SURVISION
LICENSE PLATE RECOGNITION

PICOPAK3

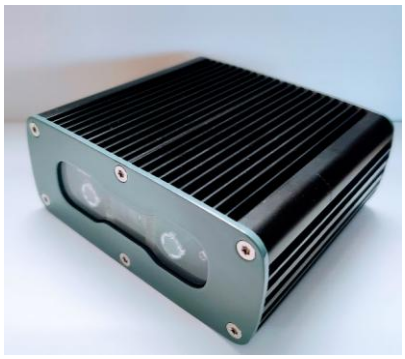
QUICKSTART GUIDE

v 1.0.1 EN

REVISIONS

Date	Name	Modifications	Version
12/08/2024	AGO	First version released	1.0.0
09/SEP/2025	AGO	New Chapter 7, “MAINTENANCE TIPS.”	1.0.1

1. WHAT'S DELIVERED?

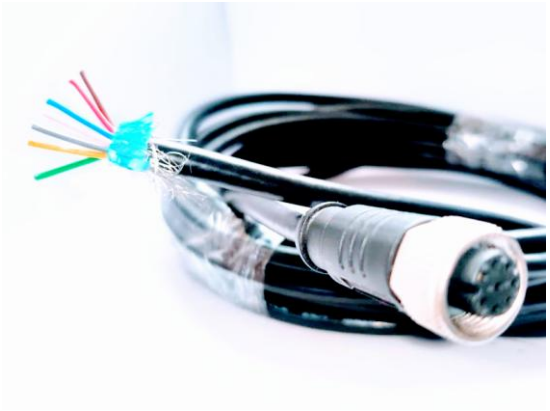


Picopak3 unit
Power: 12-24 VDC || Consumption: 15 W Max || Protection rating: IP67

ACCESSORIES

Mounting bracket

Magnetic suction kit



Standard cable (ref. S101092)

This is the standard cable delivered. The client can customize the terminations (power and Ethernet).
Length = 5 m.

“Y” cable (ref. S101100)

This cable goes from the Amphenol connector of the Picopak3, providing a network connector (RJ-45) and a power connector (car cigarette-lighter).
Length = 3 m.

Wi-Fi antenna, that will ensure the correct signal transmission.

2. POWER AND NETWORK CONNECTION

- **WITH THE STANDARD CABLE.** Below you can see the pinout of the standard cable so you can patch the terminations according to your preferences.

REF. S101092 rev2		
1	White-Orange	TX+
2	Orange	TX-
3	White-Green	RX+
4	White-Blue	+VCC
5	White-brown	+VCC
6	Green	RX-
7	Blue	-VCC
8	Brown	-VCC

OLD VERSION		
1	White	TX+
2	Brown	TX-
3	Green	RX+
4	Yellow	+VCC
5	Gray	+VCC
6	Pink	RX-
7	Blue	-VCC
8	Red	-VCC

IMPORTANT: Despite our efforts, colors may differ from above.

- **WITH THE "Y" CABLE.** Plug the Amphenol 8-pin connector to the Picopak3. On the other end, plug the RJ-45 connector to your PC/switch/router and the cigarette-lighter connector to the source of power. In case you need to dismantle the cigarette-lighter connector to use an alternative power source, this is the color code of the wires:

POWER END OF THE "Y" CABLE	
GREEN	+VCC
YELLOW	+VCC
WHITE	-VCC
BROWN	-VCC

IMPORTANT: In case of dismantling the cigarette-lighter connector, use the four wires that appear on the table above (green + yellow to +VCC, white + brown to -VCC).

