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Install new image on storage device CB2, CB3 and e-Series

Original instructions (EN) Version: 0.0.2

Robot: UR3, UR5 and UR10 UR3e, UR5e, UR10e



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Contents

1. General information	.4
1.1 Purpose	.4
1.2 Company details	. 5
1.3 Disclaimer	. 5
2. Files to download	.6
2.1 Program to create a bootable storage device	.6
2.2 PolyScope image	.6
3. Installing PolyScope image	.7
3.1 Cation before proceeding	.7
3.2 Installation	.8

1. General information

1.1 Purpose

The purpose of these articles is to help Universal Robots (UR) users and integrators to safely perform service-related operations and troubleshooting.

Universal Robots industrial robots are designed using high quality components to ensure a long lifetime. However, improper use of a robot or robot parts can potentially cause failures. If, for example, the robot is overloaded, dropped during relocation, damaged by collision, or any other improper usage, the warranty will be void.

Universal Robots recommends the user does not attempt repair, adjustment, or make other interventions in the mechanical or electrical systems of the robot without first consulting an UR certified service engineer. Any unauthorized intervention voids the warranty. Service-related operations and troubleshooting should only be performed by qualified personnel.

Before performing service-related operations, stop the robot program and disconnect the main power to any potentially dangerous tool on the robot or in the surroundings.

In the event of a defect, Universal Robots recommends ordering new parts from the Universal Robot distributor where the robot was originally purchased. Alternatively, parts can be ordered from the nearest distributor, details of which can be obtained from Universal Robots official website at <u>www.universal-robots.com</u>

1.2 Company details

Universal Robots A/S Energivej 25 DK-5260 Odense Denmark Tel.: +45 89 93 89 89 Fax: +45 38 79 89 89

1.3 Disclaimer

Universal Robots continues to improve reliability and performance of its products, and therefore reserves the right to upgrade the product without prior warning. Universal Robots takes every care that the contents of this manual are precise and correct, but takes no responsibility for any errors or missing information.

2. Files to download

In this first section, we are going to cover where to download the different files and how to install PolyScope on a storage device.

2.1 Program to create a bootable storage device

In this example are we using a program called Rufus, to create our storage device with PolyScope installed. Other programs can be used as well.

Rufus is a fast, small program that helps format and create bootable devices.

Download link for Rufus - https://rufus.ie/

Follow instructions on website, on how to install Rufus.

Rufus is a third-party software and not associated with Universal Robots A/S

Universal Robot take no responsibility for this software.

2.2 PolyScope image

To download PolyScope, go to <u>https://www.universal-robots.com/support/</u> and under the section download, select your robot type, chose software, robot image software and then select your control box type.

We recommend always to download the latest version of PolyScope.

If you have a CF card chose 2.0 for CB2 and CB3.0 for CB3.

If you have a USB chose 2.1 for CB2.1 and CB3.1 for CB3.

For e-Series SD-card is the only option.

3. Installing PolyScope image

3.1 Cation before proceeding

When installing a fresh image of PolyScope, all data on your storage device will be deleted.

If necessarily make a backup of all wanted data before proceeding. See Service Manuals software section for more information on how backup and upload files.

If the storage device has already been used, it MUST be formatted first. Note: e-Series SD card is divided into 4 partitions.

CB2/CB3 recommend data to backup: programs - folder .urcontrol – folder /enable hidden folders flightreports folder - if not present just ignore (CB3 only) .urpass.file - if not present just ignore .ursafetypass.file - if not present just ignore (CB3 only) histogram.propeties log_history.txt ur-serial

e-Series recommend data to backup:

programs folder .urcontrol folder /enable hidden folders flightreports folder - if not present just ignore .urpass.file - if not present just ignore .ursafetypass.file - if not present just ignore histogram.propeties Log_history.txt ur-serial First insert your storage device in your computer. If your device already contains a version of PolyScope and you haven't installed a program to access an EXT2/3/4 file system, your computer will recognize that a device has been connected/mounted, but it won't be accessible.

