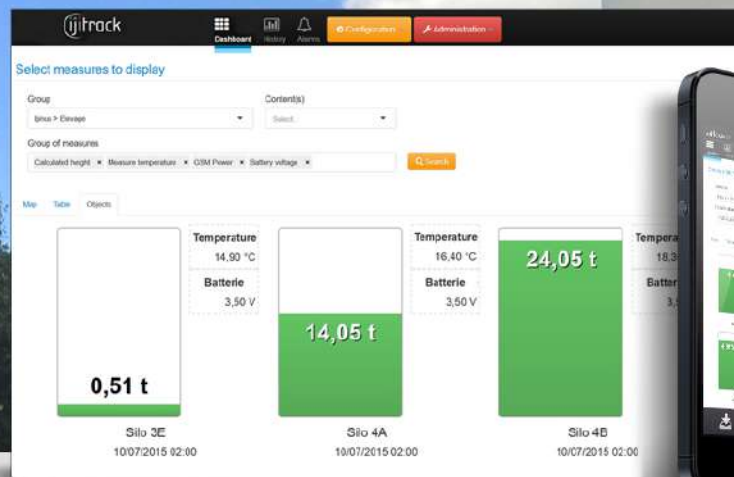




## Telemetry Solutions

Sensor - Data Logger - Web Services



# The solution to manage livestock feed in silos

fast, easy to install and reliable

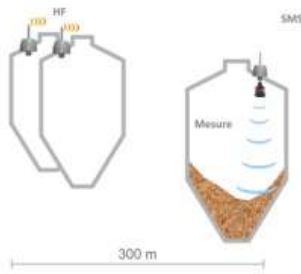
- Optimise orders
- Increased earning
- Eliminate risk of accidents
- Stocks traceability

Locally monitor your silos data with a display



## ► Operational principle

### Functioning



### Installation / Functioning

The sensors are battery powered. The master sensor concentrate all data from others silos and send them to the web service : **v2.ijitrack.com**

**Solution from 1 to 8 silos**  
One sensor per silo with GSM / GPRS communication

**Solution from 9 to 32 silos**  
One sensor per silo and one access point GSM / GPRS DC powered

### Web services



### v2.ijitrack.com

Filling measures,  
Temperature, battery levels, level trends  
Data hosting,  
history and alarms

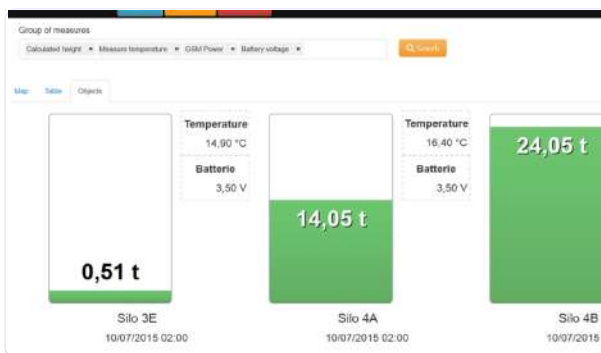
### Option : local display



### Local display

An access point retrieve datas from sensors intalled in the silos. It is connected by modbus RS485 on the color LCD display

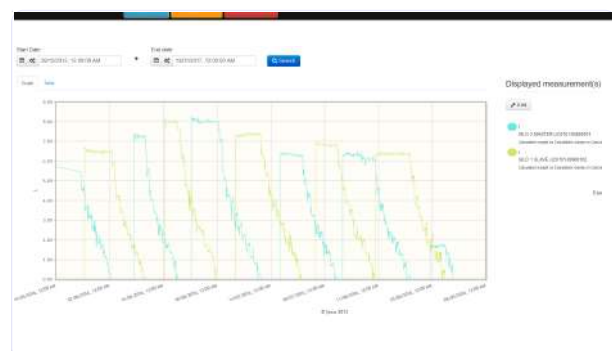
## ► IJITRACK.COM



## More than just a data hosting service

- Simple and intuitive interface
- Accessible from anywhere
- Ijitrack lets you set alarms on levels, the air temperature in the sensor area, battery voltage
- Its alarms generate informations by E.mail, SMS

Object	Container	Content(s)	Date	Calculated weight
SILO 1 SLAVE IJC0101-00000102		Alu	12:54 PM	7,99 t
SILO 2 MASTER IJC0101-00000101		Alu	12:55 PM	3,15 t
SILO 3 SLAVE IJC0101-00000103		Alu	12:54 PM	0,82 t
SILO 4 SLAVE IJC0101-00000105		Alu	12:54 PM	4,64 t



## ► PRESENTATION OF THE SOLUTION

### QUICK AND EASY INSTALLATION



### WEB ACCESS (PC, Tablet, Smart Phone)



### CONFIGURATION, REMOTE SUPPORT AND COMMISSIONING



#### Gains on time :

- Easy control, no unnecessary travels
- Stock inventory in real time, information are available online, accessible from anywhere, several times / day on **V2.ljitrack.com**
- No need to empty the silos during installation
- A system without particular maintenance
- Auto diagnosis of digital measurement.