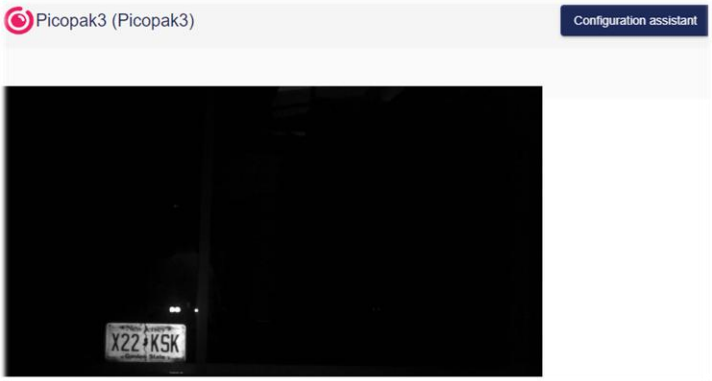
3. POWER ON AND FIRST CONNECTION WITH ETHERNET CABLE

Once the Picopak3 is correctly powered, the two LED should start having activity after 10 seconds. If that is not the case, please contact Survision's Technical Support Dept.

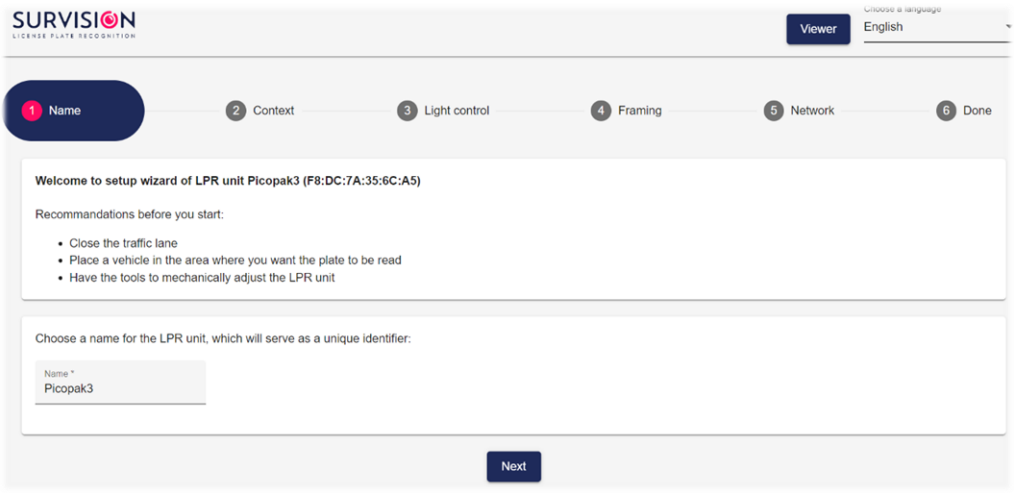
If the LEDs are active, the Picopak3 should now be ready to accept connections. Connect the unit to your computer with an Ethernet cable.

There are two ways of accessing Picopak3:

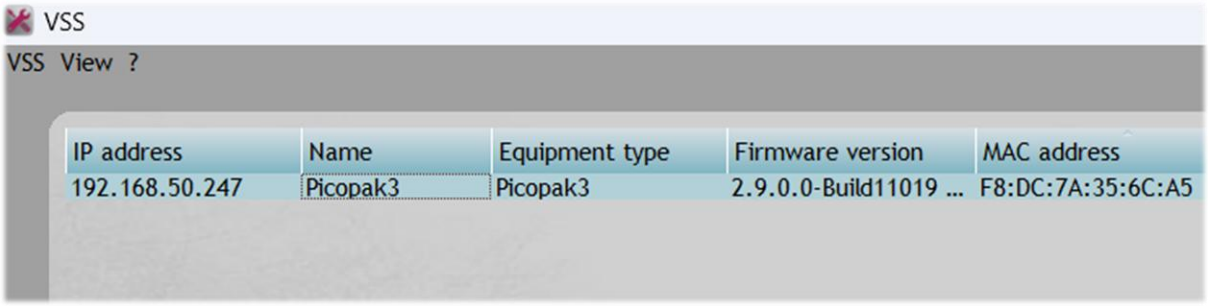
- **The web interface**: type the default IP address of the Picopak3 unit in a web browser (Chrome recommended), assuming the network configuration of your computer lets you reach the LPR unit's IP range. The Viewer will appear:



