

TOTEM NANOPAK5 QUICKSTART GUIDE

v 1.0.5 EN



REVISIONS

Date	Name	Modifications	Version
26/JUL/2024	AGO	First version	1.0.0
12/DEC/2024	AGO	Added Wiegand cable recommendations	1.0.1
05/FEB/2025	AGO	Information about direct Wiegand cable length limitation	1.0.2
18/MAR/2025	AGO	Added image of the Totem base and recommendations for installation in marine environments.	1.0.3
05/AUG/2025	AGO	Modifications due to the addition of NPK5 references with a long-range lens.	1.0.4
09/SEP/2025	AGO	New Chapter 6, "MAINTENANCE TIPS". Added comment on chapter 3 on closing the door and protecting the base. Maximum distance of the direct Wiegand output modified.	1.0.5

1 WHAT'S DELIVERED?

Here is an overview of the parts delivered with a Totem Nanopak5.

1.1 AC/DC powered models

The more usual product references of the Totem Nanopak5 are delivered with a separate AC/DC power supply. The client can either use it or just connect 24 VDC directly to the Nanopak5.



Totem Nanopak5, with the sun shield already mounted.

*Protection rating: IP54
Coating: axalta powder*



Nanopak5 LPR unit, already mounted inside of the totem on a swiveling bracket.

*Power: 24 VDC ; Consumption: 8 W Max.
PoE: not available. See chapter 1.3*



Power and relay output cable. Included with any purchase of Totem Nanopak5. (1 meter, 4 pin connector).



Power supply. AC/DC power supply to be mounted on a DIN rail included in the Totem.



Input/Serial cable. If requested on the purchase order, this additional cable can be provided. It can be used for 2 different purposes: digital input (trigger hardware) or RS485/Wiegand output.

(1 meter, 2 pin connector)

1.2 “Full AC” Powered models

Certain product references of the Totem Nanopak5 are equipped with the AC/DC power supply mentioned before, plus a circuit breaker. All the elements are pre-mounted and cabled so this LPR unit is ready to receive just the AC power cable. This model is specific for those clients who need to comply with certain electrical regulations. Ask your Sales contact if you are interested in this version.



1.3 “PoE compatible” models

Certain product references of the Totem Nanopak5 are delivered with a pre-wired PoE splitter instead of the AC/DC power supply, to make things easier for those clients who use PoE in their installations. Ask your Sales contact if you are interested in this version.



1.4 Not included

- Survision does not include the network cable to connect to the Nanopak5, except for the model that includes the PoE splitter (in this case, Survision does not provide the PoE cable to be connected to the splitter). The minimum requirement for the network cable is Cat5e FTP.
- Survision does not provide the anchors that fasten the Totem to the floor.

2 DISTANCES AND CAMERA POSITIONING

The Totem Nanopak5 has been designed to be installed on the floor. The reading distances and coverage are detailed in the following chart:

	European plates (long)	American plates (short)
NPK5 Short Range	From 2 to 7,5 m (6.5 to 24,5 ft)	From 1.5 to 5,5 m (5 to 18 ft)
NPK5 Long Range	From 4 to 15 m (13 to 49 ft)	From 2,5 to 10 m (8 to 32 ft)
Coverage width	Up to 4 m (13 ft)	Up to 3 m (10 ft)

