



**iJINUS**  
CLAIRE GROUP

Sensors

Dataloggers

Web services

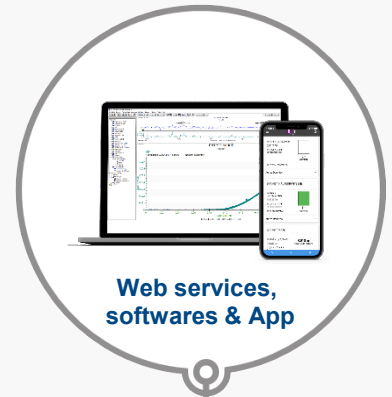
# Environment catalogue



**Instrumentation  
Rental**



**Data loggers &  
Sensors**



**Web services,  
softwares & App**



**iJINUS**  
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ijinus, a compagny from the pole





**iJINUS**  
CLAIRE GROUP

It is with great pleasure that we announce the integration of Ijinus within the Claire group, which occurred on November 26, 2019. Claire (which already includes the companies Sainte-Lizaigne, Hydroméca, VV Electronic and Fast) is specialized in the equipment of water networks, for the connection of subscribers to distribution pipes, and in solutions intended to improve the efficiency of these networks (search for leaks and remote control).

Ijinus joins the Claire Connect branch of the group and will strengthen it with its skills in measurement, instrumentation and connected objects.

Conversely, it will now benefit from the international influence of the Claire group, the pooling of skills and resources of Claire's teams, but also of Wayve and Fast, the two other entities in the Claire Connect pole.

With this operation, the two companies reach a critical size, allowing the creation of an offer of autonomous and communicating products for the performance of water networks, unique on the market.



**claiRE**  
CONNECT

[www.ijinus.com](http://www.ijinus.com)

[www.wayve.fr](http://www.wayve.fr)

[www.fastgmbh.de](http://www.fastgmbh.de)





### Ultrasonic level sensors LNU06V4

LNU06V4 is an all-in-one solution integrating ultrasonic sensor, logger, communications and energy in the same device, **IP68 and Atex zone 2**. It allows water height measurement by aerial ultrasonic, with automatic measurement cycle changes depending on thresholds, flow rate transformation through conversion tables, and many other innovative features. Sensors are equipped with connectors for coupling with an overflow detector or to control water sampler. In addition to measuring, these sensors can also be paired with others equipments located nearby or serve as data concentrators, for version with integrated communication **2G / 3G / 4G(LTE-M, NB-IoT)**



#### Measuring range

The sensors LNU06V4 typically measure up to 6 meters. Ultrasonic power can be adjusted to optimize measurement and autonomy

#### Wireless sensors configuration

Configuration of the sensors is done locally and safely by radio (RFID) using one of our programming kit to connect to PC or tablet. It includes the software Avelour 6

#### Sensors with or without modem

On-site radio communication for your measuring campaigns, and for remote monitoring applications some models integrate cellular communication options like SMS / GPRS with integrated modem 2G / 3G or 2G / 4G (LTE-M, NB-IoT). Data are sent to the web monitoring platform [www.ijitrack.com](http://www.ijitrack.com) or client server

#### Ultra low-power sensors: autonomy of 5 years

Energy is integrated in the sensor : lithium batteries are replaceable and last more than 5 years for 1 measurement / 15min and 1 data sending per day + alerts, and even more years with external battery pack

### Wireless Data Loggers LOG V4

Ijinus introduces you its new range of Loggers that will adapt to all your applications. They are easy to install, robust and offer data communication options. Connected sensors are powered by the internal battery of the loggers, and for the more energy-consuming sensors by a battery pack. They are all fully **IP68**.

Communication Radio / GSM / GPRS / 3G / 4G (LTE-M, NB-IoT)

This range of data loggers includes 4 models each with their own specialties :



#### LOG03V4

4-20mA – DIGITAL

- Groundwater resources
- CSO / SSO
- Flow using pressure probe
- Electromagnetic flowmeter by 4-20mA
- Flow meter connection (Pulse)
- Lift stations
- Rainfall
- Access point Hf/GPRS

#### LOG04V4

Modbus RS485 – DIGITAL

- Area-Velocity Flow
- CSO / SSO
- Water quality
- Electromagnetic flowmeter by Modbus
- Flow meter connection (Pulse)
- Lift stations
- Rainfall
- Access point Hf/GPRS

#### LOG09V4

4/20mA – Modbus RS485

- Area-Velocity Flow
- Water quality
- Flow using pressure probe
- Access point Hf/Modbus/GPRS
- Ressource souterraine
- Lift station
- Rainfall

#### LOG10V4

Modbus RS485 / Contact / Ext. US probe

- Area-Velocity Flow
- CSO / SSO
- Access point HF/Modbus/GPRS
- Postes de relèvement
- Water quality
- Rainfall



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## ► Rain gauge with battery powered logger 2G / 3G / 4G

