



**Desktop Reader NEO2
R-DT-NEO2-xx/yy-USB
LF/HF RFID Device**

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1 Function Description

1.1 Intended Use

This device is intended for operation indoors and in office environments.

1.2 Safety Notes

The device may only be used for the intended purpose designed by the manufacturer. The operation manual should be always kept available for each user.

The liability-prescriptions of the manufacturer in the issue valid at the time of purchase are valid for the device. The manufacturer shall not be held legally responsible for inaccuracies, errors, or omissions in the manual or automatically set parameters for a device or for an incorrect application of a device.

Repairs may be executed by the manufacturer only.

The device is intended for storage and operation in office conditions.

1.3 Operation Modes

When you plug in the device into an USB port, it will connect as VCP and HID Device.

1.3.1 HID Mode

After configuring the device with the HID Configuration Command, the device automatically scans for tags, performs (if configured) other RFID operations and (if configured) converts the data into another form or representation.

When configured to HID operation, the read/write functions cannot be used.

1.3.2 Read/Write Mode

You can freely send commands to any of the RFID electronics and perform read and write operations.

1.3.3 Auto-List Mode (NFC only)

The NFC module in the NEO2 can be configured to automatically read the UID and output this in a telegram frame on the VCP USB connection.

1.3.4 Hardware Settings

There are no hardware settings to be done. All configuration is done using the HID configuration software for the HID function or via binary commands for the NFC module.

1.4 Reference Documents, Communication Protocol

These documents describe the communication between your software and the RFID electronics.

LF-RFID: OEM-LF1S Hitag 1 & Hitag S Communication Protocol x.y EN.pdf

HF-RFID: OEM-DES Devices Communication Protocol_x.y_EN.pdf

HID Mode: The command to set the HID Mode is described in this document.

1.5 Glossary

VCP = Virtual Com Port

HID = Human Interface Device, e.g. keyboard, mouse, joystick

2 Installation

2.1 Communication Interface

The device has a fixed USB cable of 1.2 m length with USB-A plug. Plug it directly into your PC or Laptop. Avoid using a USB prolongation cable.

2.2 Communication Parameters

The communication parameters of the virtual com-port (VCP) are fixed set to:

Parameter	Value
Start bit	1
Data bit	8
Stop bit	1
Baudrate	9600 bps (as of 2022-09-13 the firmware uses 115200 baud)
Parity	No Parity

2.3 USB Interface Electronics · No Drivers Needed

CoreChips SL2.1A USB Hub Controller

This device contains the USB 2.0 hub “CoreChips SL2.1A”. Normally these types of ICs do not need a driver. But if yours is not working, the first step you need to do is checking your BIOS setting for USB is enabled. If it still not working, check whether the USB port is recognized in your device manager (type “device manager” at search program windows logo).

CH340E USB-TTL for VCP

USB drivers are no longer installed automatically by the Windows OS. Use the files in the folder "USB_Drivers" to install them.

3 Avoiding Interference

This is an RFID device. It is part of its normal function to emit radio waves.

3.1 Emitted Frequencies During Normal Operation

Target Product	Frequencies
Desktop Reader NEO2 HF USB	13.56 MHz
Desktop Reader NEO2 HF/LF USB	13.56 MHz + 125 kHz
Desktop Reader NEO2 Legic/LF USB	13.56 MHz + 125 kHz
Desktop Reader NEO2 UHF, UHF-HID	868 MHz

3.2 Conflicts With Other Equipment

Avoid other RFID devices operating on the same frequency.

The 13.56 MHz Band is an ISM band. Therefore, it can be freely used by remote control equipment e.g. wireless computer mouse, RC cars or other RC toys.

Modern smart phones often have an NFC module emitting radio waves of 13.56 MHz (HF, Legic operating frequency). Either shut off the NFC function of your smart phone or keep the smart phone more than 50 cm away from the RFID device.

4 Status Indications

4.1 On Startup

For a brief moment the LED will light up red while the buzzer gives an audible indication of a successful start.

4.2 LED red/blue

Blue standard, idle

Red in standard read/write operation mode: device receives command

In HID operation mode: device detects an RFID tag

4.3 Buzzer

In HID mode the buzzer signals detection of RFID tags.

