

# KEYDOM

INSTALLATION AND CONFIGURATION  
GUIDE

105927

ANPR CAMERA DS-TCGXXX SERIES

The FAAC logo is located at the bottom left of the page. It consists of the letters 'FAAC' in a bold, sans-serif font. The letter 'F' is stylized with a diagonal slash through it. The logo is positioned on a white background that is part of a larger grey graphic element on the left side of the page.

**FAAC**

# Contents

1 • CAMERA INSTALLATION	3
2 • FAQ	4
3 • CONNECTIONS	5
4 • CONFIGURATION	7
4.1 ANPR CAMERA SETUP	7
4.1.1 GENERAL CONFIGURATION	7
4.1.2 IMAGE ADJUSTMENT	8
4.1.3 CONFIGURE IMAGE	9
4.1.4 CONFIGURE TIME	12
4.1.5 CONFIGURE DST	13
4.1.6 CONFIGURE FTP	14
4.1.7 CAPTURE INTERFACE	15
4.2 KEYDOM SETUP	17
4.2.1 NTP/TIMEZONE SETTINGS	17
4.2.2 SET ANPR CAMERA IN THE READERS	18
4.2.3 FTP SETTINGS	18
4.2.4 ENTER A PLATE IN THE ARCHIVE	20

# 1 • CAMERA INSTALLATION

- Camera installation height should be between 0,5m and 1,90m
- The view angle of the camera should be within 30 degrees to the ground (fig1.1)
- Camera angle at 1,9m should be around about 10-15 degrees.
- The view angle should be within 30 degrees to the path of movement (fig1.2)
- Install the camera to the front of the vehicle (recommended) (fig1.3)
- Licence plates tilt must be within +/- 5 degrees (fig1.4)

