2N® Access Unit

„Unique access control box"

Usage scenarios

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Document: Příklady použití 2N® Access Unit   Page 1 of 8
Version: 1.01
Date of last revision: 2016-05-13

Content

1. Access Unit – usage scenarios (premises entry only)

➤ Access Unit – basic usage

Typical use: to secure entry into offices, meeting rooms, warehouses, parking garages

The 2N® Access Unit, which combines an RFID reader and door controller is installed on the entrance side of the premises (checking access only). As soon as a user presents a valid RFID card or a phone with an NFC Application authorized for the device, they are let in to the premises. Otherwise, access is denied. In this scenario departure is not addressed – the doors usually having a handle from the inside.

Order No. 2N® Access Unit … 916009 (125kHz) and 916010 (13.56MHz)
Order No. frame (1 module – surface mount) … 9155021
Order No. frame (1 module – flush mount + box) … 9155011 + 9155014
Order No. NFC license … 916012
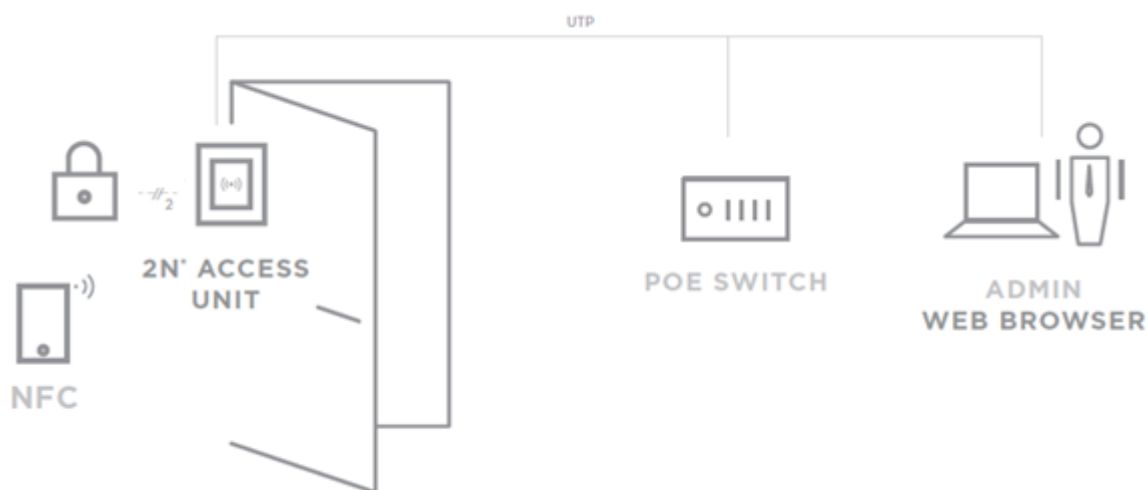
➤ Access Unit as an elevator card reader

Typical use: in the elevator cabin in combination with the floor buttons (the solution is suitable for buildings of up to 5 floors).

The customer requires an elevator solution to control which floors the given user (lessee, employee, visitor) may reach via the elevator. Upon presenting the card the person may press only the button to the authorized floor (there may be several such floors – e.g. the floor where they have an office + the restaurant floor + the foyer etc.). Other buttons will not work with the card.
This solution makes use of the Vbus (the same as is used in the 2N® Helios IP Verso), allowing other expansion modules to be connected to the 2N® Access Unit. We use the I/O module in this case (specifically 2x I/O modules for the 5-storey

Author: Lukáš Psota
Document: Příklady použití 2N® Access Unit   Page 3 of 8
Version: 1.01
Date of last revision: 2016-05-13

house). The I/O module does not fit directly into the unit and must be located outside it, e.g. behind the elevator cabin, where the floor selection buttons are routed.

