	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 1 of 16

DataReader 2



Device Description


The DataReader 2 is a portable handheld serial data communication device to interface with reefer controllers and is equipped with a user-friendly menu, which can be navigated with a keypad, complemented by a 2.4-inch IPS TFT display that remains clearly visible even in bright sunlight.

With the use of an associated compatible communication cable, the DataReader 2 can interface with a reefer controller to extract or upload data, ensuring secure service connectivity.

This device is powered by a single Lithium Polymer battery pack that is designed to be charged through a USB-C power connection. Charging is indicated through a built-in status LED.

The DataReader2 can store downloads and operational software files on its internal memory, that holds up to 32GB storage space, and is directly accessible with a PC through an USB-C cable.


<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 2 of 16

Contents

- Safety Instructions..... 3
- Parts List..... 4
- Device Overview 5
- Basic Operations 6
 - Keypad Button Functionality 6
 - Multi-purpose P7ower Button 6
 - Menu Navigation..... 6
 - Menu Structure..... 6
 - Battery Charging 7
 - Power Save Mode..... 7
 - Automatic Shutdown..... 7
 - Connecting DataReader 2 to PC..... 8
 - Transfer Controller Software to DataReader 2 9
 - Updating DataReader 2 Firmware 10
- Reefer Operations..... 11
 - Data Download 11
 - Cold Treatment..... 11
 - System Config..... 12
 - Set container ID..... 12
 - Sync Date/Time..... 12
 - System Values 13
 - Software Upload..... 13
- Telematics Operations..... 14
 - Default APN..... 14
 - Factory Reset..... 14
 - Software Load 14
- Device Settings..... 15
 - Backlight 15
 - Set Date & Time..... 15
 - Upgrade Firmware..... 16

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 3 of 16

Safety Instructions



The DataReader 2 has a limited protection to water and dust, and must be used in a sheltered environment.

Do not disassemble, damage, or pierce the DataReader 2.

Battery Charge Information

Battery Type : Li-Polymer
Capacity : 2000mAh 3.7V / 7.4Wh
Charge Input : USB-C 5V $\overline{=}$ 1.5A Max

Operational Temperature : 0°C ~ 40°C (Charging)
-20°C ~ 60°C (Discharging)

Charging instructions

Connect the DataReader 2 to a USB-C port, e.g. PC, Laptop, or a certified USB adapter.
Depending on the charging current provided, the charge time may vary.

The charging status can be monitored with the associated red charging status LED at the front of the device.

Charging the DataReader 2 is recommended to be charged in an office environment, with an ambient temperature of 21°C. Charging behaviour may vary depending on the environmental temperature.


Exceeding recommended temperature is prohibited due to risk of damage to the internal battery.

Environmental Protection



To avoid environmental and health problems due to hazardous substances in electrical and electronic goods, appliances marked with this symbol mustn't be disposed of with unsorted municipal waste, but recovered, reused, or recycled. For further information on recycling please contact your local city council.

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

 Carrier TRANSICOLD	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 4 of 16

Parts List

Item	Part Number	Description	Qty
DataReader 2 Package			
1	07-00619-00	DataReader 2 Kit – Includes:	1
2	07-00619-01	DataReader 2	NSS
3	07-00636-00	Cover, Protective	1
4	22-50527-00	Cable, Interrogator Port	1
5	22-50528-00	Cable, RMU Port	1
6	N/A	Casing, Protective	NSS
Optional Cables			
7	22-50529-00	Cable, Interrogator MA	1
8	22-50539-00	Cable, Telematics	1
9	22-50540-00	Cable, Interrogator JST	1
10	22-50541-00	Cable, Interrogator CIM6	1
11	22-50542-00	Cable, Interrogator MP4000	1




It is important to read the instructions before usage.