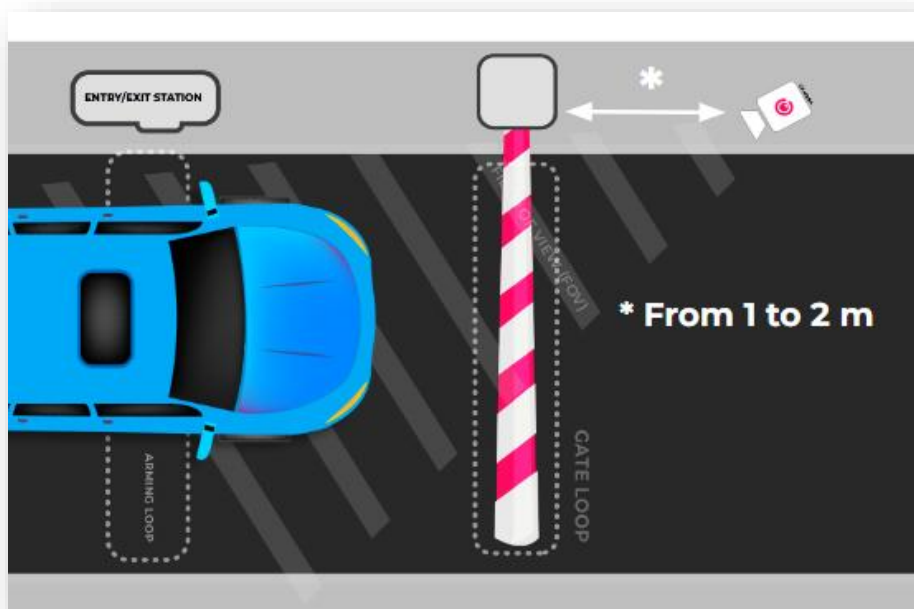
2.1 POSITIONING FOR FRONT PLATE RECOGNITION

In a typical gated access layout (parking, access control) we will take the barrier gate as a reference to recommend the optimal position for the totem. The basic recommendations are:

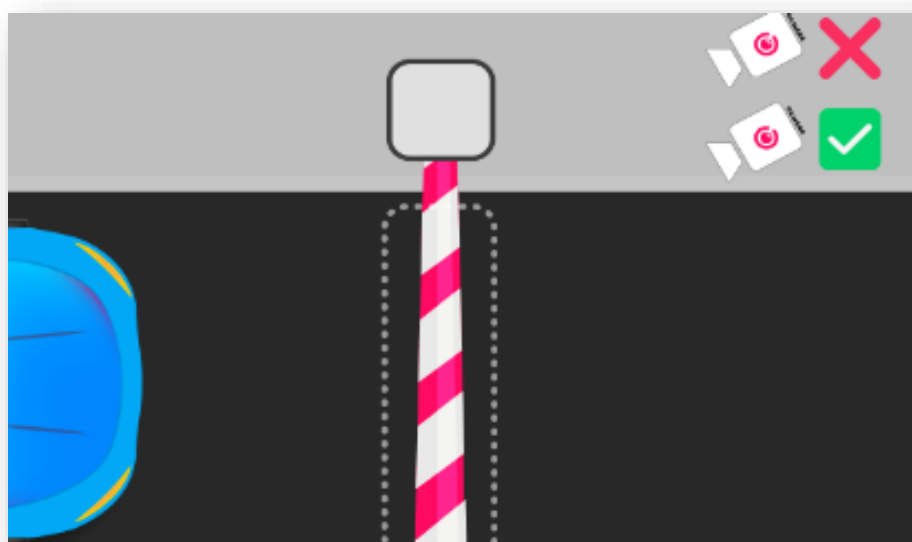
- o Place the totem on the driver's side, except for cases where vehicles approach while making a turn and the plate has a difficult angle when it is seen from the recommended side.



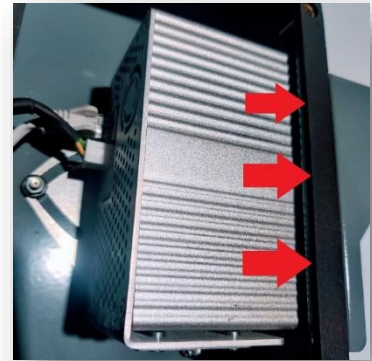
- Place the totem between 1 and 2 meters (3 to 6 ft) after the barrier gate. In case you do not have at least 1 meter of island after the barrier, it is preferable to place the totem before the barrier rather than behind it and too close, because the barrier gate would limit the field of vision.



