > Can	cel

💣 FlashBoot 3.3n Pro			X
	Create self-extracting EXE fi	le (USB formatter to NTFS filesystem)	
	Volume label:	WIN7	
	Folder with input files:	D:\win7_with_usb3_nvme_vgaemu	
	Override boot record (8 Kb):		
	Override default MBR:		
	Не	Ip < Back Next > Car	ncel

5) Set volume label and specify folder with input files. Click Next.

6) Customize self-extracting archive: set icon, title and description text for end user. Then click Next.

ở FlashBoot 3.3n Pro		
	Create self-extractin	g EXE file (USB formatter to NTFS filesystem)
	Icon for end user:	D:\windows7.ico
	Run after extraction:	
	Title for end user:	Windows 7 with USB3, NVMe and VGA emulation
	Text for end user:	Windows 7 is a personal computer operating system developed by Microsoft. It is a part of the Windows NT family of operating systems. https://en.wikipedia.org/wiki/Windows_7 With generic USB 3.x Host Controller drivers. With generic NVMe Storage Device drivers. With VGA emulation patch for pure UEFI class 3 PC firmware.
	[<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

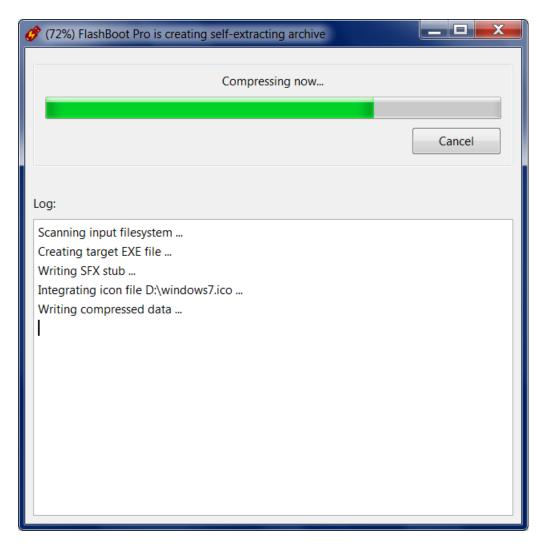
7) Specify target EXE file:

💣 FlashBoot 3.3n Pro		x
	Create self-extracting EXE file (USB formatter to NTFS filesystem)	
	Please specify target EXE file:	
	D:\win7-setup-customized-sfx.exe	
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> and	cel

6) Check summary information and click Compress Now

🔗 FlashBoot 3.3n Pro		x
	Summary	
	Scenario: Create self-extracting EXE with embedded NTFS filesystem	
	Data source: Folder D:\win7_with_usb3_nvme_vgaemu	
4	NTFS SFX options: Volume label: WIN7	Ξ
	Target: EXE file D:\win7-setup-customized-sfx.exe	
	SFX customization: Icon for end user: D:\windows7.ico	
	Title for end user: Windows 7 with USB3, NVMe and VGA emulation Text for end user: Windows 7 is a personal computer operating system developed by Microsoft. It	t is a 🔻
	<u>H</u> elp < <u>B</u> ack Compress <u>N</u> ow <u>C</u> and	cel

7) Wait for process completion



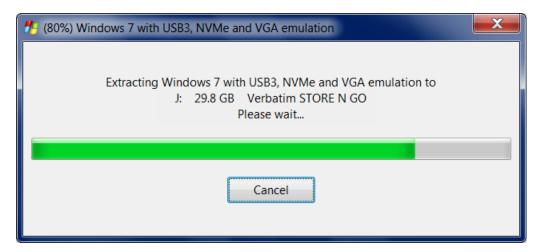
8) Self-extracting EXE file is ready to use. Click OK to exit

Search and the successfully an	_ 🗆 🗙
Completed successfully. Click OK to exit	
Log:	
Scanning input filesystem	
Creating target EXE file	
Writing SFX stub	
Integrating icon file D:\windows7.ico	
Writing compressed data Writing footer	
Done	
Save log	ОК

Let's test just created self-extracting archive. Here's now it looks like:

🎢 Windows 7 with USB3, NVMe and VGA emulation	X
Windows 7 is a personal computer operating system developed by Microsoft. part of the Windows NT family of operating systems. <u>https://en.wikipedia.org/wiki/Windows 7</u> With generic USB 3.x Host Controller drivers. With generic NVMe Storage Device drivers. With VGA emulation patch for pure UEFI class 3 PC firmware.	It is a
Target USB device: J: 29.8 GB Verbatim STORE N GO	•
Powered by FlashBoot OK Cancel	I

Progress window looks like this:



When extraction is finished, message like this is displayed:

Windows 7	with USB3, NVMe and VGA emulati	x
i	Extraction completed successfully	
	0	к

4.6 Create self-extracting archive with raw image

FlashBoot can create standalone self-extracting EXE file (USB formatter) with predefined contents. This file will run in end-user environment under Windows XP or any later version of Windows and extract its content to USB storage device specified by end user without asking any additional questions. This USB thumbdrive will contain fixed-sized image with any filesystem(s) and, if necessary, will be bootable. Self-extracting archive can have customized icon, title, description text, and commands to run after extraction.

Let's take Raspbian, operating system of choice for Raspberry Pi, to demonstrate how FlashBoot can create self-extracting archives with fixed-sized filesystem: https://www.raspberrypi.org/downloads/ raspbian/

The Raspberry Pi is a credit-card sized computer manufactured by Raspberry PI Foundation that plugs into your TV and a keyboard. It's a capable little PC which can be used for many of the things that your desktop PC does, like spreadsheets, word-processing and games.

Raspberry Pi is also very useful for DIY hobbysts and can be a hardware platform for embedded appliances like TV set top box or supermarket checkout terminal or maybe even ATM.