#### Financial Gains :

- Saves time to find out the real-time inventory (2 to 4 silos) 30 min / week
- Optimizes control and storage time, avoid overstocking of certain foods used for a short time
- No more surprise when loading, prevents silos overload and returns
- No More out of stock, which necessarily entails a costly troubleshooting
- Enjoy the maximum truckload discount

#### Benefits :

- Eliminates the risk of falls (no need to get on the silos to evaluate stocks)
- Detect abnormal loading (silo error)
- Indicates the temperature inside the silo (temperature of the internal air)
- Proof of delivery
- Anticipate the empty silos to ensure their cleanliness and avoids sources of mold growth
- No mixing when using a supplemented food
- Knowledge of the actual available capacity avoids the overhead silo

## ► Quick and easy installation

### Necessary informations for the installation

- Exact silos dimensions with sketch (provided by the customer or the fitter)
- Type of food: flour, granulated, crumb ...
- Type of silo (smooth or corrugated sides - right or departed cone)
- Number of silos (1 master sensor for a maximum of 8 silos in the standalone solution)
- Maximum distance radio communication between silos

### Materials required :



#### Level sensor 0.4...10m

- LNU1000-0-80X-C1-GSM / **Master**
- LNU1000-0-80X-C1 / **Slave**

#### Fixing materials :

- **Adaptator** : FOA00014
- **Mounting plate** : GOA00010

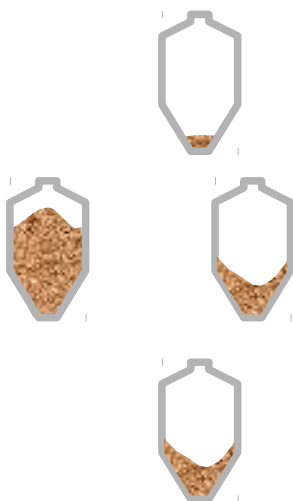


#### Data hosting, interface, reports , alarms

The choice between two interfaces :

- <http://www.ijitrack.com>
- <https://v2.ijitrack.com>

### Option : Local LCD display



#### Concentrator HF/Modbus

- AP1-MOD-90X

#### Modbus RS485 LCD display

- F0D00006

## ► BATTERY POWERED LEVEL SENSOR LNU1000



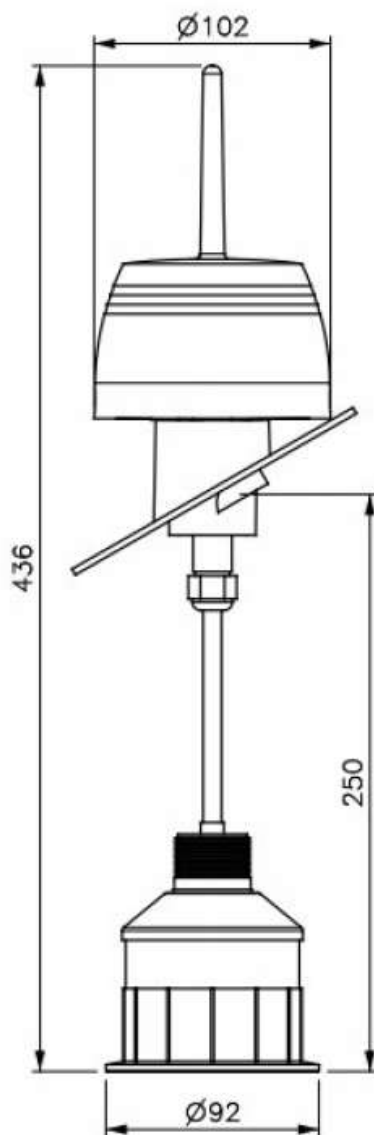
- Smart and communicating solutions for silos
- Quick and easy installation
- Wireless (Rfid or GPRS) configuration
- Lifeproof (water and bad weather): IP65 sealing
- Long-life battery
- One master device for 7 slaves  
(beyond, one concentrator supplied in energy is required)
- 0,4 to 10 m measurement for silos