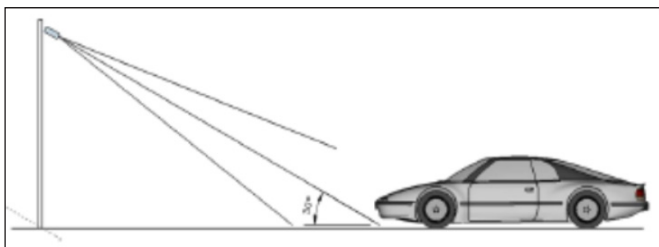


Fig. 1.1

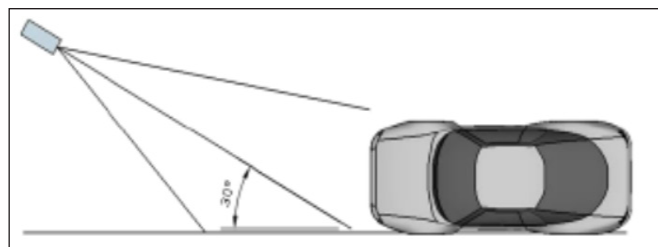


Fig 1.2

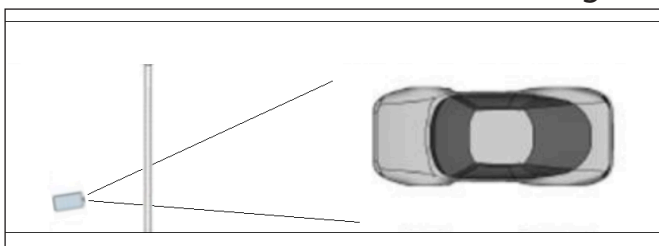


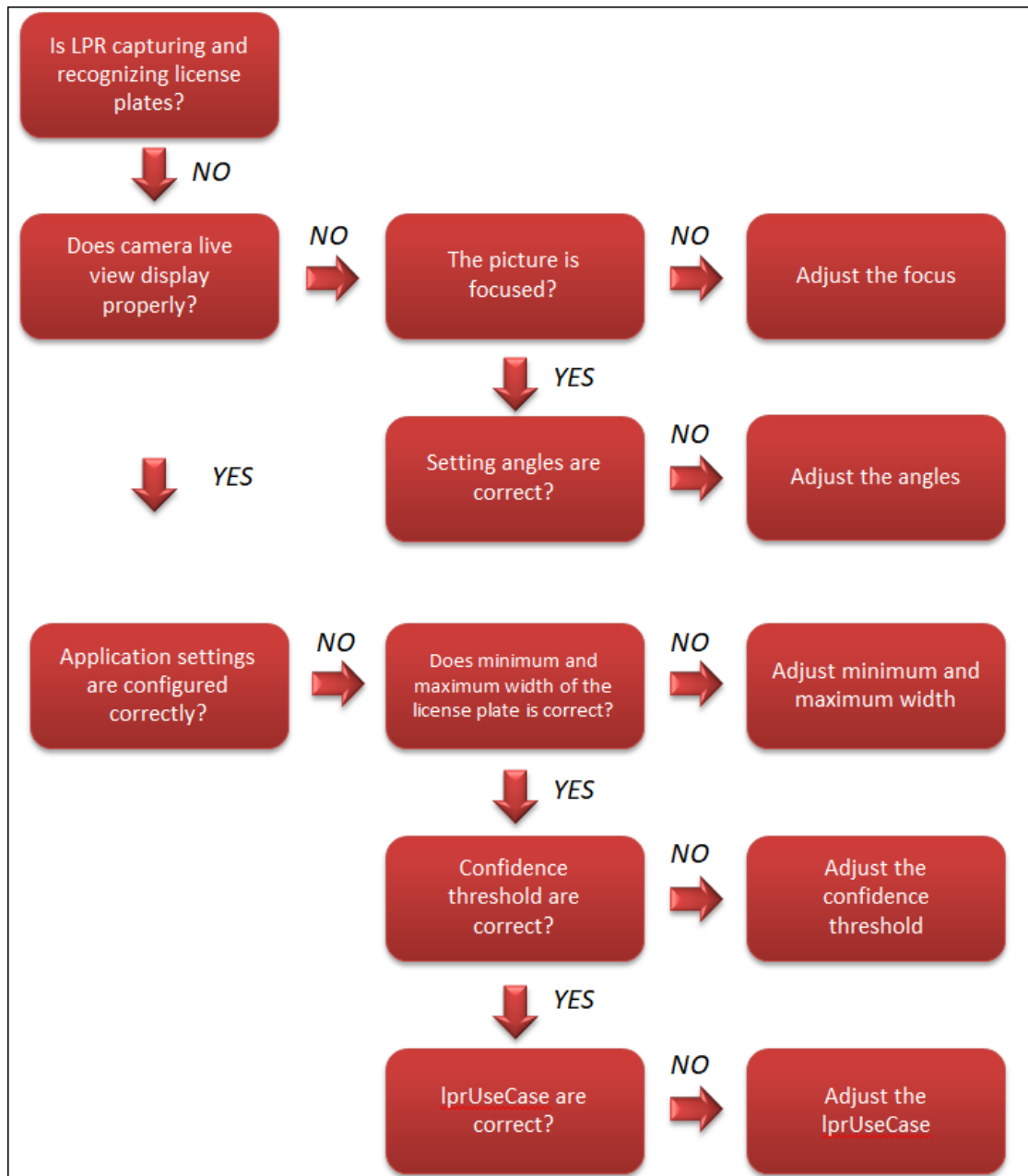
Fig 1.3



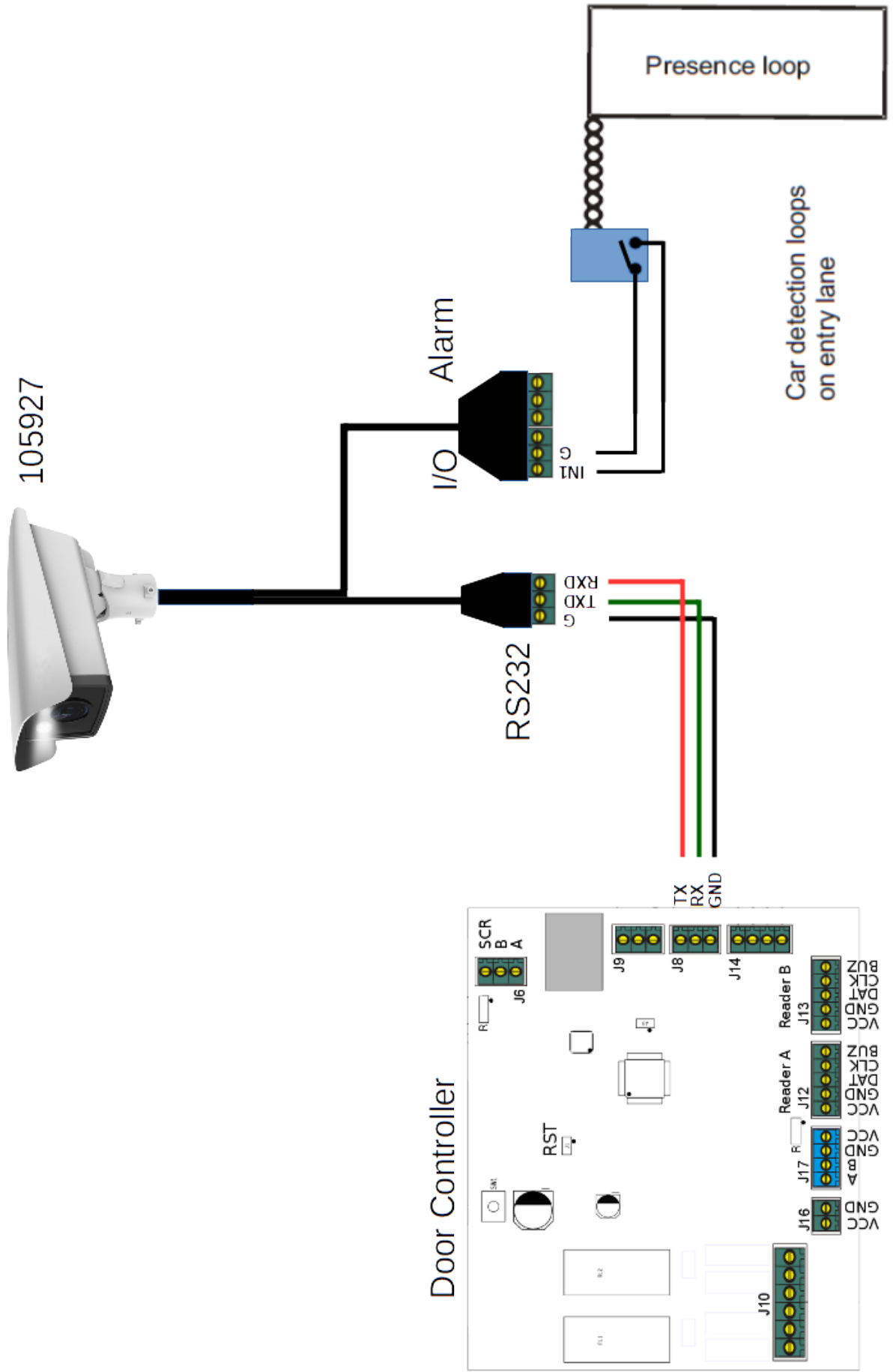
Fig 1.4

## 2 • FAQ

The troubleshooting flowchart is as follows, please refer to it for more details.



# 3 • CONNECTIONS



## USE ONLY INTERNET EXPLORER TO CONFIGURE THE CAMERA

Default configuration:

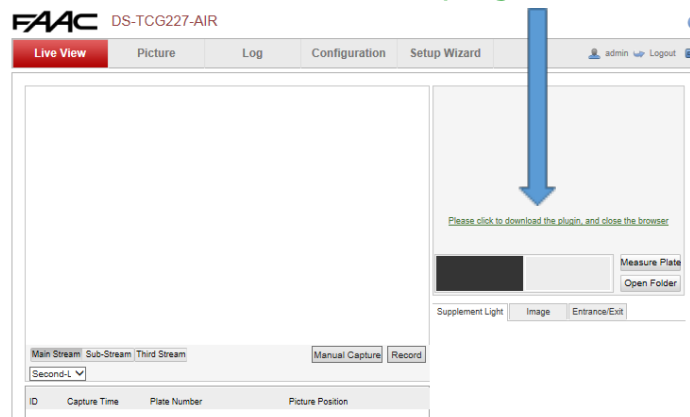
- IP Address: 192.168.1.64
- User Name: admin
- Password: admin1234

You will need to download the Plugin to see Live View.

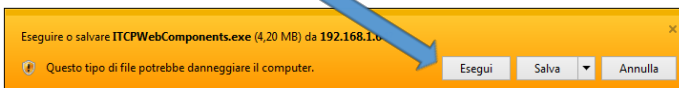
Click the link on the live view pane to download it and follow the on screen instructions.

To have Live View:

1. After login select: "[Please click to download the plugin, and close the browser](#)"



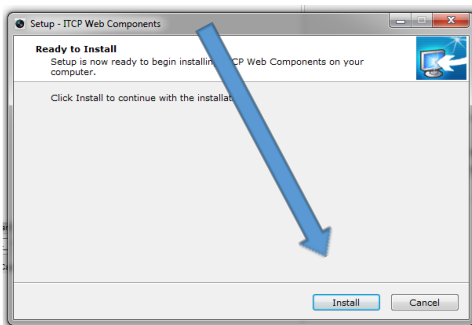
2. Then select "Run"



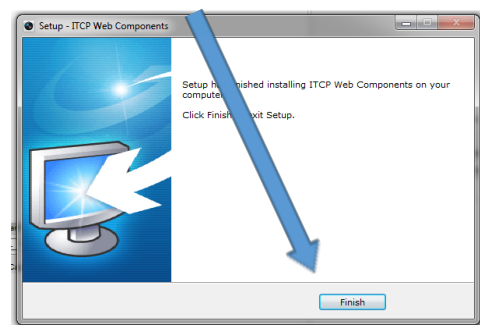
3. Then select "Run"



4. Then select "Install"



5. Then "Finish"



6. Then "Allow"



7. Live View activated!!

**Remember to close the browser during installation of the plugin.**

Reopen the browser and click allow in the pop up.

# 4 • CONFIGURATION

## 4.1 ANPR CAMERA SETUP

### 4.1.1 GENERAL CONFIGURATION

Steps:

1. Go to Setup Wizard > General Configuration.

- Confirm the IP setting of the camera or make any changes needed.

The screenshot shows the web interface for the FAAC DS-TCG227-AIR camera. At the top, there is a navigation bar with tabs for Live View, Picture, Log, Configuration, and Setup Wizard (which is highlighted in red). The user is logged in as 'admin' and can click 'Logout'. On the left, a 'Wizard' sidebar shows two steps: '1. General Configuration' (highlighted in red) and '2. Image Adjustment'. The main area is titled 'Quick Configuration Wizard' and contains the following fields:

- IP Address:
- Subnet Mask:
- Default GateWay:
- Capture Mode:
- Scene Mode:

Below the fields, there is a blue information icon and a note: "Reboot to take the modified IP address, subnet mask and default gateway into effect." At the bottom right, there are two buttons: "Next" and "Skip".

Select Next

## 4.1.2 IMAGE ADJUSTMENT

Park a Vehicle in the area of detection.