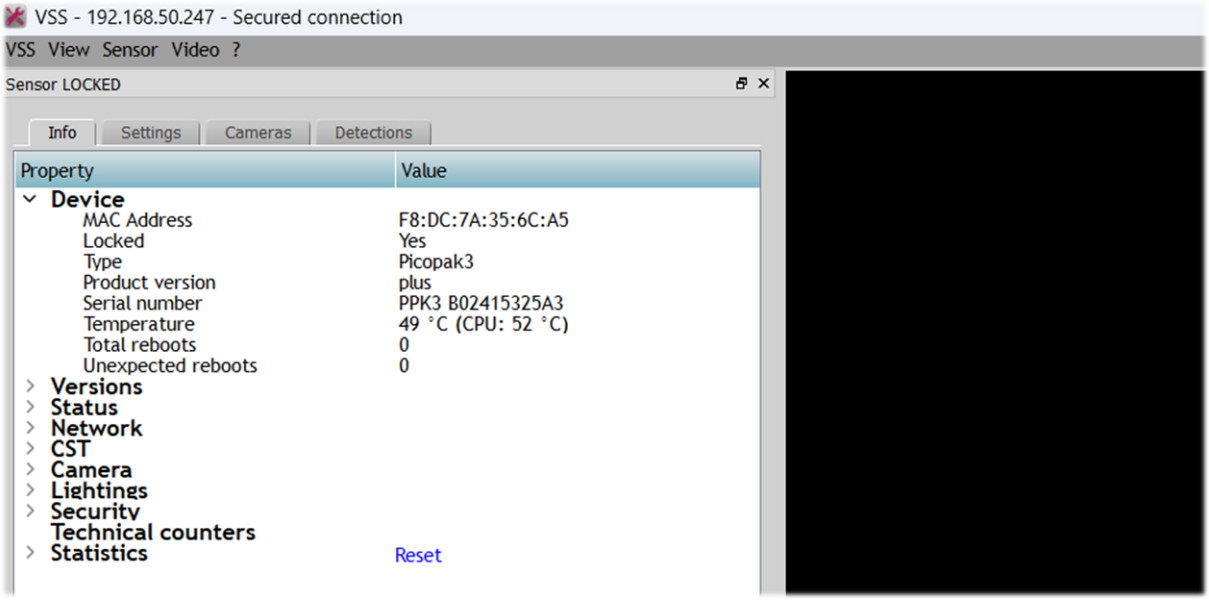
On the top right corner of the Viewer there is a button to open the **Configuration Assistant**. This is a web configuration wizard that will let you modify the basic LPR unit settings.



- The second option is **VSS,** which is Survision's main tool for configuration and testing. Launch VSS, authorize the application through the Windows firewall and you should be able to see the Picopak3 on the landing page.



If your computer is in the same IP range as the Picopak3, you should be able to connect by double-clicking on the line that shows the information of the unit.



For more information, download the VSS manual from My Survision.

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.

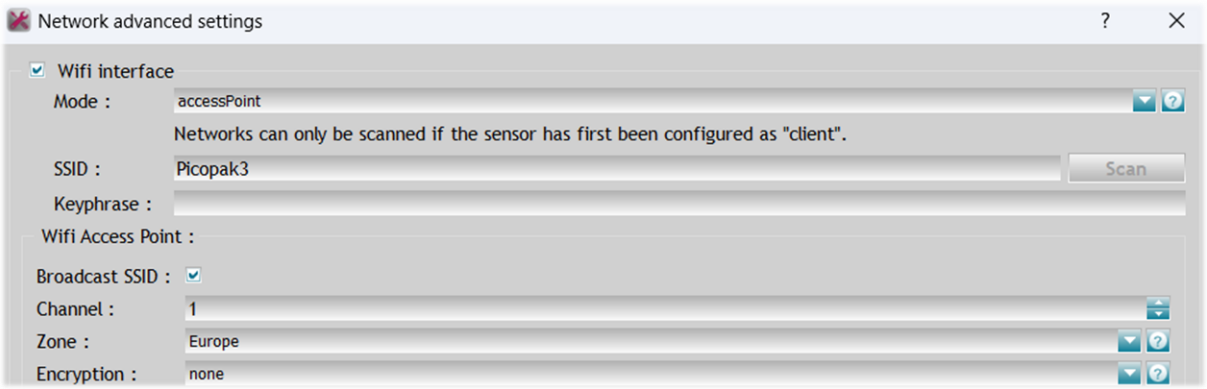
4. DUAL NETWORK INTERFACE: ETHERNET AND WIFI