### Specifications :

Features	Master level sensors LNU1000-0-80X-C0-GSM (868 MHz) LNU1000-0-90X-C0-GSM (915 MHz)	Slave level sensors LNU1000-0-80X-C0 (868 MHz) LNU1000-0-90X-C0 (915 MHz)
Measuring range	0,4 ... 10 m	0,4 ... 10 m
Resolution	1 cm	1 cm
Accuracy	± 5% on solid / ± 1% on liquid material	± 5% on solid / ± 1% on liquid material
Communication	Radio HF – Wiji Protocol GSM / GPRS	Radio HF – Wiji Protocol
Radio range	500m	500m
Temperature compensation	Yes: Internal T°C probe	Yes: Internal T°C probe
Data logger	1.000 Measurements	1.000 Measurements
Data concentrator	Yes until 7 slaves sensors (for autonomous solution)	No
HF / GSM antenna	¼ Wave Length / Quad band Patch	¼ Wave Length / Quad band Patch
Operating temperature	-40 ...85°C	-40 ...85°C
Housing	ABS 20% Glass Fiber	ABS 20% Glass Fiber
Sealing	IP65 with an aerator	IP65 with an aerator
Power Supply	Bat: 3,6V 34Ah	Bat: 3,6V 17Ah or 34Ah
Autonomy	Up to 3 years	Up to 5 years
Configuration	AVELOUR software or remotely using GPRS	AVELOUR software
Technology	Acoustic imaging eKo® algorithm LAMY® filtration	Acoustic imaging eKo® algorithm LAMY® filtration
Security	Antistatic kit for metal silo	Antistatic kit for metal silo
Certification	CE	CE

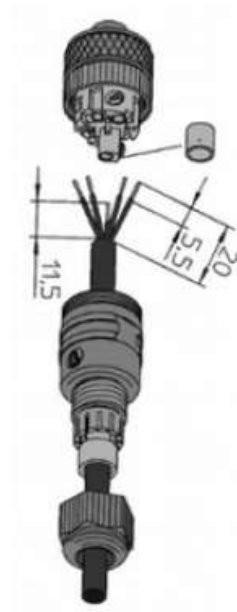
## ► DIMENSIONS AND WIRING

**Drawing : Sensor with mounting plate**



### Sensor wiring

- 1 : US+ / Red
- 2 : GND / Black
- 3 : Shield
- 4 : T°C/ White
- 5 : NC ( can be removed)



**User information**

Company:

Contact :

Tel :

Fax :

Mobile :

Email :

**Installation site**

Site name :

Address :

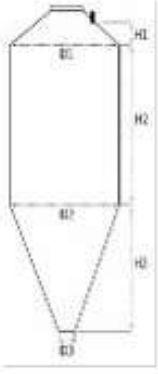
Contact on site:

**Fitter**

Company :

Installation date:

SILO ID	H1	H2	H3	D1	D2	D3	H <sub>Total</sub>	Corrugated sides
	cm							
A								<input type="checkbox"/>
B								<input type="checkbox"/>
C								<input type="checkbox"/>
D								<input type="checkbox"/>
E								<input type="checkbox"/>
F								<input type="checkbox"/>
G								<input type="checkbox"/>



SILO NAME	Model Silo	Sensor serial number

SILO NAME	Model Silo	Sensor serial number

Comments

## ► Installation Guide



### Equipment

- Communicating generator mounted with its ultrasonic probe
- Mounting plate and ring
- hole saw 108mm
- 3x fixation screws for the mounting plate
- Seal and gun
- Protective gloves
- Cover plate
- Plastic clamp

### Drill into the silo with the hole saw 108mm and take off the round piece

Be careful not to drop the operculum !



