

UHF | HF | NFC | LEGIC | LF DESKTOP READER

NEO 2

PRODUCT DESCRIPTION

The Desktop Reader NEO 2 is a versatile RFID reader and writer with USB 2.0, suitable for a variety of applications in sectors like commerce, telecom, postal services, banking, and healthcare.

It features two operation modes: VCP for full read/write access and HID for keyboard emulation, making it ideal for IoT and web applications.

It supports multiple RFID standards (UHF, HF, NFC, LEGIC, LF) and is compatible with a range of chips and transponders. The device comes with a software development kit for Windows, facilitating integration into existing systems, and is RoHS 2 and REACH certified.



APPLICATIONS

- E-Banking | E-Shopping
- Internet Security
- Software Lock
- Telecom & Postal
- E-Wallet Charging & Check

FEATURES

- HID + VCP Mode or PC/SC
- USB 2.0 Interface
- Integrated Antenna
- Read & Write Mode
- LED and Buzzer Signal
- USB Plug & Play Mode

RFID OPTIONS

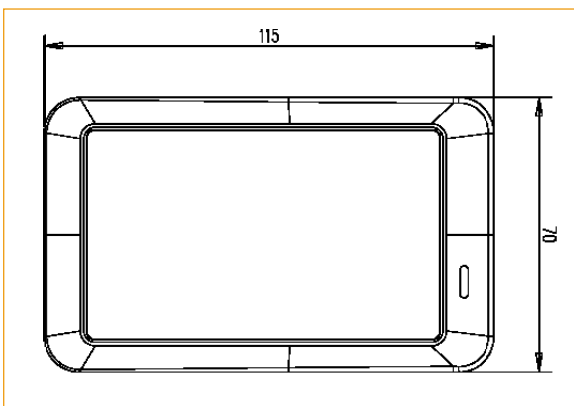
- UHF (EPC C1 GEN2 | ISO 18000-63)
- HF | NFC (ISO 14443A/B, ISO 15693, ISO 18000-3M3)
- LEGIC (Prime + Advant)
- LF (EM4200, Hitag-1, Hitag-S)

TECHNICAL DATA

ELECTRICAL SPECIFICATIONS	
Power Supply	USB
Power Consumption	<200 mA
Operating Frequencies	HF NFC LEGIC: 13.56 MHz LF: 125 kHz UHF: 868 MHz (ETSI), 902-928 MHz (FCC)
Operating Distances	3 cm*
Standard UID Output	HF: ISO 14443A UID LSB LF: Read-only UID LSB UHF: UID EPC
Antenna	integrated
Status	1x Bi-color LED 1x Buzzer
Interfaces	USB 2.0 VCP / HID, CH340E Chip PC/SC (only for HF)
Connection	120 cm long cable with USB- Type-A plug
MECHANICAL SPECIFICATIONS	
Dimensions	115 × 70 × 17 mm without USB cable
Weight	90 g incl. USB cable
Housing	ABS (black)
ENVIRONMENTAL CONDITIONS	
Operating Temperature	-20 °C ... +70 °C
Storage Temperature	-20 °C ... +80 °C
Humidity	up to 95%, non condensing
SDK INFORMATION	
Supported OS	Windows XP, Vista, 7, 8, 8.1, 10
Supported Languages	Binary command protocol, VS2005 C++
Demo Software	Windows

*Reading distance depends on tag and environmental conditions

PRODUCT DIMENSIONS



SUPPORTED STANDARDS TAGS	
RFID UHF: 868 MHz (ETSI), 902-928 MHz (FCC)	
ISO 18000-63	Global UHF frequencies
RFID HF NFC LEGIC: 13.56 MHz	
ISO 14443 A and compatible	Read/write: MIFARE® Classic/1K/4K, MIFARE Ultralight®/C, MIFARE® DESFire® EV1/2, MIFARE® Smart MX, MIFARE® Plus S / X, MIFARE® Pro X, NTAG 21x, Read UID only of all other ISO14443A RFID tags
ISO 14443 B and compatible	SRI4K, SR1X4K, AT88RF020, 66CL160S, SR176
ISO 15693 and compatible	EM4135, EM4043, EM4x33, EM4x35, I-Code SLI / SLIX, M24LR16/64, TI Tag-it HF-I, SRF55Vxx (my-d vicinity)
ISO 18000-3M3	I-Code ILT-M
Legic RF-Standard	Full read/write operation: LEGIC Advant; LEGIC Prime Smart card cards with Card in Card (CIC) technology Legic Advant type AFS 4096-JP with loaded Legic
RFID LF: 125 kHz	
Read-only	EM4200 and compatible
FDX-B	Read information
Read/write	Hitag-1, Hitag-S
APPLICABLE STANDARDS	
EMC	EN 301489-1:2019-11 (v2.2.3) EN 301489-3:2019-03 (V2.1.1)
Radio Regulation	EN 300330-1:2015-03 (V1.8.1) EN 300330-2:2015-03 (V1.6.1)
Safety	EC 62368-1:2018-10 (V3.0, valid as of 2020-12-20)
RoHS 2	EC Guideline 2011/65/EU and amendment 2015/863/EU, updated by 2017/2102/EU EN 50581:2012 (valid till 2024-07-07) EN 63000:2018
REACH	EU Guideline 1907/2006, updated by 2020/171/EU
Certificates	FCC, CE