- Focus the camera to have a clear image of the detection area.
- Set up Lane and the trigger line by dragging the lines to suit the installation.



Use the Zoom and Focus buttons to set the image.

The "**lane line**" determines the margin of the left side of the reading area, position the line by dragging it across the screen.

The "**right border line**" marks the right-hand side of the reading area, position the line by dragging it across the screen.

The "**trigger line**" should be placed in the area where the number plate is present, when the car is stationary. Position the line by dragging it across the screen.

- Save Change

You will then be brought to live view



Press Manual Capture to ensure you are getting a reading to confirm installation is correct.

04-06-2021 Tue 13:07:42

Camera 01

Main Stream Sub-Stream Third Stream

Manual Capture Record

Second-L  The manual capture is enabled.

ID	Capture Time	Plate Number	Picture Position
2	20210406130735965	AB456CD	C:\Users\Eugenio\TCP Web\normalType\20210406\
1	20210406130735965	AB456CD	C:\Users\Eugenio\TCP Web\normalType\20210406\20210406130735965.jpg

Supplement Light Image Entrance/Exit

F1

Control Constant Light According to Brightness Condition

Control Constant Light According to Time Schedule

Start Time 00:00

End Time 00:00

Save

If pressing "Manual capture" does not give a reading, check and repeat from point Image Adjustment Pag.8.

### 4.1.3 CONFIGURE IMAGE

Go to **Configuration > Device Configuration > Capture Parameters > LPR Parameters**  
Set the type of number plate to be read, Front or Rear.

FAAC DS-TCG227-AIR

Live View Picture Log Configuration Setup Wizard

admin Logout

Device Status

Local Configuration

Device Configuration

- System Maintenance
- System Configuration
- Encoding and Storage
- Text Overlay
- Application Mode
- Capture Parameters**
- Image Parameters
- Custom Interface
- Entrances and Exits
- User Management

LPR Parameters Flash Light Parameters Vehicle Feature

LPR Parameters

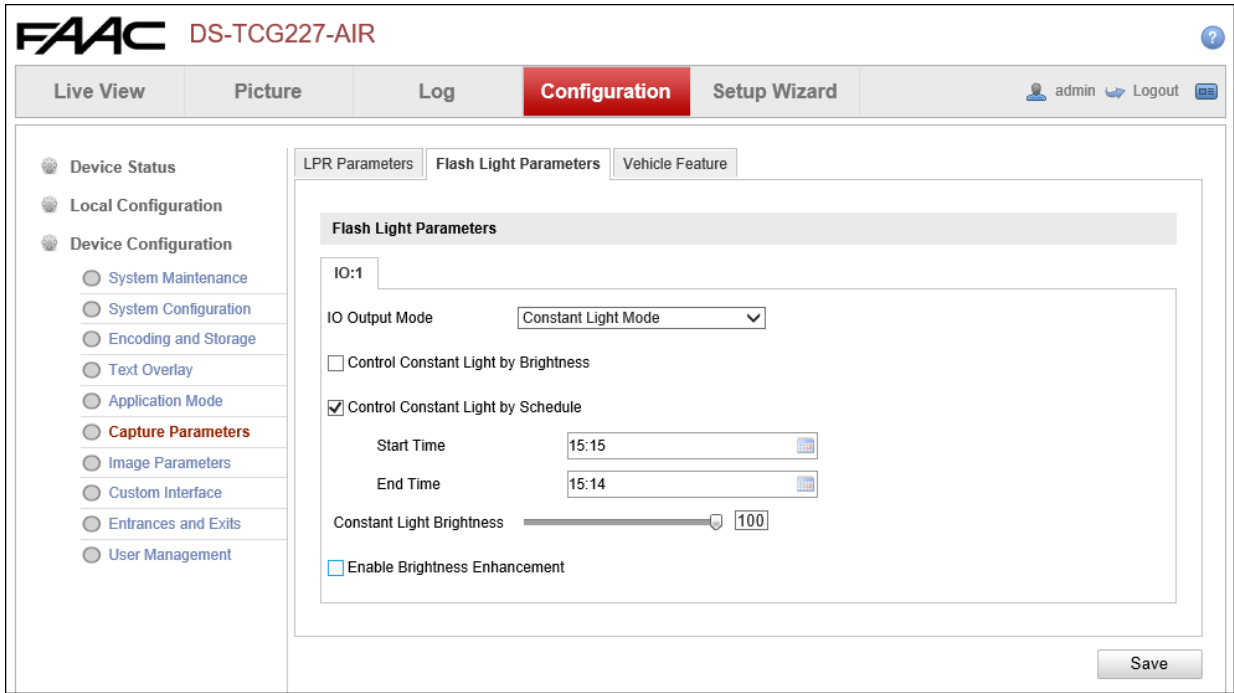
License Plate Recognition  Front Plate  Back Plate

License Plate Type  Small-Size Plate Recognition  Large-Size Plate Recognition

Save

Click **Save** to save the settings.