### The complete solution for rainfall monitoring



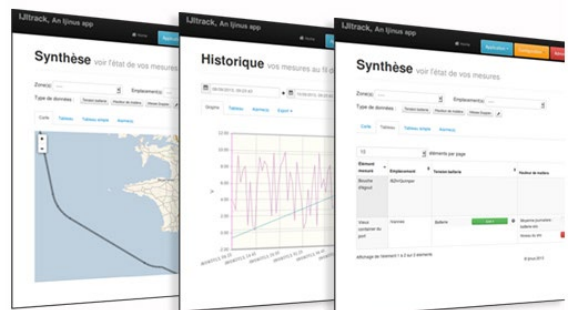
Radio programming / data download



Tipping bucket rain gauge



- Quick and easy installation
- Data logger with cellular communication available for remote monitoring
- Rain gauge including integrated data logger, transmitter and batteries
- Data retrieving on-site by radio
- Timestamp or accumulated rainfall, temperature
- Export data to Csv, Excel or HTML
- **Protocol compatibilities : Topkapi, Lerne, Floee, Dev I/O – OPC, and many other using web services**





## ► Flood warning and management



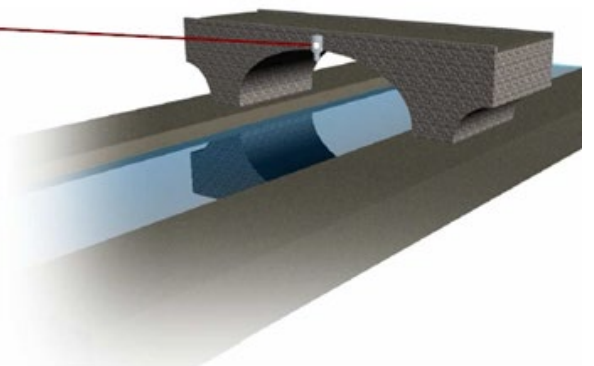
### The solution for Level - Rainfall - Overflow

- Quick and easy installation
- Compact, light and discreet <1kg
- Multiprotocol Communication
- Autonomy up to 5 years
- Set your equipment safely by radio
- Measurement of water levels contactless
- Cost effective solution
- Rain gauge integrates the data logger, transmitter and batteries

**Wireless level sensor measures and concentrates data of all devices in the area and sends reports and alert text messages in case of flooding before high levels of water**



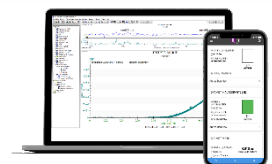
**Battery powered  
Ultrasonic Level Sensors**