On the previous chapter we focused on using the Ethernet as a first step to connect to the unit, but **Picopak3 also provides a Wi-Fi interface.**

The Wi-Fi interface has two different modes of operation: “Access Point” or “Client”.

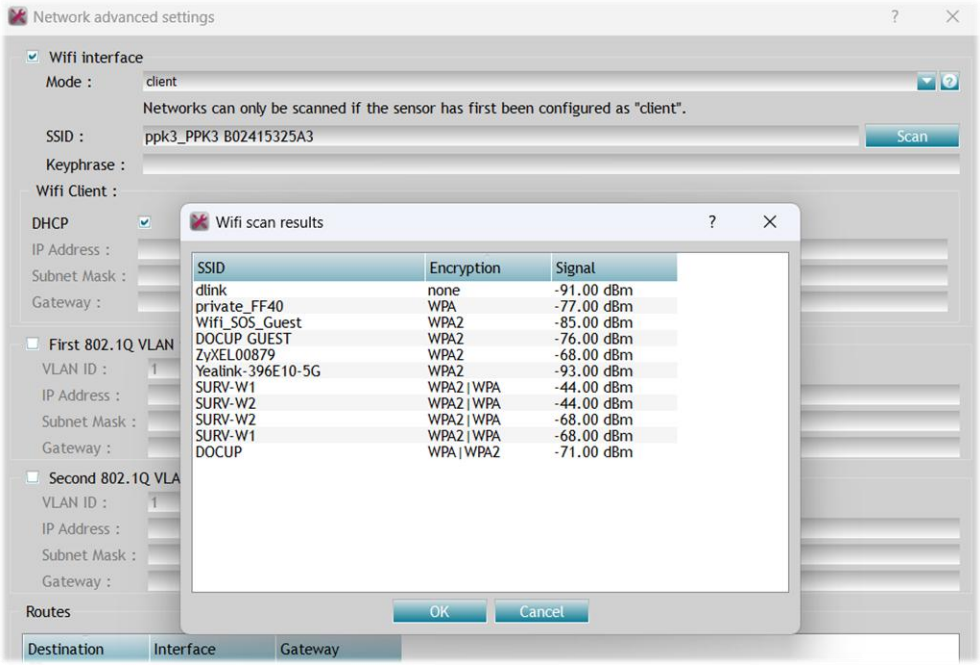
By default, Picopak3 is delivered with the Wi-Fi activated and the mode is set to **“Access Point”**. That means that the Picopak3 unit generates a Wi-Fi network with an SSID named “*PPK_serial_number*”. This network does not have any security by default, so once connected to the mentioned Wi-Fi network, users should be able to connect to the Picopak3 with the two methods explained on the previous chapter.

If users want to add a password to this network, it must be done via VSS (Settings -> Network -> Advanced parameters -> Keyphrase).



On the same menu, users can switch to the **“Client”** mode so the Picopak3 will connect to a given Wi-Fi network. There are two ways of doing this:

- <u>YOU MUST BE CONNECTED VIA ETHERNET TO DO THIS.</u>
  Switch the mode to “Client”, then click on “OK” to reboot the unit. Then you must reconnect (using the Ethernet interface because the Wi-Fi access point will have disappeared).
  Go back to the same menu and you will be able to see a list of the available Wi-Fi networks detected by the Picopak3 by clicking the “Scan” button. Choose the network and type the password on the “Keyphrase” field.