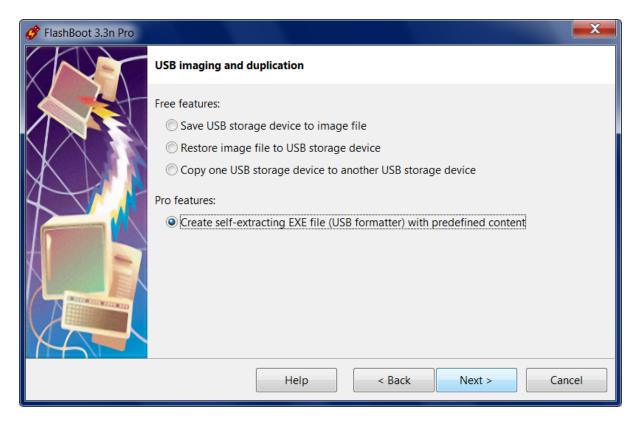
1) Run FlashBoot Pro, click Next

💣 FlashBoot 3.3n Pro	
	Welcome to FlashBoot 3.3n Pro
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to <u>https://www.prime-expert.com/flashboot/</u>
	This copy of FlashBoot Pro is registered to Mykhailo Kupchyk
	More info
XA	Click Next to continue.
	Help < Back Next > Cancel

2) Choose "USB imaging and duplication" in the the Main Menu

🔗 FlashBoot 3.3n Pro	
	FlashBoot Main Menu
	 OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD
	USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX
	Format as non-bootable Quick format and wipe
	Help < Back Cancel

3) Choose "Create self-extracting EXE file (USB formatter) with predefined content" in this menu and click Next



4) Choose "fixed-size image with any filesystem(s)" in this menu and click Next

🧳 FlashBoot 3.3n Pro		X
	Create self-extracting EXE file (USB formatter)	
	Choose type of filesystem this EXE file should contain: stretching FAT filesystem stretching NTFS filesystem (ixed-size image with any filesystem(s))	
	Help < Back Next > Ca	ncel

5) Specify source image file and click Next

ở FlashBoot 3.3n Pro		X
	Create self-extracting EXE file (USB formatter with fixed image)	
	Please specify source image file:	
	D:\2021-10-30-raspios-bullseye-armhf-full.img	
	Help < Back Next > Can	cel

6) Customize self-extracting archive: set icon, title and description text for end user. Then click Next.

🧬 FlashBoot 3.3n Pro		
	Create self-extractin	g EXE file (USB formatter with fixed image)
	Icon for end user:	D:\pi.ico
	Run after extraction:	
	Title for end user:	Raspberry Pi OS
	Text for end user:	Raspberry Pi OS (formerly Raspbian) is a Debian-based operating system for Raspberry Pi. Since 2015, it has been officially provided by the Raspberry Pi Foundation as the primary operating system for the Raspberry Pi family of compact single-board computers. Raspberry Pi OS is highly optimized for the Raspberry Pi line of compact single- board computers with ARM CPUs. It runs on every Raspberry Pi except the Pico microcontroller. https://www.raspberrypi.com/software/operating-systems/
		Help < Back Next > Cancel

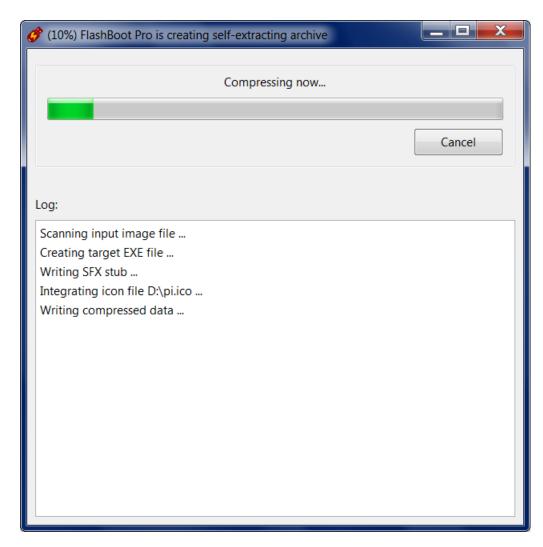
7) Specify target EXE file:

🧬 FlashBoot 3.3n Pro		X
	Create self-extracting EXE file (USB formatter with fixed image)	
	Please specify target EXE file:	
	D:\raspberry-pi-os-sfx.exe	
	Help < Back Next > Ca	ncel

6) Check summary information and click Compress Now

💣 FlashBoot 3.3n Pro		x
	Summary	
	Scenario: Create self-extracting EXE with embedded raw image	
	Data source: Image file D:\2021-10-30-raspios-bullseye-armhf-full.img	
4	Target: EXE file D:\raspberry-pi-os-sfx.exe	Ш
	SFX customization: Icon for end user: D:\pi.ico Title for end user: Raspberry Pi OS	
	Text for end user: Raspberry Pi OS (formerly Raspbian) is a Debian-based operating system for Raspberry Pi. Since 2015, it has been officially provided by the Raspberry Pi Foundation as the primary operating system for the Raspberry Pi family of compact single-board computers. Raspberry	•
	Help < Back Compress Now Cancel	

7) Wait for process completion



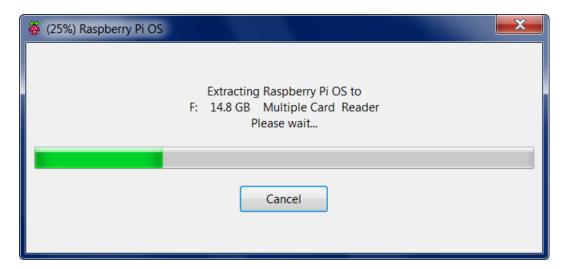
8) Self-extracting EXE file is ready to use. Click OK to exit

🔗 FlashBoot Pro completed successfully	
Completed successfully. Click OK to exit	
Log:	
Scanning input image file Creating target EXE file Writing SFX stub Integrating icon file D:\pi.ico Writing compressed data Writing footer Done	
Save log	ОК

Let's test just created self-extracting archive. Here's now it looks like:

👹 Ras	pberry Pi OS		
Raspberry Pi OS (formerly Raspbian) is a Debian-based operating system for Raspberry Pi. Since 2015, it has been officially provided by the Raspberry Pi Foundation as the primary operating system for the Raspberry Pi family of compact single-board computers. Raspberry Pi OS is highly optimized for the Raspberry Pi line of compact single-board computers with ARM CPUs. It runs on every Raspberry Pi except the Pico microcontroller. https://www.raspberrypi.com/software/operating-systems/			
Targe	t USB device: F: 14.8 GB	Multiple Card Reader	
Power	ed by FlashBoot	OK Cancel	

Progress window looks like this:



When extraction is finished, message like this is displayed:

Raspberry	Pi OS 🧮	X
i	Extraction completed successfully	
	ОК	

5 Format USB device as non-bootable

5.1 Quick format

FlashBoot can quick-format USB storage device in non-bootable mode to clear previously installed operating systems, other bootable software or data.