**Autonomous  
rain gauge**



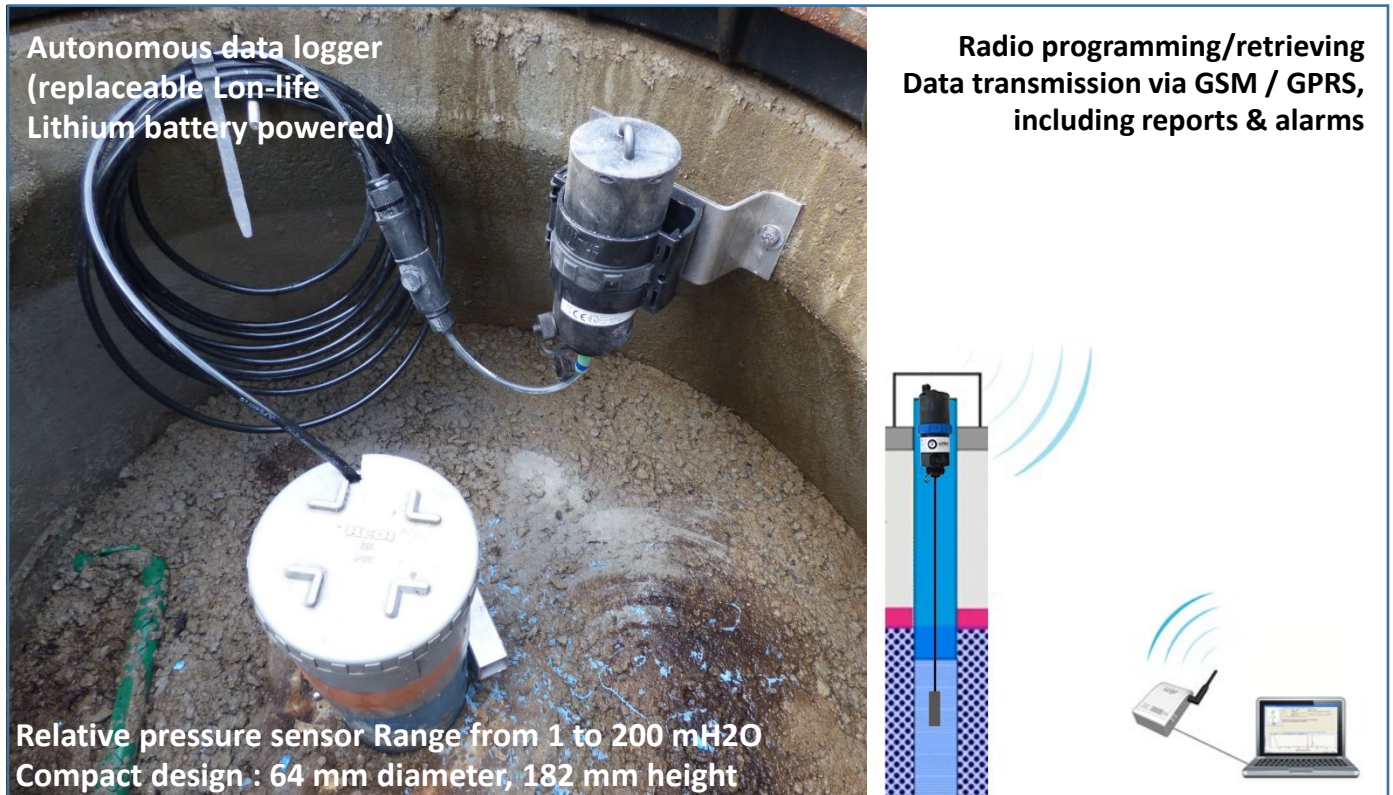
**Overflow sensor**



**Web services,  
softwares & App**

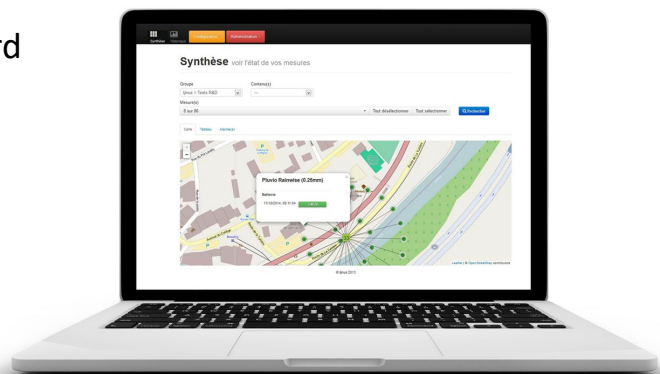


## ► Autonomous and communicative solution for groundwater monitoring with piezo probe



### Portable solution to monitor groundwater

- **Easy, quick** and discreet installation
- With or without cellular communication card
- Price control
- Battery powered system, Long lasting
- Level recorder
- Rain gauge data capabilities by radio
- **Battery life power > 5 years**
- **Web services and App available**





## ► Instrumented Buoys with cellular communication to monitor lakes, rivers, and seawater

The all-in-one solution mono-parameter  
Only one person needed for the installation



### Available sensors to choose from (one per buoys):

- Conductivity / Salinity / Temperature
- pH / Redox / Temperature
- O<sup>2</sup> / Temperature
- Turbidity NTU-mg/l / Temperature

- ✓ Compact and self-stable buoy
- ✓ Battery life power > 5 years : 1 measurement / 15 min and 1 data sending every day
- ✓ Quick and easy installation - on-site calibration
- ✓ Integrated GSM for monitoring data by internet or supervision
- ✓ Retrieving data by radio on-site (around 100M)
- ✓ Dynamic communication between buoys







## ► Data logger & physico-chemical probes for natural water monitoring



### Available probes/parameters :

- Conductivity / Salinity / Temperature
- pH / Redox / Temperature
- O<sup>2</sup> / Temperature
- Turbidity NTU-mg/l / Temperature
- Oxydo reduction potential
- Automatic rotating cleaning system available

### The all-in-one solution with multi-parameters

- **Radio + cellular communication options** for dat remote monitoring
- Data logger 400,000 measurements
- Quick and easy installation
- **Reduced maintenance**
- Battery pack available
- Battery autonomy of 5 years:  
a measurement / 15 min and 1 sending GSM / day
- **Calibration on-site simplified**
- On-site data retrieval by radio
- Radio/GPRS access point with other Ijinus devices





## ► Fast pressure metering and logging of drinking water network



### The 2 in 1 solution : meter / pressure

- Quick and easy installation
- Very compact, IP68
- Programming and data collection by radio
- Daily and hourly accumulation
- Pressure sensor 4-20mA
- Battery life power > 5 years
- Compatible protocols : Areal Topkapi, Lerne, Dev I/O - OPC, Floee, ...
- Data can be sent to client server

## Water pressure and volume logger to calculate yields of drinking water networks



**iJiNUS datalogger  
LOG03 / LOG04**

**Electromagnetic flowmeter  
by Modbus or pulse**

**ljitrack.com + App  
or SCADA**



## ► Pressure control on drinking water network

Compact and autonomous, the logger LP025V4 allows you to set up a pressure measurement quickly without risk of interfering with the use of the drinking water network.



- Simple and fast installation
- Battery powered logger
- Integrated pressure sensor 0-25 bars
- Quick coupling
- Data reading in real-time by radio
- Data retrieval by Walk-by
- Excel Report

### Installation principle

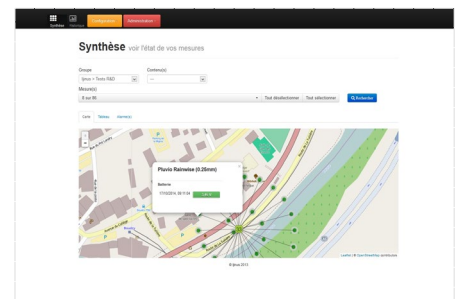
- Hose cap change on fire hydrant
- Coupling sensor/cap via the flexible
- Open the valve
- Set up & data reading remotely by radio
- Data logging with variable interval acquisition on schedule



**Fire hose cap with quick coupling**



**Connection Flexible**



**Web services  
ijitrack.com**



## ► Pressure control on drinking water network

Our pressure probe CPA can be place directly on pipe to instant measurement.