- Another option is doing it all at once: switch to “Client” mode, type manually the SSID of the network you wish to connect and the password (the scan button will not work because we have not rebooted the unit after switching the mode).
  This method lets the user do everything at once with no need of an Ethernet cable but if any mistake is made, only a connection via Ethernet will let the user reach the Wi-Fi parameters again to fix it.

In case you are successfully connected from your laptop to the Picopak3 Wi-Fi and Ethernet interfaces at the same time, the unit will be reachable on both IP addresses and on the landing page of VSS you will see two different lines for that same unit.

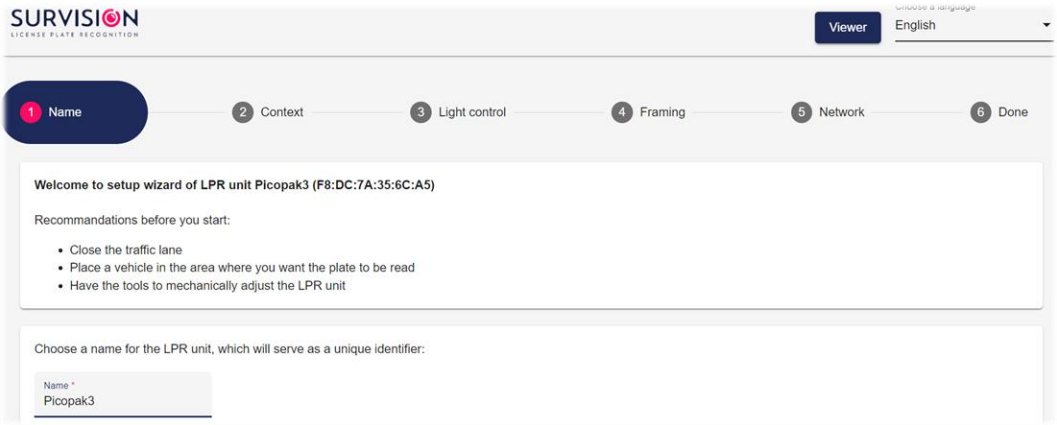
192.168.50.247	Picopak3	Picopak3	2.9.0.0-Build11019 (...	F8:DC:7A:35:6C:A5
192.168.50.114	Picopak3	Picopak3	2.9.0.0-Build11019 (...	78:04:73:E7:5D:3A

5. CONFIGURATION ESSENTIALS AND TESTING

Now that we are familiar with the connectivity part (Ethernet and Wi-Fi), we will review the important configuration parameters before we start trying to read plates with Picopak3.

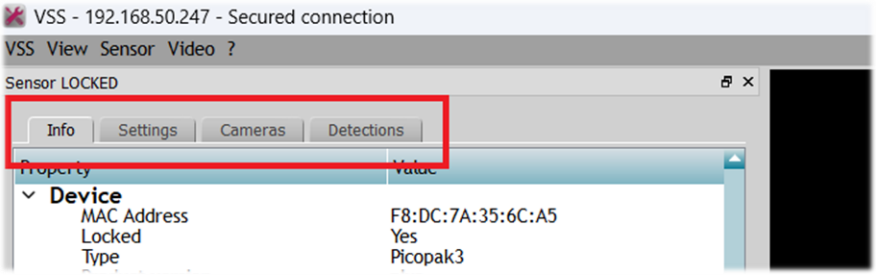
The Configuration Assistant that we have introduced before is an option that can help the user to cover the basic parameters:

- Camera name
- Country/state
- Light control
- Framing (zoom & aiming)
- Network configuration (only Ethernet parameters)



Once you go through all the steps, you can go to the Viewer and the Picopak3 should be reading the license plates that enter its field of vision. They will be listed on the right, next to the live video stream.