FlashBoot can work with USB thumdrives which have no drive letter assigned or have no partitions. If capacity of USB thumdrive was reduced by other tools (for example, 64 Gb USB thumbdrive has become 32 Gb USB thumbdrive), then FlashBoot will automatically recover it to full capacity.

1) Run FlashBoot Free or FlashBoot Pro, click Next

💣 FlashBoot 3.3n Free				
	Welcome to FlashBoot 3.3n Free			
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.			
For more information, refer to https://www.prime-expert.com/flashboot/				
	Click Next to continue.			
	Help < Back Next > Cancel			

2) Choose "Format as non-bootable" in the Main Menu

🔗 FlashBoot 3.3n Free		X
	FlashBoot Main Menu	
	 → OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD → Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD → USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX 	
	Format as non-bootable Quick format and wipe	
	Help < Back Can	cel

3) Choose "Quick format" in this menu and click Next



4) Specify target USB storage device and click Next

🔗 FlashBoot 3.3n Free		X
	Quick Format: Specify target	
	Please specify target USB device:	
	F: 1000 MB Generic Flash Disk	•
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> an	cel

5) If necessary, change volume label, or leave it as is, and click Next

💣 FlashBoot 3.3n Free		
	Quick Format (F:): Formatting options	
	Formatting options:	
	Volume label: USB_1G	
	Filesystem: Auto Layout: partitioned	
	Set advanced options	
	Allowed cluster sizes: 🔽 0.5K 🔍 1K 🔍 2K 🔍 4K 🔍 8K 🔍 16K 📝 32K	
	Unallocated space at the end of the disk: 0	
XA		
	<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>C</u> ancel	

6) Check summary information and click Format Now

🔗 FlashBoot 3.3n Free		
	Summary	
	Scenario: Quick format	
	Data source: FlashBoot builtin	
	Target: USB storage device: F: 1000 MB Generic Flash Disk Filesystem: Auto Volume label: USB_1G Layout: partitioned Allowed cluster sizes: 0.5k 1k 2k 4k 8k 16k 32k Unallocated space at the end of the disk: 0	
	<u>H</u> elp < <u>B</u> ack Format <u>N</u> ow <u>C</u> ancel	

7) Wait for process completion

🧳 (50%) FlashBoot Free is formatting non-bootable USB storage device		X		
Formatting now				
	Cancel			
Log:				
Opening target USB storage device Deducing VFAT filesystem parameters for physical disk #7 (F:) Creating empty VFAT filesystem on physical disk #7 (F:)				

8) Non-bootable USB storage device is ready to use. Click OK to exit

FlashBoot Free completed successfully	
Completed successfully. Click OK to exit	
Log:	
Opening target USB storage device Deducing VFAT filesystem parameters for physical disk #7 (F:) Creating empty VFAT filesystem on physical disk #7 (F:) Done	
Save log	ОК

5.2 Wipe (securely erase all data)

FlashBoot can wipe USB storage device. This operation will erase all files and free space on said device, so any data from it can't be undeleted.

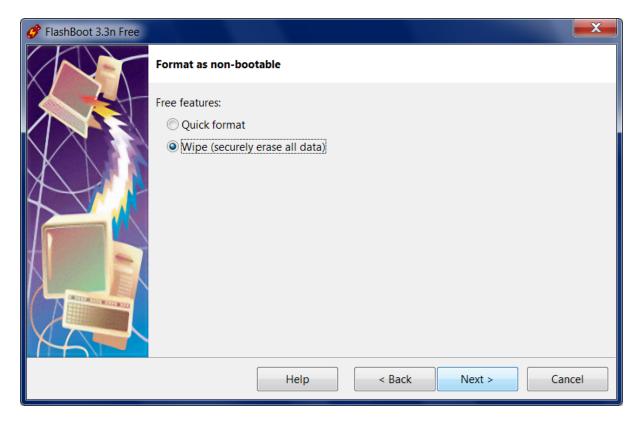
1) Run FlashBoot Free or FlashBoot Pro, click Next

💣 FlashBoot 3.3n Free	
	Welcome to FlashBoot 3.3n Free
	This wizard will guide you through formatting of bootable USB thumbdrive or USB HDD.
	For more information, refer to https://www.prime-expert.com/flashboot/
	Click Next to continue.
	Help < Back Next > Cancel

2) Choose "Format as non-bootable" in the Main Menu

🔗 FlashBoot 3.3n Free		X
	FlashBoot Main Menu	
	 → OS installer → USB Install OS to internal HDD/SSD from USB device instead of DVD → Full OS → USB Boot full-featured OS from USB device independently from HDD/SSD → USB imaging and duplication Save USB thumbdrive to image file, restore from image file, USB to USB, SFX 	
	Format as non-bootable Quick format and wipe	
	Help < Back Car	ncel

3) Choose "Wipe (securely erase all data)" in this menu and click Next



4) Specify target USB storage device and click Next

🔗 FlashBoot 3.3n Free		X
	Wipe (securely erase all data): Specify target	
	Please specify target USB device:	
	F: 1000 MB Generic Flash Disk	•
	Help < Back Next > Ca	ncel

