

ST-IDRO

Hydrological early warning system





ST-IDRO

What is it?



ST-IDRO stations are realized and used for the monitoring of the hydrologic risk or more easily, for the water level controls in basins, dams, lakes or rivers, for the control of flooding, overflowing, floods and flash flood.

Stations, **fully automatic**, operate both in **stand-alone mode**, and **integrated in a monitoring network** for a real and constant check of the **hydrologic state in a specific area**.

In addition to the water level and the rain measure, elements that characterize this type of monitoring, **other general weather sensor** and **surveillance cameras** can be easily integrated.

Each station, in addition **to collect and transmit continuously data**, is able to discriminate **thresholds or alarm conditions**, alerting directly the responsible persons (and the eventual remote control data center), permitting an immediate action to **safeguard the territory and the population**.

Integrating **flow speed sensors to the hydrologic level ones** (or directly flowmeters) it is also possible to **determinate the discharge** and study the trend of the whole hydrological system for **public safety**.

All kinds of hydrological application can be made with this solution.



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How is it composed?



Mainly Components of a ST-IDRO system are:

Datalogger NESA TMF100 or TMF500 for the local collection of all data from various probes and their transfer to a data center, via cable, GPRS, UMTS, or via satellite, by FTP protocol. The operation can be done in continuously mode or at programmed acquisition intervals. The datalogger is equipped by **Linux** operating system for an easy management and interfacing by specific **web pages**.

LEVEL SENSORS: can be of different typologies depending on the water system to be monitored and on the installation needs, in particular can be a **Radar** sensors for distances between sensor and water surface up to 40 meters, **ultrasonic** for distances up to 6 meters, (lakes, dams, rivers or torrents), **piezometric** for close fields, or pneumatic sensors, etc.



ALARM SYSTEM: Local optic/acoustic alert System on customizable and adaptable measure's thresholds for every applications, with possible use of LED panels to give indications and support to the population in case of emergence.

POLE: Mechanical structures in galvanized steel or anodized aluminium for the instrumentation and sensors fixing, with specific supports; for level sensors were studied **specific folding support brackets** for an easy maintenance from above position.

OTHER SENSORS AND OPTIONAL ACCESSORIES:

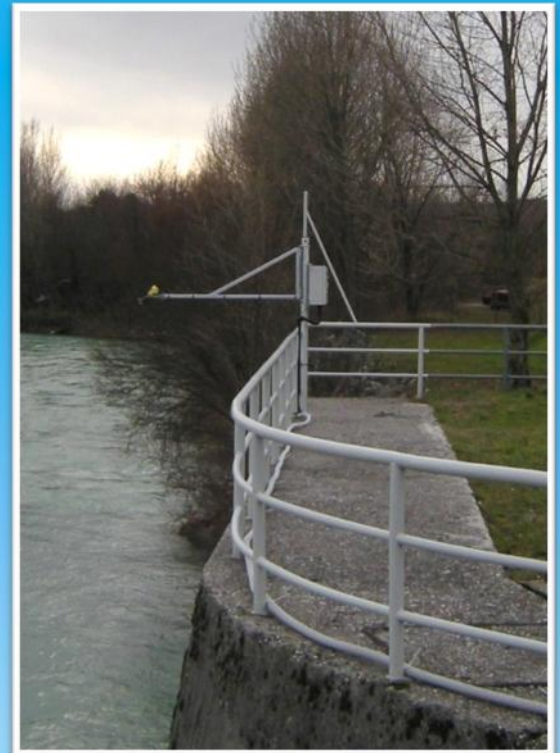
Depending on the application can be **integrated sensors and probes** for the waters quality monitoring (pH, conductivity, Redox, dissolved Oxygen...), meteorological sensors for the analysis of environmental conditions and can be added a **camera, whose images are sent together with data** (at the same time) for a visual control of the monitored water conditions.



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Performances

- ✓ **Sensors** in according to **WMO standard** (World Meteorological Organization)-Annex No. 8.
- ✓ **Data elaboration:** instantaneous data, average, totalization, gust, standard deviation, etc.
- ✓ **Data transmission:** GPRS/UMTS, satellite, modem, radio, via cable.
- ✓ Different transfer **protocols:** serial, modbus, TCP, FTP, NMEA, SDI12, etc.
- ✓ Possibility of **specific discharge calculations** with weir on the river or additional sensors.
- ✓ **Real time visualization of instantaneous data** for every measured parameter and programming, both in local and on remote.
- ✓ Automatic and pre-configurable management **on threshold or on event alarms**, with activation of relay commands or **SMS messages, sent directly from the station.**
- ✓ Large data memory both internal and on removable support (USB) able to record a data storage of more than 4 years.
- ✓ Possibility to connect to the datalogger other sensors or instruments with analogical interface 0÷2Vdc or 4÷20mA or digital (contact or frequency) or serial (RS232, Rs485, etc.) also of other manufactures.
- ✓ Low energy consumption, with supply by primary network (110/220Vac) or by photovoltaic panel (it depends on connected sensors).
- ✓ Periodic recalibration service of all instrumentation with test report.



If you would like to have more information or require a quotation, please contact our Sales department:

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