First use

1. Check kit content.
2. Charge the DataReader 2 internal battery using a USB-C cable.
3. Check for the latest firmware update.
4. Set date & time on DataReader 2.
(see instructions in the ‘device settings’ section)

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

 Carrier TRANSICOLD	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 5 of 16

Device Overview



DATE/TIME

15/05/2025 12:34

BATTERY STATUS

100%

BUTTONS



POWER ON/OFF, BACK, CANCEL



UP



DOWN



ENTER

LEDS




○	Off	Not charging, Idle
●	Solid	Charging in progres...
⊙	Blink	Charge suspended



○	Off	Device off
●	Solid	Task completed
⊙	Blink	Task in progress

Used On: DataReader 2 07-00619-00	Prepared By: CTL Rotterdam	Approved By: Perry Hoover	Date: 05/2026
--------------------------------------	-------------------------------	------------------------------	------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 6 of 16

Basic Operations

DataReader 2 is a portable device powered by a rechargeable LiPo battery. To operate the device there are four buttons to power the device and navigate through the menu.

Keypad Button Functionality

Multi-purpose Power Button

The “POWER” button has multiple functions:

- **Power On** : Press and shortly hold to power the device.
- **Power Off** : From the main menu, press once to power off.
- **Back** : Acts as a “Back” button when navigating submenus.
- **Cancel** : Cancels an active process when the process is allowed to be cancelled.
- **Device Reboot** : Hold the button for **10 seconds** to restart the device.

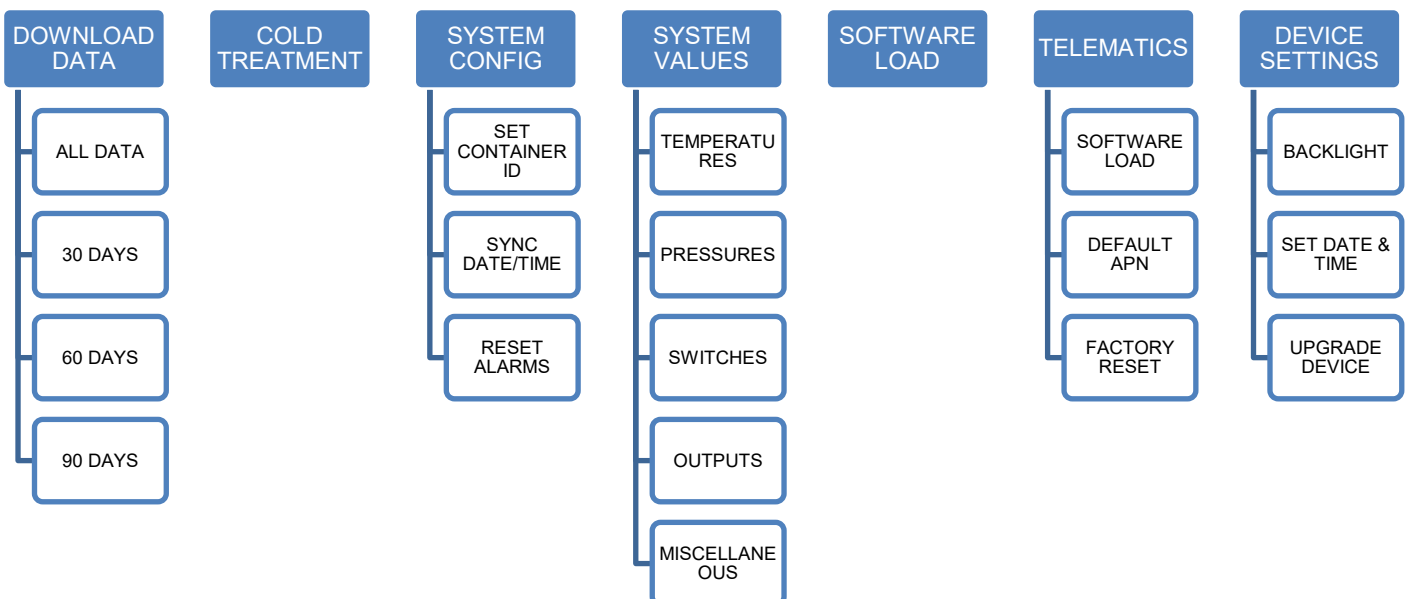
Menu Navigation

Use the “UP” and “DOWN” button to navigate through menu items.


To start a task: Select the desired task using the navigation buttons and press “ENTER” to initiate the task.

Menu Structure

The DataReader 2 maintains a menu structure according to the established connection.



<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 7 of 16

Battery Charging

The DataReader 2 is powered by a rechargeable LiPo battery pack.

Charge the device using the USB-C connector.