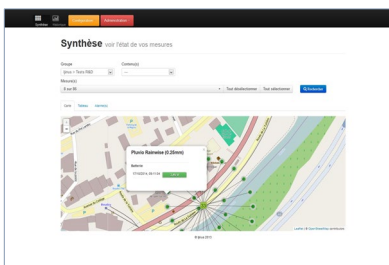


- Temporary or permanent installation
- Battery powered logger
- Choice of measuring range :  
**0-10 bars - 0-20 bars - 0-35 bars**
- Quick coupling
- Data reading in real-time by radio
- Radio communication options 2G / 3G / 4G
- Pressure probe with 4-20mA output
- NSF61 certification

### Installation example



**Configuration  
software Avelour 6,  
& Mobile App**



**Web monitoring  
platform [ijitrack.com](http://ijitrack.com)**





## ► OSRAI' Flow : Flow calculation for small diameter sewage collectors (200-250-300 mm)



**OSRAI'Flow** : The autonomous and communicating solution to reliably convert a measurement of water height into flow.

- Simple and rapid on-site installation of a contraction that adapts to existing sewer manhole invert, while limiting risk of fouling upstream
- Integrated flow calculation in the LNUV4 level sensor covering a wide range of collector slopes
- New device developed in cooperation with ENGEES, Icube, APEI

### Présentation and principles of the système

The **Osrai'Flow system** is based on the principle of the invert contraction of the flow by an "obstacle" to guarantee a hydraulic law between the flow and the water height upstream.

The "semicircular" shape (view from the top) and one side only of the invert was selected to limit the risk of fouling and be able to settle it in an existing manhole.



#### Wireless ultrasonic level sensors LNU06V4

- **iJINUS sensors integrate the flow laws of the Osrai 'Flow solution, and also other conversion tables**
- Activation of water sampler with adjustable parameters
- Wireless setting with Rfid technology
- Sensor with or without modem for remote monitoring
- Lithium battery powered, long battery life
- Rugged, compact, sealing grade IP68



## ► Diagnostic of sewers network



### The 3 in 1 solution: Level - Volume - Flow

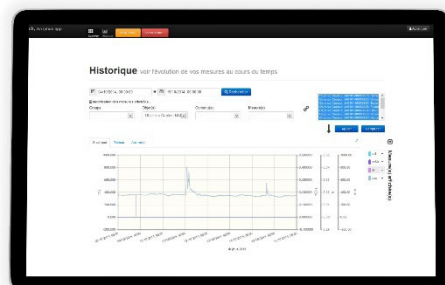
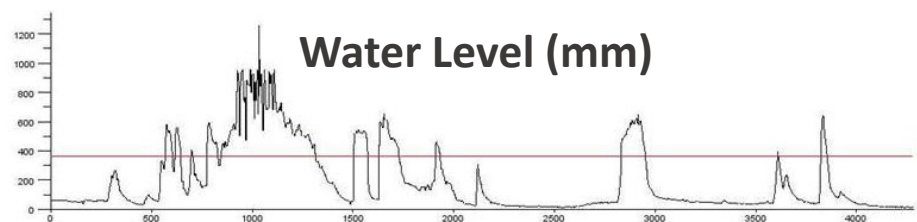
- **LNU06V4** is Quick and easy to install in radio
- Timestamp volumes
- Battery life up to 5 years on regular battery, and even more years with external battery pack
- Acoustic imaging technology
- Insensitive to dirt - IP68
- IP68 (tested 30 days at 10m of water)
- communication 2G/3G or 2G/4G (LTE-M or NB-IoT)
- Hosting data and web services available

### Measures of water level / flow rate / volume

3G/4G



**Ultrasonic  
Level Sensors  
Built-in modem**



### ljitrack.com & App

- ✓ Hosting data
- ✓ Measurement points report
- ✓ History data
- ✓ Export data in CSV, Excel files



## ► Pump run-time recorder in lift station



### The stand-alone solution to record pumping stations activity as part of the network diagnostic

- Quick and easy installations with the Quickclip
- Intuitive programming and wireless data retrieval
- Recording in timestamp or full report
- Calculates flow and volume on Pump 1, Pump 2 and Pump 1 + 2
- Result available by the minute or daily
- Autonomy up to 3 years, extended with battery pack
- Battery powered and replaceable by the operator
- Automatic sampler enslavement at startup or runtime or volume on Pump 1, Pump 2 and Pump 1 + 2
- Data hosting plan available

