ANPR LUMO*

quick reference guide

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SAFETY PRECAUTIONS

The following safety precautions must be observed during normal use, service and repair.

- The ANPR shall be connected to safety ground.
- Disconnect the power supply before removing any parts.
- The ANPR shall only be installed and serviced by qualified and trained personnel.
- To be sure of safety, do not modify or add anything other than mentioned in this manual or indicated by NEDAP N.V.
- CAUTION: for continued protection against risk of fire, replace fuses only with the same type and rating.
- The ANPR can be powered from a low power, Class 2 power supply, in compliance with local regulations or through POE.
- The product is to be connected only to PoE networks without routing to the outside plant.
- The ANPR is equipped with an InfraRed illuminator. The human eye will not or slightly see this light coming from the illuminator. Do not look into the ANPR lens directly from close range or for more than 100 seconds. Eyes can be damaged by not taking these precautions. During normal use of the ANPR at a vehicle gate, reading plates, there is no risk to the public.

MOUNTING THE ANPR

Determine how to mount the ANPR, onto a pole or behind the barrier. Mount behind the barrier to ensure recognition right in front of the barrier. Important mounting instructions are:

- Best operating distance is between 2 to 8 meters.
- Angle between ANPR and number plate should be smaller than 25 degrees.

Pole mounting

The ANPR is positioned directly behind or in front of the actual barrier onto a pole. Recommended installation height is 2m20. In this position license plates directly in front of the barrier cannot be read. When overhead installation is an option, the ANPR can at best be installed in the center of the lane, above the lane.

Behind barrier mounting

The ANPR is positioned behind the barrier at bumper height.

If there is space behind the barrier and the sight is not blocked, then the best place for the ANPR is at bumper height (0.5m height) about 1 to 2 meters behind the barrier. A vehicle just in front of the barrier is still recognized in that case.



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DIMENSIONS



CONNECTIONS

Ethernet connection

The Ethernet communication cable (Cat5e, 5 meter) is already fitted to the RJ-45 network connector.

| Multi-wire cable | | 1 | | | | |
|------------------|------------------------------|--|---|--|--|--|
| Power supply | Red Blue Black | Power supply +24VDC ~ 1A Ground OV Ground OV | | | | |
| Rs485 connection | Yellow Green Purple | RS-485 A RS-485 B RS-485/Wieganc | IGND | | | |
| Wiegand | White Brown | Wiegand Data-0 Wiegand Data-1 | | | | |
| Relay output 1 | White/Green Brown/Green | Relay output 0 Relay output 0 | (normally open contact, U _{max} = 24VDC, I _{max} = 2A) (common contact) | | | |
| Relay output 2 | White/Yellow Brown/Yellow | Relay output 1 Relay output 1 | (normally open contact, U _{max} = 24VDC, I _{max} = 2A) (common contact) | | | |
| Trigger input 1 | Pink Gray | Digital input IN+ Digital input IN– | (optocoupler positive contact, U = 5 - 24VDC) (optocoupler negative contact) | | | |
| Trigger input 2 | Gray/Pink Red/Blue | Digital input IN+ Digital input IN– | (optocoupler positive contact, U = 5 - 24VDC) (optocoupler negative contact) | | | |

The network cable and the multi-wire cable should be placed parallel to each other.

ASSIGN AN IP-ADDRESS

Enter the default IP-address in the address bar of your web browser. Default IP address: **192.168.3.15**

The login window appears where the user is asked to type the username and password.

| Username: | admin |
|-----------|--------|
| Password: | secret |

Go to the system configuration and setup the network configuration as desired. If required, now also other configuration settings may be changed.

CONFIGURE THE ANPR

By default the camera's exposure settings are pre-configured to suit most situations, The following items needs to be configured after installation.

