

MAIN FEATURES

Edge Computing Architecture for reliable, real-time, and low-energy consumption plant control.

Local controller (CU) capable of functioning with full capabilities even in the absence of a network and cloud connection.

Autonomous power supply for modules, sensors, and connected solenoid valves, via high-efficiency solar panels and long-lasting lithium batteries.

Creation of a wireless network using **LoRaWAN** technology to connect various modules to the Control Unit.

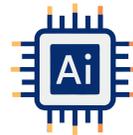
Remote and wireless control of the entire system, including pumping stations, via **Seneca** radio modems, and field solenoid valves connected to the Distribution Module.

Flexible system, with the ability to connect and manage, in each Field Module and based on the application and needs, soil temperature and humidity sensors placed at various depths.

Complete management of volumetric sensors (VWC) with different technologies, and tensiometric sensors for measuring water potential.

Advanced **DSS (Decision Support System)** functionalities: full decision-making support to achieve better savings and crop quality through the sensors installed with the Field Modules.

With the measurement of water potential, it is possible to determine the amount of energy that a plant's root system uses to draw water, regardless of the soil type.



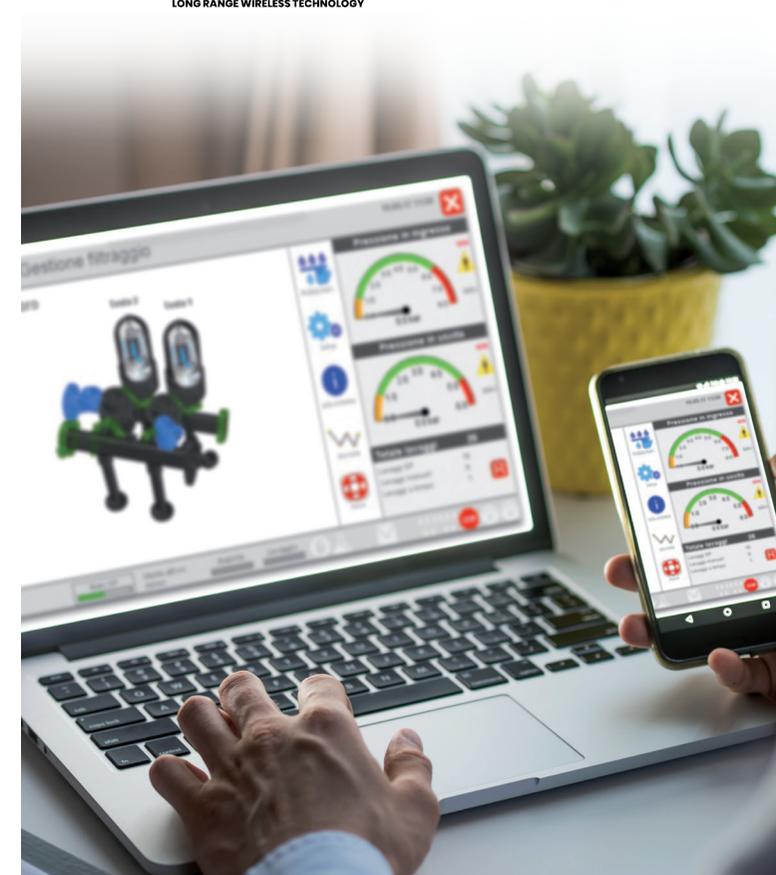
SMART & PRECISION IRRIGATION



AquaPro products are designed and engineered for **environmental sustainability**, incorporating innovative technologies to ensure continuous operation with minimal maintenance, even in hard-to-reach environments.



SMART REMOTE AUTOMATION SYSTEM FOR DRIP IRRIGATION SYSTEMS



AquaPro products are designed and developed for environmental sustainability and with innovative technologies for continuous operation and reduced maintenance, even in hard-to-access environments.

AquaPro is a wireless Smart Farming system for precision irrigation, capable of reducing production costs and increasing crop yield through automated and fully autonomous management of irrigation systems.

With the integration of IoT (Internet of Things) technologies and Artificial Intelligence (AI) algorithms, AquaPro can irrigate individual crop zones under controlled water stress, allowing for water and energy savings, increasing yield, improving crop quality, and limiting the development of diseases.