Charging behaviour can be monitored through the red charging status LED.

Note: While the device is being charged, the device should not be connected to a unit.

Power Save Mode

When idle or after a task is selected, the DataReader 2 automatically enters Power Save Mode. In this mode the display gradually dims and lastly turns off.

When active, the status LED indicates the current device activity:


- Blinking Green: Task in progress.
- Solid Green : Task completed.

The user can exit Power Save Mode by pressing any button.

Automatic Shutdown

If the DataReader 2 remains inactive for an extended period of time, the device will power off automatically to conserve power.

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

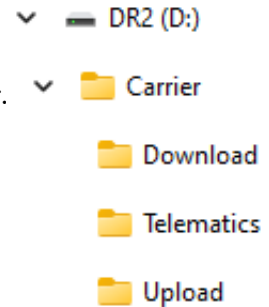
	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 8 of 16

Connecting DataReader 2 to PC

When connected to a PC using a USB-C data cable, the DataReader 2 connects as a USB Mass Storage Device.

Connecting:

1. Connect the DataReader 2 to the PC.
2. DataReader 2 will automatically power on, and a removable drive will appear.
3. The DataReader 2 has the following file structure.



Disconnecting:

1. Use the "Safely Remove Hardware and Eject Media".

Note: Instant unplugging of the device could result in the possibility of a device corruption.

2. Disconnect the USB cable.
3. The DataReader 2 will power off automatically when disconnected.

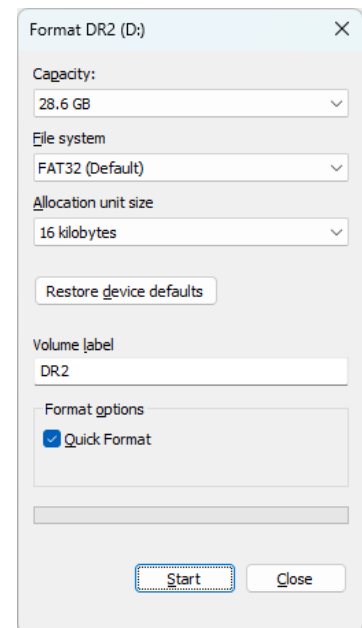
Troubleshooting:

When the removable drive will not show up:


1. Make sure the PC has access to Removable Media.
2. Disconnect the USB cable.
3. Power the DataReader 2 off.
4. Reconnect USB cable. (Device will automatically power on)

When removable drive is not accessible (corrupted drive):

1. Open Windows Explorer.
2. Right click on Removable Disk, and then click on Format.
3. Press 'Start' to format the removable drive. (with FAT32 default settings)
4. After formatting is done, the DataReader 2 should be accessible.



<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 9 of 16

Transfer Controller Software to DataReader 2

Software Downloading to PC

The following software needs to be downloaded to your PC from the Carrier Container website Information Center at <https://www.carrier.com/us/en/cold-chain/container/data-tools/>.

Goto the “ML3 Software” section and download the latest version of software.

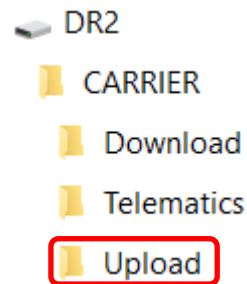
ThinLINE : 51xx
 EliteLINE / PrimeLINE : 53xx
 NaturaLINE : 57xx
 Configuration File : *.cf3

Transfer Software to the DateReader 2

Transfer the software files from the PC to the DataReader 2 within the “Upload” folder:


- Latest Required Configuration File:
 - cfXXXXXX.CF3

- Selectable Software files:
 - scr153XX.ml3
 - recp51XX.ml3
 - co2_57XX.ml3



Note: The folders are normally automatically generated by the DataReader 2. If the folders are not present, create the folders as shown above. (Not case sensitive)

Used On: DataReader 2 07-00619-00	Prepared By: CTL Rotterdam	Approved By: Perry Hoover	Date: 05/2026
--------------------------------------	-------------------------------	------------------------------	------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 10 of 16

Updating DataReader 2 Firmware

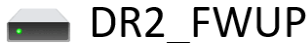
Preparation:

Download latest DataReader 2 firmware (dr2-file) from the Carrier Container website Information Center at <https://www.carrier.com/us/en/cold-chain/container/data-tools/>.

