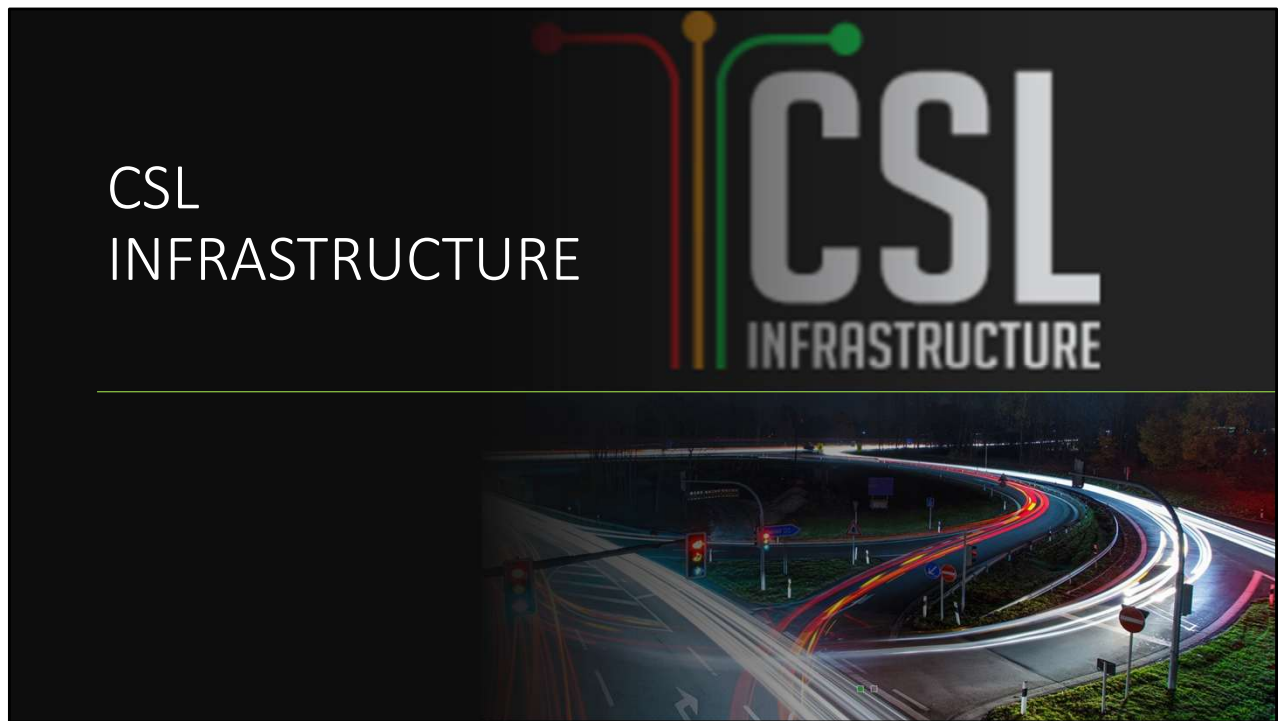




Hi Everyone.

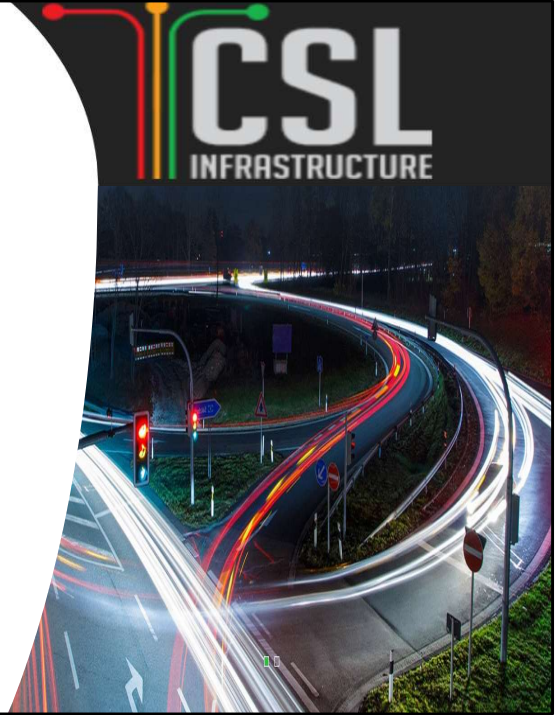
I was asked to give a quick talk on the basics of setting up a Flir camera.

In saying that I don't want to bore you with all the details in the manual, because as we all know all technicians read the manual from cover to cover before they install any product.