- Place the round base of the totem close to the edge of the concrete island which is closer to the traffic flow to prevent the barrier gate limiting the field of vision.

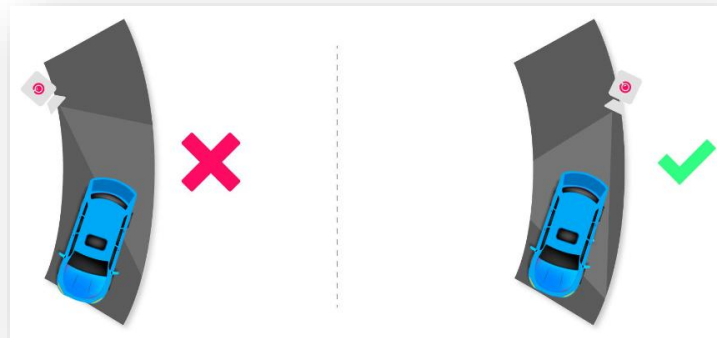


- Make sure that the Nanopak5 is as close as possible to the window of the totem. The resolution of Nanopak5 (FHD) makes it very unlikely that you will need to tilt it down.

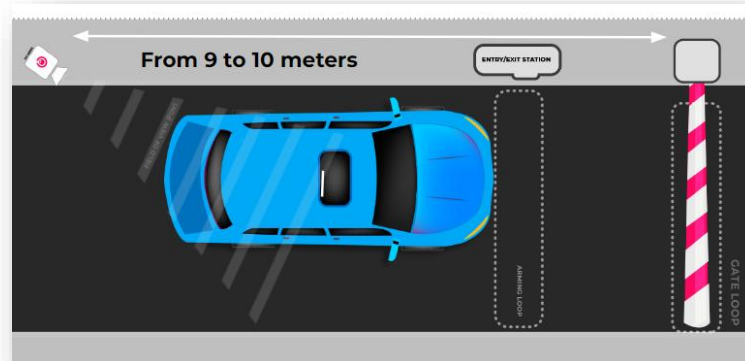


2.2 POSITIONING FOR REAR PLATE RECOGNITION

- Place the totem on the driver's side, except for in those cases where vehicles approach making a turn and the plate has a difficult angle when it is seen from the recommended side.



- Place the totem between 9 and 10 meters (30 to 33 ft) before the barrier gate, assuming 3 meters (10 ft) from the entry/exit terminal to the barrier.



- Place the Totem close to the edge of the island which is closer to the traffic, with the necessary precautions to avoid accidents.

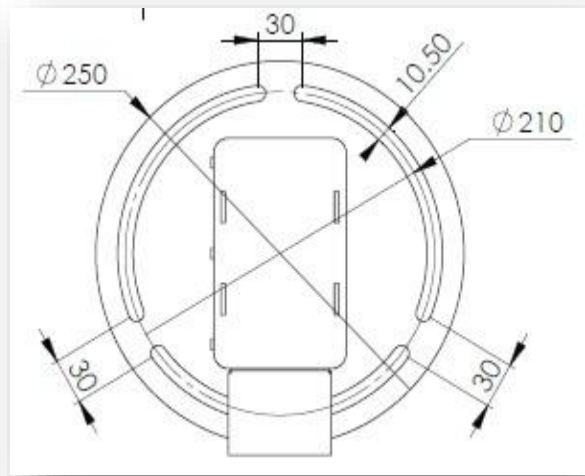


- Finally, make sure that the Nanopak5 is as close as possible to the window of the Totem. The resolution of Nanopak5 (FHD) makes it very unlikely that you will need to tilt it down.



3 LPR UNIT INSTALLATION AND CABLING

- Install the totem on the floor using suitable anchors. First, place the totem aiming at the desired area and mark the points where the holes for the anchors will be made, making sure that the position of the anchors will leave room for small corrections if needed. Leave the anchors loose in case you need to rotate the totem during the configuration.