### Avelour software:

On-site data retrieval by radio  
Export data in Excel and other files formats



**Radio configuration kit**

an	nom	Nb On P1	Nb On P2	Durée P1(x)	Durée P2 (x)	Durée (P1 + P2)
UA0101-0X	Poste_relieveme	2	4	234	136	
UA0101-0X	Poste_relieveme	3	6	564	389	
UA0101-0X	Poste_relieveme	4	8	766	534	
UA0101-0X	Poste_relieveme	4	8	796	553	
UA0101-0X	Poste_relieveme	3	6	562	396	
UA0101-0X	Poste_relieveme	3	6	552	378	
UA0101-0X	Poste_relieveme	1	2	175	119	
UA0101-0X	Poste_relieveme	1	3	168	111	
UA0101-0X	Poste_relieveme	1	2	170	112	
UA0101-0X	Poste_relieveme	2	5	335	220	
UA0101-0X	Poste_relieveme	1	2	168	110	
UA0101-0X	Poste_relieveme	2	4	337	221	
UA0101-0X	Poste_relieveme	1	2	169	110	
UA0101-0X	Poste_relieveme	2	5	337	222	
UA0101-0X	Poste_relieveme	1	2	168	111	
UA0101-0X	Poste_relieveme	4	8	759	526	
UA0101-0X	Poste_relieveme	4	8	811	577	
UA0101-0X	Poste_relieveme	4	8	831	598	
UA0101-0X	Poste_relieveme	5	9	844	592	
UA0101-0X	Poste_relieveme	4	9	987	717	
UA0101-0X	Poste_relieveme	4	8	808	576	



**Portable data logger with dual clips**  
Communication by Radio and/or  
2G / 3G or 4G(LTE-M, NB-IoT)



## ► Combined Sewers Overflow Monitoring



### Volume - Flow - Overflow

- Quick and easy installation
- Timestamp of volumes
- Battery life > 5 years
- Acoustic imaging technology
- Non-contact measurement of volumes
- IP68 (tested 7days at 10m)
- Multiprotocol communication
- Data sent directly to your server by GPRS in .CSV
- communication 2G/3G or 2G/4G (LTE-M or NB-IoT)

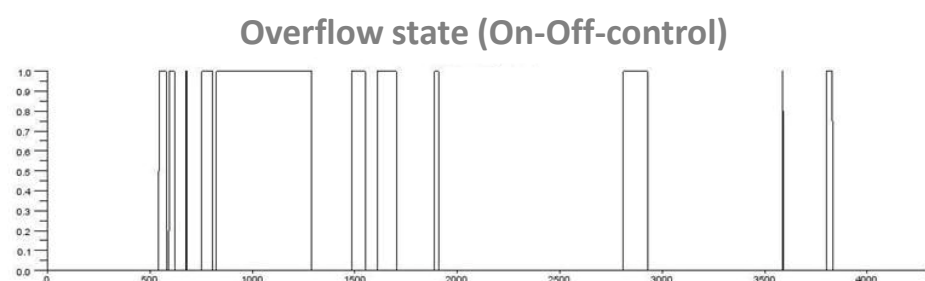
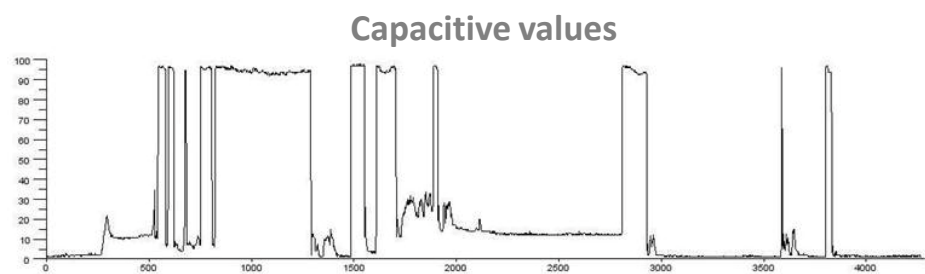
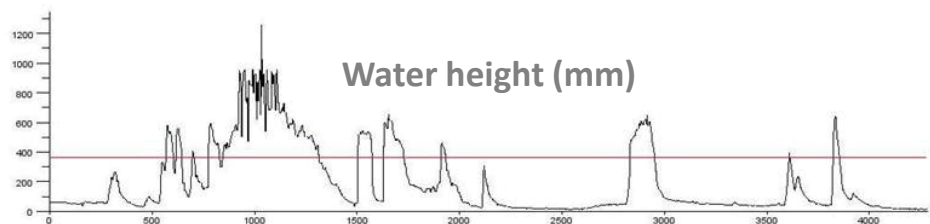
### Comparison of water level, capacitive, on-off-control measurements



**Ultrasonic  
Level Sensors**



**Capacitive Overflow  
sensor**







## ► Autonomous flow measurement with area velocity flowmeters with smart area velocity measurement

3 sensors available :

VLI (Isco) – KDO (Nivus) – UB-V (Ubertone)



**Level - Velocity - Flow rate - Overflow - Measurement quality - Temperature**

- Quick and easy installation
- Timestamp of all parameters
- Integrated calculation of flow rate
- Autonomous battery pack system (Li-ion) or rechargeable lead battery
- Options : sampler pacing

### Autonomous stationary equipment installation or temporary measurement campaign

A level / cross section area conversion is made, then a flow rate calculation. All data: height, velocity, flow rate, **signal quality, measurement quality** are transmitted via GSM / GPRS.