- Region of interest
- Output messages (actions)

Drive the vehicle into the position where it should be possible to read it's license plate. Connect to the ANPR using your web browser and login. After a successful login you will see the live video in the menu item "HOME". On the right side of the page 'live' text results are shown. It might be necessary to adjust the ANPR alignment.

| *NEDA | P ANPR LUMO | | HOME | TEXT RESULT | ACCESS LISTS | CONFIGURATION | SYSTEM SETTINGS | LOG OUT |
|-----------|-------------|-------------------|---|-------------------------------|--------------|---------------|-----------------|---------|
| LIVE VIEW | LIVE VIEW | 2018-02-05 144441 | LIVE TEXT RESULT DIEISUNG RATE COM COMPANY | | | | | |
| | | | CANTRA ADDAL CANTRA CLASSIFIER | 4001803 4.18 WESTEUROPE | CLASSINER | | | |

The Yellow box within the LIVE VIEW represents the region of interest, this region of interest can be changed in the configuration menu.

Region of interest

After correct installation of the camera, it is recommended to change the region of interest. This can be done by moving the green points to the desired position. Press the "Apply" button next to the corresponding item to permanently store the region of interest.

| NEDAP ANPR LUMO | | HOME | TEXT RESULT | ACCESS LISTS | CONFIGURATION | SYSTEM SETTINGS | LOG OU |
|---|------------|----------------|--------------|-------------------|---------------|-----------------|--------|
| CAMERA ANPR ACTIONS INSTALLATION PARAMETERS | | | | | | | |
| REGION OF INTEREST | SETTING | s | | | | | |
| Mo : ANPR LUNO dote : 2018-07-02 bm - : 1016-105900 | SERVER | TRIGGER | PARKING MODE | ENGINE | | | |
| gon"(668) : 9 3 huter (ws): 559 1ps wrob : 5.28 | ANPR DETE | CTION | | × | APPLY | | |
| 100 000 : U.C. | DISPLAY PL | νΤΕ | | × | APPLY | | |
| | DISPLAY ST | Ϋ́E | | | APPLY | | |
| | DISPLAY CH | ARACTER CONF | IDENCE | | APPLY | | |
| | DISPLAY RE | ADING FRAMERA | ATE. | 8 | APPLY | | |
| | ANPR REGIO | IN OF INTEREST | (X Y WIDTH | 1 4 50 1000 50 50 | APPLY | | |
| | SEND UTF-8 | | | 2 | APPLY | | |
| | | | | | | | |
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| • | | | | | | | |
| 335/984 [0, 255, 0] | | | | | | | |
| | | | | | | | |

For more details about the menu items, see the installation guide on https://portal.nedapidentification.com

ACTIONS

| *NEDAP A | NPR LUMO | HOME | TEXT RESULT | ACCESS LISTS | CONFIGURATION | SYSTEM SETTINGS | LOG OUT |
|----------|---|------|-------------|--------------|---------------|-----------------|---------|
| | CAMERA ANPR ACTIONS INSTALLATION PARAMETERS | | | | | | |
| | ACTIONS | | | | | | |
| | ✓ READ | | | | | | |
| | ✓ NOREAD | | | | | | |
| | ✓ LOW CONFIDENCE READ | | | | | | |
| | Y WHITELIST MATCH | | | | | | |
| | WHITELIST MISMATCH | | | | | | |
| | ✓ BLACKLIST MATCH | | | | | | |
| | BLACKLIST MISMATCH | | | | | | |
| | Y IGNORELIST MATCH | | | | | | |
| | Y IGNORELIST MISMATCH | | | | | | |
| | ✓ SYSTEM MESSAGES | | | | | | |
| | | | | | | | |

In the actions menu, you can define what actions the camera should perform on certain events. There are three types of events based on the OCR system:

| READ | When ANPR recognizes a plate |
|--------|--|
| NOREAD | When there are no plates recognized between given limitations set under ALPR Configuration- |
| | Trigger (i.e. Start and Stop trigger, or Start trigger and Trigger timeout). |
| LCR | Low confidence read event is created when a plate is read but the confidence level is lower than |
| | set in parameter 'Min Plate confidence' |

The following actions can be added to any of the events. You can also make combination of actions. Ftp Upload, Ftp Database, Store, Digital out, Notification, Serial, TCP.

To define an output message you can use patterns. Patterns are keywords which represent a value, an example is %LP%, this keyword will be replaced by the license plate value.

An example message for a serial action is: %LP%%CR%%LF%. This will output the number plate with a CRLF.

All available patterns can be found in the installation guide.

For more details about the menu items, see the installation guide on https://portal.nedapidentification.com