Goto the “DataReader 2 Firmware” section and download the latest version of software.

Perform firmware update:

1. Make sure the DataReader 2 is not connected and powered off.
2. Press and hold the “UP” button while connecting the DataReader 2 to the PC using a USB-C data cable.
3. The DataReader 2 will boot in firmware update mode.
4. Removable drive ‘DR2_FWUP’ will appear.



5. Drag-and-drop or copy the dr2-file to the removable drive root directory.
6. The DataReader 2 will disconnect and install the new firmware.
7. When installation is successful, the device will reboot.
8. DataReader 2 is ready to use when in menu.

To cancel firmware update mode:

1. Disconnect the USB cable.
2. Power down the device using the ON/OFF button. (status LED turns off)

Note: In firmware update mode, the DataReader 2 screen remains blank. Check status LED for activity.

When the DataReader 2 is connected to a PC in firmware update mode, an information file (“info”) is available on the removable drive. This file will provide some additional information.




info



PLACE DR2 FILE
HERE

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 11 of 16

Reefer Operations

To communicate with the reefer, select the correct cable, connect the cable between the DataReader 2 and the reefer equipment, as soon as you power the DataReader 2 it will automatically search and connect to the reefer.

Data Download

Retrieving controller download:

1. Connect DataReader 2 to the interrogator port of the unit.
2. Select “DATA DOWNLOAD” from the DataReader 2 menu.
3. Select download type “ALL”, “90 DAY”, “60 DAY”, or “30 DAY”.
4. Press ‘ENTER’ to start download.
5. While downloading, status is visible via status LED and display.
6. When done, a confirmation screen is shown.
7. Press “ENTER” to return to main menu.

Note: The dcx-file is stored in the “Download” directory.



Retrieving download from DataReader 2:

1. Connect DataReader 2 to PC.
2. Access the “Download” directory as described in the ‘Connecting DataReader 2 to PC’ section.
3. Drag-and-drop or copy the dcx file(s) to PC.


Cold Treatment

Performing Probe Calibration:

1. Connect DataReader 2 to the interrogator port of the unit.
2. Select “COLD TREATMENT” from the DataReader 2 menu.
3. Check probe values to determine if calibration is required.
4. Press “ENTER” to calibrate, if required. Or press “BACK” to return to the main menu.
5. Shows probe results upon completion of calibration.
6. Press “ENTER” to return to main menu.

Note: To review the Cold Treatment procedure, please refer to the ‘Temperature Sensor Service’ section of the related reefer Operations and Service manual.

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 12 of 16

System Config

Set container ID

Setting or modify unit container ID:

1. Connect DataReader 2 to the interrogator port of the unit.
2. Select “SYSTEM CONFIG” – “SET CONTAINER ID” from the DataReader 2 menu.
3. Press “UP” and “DOWN” to adjust field.
4. Press “ENTER” to go to the next field, “BACK” for previous field or to return to main menu.
5. After ID is set, a confirmation screen is shown.
6. Press “ENTER” to return to main menu.

Sync Date/Time

Synchronizes controller date and time with the DataReader 2:

1. Connect DataReader 2 to the interrogator port of the unit.
2. Select “SYSTEM CONFIG” – “SYNC DATE/TIME” from the DataReader 2 menu.
3. Check if controller date and time synchronisation is required.
4. Press “ENTER” to synchronize or “Back” to return to main menu.
5. When done, a confirmation screen is shown.
6. Press “ENTER” to return to main menu.


Reset Alarms

Clears Controller Alarm List:

1. Connect DataReader 2 to the interrogator port of the unit.
2. Select “SYSTEM CONFIG” – “RESET ALARMS” from the DataReader 2 menu.
3. Press “ENTER” to request Alarm List clearance.
4. Returns automatically to main menu.

Note: Alarms must be diagnosed and corrected before the Alarm List can be cleared.

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 13 of 16

System Values

Check system values or status:

1. Connect DataReader 2 to the interrogator port of the unit.
2. Select “SYSTEM VALUES” from the DataReader 2 menu.
3. Select one of the following menu items to check values or status:
 - Temperatures Sensors
 - Pressures Sensors
 - Switches and Protectors
 - Controller Relay Outputs
 - Miscellaneous Sensors
4. Press “BACK” to return to “SYSTEM VALUES” menu.
5. Press “BACK” to return to main menu.