- ✓ Available in ultra-low profile digital sensor version (velocity from 25mm of water)
- ✓ Triggerring velocity measurement on adjustable water level
- ✓ Autonomy up to 5 years with Ubertone depending on configuration
- ✓ Radio-triggerring of a slave sensor on water height threshold

### 4 available configurations:

Differential pressure level  
Doppler velocity  
Rechargeable lead battery with logger HF, integrated in battery case



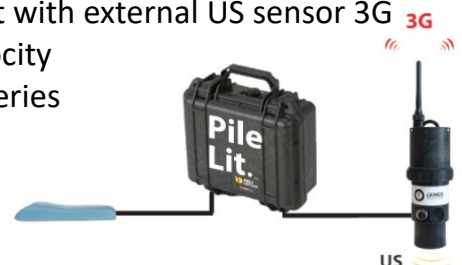
Differential pressure level  
Doppler velocity  
Lithium batteries  
Logger 2G/3G/4G



Water height with external US sensor 3G  
Doppler velocity, Lithium batteries  
Logger HF  
Level sensor retrieve velocity measurement



Water height with external US sensor 3G  
Doppler velocity  
Lithium batteries





## ► Process sensor connection on PLC



### The compatible solution with all PLC

- Quick and easy installation
- Measure visualization in real time
- Programming by radio without line breaking
- 4-20mA and Modbus output
- Conversion level to flow - volume
- Flow Paced Sampling
- Stormwater overflow applications



### Connection kit

- Programming by radio
- remote Reading and set up



### Multi channels display

- Modbus connexion
- Real time reading

### CNU06V4 process sensor available in 0,3 ... 6m water height version





## ► Radio access point to PLC/control units



### The solution compatible with all PLC

- RF access point with Modbus RTU output for PLC connection
- The access point automatically detect all sensors in the field by the radio
- Speed up level conversion
- Visualization on display up to 20 channels
- Measurement of Height, overflow, flow, velocity, temp ...

### The wireless sensors measure and send data by radio to display and PLC

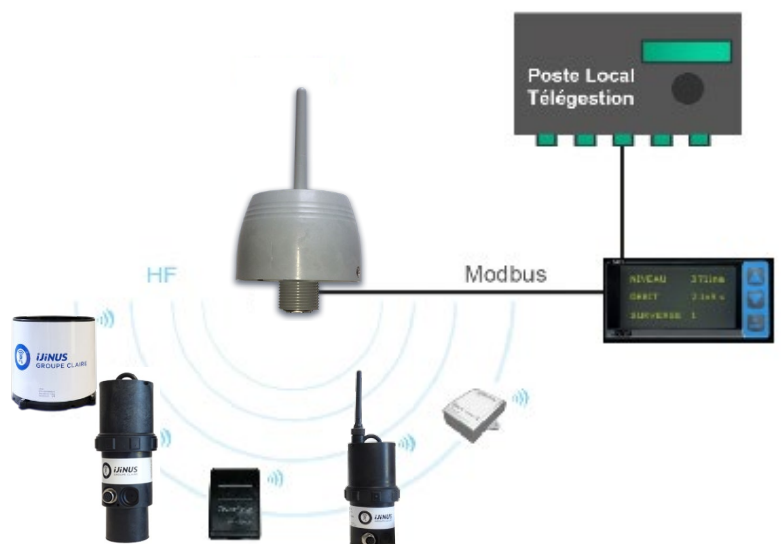


**Autonomous data loggers LOG04V4**



### Multi channels displays

- Modbus connection
- Real time data view





## ► Discharges monitoring from small wastewater treatment plants



### Autonomous solution to control discharges in lagoon structure and reed filter



- Battery powered logger **LOG03V4 & LNU06V4**
- Record level, volume, flow, rain
- Autonomous display for reading in situ current values
- Day volumes are saved
- Battery life > 7 years
- Acoustic imaging technology is also suitable for light open flumes
- Automatic sampler pacing
- Dirt proof
- Communication 2G/3G or 2G/4G (LTE-M or NB-IoT)