SOFTWARE SETTINGS TO CONFIGURE OUTPUT FORMAT

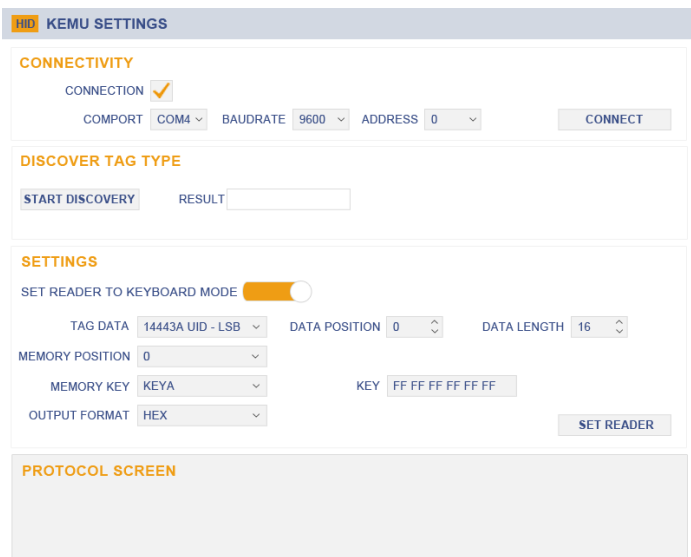
Operating Modes:

There are two working modes available on the Stick Reader EVO NFC:

HID Mode = Keyboard emulation (Read Only)

VCP Mode = Virtual ComPort (Read & Write)

With the HID mode, that the device automatically retrieves the data from the transponders as keyboard emulation. The output can be configured from various ways. Beside different UID (Serial Numbers) formats, the reader may be set to read out different parts of the user memory in various formats. The configuration can be done via a configuration tool which is compatible with Windows OS.



The screenshot shows the 'KEMU SETTINGS' interface with the following sections:

- CONNECTIVITY:** Includes a 'CONNECTION' checkbox (checked), 'COMPORT' (COM4), 'BAUDRATE' (9600), 'ADDRESS' (0), and a 'CONNECT' button.
- DISCOVER TAG TYPE:** Includes a 'START DISCOVERY' button and a 'RESULT' input field.
- SETTINGS:** Includes a 'SET READER TO KEYBOARD MODE' toggle (turned on), 'TAG DATA' (14443A UID - LSB), 'DATA POSITION' (0), 'DATA LENGTH' (16), 'MEMORY POSITION' (0), 'MEMORY KEY' (KEYA), 'KEY' (FF FF FF FF FF FF), 'OUTPUT FORMAT' (HEX), and a 'SET READER' button.
- PROTOCOL SCREEN:** A section for protocol details, currently empty.

The VCP mode offers fully read and write access to all supported transponder types. The device can be operated via demo software, sample source codes, and a USB driver on Windows OS. Other operating systems are supported via a serial command protocol and a virtual ComPort interface based on a CH340E chip.

ORDER CODES

VERSIONS	ORDER CODES
Desktop Reader NEO 2 - UHF Version	R-DT-NEO2-UHF
Desktop Reader NEO 2 - UHF Version	R-DT-NEO2-UHF-HID
Desktop Reader NEO 2 - HF NFC Version	R-DT-NEO2-HF
Desktop Reader NEO 2 - HF NFC Version, preconfigured to HID)	R-DT-NEO2-HF-HID
Desktop Reader NEO 2 - HF NFC PC/SC Version	R-DT-NEO2-HF-PC/SC
Desktop Reader NEO 2 - LEGIC Version	R-DT-NEO2-LEGIC
Desktop Reader NEO 2 - LF Version	R-DT-NEO2-LF
Desktop Reader NEO 2 - LF Version, preconfigured to HID	R-DT-NEO2-LF-HID
Desktop Reader NEO 2 - Dual Frequency HF + LF Version	R-DT-NEO2-HF/LF