Software Upload

Upload new firmware to the controller.

Preparation:

Download the appropriate ml3 file(s) from the Carrier website and store the file(s) onto the DataReader 2.

See section ‘Transfer Controller Software to DataReader 2’


Performing Upload:

1. Connect the DataReader 2 to the MA port (RMU) of the controller.
2. Select "SOFTWARE LOAD" from the DataReader 2 menu.
3. Choose the desired file to upload.
4. Press ‘ENTER’ to confirm.
5. While uploading, status is visible via status LED and display.
6. When done, confirmation screen is shown.
7. Press “ENTER” to return to main menu.

Note: The controller will reboot after loading.



<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 14 of 16

Telematics Operations

Preparation:

1. Make sure unit is powered off before connecting cable.
2. Connect the telematics device to the DataReader 2 and unit power supply (24VAC) using the telematics serial communication cable.
3. When connected, power the unit.

Performing Operations:

1. Select “TELEMATICS” from the DataReader 2 menu.
2. The DataReader 2 will automatically search and connect to the telematics device.



Note: If no connection is established, DataReader 2 will return to main menu.

3. When connected, select desired operation from “TELEMATICS” menu. (see below)

Default APN

Load default APN settings. Press “ENTER” to start.

Factory Reset

Perform a device Factory Reset. Press “ENTER” to start.

Software Load


Preparation:

1. Download the appropriate bin file(s) from the Carrier website.
2. Connect DataReader 2 to PC.
3. Access the “Telematics” folder as described in “Connecting DataReader 2 to PC”.
4. Drag-and-drop or copy the bin file(s) to the folder.

Performing Upload:

1. Select "TELEMATICS" – “SOFTWARE LOAD” from the DataReader 2 menu.
2. Choose the desired file to upload.
3. When uploading, status is visible via status LED and display.
4. When done, a confirmation screen is shown.
5. Press “ENTER” to return to main menu.

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 15 of 16

Device Settings

Configure DataReader 2 settings.

Backlight

Adjust LCD brightness:

1. Select “DEVICE SETTINGS” from the DataReader 2 menu.
2. Navigate to the “BACKLIGHT” menu item and press “ENTER” to adjust brightness level of the display:
 - Standard factory setting (default)
 - Brightness at 100%
 - Brightness at 75%
 - Brightness at 50%
 - Brightness at 25%
3. Press “BACK” to return to main menu.




Set Date & Time

Change the date and time of the DataReader 2:

1. Select “DEVICE SETTINGS” – “SET DATE & TIME” from the DataReader 2 menu.
2. Press “UP” and “DOWN” to adjust field.
3. Press “ENTER” to go to the next field, “BACK” for previous field or to return to main menu.
4. After date and time is set, press “ENTER” to confirm.
5. When done, a confirmation screen is shown.
6. Press “ENTER” to return to main menu.

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------

	No.: 62-12394	Rev: A
	Date: May 28, 2026	Authorization #:
Title : DataReader 2 User Manual P/N : 07-00619-00	Supersedes:	Page: 16 of 16

Upgrade Device Firmware

Used when the process in section ‘Updating DataReader 2 Firmware’ is unavailable.

USE ONLY WHEN UPGRADING DEVICE!

1. Select “DEVICE SETTINGS” – “UPGRADE DEVICE” from the DataReader 2 menu.
2. Sets the DataReader 2 in Firmware Upgrade mode.
3. Insert a USB-C cable when the status LED is solid green.
4. Proceed upgrading with the dr2-file.

Note: refer to ‘Updating DataReader 2 Firmware’ section.

5. When done, the DataReader 2 will reboot.

To cancel upgrade mode, hold the “ON/OFF” button. (status LED will turn off as DataReader 2 is powered off)

<u>Used On:</u> DataReader 2 07-00619-00	<u>Prepared By:</u> CTL Rotterdam	<u>Approved By:</u> Perry Hoover	<u>Date:</u> 05/2026
---	--------------------------------------	-------------------------------------	-------------------------