### Avelour Software : Measure comparison of volume / water height / flow





## ► Diagnostic and continuous monitoring of H<sub>2</sub>S in sewers networks



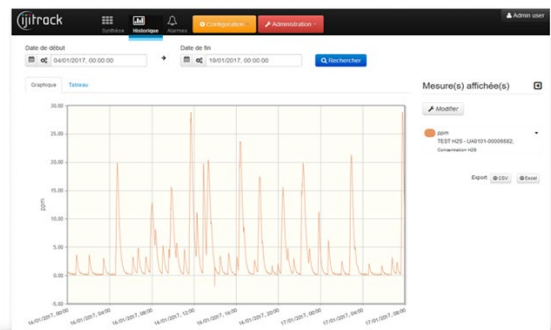
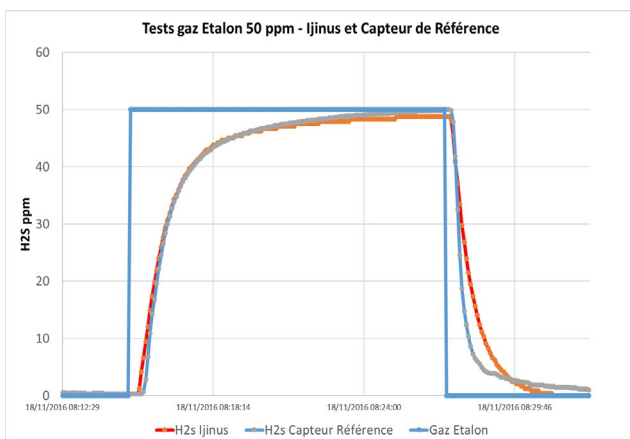
### Smart H<sub>2</sub>S sensors for sewers networks

- Measure concentrations of H<sub>2</sub>S and temperature
- Electrochemical cell technology
- Measuring range from 0 up to 2000ppm
- Wireless configuration and data retrieval locally by radio without activation
- Memory : up to 500 000 mesures
- Battery operated logger for several months autonomy
- Communication 2G/3G or 2G/4G (LTE-M or NB-IoT)



**Plug & play and  
Interchangeable  
cells on-site**

## Comparison of laboratory measurements and historical data





## ► APP WIJI : Ijinus mobile App for Android & IOS



### 4 main features :

- Configuration of sensors and loggers in [ijitrack.com](http://ijitrack.com)
- Visualization of last data
- Alarm management
- Photo of your installation sites to found them later

#### ► Quick integration

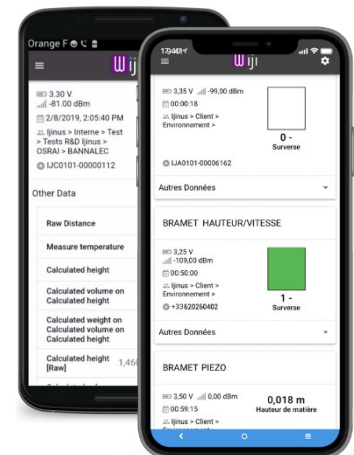
Quickly configure your sensor by scanning the QR code of the product label. Edit the group it belongs. Then thanks to your mobile GPS you can place it on the map.

#### ► Data visualization

In addition to quickly adding sensors to your Ijitrack account, the App displays, among other things, the latest data sent by the sensors, the alarms you have configured, the pictures taken during the installation, etc.

#### ► Real time notifications

Alarms appear in real time, even if the application is closed. You manage the alerts as under the web monitoring platform Ijitrack



Download on Google Play & the App store





## ► Web Services : [ijitrack.com](http://ijitrack.com)

### More than just hosting data



- Simple and intuitive interface
- Reachable everywhere
- Quick sensor configuration
- Securing Data
- View your data in real-time
- Export data to Csv, Xls formats

iJitrack allows you to generate alarms on level, overflow, tension, unusual parameters. For each alarm you can set a high and low threshold. Alarms are visible on [ijitrack.com](http://ijitrack.com) and can be transmitted by mail, text message or Fax.

### Hosting and secure data at reduced price



Data history

Date	Objectif	Mesure(s)	Valeur
11/05/2014, 05:35:50 PM	LIAD101-0000105	Surverse	0,00
11/05/2014, 05:26:53 PM	LIAD101-0000105	Surverse	1,00
11/05/2014, 04:37:58 PM	LIAD101-0000105	Surverse	0,00
11/05/2014, 04:28:52 PM	LIAD101-0000105	Surverse	1,00
11/05/2014, 03:40:18 PM	LIAD101-0000105	Surverse	0,00
11/05/2014, 03:31:27 PM	LIAD101-0000105	Surverse	1,00
11/05/2014, 03:34:00 PM	LIAD101-00001532	Hauteur de mâtère	1,37 m
11/05/2014, 03:32:00 PM	LIAD101-00001532	Hauteur de mâtère	1,38 m
11/05/2014, 03:30:00 PM	LIAD101-00001532	Hauteur de mâtère	1,35 m
11/05/2014, 02:58:00 PM	LIAD101-00001532	Hauteur de mâtère	1,33 m

Easy data export by sensor, parameters ...

Alarm creation wizard



**Wiji App available on  
Android or IOS store**



## ► Configuration software Avelour



### Unique software to configure all IjInus sensors and data loggers



- Instant radio connection to sensors
- Intuitive interface adapts to connected sensors
- Assisted Setup, recapitulation summary
- Multi curves display of your data
- Back-up are available for both data and settings
- Work safely by staying away from your measurement points
- Many features to check networks and antenna positioning
- Avelour recognize the connected sensor and suggest any available firmware update

### Operating principles are the same for all devices:

Our radio programming kit plugged by USB to a computer allows by RFID, to connect to various IjInus devices, to set up and retrieve data..

### Some new features in Avelour release 6

- New data editing module (drift correction, recalculation of flow and volume)
- Decision support tool to optimize antenna positioning



New : USB/HF configuration stick





## ► Ijinus equipment rentals

Short and long term rentals for your measurement campaigns, Ijinus offers a wide choice of sensors, flow meters, data loggers, portable and refrigerated water samplers.