Note: currently under development is integration with 2N® Access Commander software, whereby you can simply define per user which floors they are authorized to access.
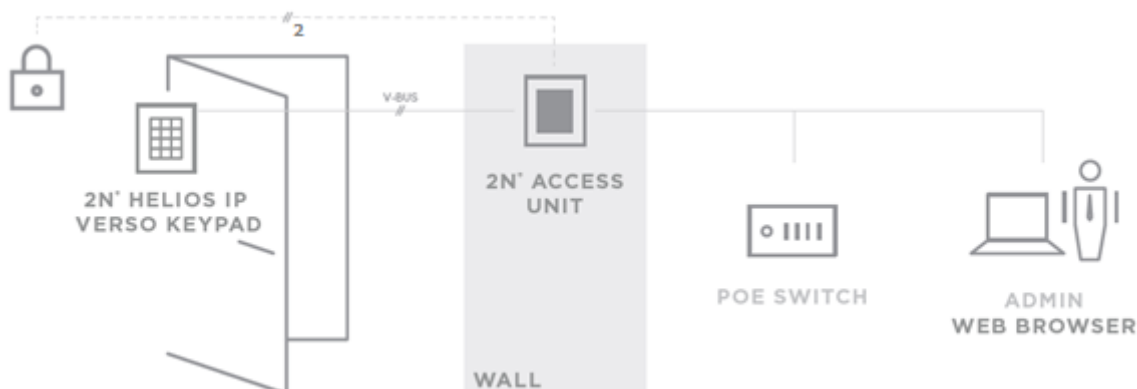
Order No. I/O module … 9155034
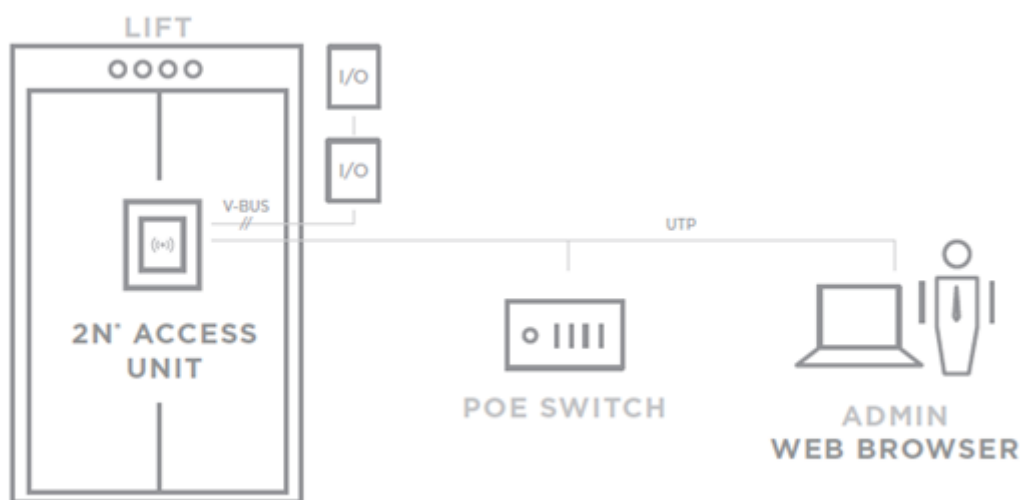
➢ Access keypad (in combination with a reader-less Access Unit)

Typical use: securing access to premises where RFID cards are not utilized and staff are accustomed to entering a PIN code

Where the customer needs to resolve access to premises using only PIN code specification, then at the present time we do not have in our portfolio a standalone unit catering for this option as-is. Nevertheless, we can offer a solution – the 2N® Access Unit devoid of its RFID module (with a blind, without the frame) hidden in the ceiling or wall. All the logic is in this unit (it works as a controller) and via the Vbus module we connect the 2N® Helios IP Verso keypad module. This module is installed in a frame (in/on a wall) located by the door to be secured. It then serves users as the PIN code keypad.

Note: The max distance between the 2N® Access Unit and keypad is 5 m (there is a 1 m, 3 m and 5 m connecting cable available).