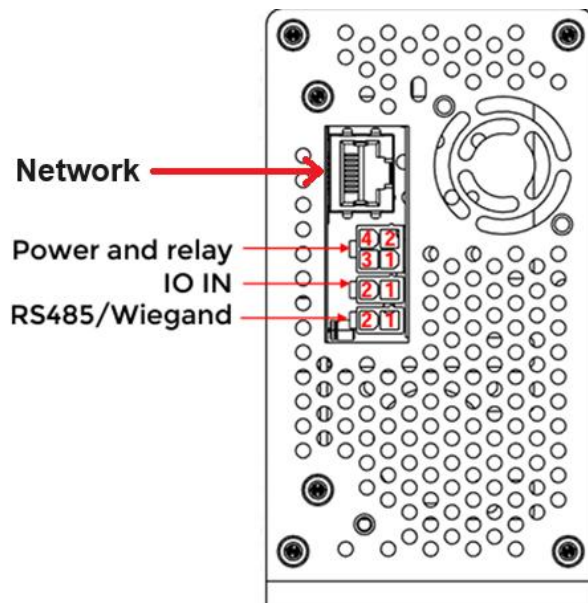


- Make sure to close the totem door using all the screws provided to prevent moisture from entering. Depending on how exposed the totem base is, protect it properly.

Recommendations for installation in marine environments:

- Handle with care to avoid impacts or deep scratches which could alter the integrity of the protective coating.
- Use screws adapted to the environment. A2 stainless steel is strongly recommended.
- Use washers to screw the Totem.
- Place washers between the floor and the Totem base to avoid direct contact with rough surfaces. When tightening, the force applied could damage the paint and alter the protective coating.

- Connect the cables provided. Here is the pinout of the connectors on the Nanopak5.



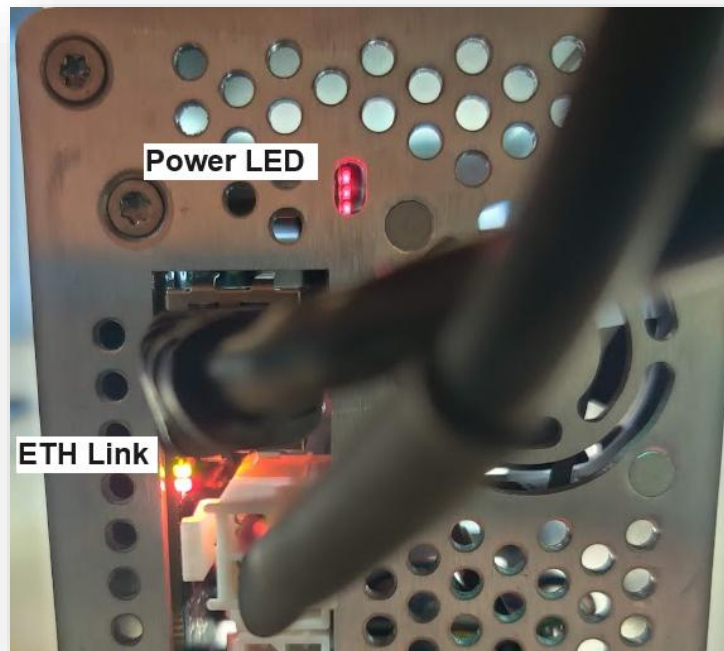
NOTE: For those users cabling the IO IN (input for trigger) or the RS-485/Wiegand cables, please make sure the ground is common between all the elements of the installation.

NOTE FOR WIEGAND PROTOCOL USERS: Nanopak5 provides an integrated Wiegand output. However, this direct output is limited to 20 m. If you have a longer distance between the LPR unit and your access control system, please set the output mode to RS-485 and the electronic conversion board ref. S103029.

4 POWER ON

Nanopak5 does not have any status LED to confirm its correct operation. However, you can check two things that will let you know that the unit has started:

- Power LED: make sure that once you power up the Nanopak5, the three red LED are on permanently.
- Ethernet link LED: these two LEDs indicate network activity. The yellow LED on the top should be on permanently, the red LED below will be blinking.