The same parameters (and many more) can be checked and modified with **VSS,** which is Survision's main tool for configuration and testing.
Once connected to the Picopak3 with VSS (already explained on chapter 3), you will see the live video stream and a panel on the left (Settings window) that contains four tabs:



- **Info:** read-only information about the LPR unit. Some of the more relevant information could be the firmware version, the temperature, and the status (with any errors detected).

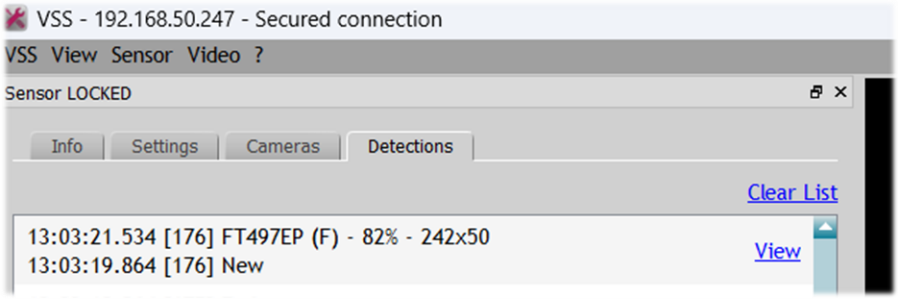
- **Settings:** all the configuration parameters of the Picopak3, grouped by type. It is worth mentioning the following:

    - *Device -> Device name*
    - *Network* ... all the Ethernet and communication parameters
    - *Network -> Advanced parameters* ... Wi-Fi configuration
    - *Camera -> ANPR -> Country/State*
    - *Camera -> Enslavement* ... Light control, must be set to "Embedded"
    - *Light sources -> Power* ... LED power, must be 100%

- **Cameras:** you can flip the image vertically and modify the Enslavement from this tab. No zoom or focus control will appear because the Picopak3 has a fixed lens.

- **Detections:** panel that will display the events generated by the camera.

Once you have set the parameters to the recommended settings, you can place a license plate in front of the field of vision of the Picopak3 and see the recognition results on the Detections tab.



Make sure the plate in front of the camera is within the size range (from 80 to 250 pixels). You can use your mouse on the image to check this.

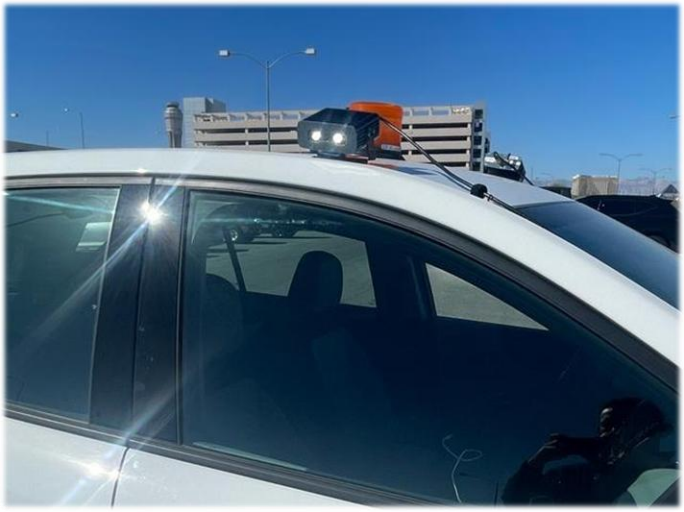
See the distance chart below to make sure your reading distances comply with the Picopak3 model you have received.

	European plates (long)	**American plates (short)**
PPK3 12 mm	From 4 to 8 m (13 to 26 ft)	From 3 to 5.5 m (10 to 18 ft)
PPK3 16 mm	From 6 to 10 m (20 to 33 ft)	From 4 to 7.5 m (13 to 25 ft)
PPK3 25 mm	From 9 to 15 m (29 to 50 ft)	From 7 to 10 m (22 to 33 ft)
Coverage width	Up to 4 m (13 ft)	Un to 3 m (10 ft)

6. INSTALLING THE PICOPAK3 ON A VEHICLE

Now that you have tested the unit, here are some recommendations for mounting the Picopak3 on a vehicle.