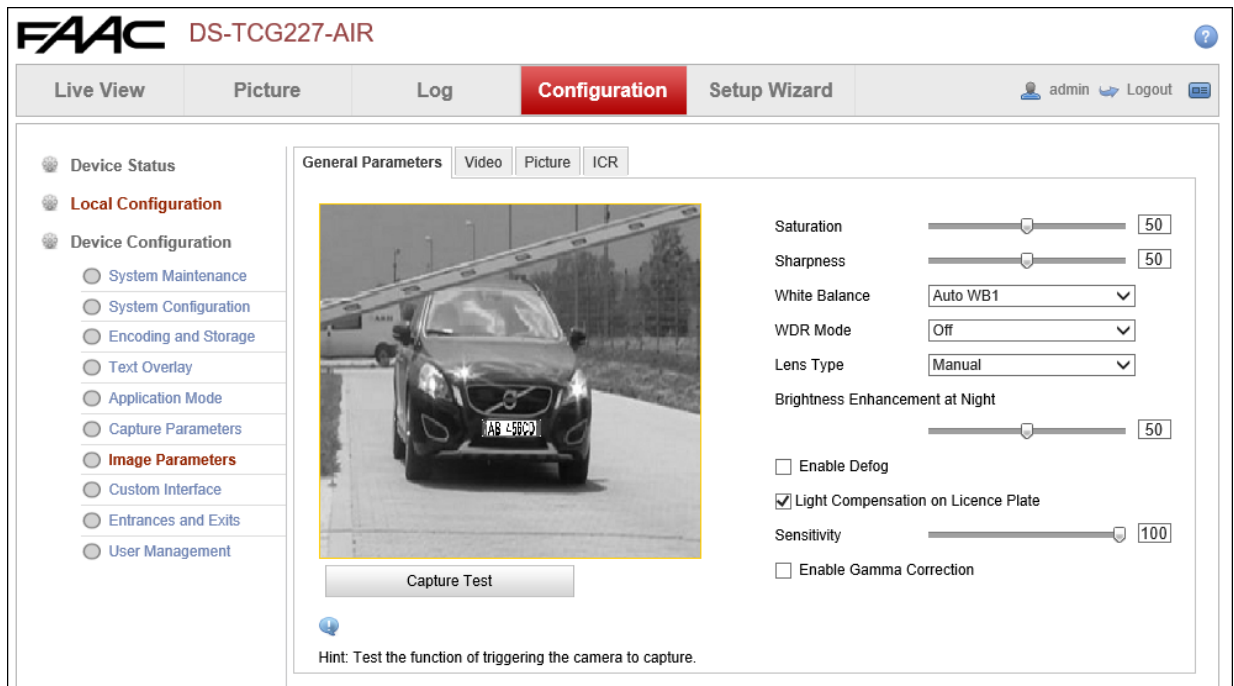
Go to **Configuration > Device Configuration > Capture Parameters > Flash Light Parameters**  
Used to enable the infrared illuminator.



Enable Control Constant Light by Schedule.  
Enter a time (as an example) to permanently enable the illuminator.  
Set the **Constant Light Brightness** value to **100**.

Click **Save** to save the settings.

Go to **Configuration > Device Configuration > Image Parameters > General Parameters**



Enable **Light Compensation on License Plate**  
Set the **Sensitivity** value to **100**.

Saving is automatic.

Go to **Configuration** > **Device Configuration** > **Image Parameters** > **Video**

Set the **Shutter Speed** value to **2500 $\mu$ s** and the **Gain** value to **19**.  
Set the **3D DNR** value to **CLOSE**.

Saving is automatic.

Go to **Configuration** > **Device Configuration** > **Image Parameters** > **ICR**  
**ICR** = (Infrared Cutfilter Removal)

Set the **ICR Mode** value to **Manual Switch**.  
Set the **Day/Night Mode** value to **Night**.

Click **Save** to save the settings.

## 4.1.4 CONFIGURE TIME

As the saved images are recalled in Keydom according to time, it is important that the system minutes and seconds match.

Steps:

1. Go to **Configuration > Device Configuration > System Configuration > Time**.
2. Select the Time Zone of your location from the drop-down menu.

FAAC DS-TCG227-AIR

Live View Picture Log Configuration Setup Wizard

admin Logout

Device Status

Local Configuration

Device Configuration

- System Maintenance
- System Configuration**
- Encoding and Storage
- Text Overlay
- Application Mode
- Capture Parameters
- Image Parameters
- Custom Interface
- Entrances and Exits
- User Management

Device Information Serial Ports TCP/IP Port HTTPS Time Service DST

Time Zone (GMT+01:00) Amsterdam, Berlin, Rome, Paris

**Manual Time Adjustment**

Device Time 2020-11-17T11:08:29

Set Time 2020-11-17T18:08:03  Synchronize with PC

**NTP**

Server Address 192.168.1.99

NTP Port 80

Interval 5 Minute(s)

NTP TEST

Save

3. Synchronize time.

### Synchronizing Time by NTP Server

- (1) Check **NTP** to enable the function.