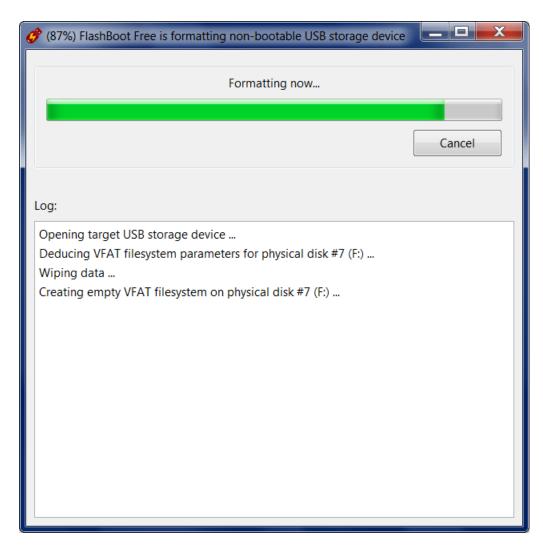
5) If necessary, change volume label, or leave it as is, and click Next

🔗 FlashBoot 3.3n Free			
	Wipe (securely er	ase all data) (F:): Formatting optio	ons
	Formatting option	s:	
	Volume label:	USB_1G	
X	Filesystem:	Auto 🔹	Layout: partitioned 🔻
	Set advance	ed options	
	Allowed cluste	er sizes: 🔽 0.5K 🔍 1K 🔍 2K	✓ 4K
		Help < Back	Next > Cancel

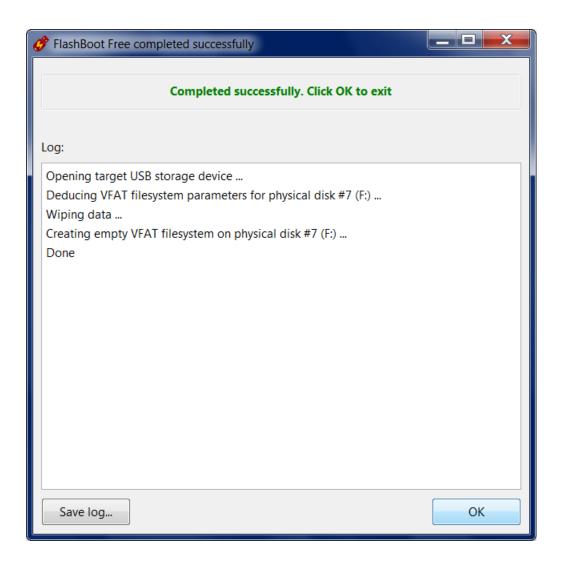
6) Check summary information and click Format Now

🔗 FlashBoot 3.3n Free	
	Summary
	Scenario: Wipe (securely erase all data) Data source: FlashBoot builtin
	Target: USB storage device: F: 1000 MB Generic Flash Disk Filesystem: Auto Volume label: USB_1G Layout: partitioned Allowed cluster sizes: 0.5k 1k 2k 4k 8k 16k 32k
	Help < Back Format Now Cancel

7) Wait for process completion



8) Non-bootable USB storage device is ready to use. Click OK to exit



6 Advanced topics

6.1 Portable Edition

Portable software is a type of software which does not require installation and can be run from removable media or from the network share. It runs without modifying Windows Registry and without leaving traces on host computer, storing its state and settings in INI files if neccessary. (For more information about portable software, refer to PortableApps.com or other similar websites.)

FlashBoot also has portable edition.

Portable FlashBoot Free can be downloaded from this link: https://www.prime-expert.com/flashboot/downloads/flashboot-latest-portable.zip

Portable FlashBoot Free can be converted to Portable FlashBoot Pro by adding **license_key.xml** to it. You will have a separate link to download this file after your order. Alternatively, you can copy this file from C:\Program Files\FlashBoot folder, where your copy of FlashBoot Pro was installed by mainstream (non-portable) installer.

There is no difference in binary files between Portable FlashBoot and installable FlashBoot. FlashBoot detects its "portability" by presence of FlashBoot.ini. If this file does not exist, then FlashBoot stores its state and settings in Windows Registry (HKEY_CURRENT_USER\Software\FlashBoot\3.3 registry key), otherwise it stores its state and settings in FlashBoot.ini.

6.2 Command Line Version

FlashBoot can be invoked from command line. This is particularly useful when you need some automation or unattended execution of FlashBoot.

Installation folder contains fb-cli.exe file (CLI stands for "Command Line Interface") alongside fb-gui.exe (GUI = "Graphical User Interface"). Installer creates shortcut only for fb-gui.exe.

