PROPRIETARY INFORMATION



Orbit Reader 20^{тм} Bootloader Upgrade Utility User Guide

31st May 2019 Version 1.0

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1 Introduction

The Orbit Reader 20 includes a mechanism to allow upgrading the system's software. This is known as the bootloader. In some instances, the bootloader itself may need to be upgraded. This document describes the procedure for upgrading the bootloader.

The upgrade of the bootloader is performed by a Windows program known as the Bootloader Upgrade Utility. This program can work with Windows 8 and later versions.

This manual will first guide you through the installation of the Windows program, and then guide you through the bootloader upgrade process.

Notes:

- 1. This document also includes pictures of the Windows user interface. These are for illustrative purposes only. The actual user interface may vary.
- 2. In this document, software version numbers are indicated by vXX.XX.XX.XXXXX, for instance, vB0.00.00.01b00.

2 Installing the Bootloader Upgrade Utility

- 1. Download the Bootloader Upgrade Package from the website (<u>https://www.orbitresearch.com/support/orbit-reader-20-bootloader-upgrade-package</u>).
- Run the program "OR-20 Bootloader Upgrade Package Setup vXX.XX.XX.XXXXX.exe" to install the bootloader upgrade program.
- 3. Program installation asks for administrative privilege.
- 4. When the installation begins, you will find a checkbox on the first screen to create a desktop shortcut for the program as shown in Figure 1. By default, this checkbox will be checked. Click the "Next" button to start the installation process.



Figure 1

5. Click on the "Install" button to continue with the installation.

🔬 Setup - OR-20 Bootloader Upgrade Utility vB0.00.00.05r02 —	□ ×
Ready to Install	
Setup is now ready to begin installing OR-20 Bootloader Upgrade Utility on your computer.	
Click Install to continue with the installation, or click Back if you want to review o change any settings.	r
Additional tasks:	_
Additional shortcuts:	
Create a desktop shortcut	
	- 1
(Dada Jacoball	Consel
< back Install	Cancel

Figure 2

6. Please wait while Setup installs the program on your computer.

🔬 Setup - OR-20 Bootloader Upgrade Utility vB0.00.00.05r02 🦳 🗌	×
Installing Please wait while Setup installs OR-20 Bootloader Upgrade Utility on your computer.	
Creating shortcuts C:\\OR20 - Bootloader Upgrade Utility\OR-20 Bootloader Upgrade Utility.lnk	
c	ancel

Figure 3

 Click on the "Finish" button to exit the setup. To launch the program after exiting the setup check the checkbox "Launch OR-20 - Bootloader Upgrade Utility". By default, this checkbox will be checked. See Figure 4.



Figure 4

3 Bootloader Upgrade Procedure

- 1. Once the installation is complete, run the "OR-20 Bootloader upgrade utility" from the start menu or using the shortcut created on the desktop by the installer.
- The upgrade process is divided into two steps: Step 1: Prepare the device for upgrading Step 2: Upgrade the bootloader Normally, these two steps will directly follow each other.

3.1 Step 1: Prepare the device for upgrading

1. Connect the OR-20 to the PC using the supplied micro-B USB cable.

Orbit Reader 20 Bootloader Upgrade Utility vB0.00.00.05r02	-		×
Device Status			_
No device connected			
Message : Step 1: Prepare the device for upgrading.			
Connect the device to the PC and press and hold forward button (the lower part of the Right Panning Dot 6 key together. Now, press and release the D keys can be released after this.	the Righ 3 button) ot 8 key.	t Panni and th . The ot	ng e her

Figure 5

- 2. Press and hold the Right Panning forward button (the lower part of the Right Panning button) and the Dot 6 key together.
- 3. Now, press and release the Dot 8 key. The other keys can be released after this.
- 4. The program will now begin preparing the device for upgrade. This might take up to 10 seconds. Figure 6 shows a screenshot of the program at this stage.

Orbit Reader 20 Bootloader Upgrade Utility vB0.00.00.05r02	×
Device Status	
Orbit Reader 20 is connected	
Message : Please wait, preparing a device for upgrade.	

Figure 6

5. When the preparation is complete, the program will show the message "The device is ready for upgrade" as shown in Figure 7.

🧼 Orbit Re	der 20 Bootloader Upgrade Utility vB0.00.00.05r02	-		×
Device Statu	\$			
No device c	onnected			
Message	 The device is ready for upgrade. To upgrade the desteps as suggested below. Step 2: Upgrade the bootloader. Again, press and hold the Right Panning forward b part of the Right Panning button) and the Dot 6 key press and release the Dot 8 key. The other keys catafter this. 	evice, f utton (ti togeth an be re	ollow th he lowe er. Now eleased	r

Figure 7

 If an error is encountered in preparing the device for upgrade, the program will show "Unable to prepare the device for upgrade" as shown in Figure 8. In this case, please repeat Step 1 until the program shows "The device is ready for upgrade".

🧼 Orbit Rea	der 20 Bootloader Upgrade Utility vB0.00.00.05r02 —		×
- Device Statu			
No device or	, annocled		
IND DEVICE C	Innected		
Message	· Upshie to prepare the device for upgrade. Diesce try age	in by	
message	following the steps as suggested below.	iii by	
	Step 1: Prepare the device for upgrading.		
	Connect the device to the PC and press and hold the Rig	ht Panni	ing
	forward button (the lower part of the Right Panning buttor Dot 6 key together, Now, press and release the Dot 8 key	i) and th z. The of	e ther
	keys can be released after this.		