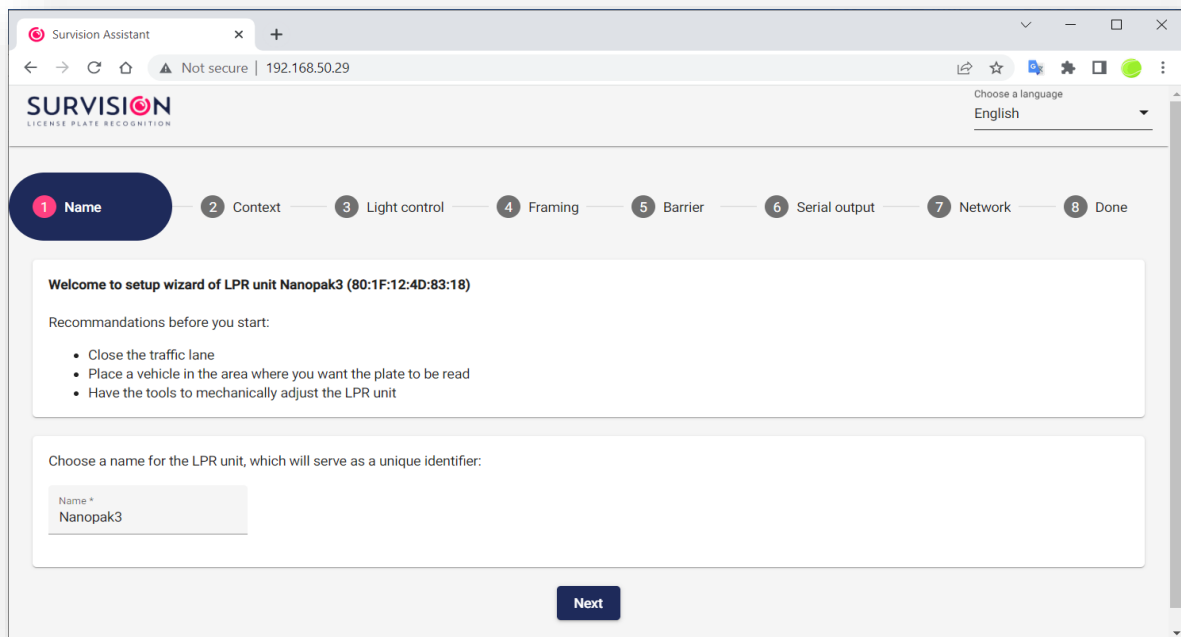
5 CONFIGURATION

Survision offers two options for setting up your Totem Nanopak5 units:

5.1 The web Configuration Assistant:

It will allow you to modify these basic LPR unit settings:

- LPR unit name
- Recognition context (geographical area)
- Light control (choose the best settings based on the type of lane)
- Framing (guided setting of camera aim, zoom and focus)
- Barrier (activate the digital output, if needed)
- Serial output (activate the RS-485 output, if needed)
- Network (IP address, Gateway, DNS and NTP servers)



To reach the Assistant, just type the IP address of the LPR unit in any web browser, assuming the network configuration of your computer lets you reach the LPR unit's IP range.