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Note that some programs which can be used to access an EXT2/3/4 file system, can conflict with Rufus, if both programs are using the device at the same time.



Open Rufus by clicking on the icon.

Rufus 3.4.1430	- 2	Device NO_LABEL (I:) [2.1GB]	- Contraction
Drive Properties Device NO_LABEL (I:) [2.1GB] Boot selection Disk or ISO image (Please select) Partition scheme	▼ ⊘ SELECT Target system	4	
MBR Show advanced drive properties Format Options Volume label 2.1GB	BIOS (or UEFI-CSM) v ?	SELECT	
File system	Cluster size		
FAT (Default)	32 kilobytes (Default)		
Show advanced format options			
Status			
REA	ADY		
§ (i) ≵ ⊞	START CLOSE		
1 device found			

When Rufus is started up, it should look like the picture above.

If you look at the first line under device, you can choose which device you want to use. In this example, our device been mounted as drive: I.

After you have chosen your storage device, go to the next section "boot selection" and press on the **SELECT** button to the right.



Organize 👻 New fold	er					
★ Favorites	Name	Date modified	Туре	Size		
E Desktop	Gontroller_CF-CB3.0-3.8.0.61336	22-11-2018 15:02	Disc Image File	2.000.880 KB		
🐌 Downloads	G Controller_USB-CB3.1-3.8.0.61336	22-11-2018 15:08	Disc Image File	2.011.136 KB		
E Recent Places	4	i				
Th.						
🗉 Control	ler USB-CB3.1-3.8.0).61336				
Control	ler_USB-CB3.1-3.8.0).61336				
U Control	ler_USB-CB3.1-3.8.0).61336				
	ler_USB-CB3.1-3.8.0).61336				
Videos	ler_USB-CB3.1-3.8.0).61336				
Videos Computer Computer	ler_USB-CB3.1-3.8.0).61336				
Videos Computer SOSDisk (C:)	ler_USB-CB3.1-3.8.0).61336		_6		
Control	ler_USB-CB3.1-3.8.0).61336		_6		
Control	ler_USB-CB3.1-3.8.0).61336		6		
Videos Videos Computer Computer OSDisk (C:)	ler_USB-CB3.1-3.8.0).61336	Open	6		
Control Videos Computer Computer OSDisk (C:)	ler_USB-CB3.1-3.8.0).61336	Open fr	6		

Now locate the folder where you have saved your PolyScope image (that you downloaded before) and open it.

In this example we are using a USB pen and therefor the image is for CB3.1.

🔗 Rufus 3.4.1430		
Drive Properties —		
Device		
NO_LABEL (I:) [2.1GB]	•	
Boot selection		
Controller_USB-CB3.1-3.8.0.61336.img	▼ ⊘ SELECT	
Partition scheme	Target system	
MBR 👻	BIOS (or UEFI-CSM)	
▽ Show advanced drive properties		
Format Options		
Format Options —		
Volume label		
Cite surface	Chuster size	
FAT (Default)	32 kilobytes (Default)	
	Sz kilobytes (beladit)	
Show advanced format options		
Status —	S'	TART
PEAD		- <u>-</u>
ILAD		
Ø û ≄ ■	START	
Using image: Controller_USB-CB3.1-3.8.0	.61336.img	

After you have opened the file, press the **START** button in bottom.



A warning will pop up and ask if you're that you want to proceed. Press OK.

Note: e-Series SD card is divided into 4 partitions, you will be warned that all partitions will be deleted, press **OK**.

Sta	atus	—			
			Writi	ing image: 7.6% completed	
\$	(j)	₽¢		START	CANCEL
Using	Using image: Controller_USB-CB3.1-3.8.0.61336.img 00:00:10				

Rufus will then start writing the image, to the USB.

Status —	
	READY
S) (i) 🛱 🗐	START CLOSE
1 device found	00:01:51

When the entire status bar is green and says ready, you can close the program and remove your storage device.

You should now have a fully functional version of PolyScope installed on your storage device.