Command-line version of FlashBoot has the following options:

```
Usage:
  fb-cli.exe /SCENARIO:InstallWindows8or1XToUSB FromDVD BiosMode
              { /INPUT DISK:<CD/DVD drive letter:> |
                /INPUT IMAGE:<ImageFile.iso> |
                /INPUT PATH: < Directory with CD/DVD files> }
              [ /WIM INDEX:<Number> ]
              [ /NO ACCESS TO FIXED DISKS ]
              [ /WIN11 ALLOW WITHOUT ONLINE ACCOUNT ]
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT DISK:<USB drive letter:> |
                /OUTPUT PHYSICAL DISK:<Number> }
              [ /RESERVE:<Size of unallocated space at the end of disk> ]
       Install full-featured Windows 8.x/10/11 to USB thumbdrive or USB HDD
       (from DVD, for BIOS-based computers).
       Former name of this scenario: InstallWindows8or10ToUSB_FromDVD_BiosMode.
   fb-cli.exe /SCENARIO:InstallWindows8or1XToUSB FromDVD UefiMode
              { /INPUT DISK:<CD/DVD drive letter:> |
                /INPUT IMAGE:<ImageFile.iso> |
                /INPUT PATH: < Directory with CD/DVD files> }
              [ /WIM INDEX:<Number> ]
              [ /NO ACCESS TO FIXED DISKS ]
              [ /WIN11 ALLOW WITHOUT ONLINE ACCOUNT ]
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT DISK: < USB drive letter:> |
               /OUTPUT PHYSICAL DISK:<Number> }
              [ /RESERVE:<Size of unallocated space at the end of disk> ]
       Install full-featured Windows 8.x/10/11 to USB thumbdrive or USB HDD
       (from DVD, for UEFI-based computers).
       Former name of this scenario: InstallWindows8or10ToUSB FromDVD UefiMode.
   fb-cli.exe /SCENARIO:InstallWindows8or1XToUSB FromESD BiosMode
              /INPUT ESD IMAGE:<ImageFile.esd>
              [ /WIM INDEX:<Number> ]
              [ /NO ACCESS TO FIXED DISKS ]
              [ /WIN11 ALLOW WITHOUT ONLINE ACCOUNT ]
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT DISK:<USB drive letter:> |
                /OUTPUT PHYSICAL DISK:<Number> }
              [ /RESERVE:<Size of unallocated space at the end of disk> ]
       Install full-featured Windows 8.x/10/11 to USB thumbdrive or USB HDD
       (from ESD, for BIOS-based computers).
       Former name of this scenario: InstallWindows8or10ToUSB FromESD BiosMode.
```

```
fb-cli.exe /SCENARIO:InstallWindows8or1XToUSB FromESD UefiMode
              /INPUT ESD IMAGE:<ImageFile.esd>
              [ /WIM INDEX:<Number> ]
              [ /NO_ACCESS_TO_FIXED_DISKS ]
              [ /WIN11 ALLOW WITHOUT ONLINE ACCOUNT ]
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT DISK:<USB drive letter:> |
                /OUTPUT PHYSICAL DISK:<Number> }
              [ /RESERVE:<Size of unallocated space at the end of disk> ]
       Install full-featured Windows 8.x/10/11 to USB thumbdrive or USB HDD
       (from ESD, for UEFI-based computers).
       Former name of this scenario: InstallWindows8or10ToUSB FromESD UefiMode.
   fb-cli.exe /SCENARIO:PrepareWinVista78or1XInstallerOnUSB FromDVD BiosMode
              { /INPUT DISK:<CD/DVD drive letter:> |
                /INPUT IMAGE:<ImageFile.iso> |
                /INPUT PATH:<Directory with CD/DVD files> }
              { /FS:FAT32 | /FS:NTFS }
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT_DISK:<USB drive letter:> |
                /OUTPUT_PHYSICAL_DISK:<Number> }
              [ /RESERVE: <Size of unallocated space at the end of disk> ]
              [ /ADD USB3 DRIVERS ]
              [ /ADD NVME DRIVERS ]
              [ /ADD_AHCI_RAID_DRIVERS ]
              [ /ADD DRIVERS:<Directory> [ /ADD_DRIVERS:<Directory> [ ... ] ]
              [ /WIN11 BYPASS TPM CHECK ]
              [ /WIN11 BYPASS RAM CHECK ]
              [ /WIN11 BYPASS SECURE BOOT CHECK ]
              [ /WIN11 ALLOW WITHOUT ONLINE ACCOUNT ]
       Prepare Microsoft Windows Vista/7/8.x/10/11 installer on USB thumbdrive or
USB HDD
       (from DVD, for BIOS-based computers) with optional driver integration.
       Former name of this scenario:
PrepareWinVista78or10InstallerOnUSB FromDVD BiosMode.
   fb-cli.exe /SCENARIO:PrepareWinVista78or1XInstallerOnUSB FromDVD UefiMode
              { /INPUT DISK:<CD/DVD drive letter:> |
                /INPUT_IMAGE:<ImageFile.iso> |
                /INPUT PATH: < Directory with CD/DVD files> }
              [ /VOLUME_LABEL:<String> ]
              { /OUTPUT DISK:<USB drive letter:> |
                /OUTPUT PHYSICAL_DISK:<Number> }
              [ /RESERVE: <Size of unallocated space at the end of disk> ]
              [ /ADD USB3 DRIVERS ]
              [ /ADD NVME DRIVERS ]
              [ /ADD AHCI RAID DRIVERS ]
              [ /ADD DRIVERS:<Directory> [ /ADD DRIVERS:<Directory> [ ... ] ] ]
              [ /PATCH WIN7 UEFILDR TO AVOID VGA IO ]
              [ /WIN11 BYPASS TPM CHECK ]
              [ /WIN11 BYPASS RAM CHECK ]
              [ /WIN11 BYPASS SECURE BOOT CHECK ]
              [ /WIN11 ALLOW WITHOUT ONLINE ACCOUNT ]
       Prepare Microsoft Windows Vista/7/8.x/10/11 installer on USB thumbdrive or
USB HDD
       (from DVD, for UEFI-based computers) with optional driver integration.
       Former name of this scenario:
PrepareWinVista78or10InstallerOnUSB FromDVD UefiMode.
   fb-cli.exe /SCENARIO:PrepareWinVista78or1XInstallerOnUSB FromESD BiosMode
              /INPUT ESD IMAGE:<ImageFile.esd>
```

