A Telraam outdoor counting unit – it's possible!

Voluntary counting citizens give us more information

Testimonial nr 1:

"My home is about 70 meters away from the street. Too far for my wifi-network and also no electricity was available. My first idea was to attach the camera to one of the trees at the streetside. To have a full view of the street including the footpath this was not the right option. You need at least 3 to 4 meters height for the camera to cover the whole street. The first thing that I had to do was to place a pillar and a box for the electrical connections, the pi-computer and the camera.

D**gg**raam

Since the camera is outdoors and surrounded by trees, I have no problems with reflections caused by the sun. I combined the Telraam-system with a system of Leuvenair (and a system of Smart Citizen

(<u>https://smartcitizen.me/kits/11099</u> - in the box) to measure the air quality and some other sensors.

To solve the problem of the wifi-connection I installed an outdoor wifi antenna (TP-Link Omada EAP225-Outdoor). I had to place the antenna at a height of about 5 meters on the façade of my house to have good coverage for the 2.4 GHz frequency. The 5Ghz frequency was not stable but the amount of data that the system is sending is no problem for the 2.4 GHz frequency. The system is now working well. We (including my neighbours) are surprised about the heavy traffic in our street. We were aware of het large amount of cars (2000-3000 cars/day) but we didn't know that also 500-1000 cyclists are passing in two directions in our very narrow street.

Based on this data we have asked the city council to give our street the road code classification of a cycle-street (30 km speed limit)."



Testimonial nr 2:

"I bought the listed material. I also bought a halogen projector of 400W (the 120W model is a bit small) in a DIY store.

I removed the bulb and the reflector, so I could put a 2P female plug inside, and I plugged the power supply on it. I put the raspberry in its little case and plugged it. Finally, I glued the camera with transparent silicone directly on the glass using a small wooden wedge about 8mm thick.

Then I fixed the projector on my gable, you can adjust the height thanks to the swivel support."



Testimonial nr 3:

"On the internet I searched for a transparent yet (splash)waterproof enclosure that fits an rpi and pi-cam, and on Conrad I found one of the Fibox brand (<u>see this link</u>). The other parts I designed myself in SolidWorks and printed with my 3d printer at home and laser cutter at school.

Firstly, I fixed a wooden plate in the Fibox with woodscrews at the points provided for it, this was thus cut out on the laser cutter (plate thickness 6 mm). You can find the dxf file of this part via this link.

My camera holder went through 2 iterations, the first version was too loose so after a while only the sidewalk was visible on the camera image. The stl files of this part can be found <u>via this link</u>.

The rpi is powered via PoE ('power over ethernet'). In the Fibox there is a PoE adapter with RJ-45 interface to separate data from power. Initially, I also tried to make the data connection via Ethernet since the cable was there anyway, but that did not work out well. The rpi fell back after reboot on the wifi connection as default connection interface, and so the rpi logged on to the Telraam server with another MAC address."