- **PLACE THE PICOPAK ON A PART OF THE VEHICLE ROOF THAT PROVIDES AN HORIZONTAL SURFACE.**



NOTE: It is not recommended to use the Picopak3 from inside of the car, because part of the light will be blocked by the windshield/window and the performance will be impacted.

- **IF YOU WILL BE USING A PICKUP OR A TALL VEHICLE**, you may have problems when driving too close to the license plates because of the vertical angle. Consider installing the Picopak3 on an alternative position instead of the roof.

- **CONNECT THE POWER CABLE** to the 12 or 24 VDC source (cigarette-lighter socket, battery, …).

- **CONNECT THE NETWORK CABLE** or if you are using the Wi-Fi interface, make sure you have installed the antenna.

- **PLACE THE PICOPAK IN FRONT OF A LICENSE PLATE** in the distance and angle conditions that you expect from your usual operation.

- **CONNECT TO THE PICOPAK3** via web interface or VSS to ensure the license plate is centered in the image (not too close to the top or the bottom of the image). If it is not well centered, correct the tilt of the Picopak3 and fasten the screws once it is set at the right position.

- **IF YOU REGULARLY INSTALL AND REMOVE** the Picopak3 unit from the vehicle, be gentle when unplugging the 8-pin Amphenol connector.

7. 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.

Since Picopak3 is an LPR unit that may need to be assembled/disassembled regularly, it is advisable to take extreme care when plugging/unplugging the Amphenol connector.

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.

8. RMA AND RETURN TIPS

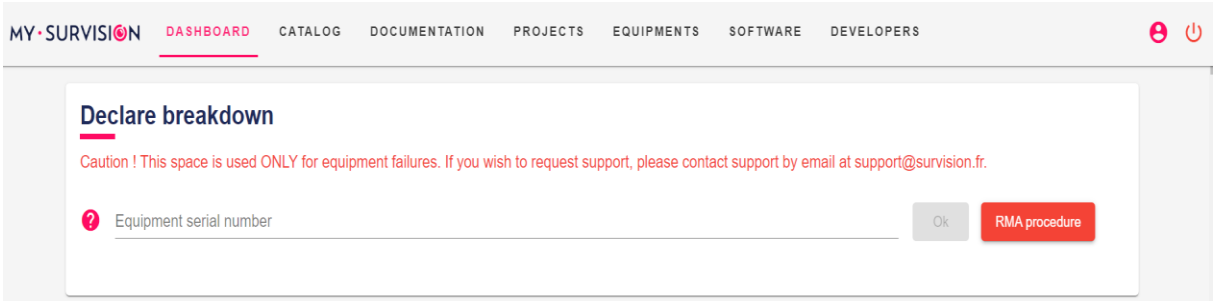
Before declaring an RMA, please make sure that you have checked and discarded all the external factors (typically power or network issues).

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.