We will however touch on a few of the key points

Basic FLIR Setup and Configuration

1. Choosing the Correct Device and Lens
2. Calibration
3. Zone Setup
4. Application and Output Assignments
5. Installation basics



Choosing the Correct Device



TrafiOne

An entry level, thermal camera capable of detecting bicycles and pedestrians in all lighting and weather conditions. This is the preferred choice for pedestrian crossings where traffic is not the main focus of detection.



TrafiCam AI

A visible light camera primarily used for vehicle detection. It excels in applications with multiple lanes and dense traffic.

It is **NOT THE PREFERRED METHOD to detect bicycles and pedestrians.**



ThermiCam AI

A thermal camera capable of detecting vehicles, bicycles, and pedestrians in all lighting and weather conditions. This is the correct choice for applications requiring 24/7 detection regardless of ambient light.



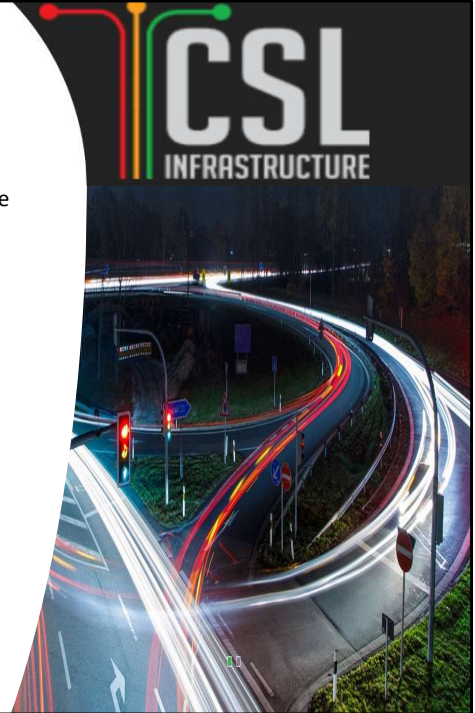
Let's start by choosing the correct device for the project.
There are 3 main models to choose from.

Calibration

Start by setting the height of the camera.

Set the tilt angle to match known distances on the road. The camera uses these points to correctly scale the detection area. This helps the camera understand the perspective.

Using the pan angle, Align the calibration lines to the traffic flow where zones are to be placed.



After installation it is essential to calibrate the sensors for reliable detection.

Zones

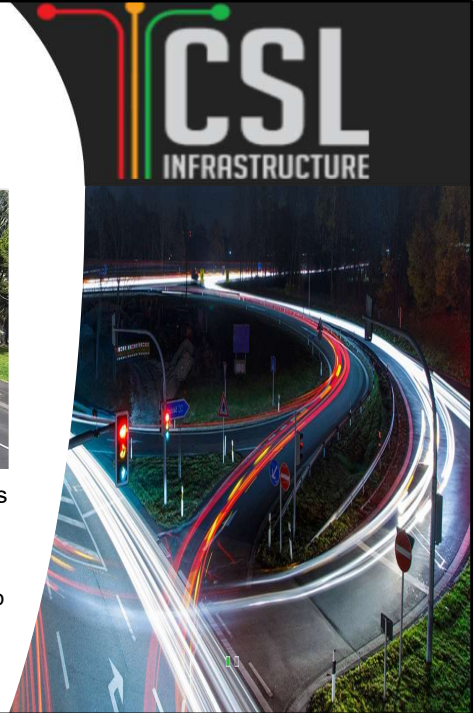
Zones and activations are done in 3 steps.

1. Within the web interface, use the zones tab to draw detection zones on the live video feed. Use the blue arrow to set the direction of detection.



2. Create an application in the web interface, select the object classes to be detected (e.g., vehicles, pedestrians, or bicycles), and set the parameters of the detection as well as the name.
3. Set up detection in the web interface by assigning a specific application to the zone, such as "Presence" for a stop bar or "Queue" for congestion monitoring.

Assign the output for the specific detection.



Next, we move to adding zones.
With the AI range of products, we
do detection setup slightly different.

Application and Output Assignments

Most of the FLIR cameras have a maximum of 8 zones that can be created.

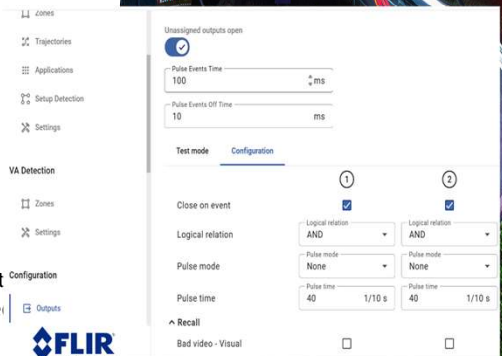
The cameras have 2 on board outputs and this can be extended to 16 outputs by using a BPL unit.