Order No. Vbus cable (for modules interconnection): 9155050 … length 1m; 9155054 … 3m;   9155055 … 5m;   **Order No. keypad** … 9155031;

Author: Lukáš Psota
Document: Příklady použití 2N® Access Unit   Page 4 of 8
Version: 1.01
Date of last revision: 2016-05-13

➢ Access Unit as a dual identification solution

Typical use: at the entrance to an office building outside working hours, for research and scientific laboratories, banks, financial centres, etc.

Generally these are zones with an increased level of security, where RFID card identification alone is not enough, and a combination of two different forms of identification – typically a PIN code or fingerprint reading is required. Since we currently offer the 2N® Access Unit only with a card reader (and NFC) the customer should be advised to deploy the keypad module or a recommended fingerprint reader:

a) **AU plus keypad combination** – this is a combination of the 2N® Access Unit and a keypad, whereby both of these units are located in two modules frame (on or in the wall), next to the secured door. The keypad is once again connected via Vbus cable, but in comparison with the aforesaid case we need just the short cable already bundled with the keypad.
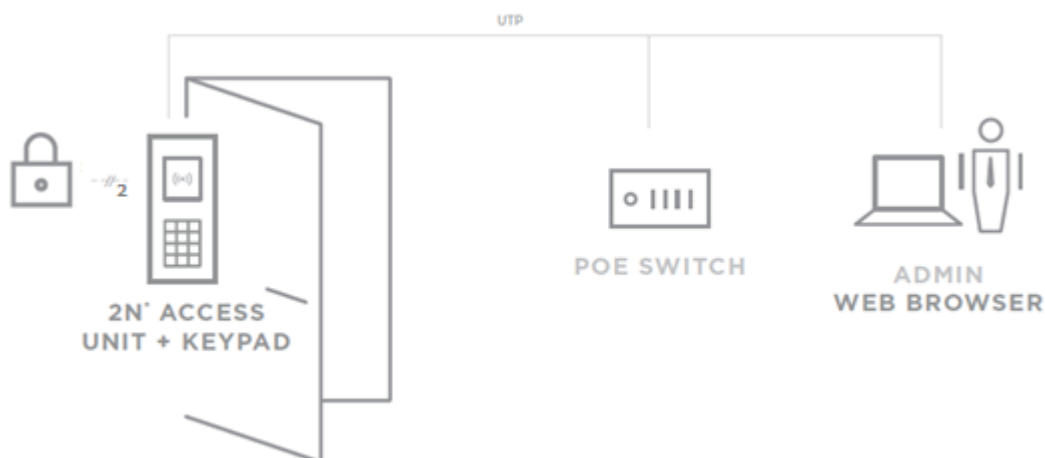
b) **AU plus fingerprint reader combination** – since we do not have a fingerprint reader in our current portfolio, a third party reader needs to be used, linked to the 2N® Access Unit via the Wiegand interface. This interface needs to be obtained for the 2N® Access Unit as a separate module (the Wiegand module), and connects to the unit via the Vbus.

Warning: The Wiegand module cannot be installed directly into the 2N® Access Unit, but has to be placed outside it (e.g. in the wall installation box or junction box – at a max distance of 5 m). You may then connect the fingerprint reader via the Wiegand interface