Figure 8

3.2 Step 2: Upgrade the bootloader

- 1. Press and hold the Right Panning forward button (the lower part of the Right Panning button) and the Dot 6 key together
- 2. Now, press and release the Dot 8 key. The other keys can be released after this.
- 3. The program will begin the upgrade process and will take about 30 seconds to complete. Figure 9 shows the screenshot of the program while upgrading the bootloader of the OR-20.

Orbit Reader 20 Bootloader Upgrade Utility vB0.00.00.05r02	-		×
Device Status Orbit Reader 20 is connected			
Message : Upgrading		19	%

Figure 9

4. The windows program shows the message "The device successfully upgraded to bootloader version vXX.XX.XX.XXXXX" after a successful upgrade. See Figure 10.

Ørbit Re	ader 20 Bootloader Upgrade Utility vB0.00.00.05r02 —		×
Device Statu	8		
No device c	onnected		
	,		
Message	The device successfully upgraded to bootloader version	1	
Message	The device successfully upgraded to bootloader versior "vB0.00.00.10r00". To upgrade another device, follow th	e steps a	as
Message	The device successfully upgraded to bootloader versior "vB0.00.00.10r00". To upgrade another device, follow th suggested below. Step 1: Prepare the device for upgrading.	e steps a	as
Message	The device successfully upgraded to bootloader version 'vB0.00.00.10r00''. To upgrade another device, follow th suggested below. Step 1: Prepare the device for upgrading. Connect the device to the PC and press and hold the Rig	n e steps a ght Panni	as ng
Message	The device successfully upgraded to bootloader version 'vB0.00.00.10r00''. To upgrade another device, follow th suggested below. Step 1: Prepare the device for upgrading. Connect the device to the PC and press and hold the Rig forward button (the lower part of the Right Panning button Dot 6 key together. Now, press and release the Dot 8 key	n le steps a ght Panni n) and the	ng ber
Message	The device successfully upgraded to bootloader version 'vB0.00.00.10r00''. To upgrade another device, follow th suggested below. Step 1: Prepare the device for upgrading. Connect the device to the PC and press and hold the Rig forward button (the lower part of the Right Panning button Dot 6 key together. Now, press and release the Dot 8 ke keys can be released after this.	he steps a pht Panni n) and the y. The ot	ng e her
Message	The device successfully upgraded to bootloader version 'vB0.00.00.10r00''. To upgrade another device, follow th suggested below. Step 1: Prepare the device for upgrading. Connect the device to the PC and press and hold the Rig forward button (the lower part of the Right Panning button Dot 6 key together. Now, press and release the Dot 8 ke keys can be released after this.	he steps a pht Panni n) and the y. The ot	ng e her

Figure 10

5. In case of an error, the program will show the message "Failed to upgrade bootloader" as shown in Figure 11. Please repeat Step 2 until you get the successful message.

🧼 Orbit Rea	der 20 Bootloader Upgrade Utility vB0.00.00.05r02 —		×
Device Statu	s		
No device c	onnected		
Message	Failed to upgrade bootloader. Please try again by following steps as suggested below.	the	
	Connect the device to the PC and press and hold the Right I	Pannir	ıg
	forward button (the lower part of the Right Panning button) a Dot 6 key together. Now, press and release the Dot 8 key. T keys can be released after this.	nd the he oth	ier

Figure 11

4 Troubleshooting

- Sometimes the OR-20 may not enter the preparing stage. If that happens, make sure you follow the correct sequence of the keys. Press and hold the Right Panning forward button (the lower part of the Right Panning button) and the Dot 6 key together, without releasing them. Then press and release the Dot 8 key. After releasing the Dot 8, you can release the other keys.
- 2. If the step 1 of the process was already performed successfully earlier, and if you try to repeat the process, it will skip step 1 and directly jump to step 2.
- 3. If you are not sure what stage of the upgrade process you are at, you can always start from the first step. Just reset the OR-20 by pressing the Right Panning forward key and Dot 8. Close and run the PC program again.

Revision History

Rev.	Date	Description of Changes	Author
0.1	1 st May 2019	Created	Orbit
0.2	2 nd May 2019	Updated	Orbit
0.3	16 th May 2019	Updated	Orbit
0.4	20 th May 2019	Added troubleshooting steps	Orbit
0.5	20 th May 2019	Updated	Orbit
0.6	20 th May 2019	Updated	Orbit
0.7	21 st May 2019	Updated	Orbit
0.8	21 st May 2019	Updated	Orbit
0.9	22 nd May 2019	Updated	Orbit
0.10	22 nd May 2019	Updated	Orbit
0.11	23 rd May 2019	Updated	Orbit
0.12	24 th May 2019	Updated	Orbit
0.13	29 th May 2019	Updated	Orbit
0.14	30 th May 2019	Updated	Orbit
0.15	31 st May 2019	Updated	Orbit
1.0	31 st May 2019	Updated	Orbit