

Gotthard Road Tunnel, Göschenen Thermo Portal

Client

ASTRA (Federal Roads Office), Zofingen

Consultant

IUB Engineering AG

Construction period

2015

Scope of services

- Planning
- Procurement of hardware and necessary IT systems
- Construction supervision & commissioning
- Definition of operation processes (exclusion, follow-up inspection, troubleshooting, deployment of damage protection Gotthard & KaPo UR)

Description

As the thermo portal in Airolo has proven itself, ASTRA 2014 has decided to also install a "thermo" portal on the north side of the tunnel for lorries travelling south. The "thermo" portal looks out for potentially overheated vehicles 1,200 m before the north portal of the Gotthard Road Tunnel. All vehicles are checked both geometrically and thermally in the normal traffic lane at normal speed and assessed in real time. If the system detects overheating in a vehicle (engine, tyre, load), a red light automatically appears via the traffic control system. The vehicle is picked out and further inspected. If necessary, the vehicle is taken off the road.

Main technical data

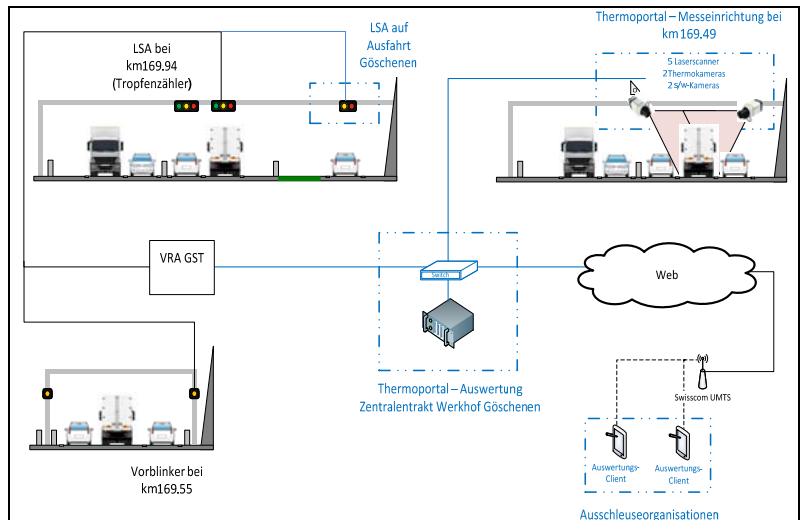
- 4 laser scanners for 3-D models
- 2 infrared cameras
- 1 temperature probe
- 2 overview cameras (black/white)
- Lighting of the measuring point for optimal night-time pictures
- 3 mobile terminals for alarm display for operators, connection to the 3G network
- 1 electrical unit at the measuring point
- Fibre optic connection between the measuring point and evaluation server
- 1 analysis server in Göschenen operations centre & internet connection



Sensor system of the Göschenen "thermo" portal



Mobile terminal to display alarms



Functional overview of the "thermo" portals