Product factsheet

ardeusi.gr

Software solution
Hardware product or technological device

Description

ardeusi.gr is an integrated tool designed to facilitate and enhance the precision of irrigation practices. The ideal quantity of irrigation water is calculated by the web application based on

the specific needs of each crop. At the same time, a network of sensors within the system continuously monitors key irrigation parameters in real time, providing effective solutions to irrigation challenges. The system also enables full automation of irrigation through remote control of pumps or valves, using time scheduling or real-time crop needs derived from current soil moisture levels and other quality indicators.

By promoting efficient water use and enabling the reuse of alternative water resources, this tool contributes to the principles of the circular economy. It supports sustainable agricultural practices by minimizing water waste, reducing dependency on conventional water supplies and optimizing resource use for long-term environmental and economic benefits.

The novelty of ardeusi.gr is based on the use of technologies based on IoT (Internet of Things) and sensors, giving the ability to calculate the ideal amount of irrigation water for multiple crops separately and for different plots. Precise identification of needs ensures the reduction of production costs while improving the quantity and quality of production.

Composition of the integrated system:

- Base node: Equipped with 4G/3G/GPRS connectivity, a GNSS/GPS system, rechargeable battery, solar panel, display screen for measurement data, anti-theft mechanism, and adjustable measurement intervals.
- Weather station: Equipped with high-precision sensors to determine the parameters that affect irrigation, such as temperature, humidity, rainfall, speed, direction and wind gust, UV index, barometric pressure, dew point and solar radiation. This data is updated in real time.
- Soil moisture sensor: For the calculations of the amount of water actually stored in the ground with a high-precision sensor.
- Online application: The system accurately calculates the irrigation dose and duration for multiple plots. Through the application, users can easily access the necessary information, while sensor data is used to determine the precise amount of water required for each plot.

Advantages of ardeusi.gr:

- Irrigation optimization
- Reduction of poduction cost
- Cost savings
- Increase production

Target audience

Farmers, research and educational institutions, municipalities, private and public industries

Unique selling points

- Energy autonomous
- Plug - and - play system
- Remote control and management of systems
- Anti-theft system

Technical requirements

The system requires no technical setup, as it is equipped with an integrated SIM card that supports 2G, 4G, GPRS, EDGE, and NB-IoT networks, and includes complimentary lifetime data. Furthermore, there are no recurring subscription costs; a single payment grants full access to both the system and the platform.

Software data

- Operating environments:
  - SaaS - Web application

Publications

The product is already commercially available.

URL

https://about.ardeusi.gr/en/ardeusi/

Technologies applied by the product

- **Agriculture and Agricultural Engineering**
- **Decision Support Systems**
- **Hydrology and Water Management**
- **Internet of Things**
- **Irrigation and Water Management**
- **Sustainable Resource Management**
- **Water Reuse and Recycling**

Costs

1250 EUR (+VAT)
Last update: 2025-05-09

Related tags

autonomy | water management | Circular Economy | Alternative water sources | Water resources | Agricultural | Improve water efficiency | Wastewater management | Smart Water Management | Digital Water Monitoring | Sustainable Water Management