- ✓ Easy and quick equipment installation
- ✓ Sensors configuration and data reading done by radio to save time and ease of use
- ✓ Timestamp of all parameters
- ✓ Avelour software for free data processing and analysis

### Equipment for drinking water monitoring

- **Portable Loggers** 400.000 points integrated pressure sensor 0-25 bars and quick coupling cables
- **Autonomous Loggers** 400.000 points for fast metering and pressure monitoring of drinking water networks
- **Pressure sensors**



### Industrial control campaign

- **Bubble flowmeter**  
Water height/ flow / volume and water sampler pacing
- **Water quality probes and buoys**  
pH, salinity, conductivity, dissolve oxygen, temperature ...
- **Access point HF/GPRS**
- **Portable refrigerated samplers**





## ► Ijinus equipment rentals

### Equipment for wastewater monitoring

- Water height / Flow rate
- Height / velocity
- Refrigerated sampler
- Overflow detector and logger
- Rain gauge with integrated logger
- Water quality : pH/Redox - Turbidity - Conductivity – Dissolve oxygen
- Current clips
- Wireless loggers
- Access point GPRS with sim card
- Gas H2S data loggers
- Inclinator



### Fast equipment installation & configuration



- ✓ Sensors and loggers are battery powered
- ✓ Configuration by RF
- ✓ One software : Avelour 6

### Web Services



Web Interface to supervise all your data, manage your clients accounts, export data in detailed reports in .XLS, Excel

[www.ijitrak.com](http://www.ijitrak.com)



## INDUSTRY



Quarry  
Hopper  
Process  
Sandpit  
Concrete Plant  
Chemistry

## ENVIRONMENT



Water treatment Plant  
CSO / SSO  
Sewerage Network  
Water quality  
Sectorization  
...

## BREEDING



Food Factory  
Silos

## LOGISTIC & SUPPLY CHAIN



Temperature Traceability  
Waste Management



**iJINUS**  
**CLAIRE GROUP**

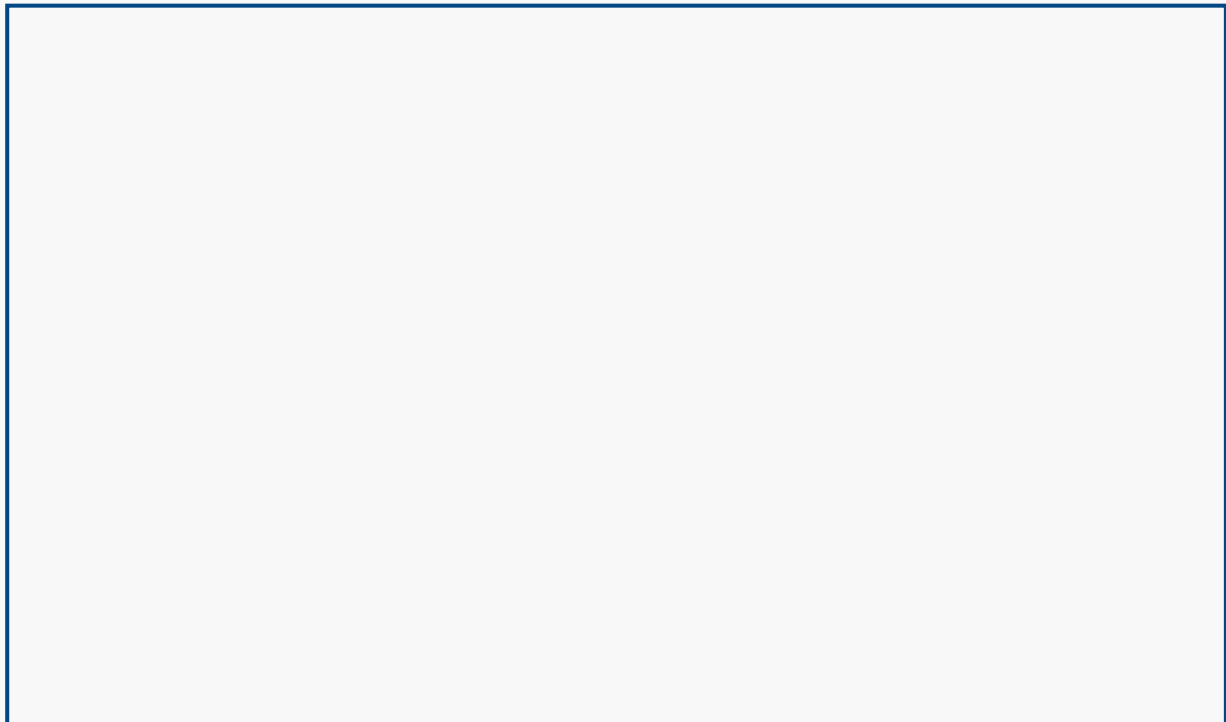
Sensors

Dataloggers

Web services

## ► Contacts

For any further information, thank you to contact  
the sales representative in your area:



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ijinus, a compagny from the pole



**claire**  
CONNECT