{ /FS:FAT32 | /FS:NTFS } [/VOLUME LABEL:<String>] { /OUTPUT_DISK:<USB drive letter:> | /OUTPUT PHYSICAL DISK:<Number> } [/RESERVE:<Size of unallocated space at the end of disk>] [/ADD USB3 DRIVERS] [/ADD NVME DRIVERS] [/ADD AHCI RAID DRIVERS] [/ADD DRIVERS:<Directory> [/ADD DRIVERS:<Directory> [...]]] [/WIN11 BYPASS TPM CHECK] [/WIN11 BYPASS RAM CHECK] [/WIN11 BYPASS SECURE BOOT CHECK] [/WIN11 ALLOW WITHOUT ONLINE ACCOUNT] Prepare Microsoft Windows Vista/7/8.x/10/11 installer on USB thumbdrive or USB HDD (from ESD, for BIOS-based computers) with optional driver integration. Former name of this scenario: PrepareWinVista78or10InstallerOnUSB FromESD BiosMode. fb-cli.exe /SCENARIO:PrepareWinVista78or1XInstallerOnUSB FromESD UefiMode /INPUT ESD IMAGE:<ImageFile.esd> [/VOLUME LABEL:<String>] { /OUTPUT DISK:<USB drive letter:> | /OUTPUT PHYSICAL DISK:<Number> } [/RESERVE:<Size of unallocated space at the end of disk>] [/ADD USB3 DRIVERS] [/ADD NVME DRIVERS] [/ADD AHCI RAID DRIVERS] [/ADD DRIVERS:<Directory> [/ADD DRIVERS:<Directory> [...]]] [/PATCH WIN7 UEFILDR TO AVOID VGA IO] [/WIN11 BYPASS TPM CHECK] [/WIN11_BYPASS_RAM_CHECK] [/WIN11_BYPASS_SECURE_BOOT_CHECK] [/WIN11 ALLOW_WITHOUT_ONLINE_ACCOUNT] Prepare Microsoft Windows Vista/7/8.x/10/11 installer on USB thumbdrive or USB HDD (from ESD, for UEFI-based computers) with optional driver integration. Former name of this scenario: PrepareWinVista78or10InstallerOnUSB FromESD UefiMode. fb-cli.exe /SCENARIO:PrepareWinXpInstallerOnUSB FromCD { /INPUT DISK:<CD/DVD drive letter:> | /INPUT IMAGE:<ImageFile.iso> | /INPUT PATH: < Directory with CD/DVD files> } [/FSTYPE:<Filesystem type>] [/GEOMETRY:<Geometry options>] [/VOLUME LABEL:<String>] { /OUTPUT DISK:<USB drive letter:> | /OUTPUT PHYSICAL DISK:<Number> } [/RESERVE:<Size of unallocated space at the end of disk>] Prepare Microsoft Windows XP installer on USB thumbdrive or USB HDD (from CD) fb-cli.exe /SCENARIO:CreateBootableClone BiosMode [{ /WITH COMPRESSION | /WITHOUT COMPRESSION }] [/EXCLUDE:<FileOrDirectory> [/EXCLUDE:<FileOrDirectory> [...]]] [/NO ACCESS TO FIXED DISKS] [/VOLUME LABEL:<String>] { /OUTPUT DISK: < USB drive letter:> | /OUTPUT_PHYSICAL_DISK:<Number> } [/RESERVE:<Size of unallocated space at the end of disk>] Create bootable clone of this OS (Windows 8.x/10/11) for BIOS-based

```
computers.
       By default, bootable clone is created without compression.
   fb-cli.exe /SCENARIO:CreateBootableClone UefiMode
              [ { /WITH COMPRESSION | /WITHOUT COMPRESSION } ]
              [ /EXCLUDE:<FileOrDirectory> [ /EXCLUDE:<FileOrDirectory> [ ... ] ] ]
              [ /NO ACCESS TO FIXED DISKS ]
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT DISK: < USB drive letter:> |
                /OUTPUT PHYSICAL_DISK:<Number> }
              [ /RESERVE:<Size of unallocated space at the end of disk> ]
      Create bootable clone of this OS (Windows 8.x/10/11) for UEFI-based
computers.
       By default, bootable clone is created without compression.
   fb-cli.exe /SCENARIO:CreateInstallableClone BiosMode
              [ /EXCLUDE:<FileOrDirectory> [ /EXCLUDE:<FileOrDirectory> [ ... ] ]
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT DISK:<USB drive letter:> |
               /OUTPUT PHYSICAL DISK:<Number> }
              [ /RESERVE:<Size of unallocated space at the end of disk> ]
              [ /ADD_USB3_DRIVERS ]
              [ /ADD_NVME_DRIVERS ]
              [ /ADD AHCI RAID DRIVERS ]
              [ /ADD DRIVERS:<Directory> [ /ADD DRIVERS:<Directory> [ ... ] ] ]
       Create installable clone of this OS (Windows 7/8.x/10/11)
       for BIOS-based computers, with optional driver integration
   fb-cli.exe /SCENARIO:CreateInstallableClone UefiMode
              [ /EXCLUDE:<FileOrDirectory> [ /EXCLUDE:<FileOrDirectory> [ ... ] ] ]
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT DISK:<USB drive letter:> |
               /OUTPUT PHYSICAL DISK:<Number> }
              [ /RESERVE: <Size of unallocated space at the end of disk> ]
              [ /ADD USB3 DRIVERS ]
              [ /ADD NVME DRIVERS ]
              [ /ADD_AHCI_RAID_DRIVERS ]
              [ /ADD DRIVERS:<Directory> [ /ADD DRIVERS:<Directory> [ ... ] ] ]
              [ /PATCH WIN7 UEFILDR TO AVOID VGA IO ]
       Create installable clone of this OS (Windows 7/8.x/10/11)
       for UEFI-based computers, with optional driver integration
   fb-cli.exe /SCENARIO:ConvertBartPE FromCDtoUSB
              { /INPUT_DISK:<CD/DVD drive letter:> |
                /INPUT_IMAGE:<ImageFile.iso> |
                /INPUT PATH: < Directory with CD/DVD files> }
              [ /FSTYPE:<Filesystem type> ]
              [ /GEOMETRY:<Geometry options> ]
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT DISK: < USB drive letter:> |
                /OUTPUT PHYSICAL DISK:<Number> }
              [ /RESERVE:<Size of unallocated space at the end of disk> ]
       Convert BartPE (mini version of Windows XP) from CD to bootable USB
thumbdrive or USB HDD
   fb-cli.exe /SCENARIO:BuiltinMiniDos
              { /MAPTO:C: | /MAPTO:A: }
              [ /FSTYPE:<Filesystem type> ]
              [ /GEOMETRY:<Geometry options> ]
              [ /VOLUME LABEL:<String> ]
              { /OUTPUT_DISK:<USB drive letter:> |
                /OUTPUT PHYSICAL DISK:<Number> }
```

