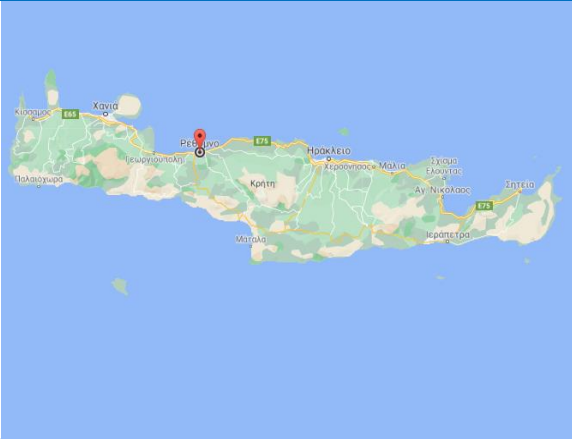


CaseStudy

ENVIRONMENTAL MONITORING STATIONS IN RETHYMNO (CRETE)



Project ID:

The project was about supply and installation of two **environmental monitoring stations** in Rethymno city in account of **Polytechnic school of Crete**.

The stations are consisted of air quality sensors, PM sensors, complete **meteorological station and sound level meter**. Each station measure **nineteen (19) air quality and meteorological parameters**.

IN BRIEF:

System : Telemetric environmental monitoring stations

Area : Rethymno (Crete)

Period : June 2021

ADMINISTRATOR:

Polytechnic school of Crete,
Department of Environmental Engineering

IMPORTANT:

- ❖ Low cost mobile telephony
- ❖ No moving parts sensors
- ❖ Low maintenance requirements



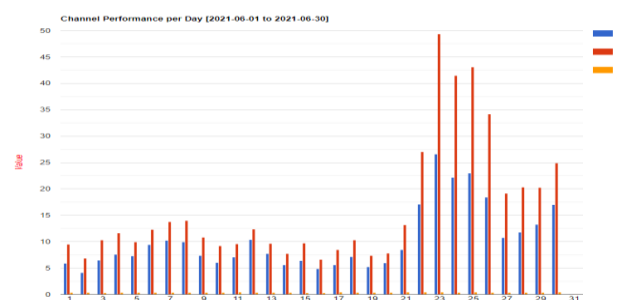
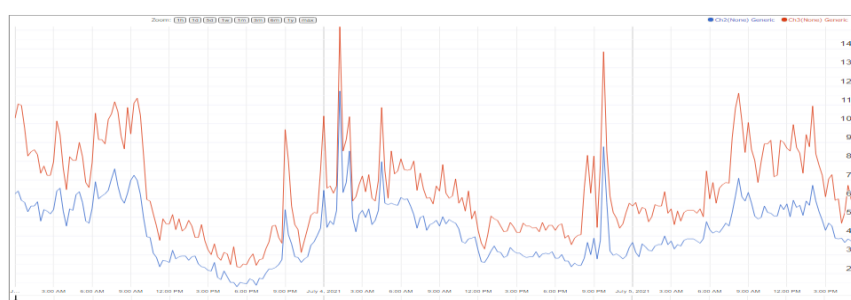
The station measures all the parameters every **1 second** and logs the averages every 15 minutes.

The measurements are logged in the data logger and simultaneously are transmitted to the **cloud**.

The access to the data are made via **internet**, from any browser.

The meteorological station includes sensors that don't require any recalibration.

The air quality sensors are **electrochemical type**, each one with its own air circulation system. They are **plug and play** and keep the **calibration data** in their own memory.





MEASURED PARAMETERS

- ❖ Sound level (db)
- ❖ Total solar radiation (w/m²)
- ❖ Barometric pressure (mBar)
- ❖ Relative Humidity (%)
- ❖ Rain height (mm)
- ❖ Lightning strike counter
- ❖ Average distance of strikes (Km)
- ❖ Wind speed (m/s)
- ❖ Wind gust (m/s)
- ❖ Wind direction (°)
- ❖ Air temperature (°C)
- ❖ Vapor pressure (kPa)
- ❖ PM₁₀ (µg/m³)
- ❖ PM_{2.5} (µg/m³)
- ❖ VOC (ppm)
- ❖ SO₂ (ppm)
- ❖ CO (ppm)
- ❖ NO₂ (ppm)
- ❖ Power supply



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