Order No. Wiegand module … 9155037
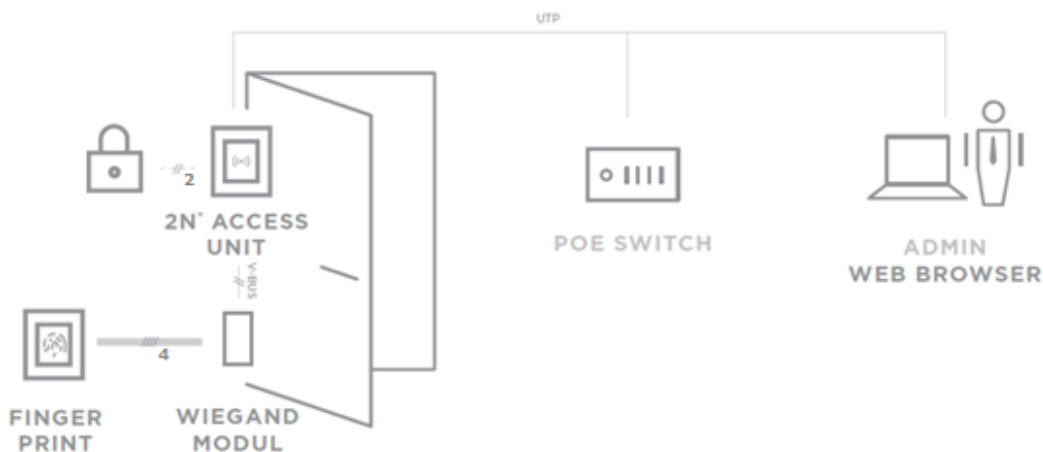
2. Access Unit – usage scenarios (premises entry and exit)

➢ Access Unit as an entry and exit solution

Typical use: the solution as described in the previous paragraphs extended to cover security when departing the premises – a typical example being doors without handles or turnstiles.

In this scenario, we not only address secure entry onto the premises but also the departure from these zones. In such a case, the following options are available:

a) The 2N® Access Unit can be placed on one side of the door and then via the Vbus connection cable an **RFID reader module** is attached on the interior side of the premises (when exiting). This solution is also ideal for monitoring attendance, whereby the user has to present their RFID card (arrival at the company) as well as signalling departure from the company (when interrupting / ending the work period). Furthermore, by combining this solution with an door magnetic contact we can detects a kicked down or long open door.

Note: to exit from the premises there is no need to use a second 2N® Access Unit which would be both financially disadvantageous and would use up two Ethernet cables (though this may have its merits in rare cases). In case someone