- (2) Configure the following parameters:

**Server Address:** enter the IP address of the Network Controller.

**NTP Port:** Port of NTP server.

**Interval:** The time interval between the two synchronizing actions with NTP server.

**NTP**

Server Address 192.168.1.99

NTP Port 80

Interval 5 Minute(s)

NTP TEST

4. Click **Save** to save the settings.

## 4.1.5 CONFIGURE DST

To configure the "Daylight Saving Time" management go to **Configuration > Device Configuration > System Configuration > DST.**

The screenshot shows the FAAC DS-TCG227-AIR web interface. The top navigation bar includes 'Live View', 'Picture', 'Log', 'Configuration' (highlighted in red), and 'Setup Wizard'. The user is logged in as 'admin' and can click 'Logout'. The left sidebar shows a tree view with 'Device Configuration' expanded to 'System Configuration'. The main content area has tabs for 'Device Information', 'Serial Ports', 'TCP/IP', 'Port', 'HTTPS', 'Time', 'Service', and 'DST'. The 'DST' tab is active, showing a form with the following fields:

- Enable DST
- Start Time: Mar. (Month), Last (Day), Sun (Day of Week), 02 (Hour)
- End Time: Oct. (Month), Last (Day), Sun (Day of Week), 02 (Hour)
- DST Bias: 60min (Minutes)

A 'Save' button is located at the bottom right of the form.

Enabling the function.

Set start and end date/time.

Enter the minutes of time deviation.

Click **Save** to save the settings.

## 4.1.6 CONFIGURE FTP

In order to be able to save the images linked to the number plate reading, an FTP server must be configured.

Steps:

1. Go to **Configuration > Device Configuration > Encoding and Storage > FTP**.

No.	Name	Elements
1	Name1	License Plate Number
2	Name2	Time
3	Name3	None
4	Name4	None

The FTP Server is already enabled and configured with the default Keydom data.

If the IP is changed in Keydom, change the Server address box with the new network address.

User Name and Password must match those configured in Keydom.

(Default: Username = user, Password = user)

Make sure that for the formatting of the image name, "-" is selected as the Separator.

In the Elements:

n°1 = License Plate Number

n°2 = Time

All other fields must be set to None.

Click **Save** to save the settings.

## 4.1.7 CAPTURE INTERFACE

The camera can capture number plates in two different ways.

**Use on the I/O coil is recommended.**

1. I/O Coil - triggered by a loop detector connected to the I/O of the camera (default). An image will be captured once a vehicle drives over the loop detector.
  - Install the loop system in the ground at the entrance in front of the camera.
  - Wire the relay from the loop detector N/O to the I/O of the camera see "Connections" pag. 5

The screenshot shows the FAAC DS-TCG227-AIR configuration web interface. The top navigation bar includes 'Live View', 'Picture', 'Log', 'Configuration' (highlighted in red), and 'Setup Wizard'. A user menu shows 'admin' and 'Logout'. The left sidebar lists configuration categories: Device Status, Local Configuration, and Device Configuration. Under Device Configuration, 'Custom Interface' is selected. The main content area is titled 'Special Interface' and contains the following settings:

ACCURACY[0-100]:	<input type="text" value="90"/>
NOTREAD[0/1]:	<input type="text" value="1"/>
RS232_OPT_A[0/1]:	<input type="text" value="0"/>
RS232_OPT_B[0/1]:	<input type="text" value="1"/>
CONTINUOUS_CAP[0/1]:	<input type="text" value="0"/>
TIMEOUT[0-255]:	<input type="text" value="0"/>
CR+LF[0/1]:	<input type="text" value="0"/>
RS485NO[0/1]:	<input type="text" value="0"/>
PLATE_FILTER[0/1]:	<input type="text" value="1"/>

A 'Save' button is located at the bottom right of the configuration area.

This configuration is set by default in the camera.

The camera is now programmed to look for a number plate in the detection field every time a vehicle drives onto the loop.

- By Constant capture mode – the camera will capture an image automatically in the interval set by the installer. Once a plate is detected in the images it will be send to Keydom.

FAAC DS-TCG227-AIR

Live View Picture Log **Configuration** Setup Wizard admin Logout

Device Status  
Local Configuration  
Device Configuration

- System Maintenance
- System Configuration
- Encoding and Storage
- Text Overlay
- Application Mode
- Capture Parameters
- Image Parameters
- Custom Interface**
- Entrances and Exits
- User Management

Special Interface

ACCURACY[0-100]:	90
NOTREAD[0/1]:	1
RS232_OPT_A[0/1]:	0
RS232_OPT_B[0/1]:	1
<b>CONTINUOUS_CAP[0/1]:</b>	<b>1</b>
<b>TIMEOUT[0-255]:</b>	<b>5</b>
CR+LF[0/1]:	0
RS485NO[0/1]:	0
PLATE_FILTER[0/1]:	1

Save

To enable continuous reading, edit the two items highlighted above.

- CONTINUOUS\_CAP = "1" Enable, "0" Disable
- TIMEOUT (0 - 255) = Enter the time interval, in seconds, between one reading and the next.

Save to confirm.

This configuration will send the data every 5 seconds in the presence of a plate. Either on the serial port or in FTP.