[/RESERVE:<Size of unallocated space at the end of disk>] Make minimal DOS-based bootable USB thumbdrive with Volkov Commander. Perform necessary A:/C: substitution in \CONFIG.SYS and *.BAT files. fb-cli.exe /SCENARIO:BuiltinUefiShell [/VOLUME LABEL:<String>] { /OUTPUT DISK:<USB drive letter:> | /OUTPUT PHYSICAL DISK:<Number> } [/RESERVE:<Size of unallocated space at the end of disk>] Format USB thumbdrive in the UEFI mode and install builtin UEFI shell to it. fb-cli.exe /SCENARIO:SaveRawImage { /INPUT DISK: < USB drive letter:> | /INPUT PHYSICAL DISK:<Number> } /OUTPUT IMAGE:<UsbImageFile.img> Save USB storage device to image file fb-cli.exe /SCENARIO:RestoreRawImage /INPUT IMAGE:<UsbImageFile.img> { /OUTPUT DISK:<USB drive letter:> | /OUTPUT PHYSICAL DISK:<Number> } Restore image file to USB storage device fb-cli.exe /SCENARIO:DuplicateUsbToUsb { /INPUT DISK:<USB drive letter:> | /INPUT PHYSICAL DISK:<Number> } { /OUTPUT DISK: < USB drive letter:> | /OUTPUT PHYSICAL DISK:<Number> } Copy one USB storage device to another USB storage device fb-cli.exe /SCENARIO:Wipe { /LAYOUT:PARTITIONED | /LAYOUT:SUPERFLOPPY } [/FSTYPE:<Filesystem type>] [/VOLUME_LABEL:<String>]
{ /OUTPUT_DISK:<USB drive letter:> |
 /OUTPUT_PHYSICAL_DISK:<Number> } Wipe (securely erase) all files and free space on USB storage device, then create empty nonbootable filesystem fb-cli.exe /SCENARIO:QuickFormat { /LAYOUT:PARTITIONED | /LAYOUT:SUPERFLOPPY } [/FSTYPE:<Filesystem type>] [/VOLUME LABEL:<String>] { /OUTPUT DISK:<USB drive letter:> | /OUTPUT PHYSICAL DISK:<Number> } [/RESERVE:<Size of unallocated space at the end of disk>] Create empty nonbootable filesystem on USB storage device fb-cli.exe /SCENARIO:FatSFX /INPUT PATH:<Directory> [/ALLOWED CLUSTER SIZES:<Comma-separated list of numbers>] [/ALLOW FAT32 [/OVERRIDE FAT32 BOOTCODE:<File name with FAT32 boot sector>]] [/ALLOW_FAT16 [/OVERRIDE_FAT16_BOOTCODE:<File name with FAT16 boot sector>]] [/ALLOW FAT12 [/OVERRIDE FAT12 BOOTCODE:<File name with FAT12 boot sector>]] [/OVERRIDE MBR BOOTCODE:<File name with MBR boot code>] [/RUN AFTER EXTRACTION: < Command to run after extraction>] [/CUSTOMIZE ICON:<CustomIcon.ico>] [/CUSTOMIZE TITLE:<String>] [/CUSTOMIZE_TEXT:<String> [/CUSTOMIZE_TEXT:<String> [...]]]

```
[ /VOLUME LABEL:<String> ]
              /OUTPUT EXE:<Filename.exe>
       Generate self-extracting EXE (USB formatter) with embedded FAT filesystem
   fb-cli.exe /SCENARIO:NtfsSFX
              /INPUT PATH:<Directory>
              [ /OVERRIDE VOLUME BOOTCODE:<File name with volume boot sector> ]
              [ /OVERRIDE MBR BOOTCODE: <File name with MBR boot code> ]
              [ /RUN AFTER EXTRACTION: < Command to run after extraction> ]
              [ /CUSTOMIZE ICON:<CustomIcon.ico> ]
              [ /CUSTOMIZE TITLE:<String> ]
              [ /CUSTOMIZE TEXT:<String> [ /CUSTOMIZE TEXT:<String> [ ... ] ] ]
              [ /VOLUME LABEL:<String> ]
              /OUTPUT EXE:<Filename.exe>
       Generate self-extracting EXE (USB formatter) with embedded NTFS filesystem
   fb-cli.exe /SCENARIO:RawSFX
              /INPUT IMAGE:<UsbImageFile.img>
              [ /RUN AFTER EXTRACTION:<Command to run after extraction> ]
              [ /CUSTOMIZE_ICON:<CustomIcon.ico> ]
              [ /CUSTOMIZE_TITLE:<String> ]
              [ /CUSTOMIZE_TEXT:<String> [ /CUSTOMIZE_TEXT:<String> [ ... ] ] ]
              /OUTPUT EXE:<Filename.exe>
       Generate self-extracting EXE (USB formatter) with embedded raw image
About notation:
   [ X ] denotes optional parameter
   { X | Y | Z } denotes mutually exclusive choice
   < X > denotes something to be filled in by user, not entered literally
<Filesystem type> explained in examples:
   auto
                                 Automatically choose between FAT12, FAT16 and
FAT32 with default cluster sizes
   fat16
                                 Allow FAT16 only
   fat16(1024)
                                 Allow FAT16 only with cluster size of 1K,
                                 disallow other cluster sizes, FAT12 and FAT32
   fat16(1024,2048)
                                 Allow FAT16 only with cluster size of 1K or 2K,
                                 disallow other cluster sizes, FAT12 and FAT32
   fat16(1024,2048),fat32(4096) Allow FAT16 with cluster size 1K or 2K, or FAT32
with cluster size 4K.
                                 Disallow all other cluster sizes and FAT12.
   fat12(512), fat32(4096,8192) Allow FAT12 with cluster size 512, or FAT32 with
cluster size 4K or 8K.
                                 Disallow all other cluster sizes and FAT16.
<Geometry options> explained in examples:
   auto
                                 Use default geometry (255 heads, 63 sectors per
track)
   h:255,s:63
                                 Same as above
  h:127,s:32
                                 127 heads, 32 sectors per track
   s:32
                                 Override sectors per track (255 heads, 32 sectors
per track)
   h:127
                                 Override heads (127 heads, 63 sectors per track)
Minimum value for sectors per track is 15 for fat32 formatted disks and 11 for
fat12/fat16 formatted disks.
Maximum value for sectors per track is 63.
Head count value must be between 2 and 255.
Cylinder count is detected automatically by FlashBoot.
```

6.3 Upgrading from FlashBoot 2.x/1.x

We provide free lifetime upgrades for all users of FlashBoot, since 2005.

If you have ordered FlashBoot 2.3b or later version, you can upgrade to FlashBoot 3.x Pro simply by redownloading FlashBoot installer from order result URL. This is permanent private URL always pointing to latest version of FlashBoot Pro, corresponding to your order. For you convenience, this URL is also displayed on the "More Info..." screen of first page of FlashBoot wizard.