With the software, locally and/or in the cloud, it is possible to:

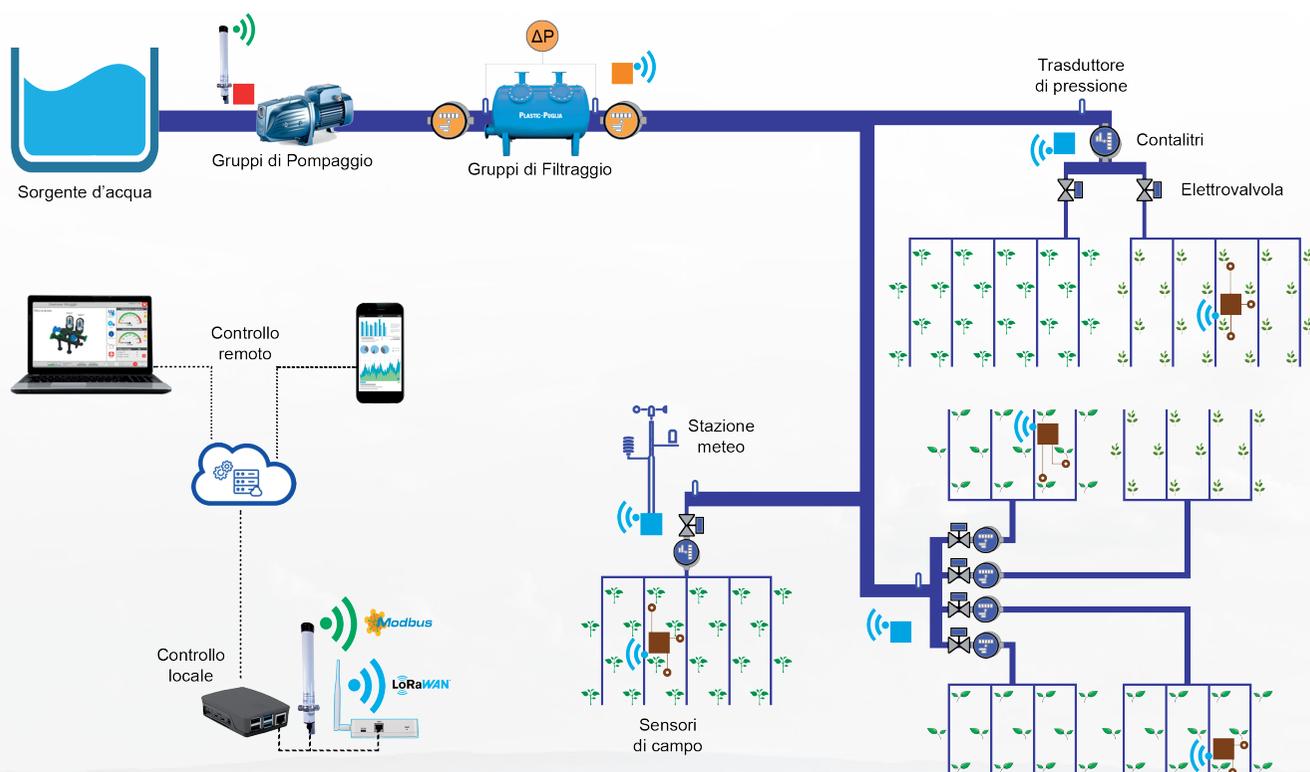
Store and visualize data from field sensors, providing a clear and simple view of the status and history of each irrigation sector.

View the temperature and precipitation forecast graph for the next 7 days.

View the calculated Evapotranspiration (ET).

Obtain decision support (DSS) to better evaluate when and how much to irrigate.

Create custom notifications with alarms when abnormal values are recorded or potential leaks are detected through the readings of installed contact sensors and pressure switches.



Perform predictive maintenance of the system, particularly for pumps and filters.

Optional Pumping Station Modules: allow for long-distance wireless management of pump groups, optimizing energy consumption, extending their lifespan, and modulating line pressure.

Optional Filtration Modules: manage filtration groups, monitoring the inlet and outlet pressures of each group, and initiating wash cycles when necessary.

Distribution Modules: allow for manual/automatic management of the system via time/calendar programs or water quantity (mm) programs, customizable for each irrigation sector.

Optional Field Modules: enable completely autonomous management of the sector or sectors to which they are assigned, after configuring the system based on the soil and crop.