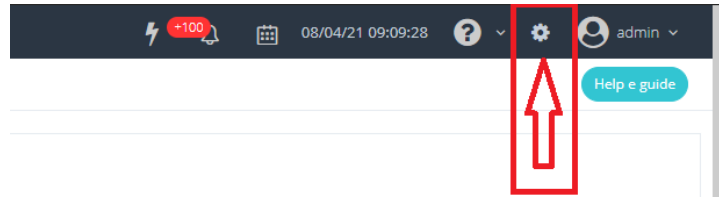
Once the installation is complete, you can configure the camera to transmit to Keydom.



## 4.2 KEYDOM SETUP

### 4.2.1 NTP/TIMEZONE SETTINGS

Login to Keydom and open the System Configurations menu.



Scroll down to Properties Configuration

1. Enable the 'Is NTP Server' item
2. Make sure Keydom has set the correct time zone.
3. Save

A screenshot of the 'PROPERTIES CONFIGURATION' form in Keydom. The form contains various configuration fields. The 'Is NTP Server' checkbox is checked and highlighted with a red box. The 'Timezone' dropdown menu is set to 'Europe/Rome'. Other fields include: Node name: Keydom; Node id: 1; Landing folder path: /mnt/partition3; MainLog path: /mnt/partition3/Logs/Main.log; Log level: Debug; Max log size (MB): 2; Save period (sec): 10; DbConnectionString: /mnt/partition3/database.db; Serial driver enabled: checked; Antijam time (sec): 300s; Serial port: /dev/ttyAMA0; Serial baudrate: 460800; Reports results path: /mnt/partition3/Reports; Web protocol: Https; Web port: 443; Web uri context: /keydom; Static web path: /WebApp; Database cache: checked; Has NTP Server: unchecked; Max active alarms: 1000; Long tasks cron: Every Day at 03:00.

## 4.2.2 SET ANPR CAMERA IN THE READERS

Select Configuration > Device

Highlight the Door Controller where the ANPR Camera has been connected

Select Readers > Scroll Down to Profile (Onboard COM)

Set the "Profile (Onboard COM)" to "Receive only" and the Baudrate at 9600

Reader 1	Reader 2
* Display backlight timeout (sec): 5	* Display backlight timeout (sec): 5
Profile (Onboard COM): Receive only	Profile (Onboard COM): Receive only
Baudrate (Onboard COM): 9600	Baudrate (Onboard COM): 9600
* Data Bits (Onboard COM): 8	* Data Bits (Onboard COM): 8
Parity (Onboard COM): N	Parity (Onboard COM): N
* Stop Bits (Onboard COM): 1	* Stop Bits (Onboard COM): 1
Language: English	Language: English
Reason (default normal):	Reason (default normal):
Reason (default reverse):	Reason (default reverse):
Text normale: ENTRATA	Text normale: USCITA
Text reverse:	Text reverse:

Save

Save

## 4.2.3 FTP SETTINGS

Select Readers > Scroll Down to ANPR camera type and set Generic FAAC

Enter the IP address set in the camera (default 192.168.1.64)

\*\* If the gate is Monodirectional insert the same IP address on both readers, if the gate is Bidirectional insert the corresponding IP addresses for reader A and B.

This is so that Keydom can store the images correctly.

Reader 1	Reader 2
Language: English	Language: English
Reason (default normal):	Reason (default normal):
Reason (default reverse):	Reason (default reverse):
Text normale: ENTRATA	Text normale: USCITA
Text reverse:	Text reverse:
ANPR camera type: Generic FAAC	ANPR camera type: Generic FAAC
ANPR camera ip address: 192.168.1.64	ANPR camera ip address:
ANPR camera url:	ANPR camera url:
Link plate on ticket issued: <input type="checkbox"/>	Link plate on ticket issued: <input type="checkbox"/>
@ Advanced validation function: <input type="checkbox"/>	@ Advanced validation function: <input type="checkbox"/>
Medias combination mode: Disabled	Medias combination mode: Disabled

Save

Save

Select Configuration > Preferences and scroll to ANPR Camera FTP and Storing Settings

Enable FTP management

Enter username and password used in the ANPR camera (default: username = user, password =user)

Access configuration  
Visits  
Configuration  
Devices  
Structure  
Counters  
Actions  
Reader Groups  
Fixed Paths  
Operators & Roles  
Email Accounts  
Preferences  
Channel In/Out

### ANPR CAMERA FTP AND STORING SETTINGS

Enabled:

Username: user

Password: \*\*\*\*

Port: 21

How to match the image sent via FTP with the validation sent via serial: By camera timestamp

Max time in ms allowed between image and validation to create a match: 10000

Image filename pattern: \*-YYYY-MM-DD\_HH-mm-ss-SSS

Storage path:

Domain:

Test filename pattern

Save

In order to save images correctly, you must set which name format to give.