If you have ordered FlashBoot 2.0-2.3a or 1.x, then you can download and install FlashBoot 3.x Free from https://www.prime-expert.com/flashboot/, and then convert it to FlashBoot 3.x Pro by adding your license key file **license_key.xml** or **flashboot_license_key.xml** to installation folder (usually "C: \Program Files\FlashBoot") or to My Documents folder. This license key was delivered as e-mail attachment after your order. This applies both to installable version and to portable version.

6.4 Compatibility with older computers

Ideally, all computers should support LBA interface for accessing boot USB storage devices, present bootable USB thumbdrive as first storage device, and provide full access to all its data, without remapping and shifting sectors in firmware.

But unfortunately, many real world BIOSes, especially on older computers, have bugs and quirks in implementation of this interface for USB boot devices. For specific formatting scenarios (related to Windows XP and DOS), when compatibility with older computers really matters, FlashBoot goes great length to take care of these issues by installing special stage1 and stage2 loaders.

Sometimes disk CHS geometry is different from BIOS to BIOS. E.g., when formatted on the workstation, the USB disk sometimes is not bootable on the embedded hardware because of different CHS geometry on Windows and under embedded BIOS.	FlashBoot allows to specify disk CHS geometry explicitly at format time, and stage2 loader will force it to predefined values at run time.			
Some BIOSes cut off MBR track from USB disk when booting (especially for A:-mapped boots). E.g., they map only partition 1 of USB disk via int 13h.	FlashBoot stage2 loader emulates MBR track in such cases, thus hiding firmware diversity and avoiding OS confusion when it switches to native hardware drivers to access USB disk.			
Some BIOSes provide int 13h extended API for USB disks, some do not. Some BIOSes do not provide these services in USB-ZIP mode, but provide ones in USB-HDD mode.	To unify runtime environment, FlashBoot stage2 loader always provides LBA and CHS disk access to USB device it boots from.			
When BIOS boots from ordinary, non-FlashBoot formatted USB disk, this disk is mapped to A: or C: at BIOS discretion, quite randomly. In the majority of real world cases USB-ZIP formatted disks are mapped to A: and USB-HDD disks are mapped to C:.	All this diversity is no more a problem for FlashBoot user. When formatting USB disk, you'll be able to specify target drive letter, e.g. A: or C:, and stage2 loader of FlashBoot will take care of this problem at run time.			
But there are some exceptions.				
For example, ASUS P5GDC-V BIOS in Auto				

mode maps 0-512Mb USB disks to A: and 512+ Mb disks to C:.

ASUS P6T BIOS in Auto mode maps 0-1024Mb USB disks to A: and 1024+ Mb disks to C:.

ASUS netbooks show similar behavior, but unfortunately there is no setting in their BIOS setups to override such "Auto mode" when choice between A: / C: is made by BIOS depending on disk size

At boot time, stage1 and stage2 loaders execute the following algorithm:

1) Stage1 loader loads stage2 loader via CHS or LBA interface in slow (single-sector transfer) mode and verifies its checksum. If something does wrong at this step, then the following error message is displayed:

Boot from USB disk failed, status <00000000>. Press Ctrl+Alt+Del to reboot.

Each status digit corresponds to certain BIOS disk.

DL

Meaning of each status digit:

0	No single sector of stage2 load	er was read from disk, neither i	n CHS nor in LBA mode

- 1 Should not happen (internal error in stage1 loader)
- 2 Some sectors of stage2 loader were read from disk in LBA mode, but not all. No single sector could be read from disk in CHS mode.
- 3 All sectors of stage2 loader were read from disk in LBA mode, but checksum or signature does not mach the expected one.
- 4 Some sectors of stage2 loader were read from disk in CHS mode, but not all. No single sector could be read from disk in LBA mode.
- 5 All sectors of stage2 loader were read from disk in CHS mode, but checksum or signature does not mach the expected one.
- 6 Some sectors of stage2 loader were read from disk in LBA mode, but not all. Some sectors of stage2 loader were read from disk in CHS mode, but not all.
- 7 Some sectors of stage2 loader were read from disk in LBA mode, some other sectors of stage2 loader were read from disk in CHS mode, but checksum or signature does not mach the expected one.

2) FlashBoot stage2 loader tries to read first 128 sectors of the File Allocation Table via CHS and LBA

interfaces. If either fails, stage2 loader switches to single-sector transfer mode and retries. If that interface fails again, stage2 loader prints "LBA not available" or "CHS not available". If LBA was unavailable in stage1, it is not tried here again, then only CHS is tried.

3) If both interfaces have failed, stage2 loader prints "Press Ctrl+Alt+Del to reboot" and softly halts machine.

4) Once FAT#1 and FAT#2 is loaded into the memory via CHS and/or LBA, stage2 loader compares FAT#1 versus FAT#2 to verify each BIOS interface. If FAT#1 does not match FAT#2 for LBA-originated data, stage2 loader prints "FAT#1 != FAT#2 for LBA on this BIOS". If FAT#1 does not match FAT#2 for CHS-originated data, FlashBoot prints "FAT#1 != FAT#2 for CHS on this BIOS".

5) If both interfaces have failed, stage2 loader prints "Press Ctrl+Alt+Del to reboot" and softly halts machine.

6) stage2 loader chooses LBA if available, otherwise it falls back to CHS. Then it prints either "LBA mode" or "CHS mode". If single-sector transfer mode is active, it adds " (slow)".

7) If BIOS hides MBR track, then stage2 loader prints the following message: BIOS hides MBR track of USB boot disk (emulating)

6.5 Compatibility with Windows XP and Vista

FlashBoot is fully functional under Windows XP and Windows Vista. FlashBoot does not mount registry hives, FAT filesystems, WIM and VHD images via Windows kernel. These features are implemented inside FlashBoot, without invocation of platform-specific tools.

If you run FlashBoot under Windows XP, formatting in UEFI mode will still work, but because resulting USB thumbdrive will have GPT layout (instead of usual MBR layout), you won't be able to view list of files on the resulting USB thumbdrive in Windows XP File Explorer. Under Windows Vista/7/8.x/10/11 resulting USB thumbdrive will be perfectly viewable. FlashBoot will still recognize USB thumbdrive with GPT layout even in Windows XP if you need to reformat it.