Any zone can be assigned to any output. Multiple zones can also be assigned to the same output.

It is possible to assign logic to the outputs for more advanced use cases.



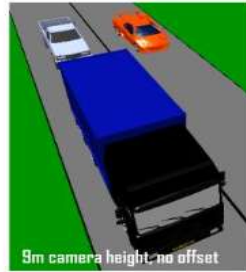
An example of this is setting two zones up and assigning the AND logic to it where zone 1 AND zone 2 needs to be activated before an output is triggered.



Installation basics

The placement of sensors are crucial to effective detection.

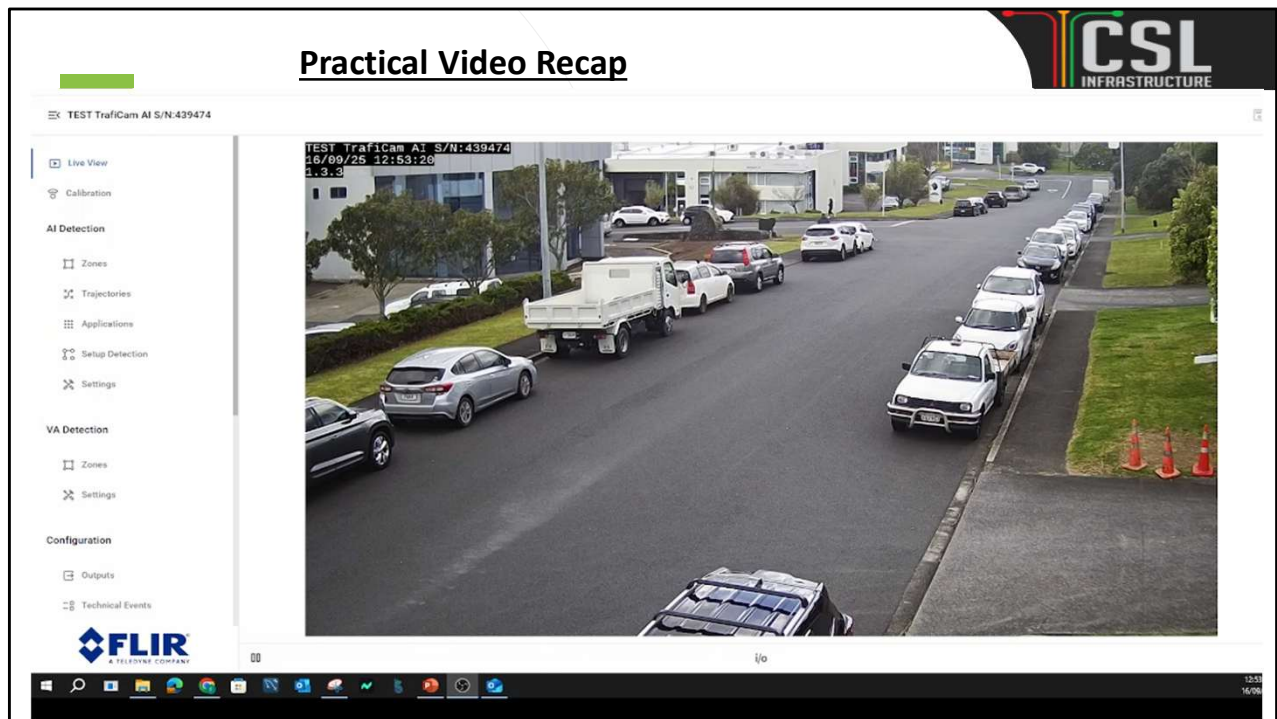
be aware of optical occlusion!



- on the same lane
- on adjacent lanes

By knowing the limitations and ability of the sensors, we can choose the correct installation location at time of design.





That was enough of the boring stuff, I'm sure you would much rather see it done in real life, so lets go through an actual setup following the steps we discussed.

Closing thoughts

It is essential , at the design phase of your project, that you have a clear plan for your detection zones and which applications they will serve (e.g., presence, queue, or counting)

Know Your Limits: Effective detection is up to 25m from the camera. This can be extended by using a narrow angle lens option if needed.

The FLIR range has a maximum of eight zones, but you can assign a single application to multiple zones or a single zone to multiple applications for maximum flexibility.

Don't Forget the Outputs: Remember that the cameras have two onboard outputs, these can be extended to 16 outputs with a BPL3 unit, and any zone can be assigned to any output.



Thank you

THANK YOU



Please see us in the exhibition hall
for more details on the products.