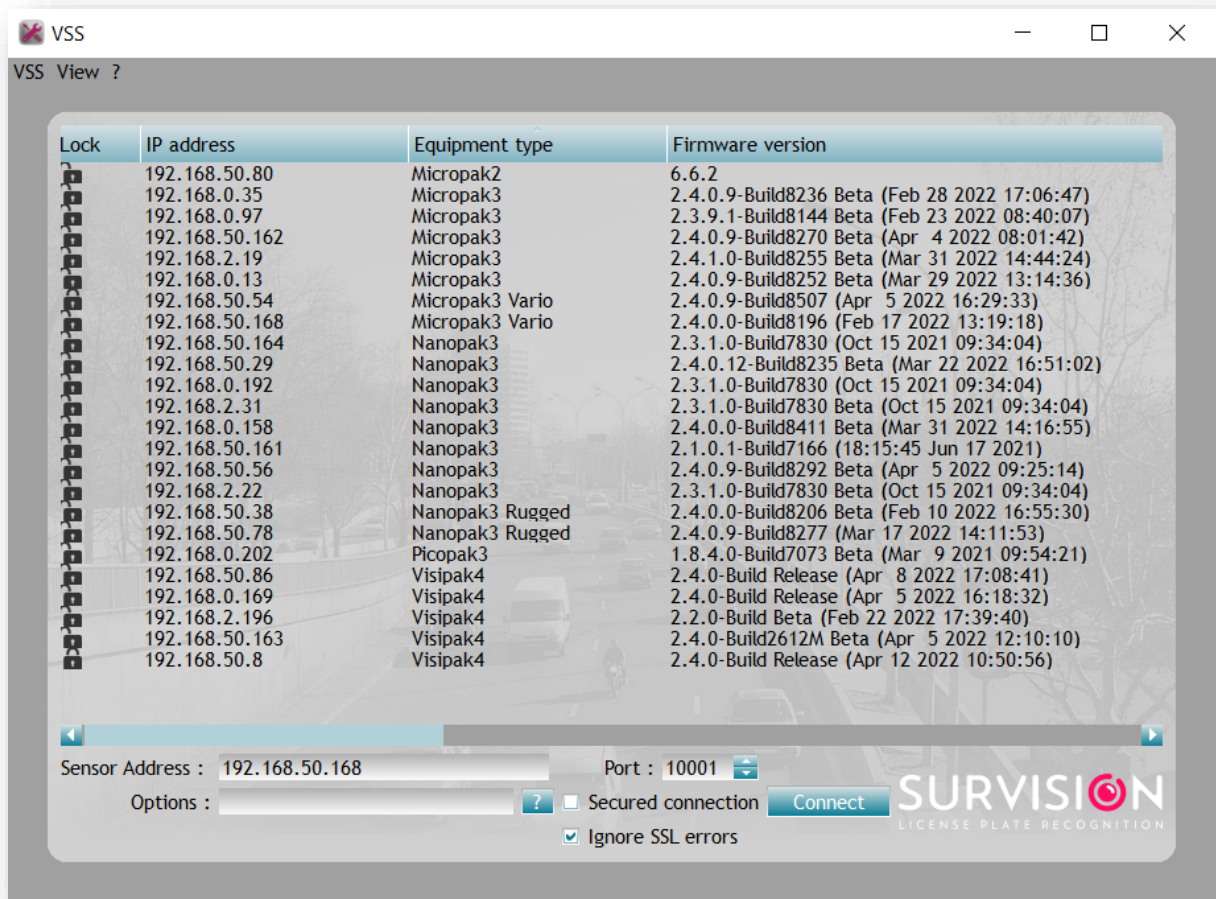
NOTE: Survision's LPR units have an IP address by default, which is printed in the test sheet provided. This IP address is always 192.168.0.XYZ, where XYZ is the conversion (from hexadecimal to decimal) of the two last characters of the MAC address.

5.2 VSS

A complete software tool that allows you to:

- Modify all the parameters of an LPR unit (network, OCR, communications).
- Receive the video stream and all the detection information from the LPR unit.
- Record the video stream, including all detections and configuration of the LPR units.
- Test some features of the LPR units.

For more information, download VSS and its manual from [My Survision](#)



6 MAINTENANCE TIPS

Once correctly installed, Survision's LPR units require no maintenance other than cleaning their front panel (infrared filter or other). This is explained in the following section.

It is also important to check for anything that could alter the field of view and obstruct the view of the license plate. Here are a few examples: spider webs in front of the camera, vegetation growing and blocking the view of vehicles, billboards installed near the camera, etc.

CLEANING

What to use?