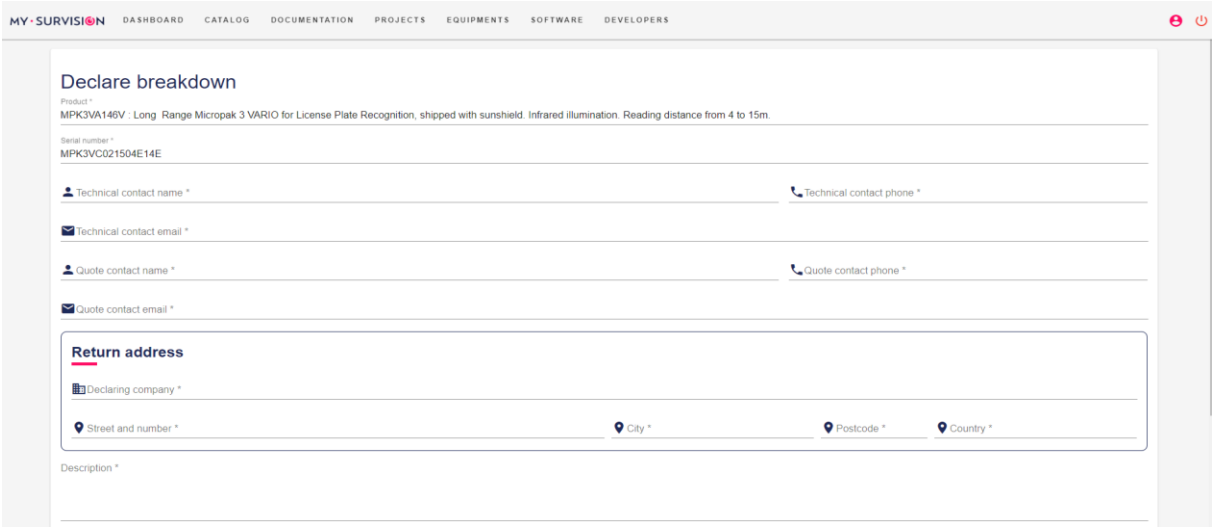
Do not hesitate to confirm the failure with our Technical Support team in case of doubts.

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

- Connect to MySurvision and type the serial number of the faulty unit in the dedicated box that you will find on the Dashboard tab.

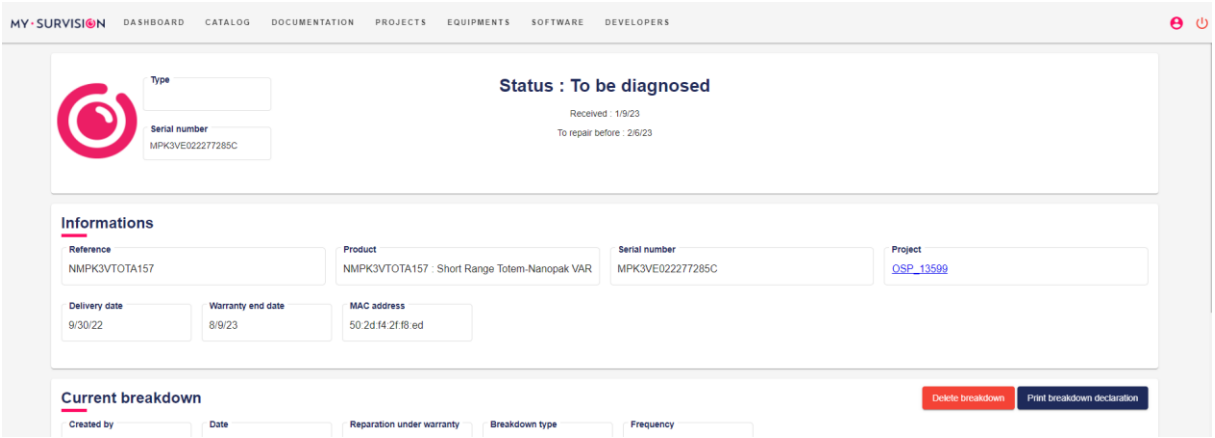


- Fill the Declaration sheet that will appear next and click on “Declare breakdown” once you have completed all the fields.



- 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 as well.

- To return the Picopak3, only use appropriate packaging, suitable for the transport of optoelectronic equipment. On request, SURVISION can provide specific packaging designed to guarantee the protection of the items during transport.

9. 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

10. RELATED DOCUMENTS

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

- PICOPAK3 DATASHEET
- PICOPAK3 CERTIFICATES (CE, IP67, ROHS)
- PICOPAK3 3D DESIGN
- PICOPAK3 PINOUT & CONNECTIONS
- VSS Manual (main configuration and testing tool)