5 Maintenance, Repair and Disposal

5.1 Maintenance

The electronics are maintenance-free. Protect it against dirt and liquids.

5.2 Repair

There are no user-serviceable parts. Do not attempt repairs. Do not allow any unauthorized service centre or personnel to repair or modify the product.

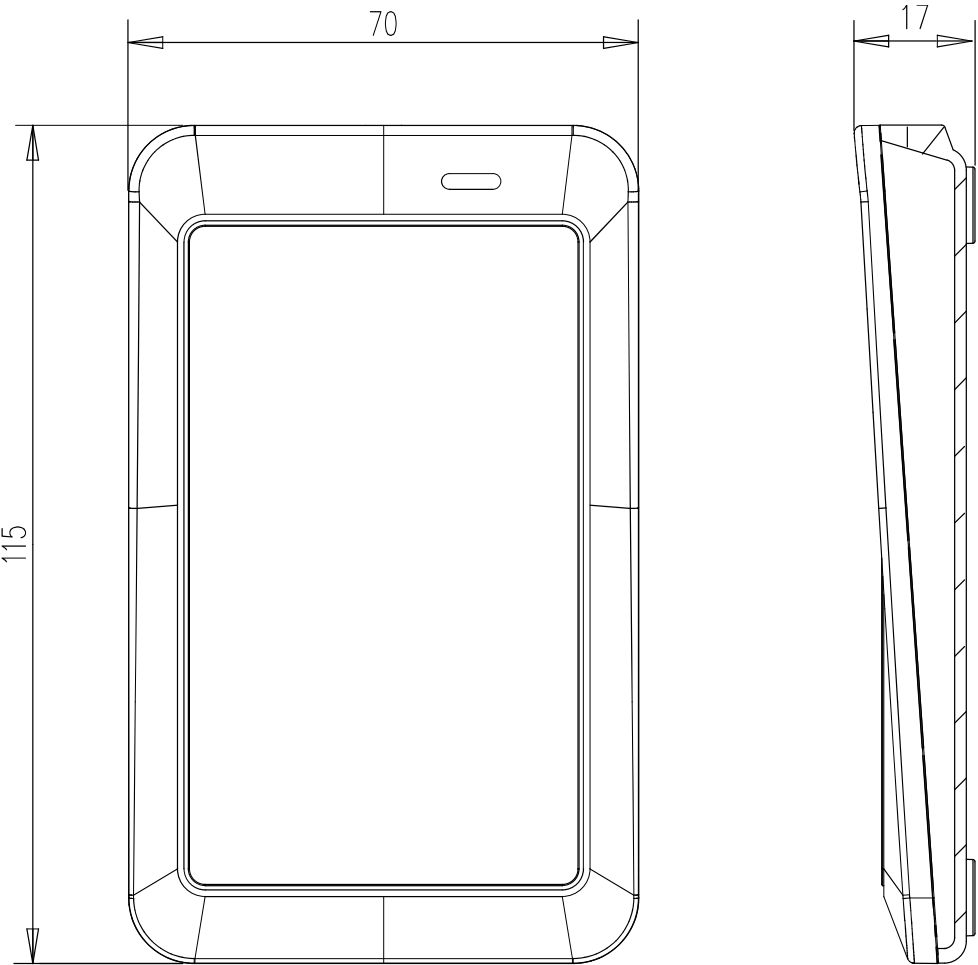
In the event your electronics fail, contact iDTRONIC GmbH via the service e-mail address: support@idtronic.de

5.3 Disposal

After use dispose of the device in an environmentally friendly way in accordance with the applicable national regulations.

Do not dispose of this device in normal household waste. Contact your local council for information on disposal options for electronic devices in your area.

6 Mechanical Drawings



7 Troubleshooting

Please see the files in the folder "Troubleshooting". If the problem remains and cannot be solved, please contact iDTRONIC GmbH via the service e-mail address: support@idtronic.de

8 Revision History

Version	Date	Notes
0.1	2021-01-12	Initial User's Guide Version
0.2	2021-01-14	Small changes in applicable standards