Synthetic microfiber wipes with no added chemicals. A mixture of isopropyl alcohol and water (*) as described below. Clean, dry hands—we recommend using powder-free, disposable silicone or vinyl gloves.

How to use it?

Rinse the surface thoroughly. Lightly dampen the wipe. Clean the surface by wiping from the center towards the edges. Use a dry wipe immediately after wet cleaning. Repeat wet and dry wiping if cleaning has not removed contaminants.

(*) Mixtures of IPA (isopropanol) and distilled water in ratios between 30/70% and 70/30%. Do not use cleaning products containing solvents, alcohol, or acetone.

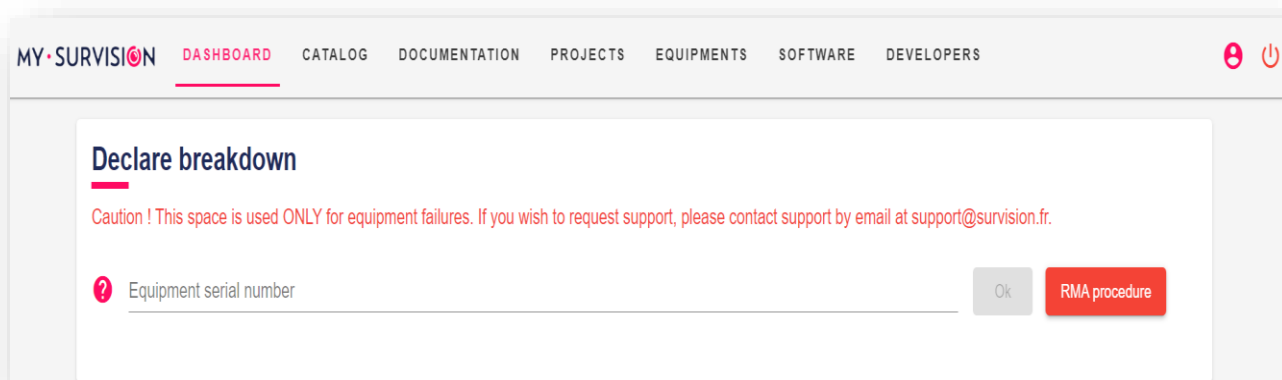
7 RMA AND RETURN TIPS

Before declaring an RMA, please make sure that you have checked and discarded all the external factors (typically power or network issues).

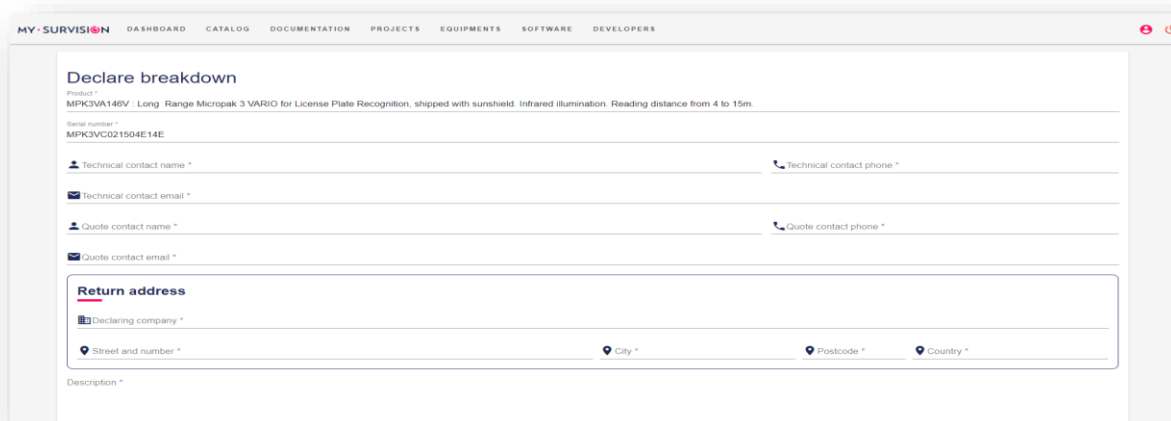
Also make sure that your problem is not related to a known bug that may have been solved in a firmware version more recent than the one running in your LPR unit. Do not hesitate to confirm the failure with our Technical Support team in case of doubts.

