



OVERLAND NEXUS

OVERLAND NEXUS is the software platform designed for **centralised control, real-time supervision and structured data logging** coming from the water systems distributed throughout the territory with particular attention to **cybersecurity**, in compliance with IEC 62443 and ISO/IEC 27001. The platform enables the **collection, normalisation, analysis and visualisation** of data acquired from **RTUs, PLCs, field sensors and aggregated data of meters**.



The platform is natively integrated with AQUAWORKS, specialised software for water district management.

OVERLAND NEXUS is supported by the **Pietro Fiorentini** integrated support service and is designed for high performance, safety and scalability.



Technical operational staff/
leakage search teams



Control Room and
Operation Manager



Automation /SCADA / ICT
managers

Functions	Description
Structure and organisation of systems	Multilevel architecture fully configurable, with geographic visualisation of systems and devices installed in the field. Intelligent search and filter functions by area, system or type.
Data collection and normalisation	Acquisition of process data from RTUs, PLCs, field sensors and aggregated meter data, via standard protocols . Data are normalised, logged and made available on interactive dashboards and synoptics.
Customisable synoptics and dashboards	Fully configurable dashboards by system or measuring point, with interactive objects showing hydraulic parameters and consumption Users can independently create or edit synoptics thanks to a library of dedicated objects .
Advanced RTU diagnostics	Real-time monitoring of operational status, battery level, signal quality and data reliability of each device. Automatic differentiation between remote and battery powered RTUs , with intelligent notifications and option of sending voice alerts or SMS.
Alarm and notification system	HyperAlarm module with configuration of static or dynamic threshold alarms, severity levels and customisable notification channels (e-mail, SMS, Telegram bot, voice calls) to on-call groups , ensuring targeted and timely management of anomalies .
Reporting and advanced data analysis	Generation of customised reports with filters by area, system or period. Dashboards and graphs enable comparisons between systems, RTUs or time intervals , monitoring performance, service levels and operational anomalies.

Table 1 Functions



Architecture and distribution

OVERLAND NEXUS is available both as a cloud service (**SaaS**) and as software installed at the customer's premises (**On Premise**). In both cases, it is accessible via a normal web browser, without the need to install applications on the devices.

The platform is designed to offer high scalability, guarantee service continuity, and ensure **maximum operational reliability**, thanks to its containerised microservices architecture.

Software updates are released in a controlled manner, **with no impact on operations**. Scheduled maintenance is also provided, aimed at maintaining consistently high performance and ensuring the full safety of the installed environment.

OVERLAND NEXUS is designed for automation, thanks to an innovative API motor that enables advanced integrations, improves operational efficiency and supports digital transformation.

OVERLAND NEXUS: optional modules



Diana module for advanced pressure monitoring (pressure transients)



RTCP ML module for pressure regulation using Machine Learning algorithm



Step Test Module for leak detection in water networks

OVERLAND NEXUS: competitive advantages



Interoperability with field devices and **native integration with SCADA, industrial protocols and open APIs**



Quick access with the ability to integrate corporate authentication, with MFA and role management to ensure **maximum safety and control** over logins



Modular and scalable architecture, expandable without impacting existing configurations



Dedicated technical support through the helpdesk and continuous training system



Maximum operational reliability thanks to **programmed updates** and guaranteed continuity.



Access from anywhere with responsive web interface, also optimised for mobile use.



Safety by design, developed according to standards **IEC 62443** and **ISO/IEC 27001**



Multi language and multi-time zone support for management across several territories.