For ANPR - 105927 set the 'filename pattern' as follows:

**\*-YYYYMMDDHHmmssSSS**

Set in which folder or HD the images will be saved, with Username and Password if any

Fixed Paths  
Operators & Roles  
Email Accounts  
Preferences  
Channel In/Out  
Dynamic Jobs  
System Health

Max time in ms allowed between image and validation to create a match: 10000

Image filename pattern: \*-YYYYMMDDHHmmssSSS

Storage path: W192.168.1.100-ANPR

Domain:

Storage username: everyone

Storage password: \*\*\*\*

Storage mount security mode: ntlm

Storage mount SMB version: 2.0


Save

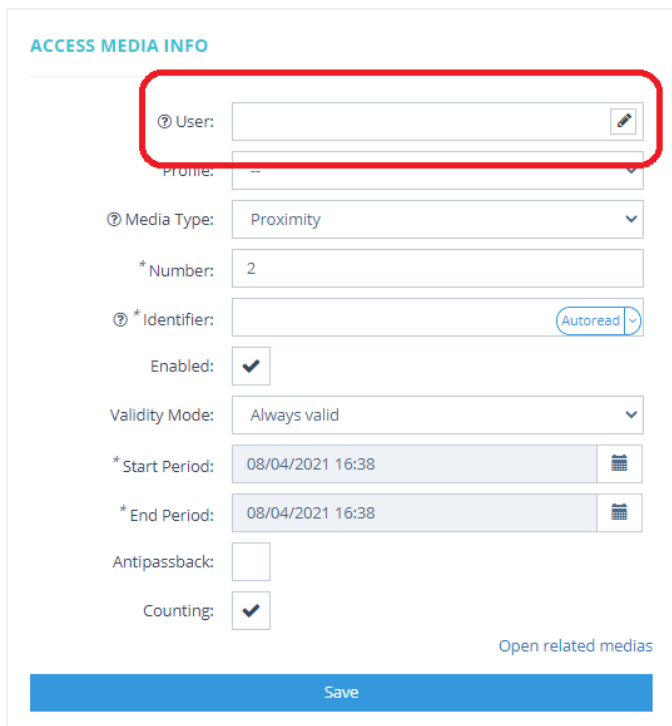
Save

## 4.2.4 ENTER A PLATE IN THE ARCHIVE

To insert a number plate into the archive by associating it with an existing User or not, follow these simple steps

Select Access Configuration > Access Medias

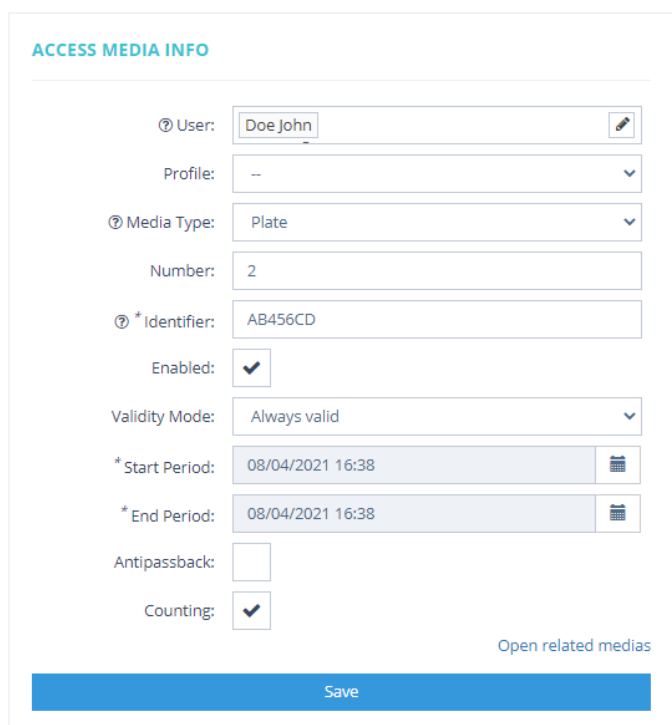
Press the ADD button   and enter the user's details in the Access Media Info Panel on the right.



The screenshot shows the 'ACCESS MEDIA INFO' form. The 'User' field is highlighted with a red box. The form includes the following fields: Profile (dropdown), Media Type (Proximity), Number (2), Identifier (Autoread), Enabled (checked), Validity Mode (Always valid), Start Period (08/04/2021 16:38), End Period (08/04/2021 16:38), Antipassback (unchecked), and Counting (checked). A 'Save' button is at the bottom.

Select the Pencil in the User Field

- Select the user from the popup window or if it's a new user press the ADD button in the top right.
- If it is a new user to the system fill in the first and last name and press save. No other details are needed unless you keep further records on users.



The screenshot shows the 'ACCESS MEDIA INFO' form with the 'User' field filled with 'Doe John'. The form includes the following fields: Profile (dropdown), Media Type (Plate), Number (2), Identifier (AB456CD), Enabled (checked), Validity Mode (Always valid), Start Period (08/04/2021 16:38), End Period (08/04/2021 16:38), Antipassback (unchecked), and Counting (checked). A 'Save' button is at the bottom.

- Select Profile to match users access rights – Example user is in the default H24 Profile – Full Access
- Set Media Type to Plate
- Enter the Plate number in the Identifier
- Make sure it's enabled
- Set Valid Period
- Select Counting if you want to count the cars coming into the area.
- Save

The Media is now added to the Access Control system and configured to grant access once the number plate is presented to the camera.





FAAC S.p.A. Soc. Unipersonale  
Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY  
Tel. +39 051 61724 - Fax +39 051 758518  
[www.faac.it](http://www.faac.it) - [www.faacgroup.com](http://www.faacgroup.com)