If sending the LPR unit to repair is necessary, these are the steps to follow:

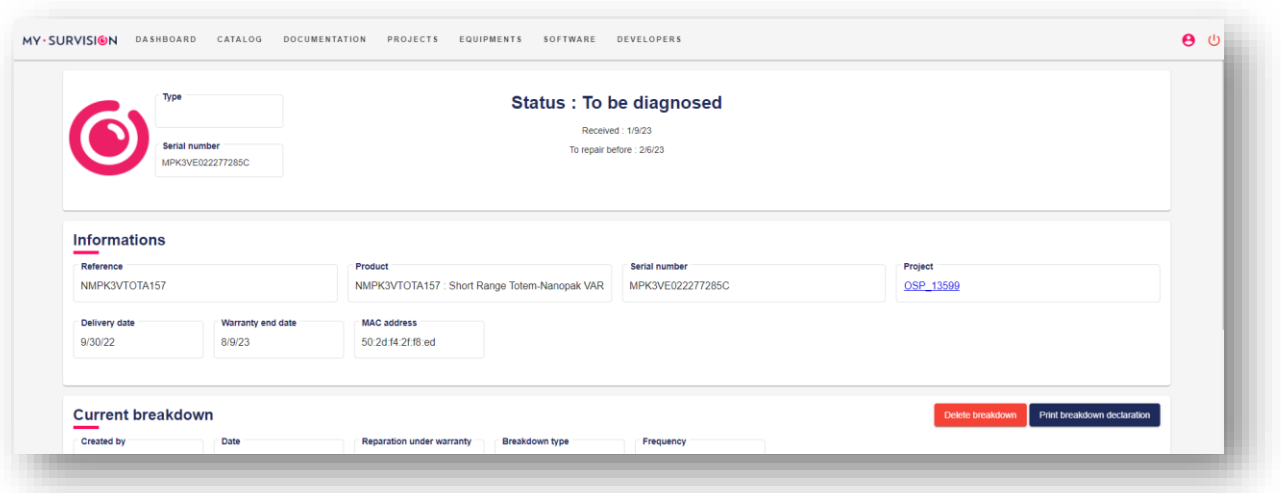
- o Connect to [MySurvision](#) and type the serial number of the faulty unit in the dedicated box that you will find on the Dashboard tab.



- o Fill the Declaration sheet that will appear next and click on “Declare breakdown” once you have completed all the fields.



- Once done, this LPR unit will appear on the list “Dysfunctional equipment” at the bottom of the same Dashboard tab.
- By clicking on a specific LPR unit, a dedicated page will open, where you will be able to confirm its shipping (optional) or cancel the breakdown declaration. Additionally, all the history can be tracked at the bottom of this page.



- All the status changes that will follow are under Survision’s control and you will always be informed via e-mail.
- Typically, clients must remove from the Totem and send only the Nanopak5 unit. The Totem should never be sent unless you receive a defective one. Finally, we recommend using bubble wrap to send the LPR unit.

8 TECHNICAL SUPPORT

In case you have any questions or if you need access to our client portal to download some of our software tools, please open a support ticket by sending an e-mail to one of the addresses below. Our team will reach out to you in less than 24 hours.

support@survision.fr support@survisiongroup.com

9 RELATED DOCUMENTS

Here is a list of related documents that you can find on MySurvision:

- NANOPAK5 TOTEM DATASHEET
- NANOPAK5 CONNECTORS & PINOUT
- NANOPAK5 2D DESIGN
- NANOPAK5 CERTIFICATES (CE, ROHS)
- VSS Manual (main configuration and testing tool)
- PVT Quick Start Guide (recording and scoring tools)

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