challenges the security of using a 2N® Access Unit with all the control logic of the outside of the premises, then rather than argue about security itself we can site the 2N® Access Unit inside the premises and the RFID reader module alone on the outside. This ensures the Ethernet cable terminates on the inside of the premises and only the Vbus leads to the outside, which cannot be exploited for breaching security and obtaining sensitive data.
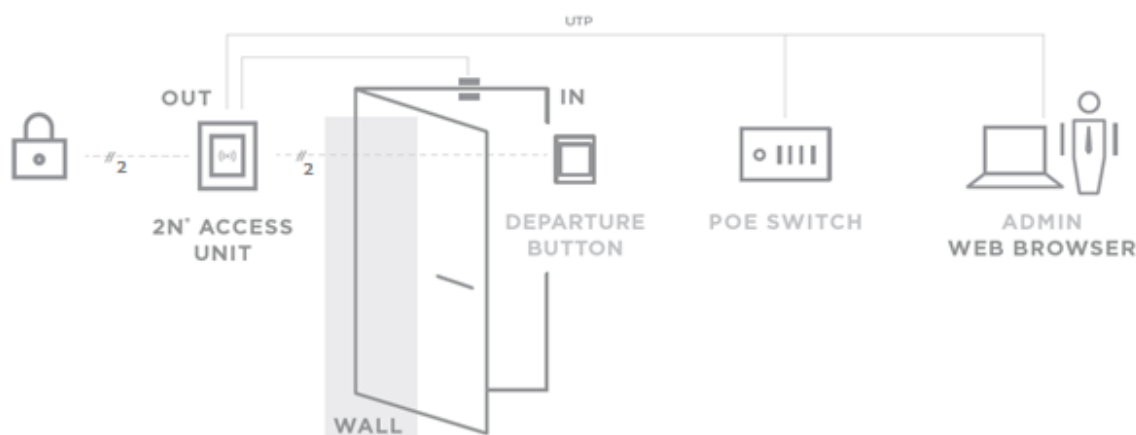
Order No. external RFID reader … 9155032 (125kHz reader); 9155033 (13.56MHz reader); 9155040 (13.56MHz + NFC); 9155042 (13.56MHz + NFC + PACS ID)
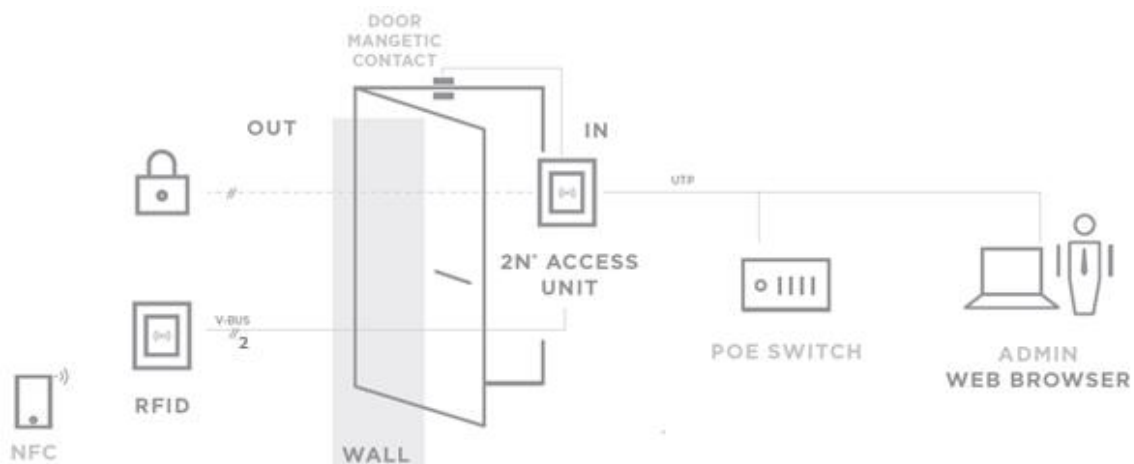
b) Access Unit can once again be located outside the entrance to the secured premises, and for departure just a **Request-to Exit button (REX)**. This is sited inside the premises and connected to the 2N® Access Unit with just a two-wire cable. As in the previous example a door magnetic contact can be used, also via a two-wires connection.

Order No. request to exit button … 9159013

Order No. door magnetic contact … 9159012

Author: Lukáš Psota
Document: Příklady použití 2N® Access Unit   Page 7 of 8
Version: 1.01
Date of last revision: 2016-05-13

3. Standalone unit vs. part of a comprehensive solution

Depending on the size and type of installation the Access Unit can be deployed in two basic variants:

a) **The Access Unit as a stand-alone access unit**
This is the basic use of the Access Unit in smaller installations (e.g. access to the garage) where we just hook up over Ethernet into the IP network and subsequently configure via the web interface – adding users with site access rights and assigning each a card.

b) **The Access Unit as part of an access solution (along with HIPs)**
This is for a larger installation, where there are more access units in combination with 2N® Helios IP door security. In this case it is no longer appropriate to set up each device separately, but instead to use 2N® Access Commander for bulk device management and the configuration of access rules (splitting the site into zones and identifying which users have access rights to these zones).

4. Technical parameters – interfaces description

INPUT: 3x
1. connection of REX button
2. connection of open door sensor
3. connection to the alarm system (to advise whether the premises are secure)

OUTPUT: 2x
1. **active output** – allowing the connection of a low power lock (12V / 500mA), which can draw its power direct from the 2N® Access Unit. No external power supply is needed for the access unit (powered via PoE), nor for the lock
2. **passive output (relay)** – used to connect a lock powered from an external source. This relay can work in NO or NC mode and switch the external source with a loading of up to 30V / 1A.

TAMPER SWITCH – protection against unauthorized intrusion into the unit

ETHERNET – the option to connect an Ethernet cable via the connector (wire by wire), or to use converters to an RJ-45 connector

Vbus – our proprietary interface that allows you to hook up to the 2N® Access Unit other additional modules (keypad, Wiegand, I/O, etc.)