### Place the mounting plate

Mark the placement of the 3 screws and make pre-drilled holes to prepare the drilling





## ► Guide d'installation des sondes de niveau

### Sealed around the hole

Put some seal around the hole  
Using the gun

Put back the mounting plate on  
the hole and screw



### Insert the wired probe

The ultrasonic probe has to be  
passed into the mounting hole  
and held with the plastic clamp

### The probe is ready

You may put more seal around  
the plate

The installation is now done



### Access the data on the web platform Ijitrack :

Data are available on the site [www.v2.ijitrack.com](http://www.v2.ijitrack.com)

Ask your reseller your connection ID

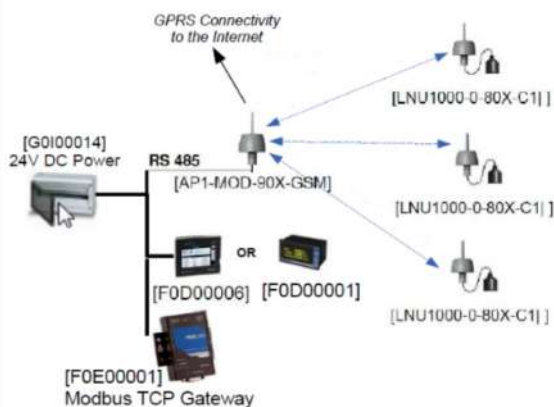
## ► OPTION : ON-SITE TOUCH PANEL



### Touch panel - MODBUS

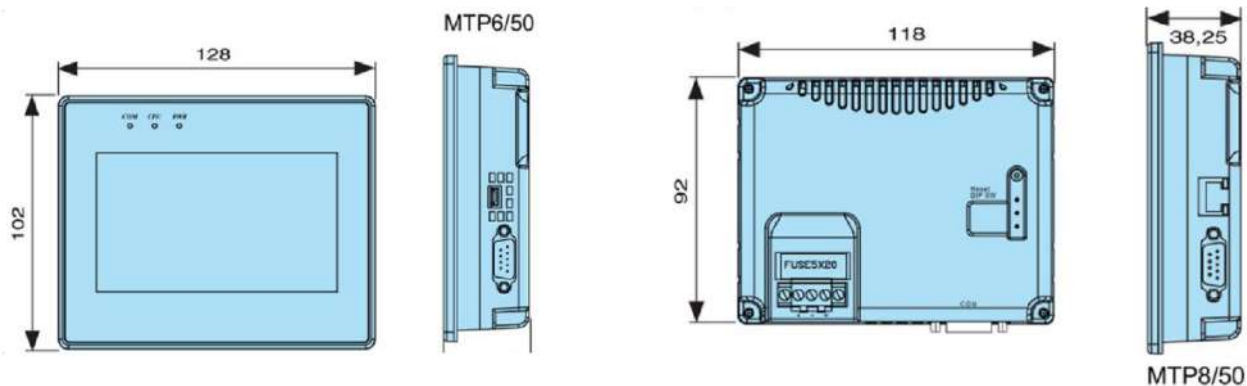
- 4.3" TFT-LCD compact resistive touch panels
- 65536 colors, LED backlight
- Resolution : 480 x 272 pixels
- 32 silos peuvent être affichés (4, 8, 16 ou 32 silos par pages)

#### OPERATION SKETCH



Features	Part number : F0D00006
Power supply	19,2...28,8VDC
Current consumption	7,2W max
Protection rating	IP65, dust and droplet
Température d'utilisation	0°C..+45°C
Storage temperature	-20..+60°C
Dimensions (l x h x w)	128 x 102 x 38 mm
Mounting::	2 screw clamps (supplied)
Weight	300g

#### Dimensions



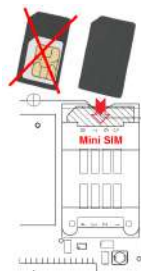
#### Associated part numbers :

<b>AP1-MOD-80X</b>	ACCESS POINT HF AUTONOMOUS - MODBUS
<b>LNU1000-0-80X-C1</b>	LEVEL SENSOR 0.4...10m Angle 12° BATTERY POWERED ESTERNAL PROBE – SILO - SLAVE
<b>G0I00014</b>	EQUIPED CASE 24V/60W POWER SUPPLY - SURGE PROTECTION 10kA/230V - 1 ROW
<b>F0D00007</b>	CASE FOR MODBUS TOUCH PANEL 32 CHANNELS COLOR

## ► WIRELESS ACCESS POINT : HF/GSM/GPRS

### After 8 silos, you need a power supply access point

	HF Concentrator with Modbus and GSM/GPRS Connectivity	HF Concentrator with Modbus Connectivity
Part Numbers	<b>AP1-MOD-80X-GSM</b> (868 MHz) <b>AP1-MOD-90X-GSM</b> (915 MHz)	<b>AP1-MOD-80X</b> (868 MHz) <b>AP1-MOD-90X</b> (915 MHz)
Communication	Radio HF (Wiji Protocol) GSM / GPRS	Radio HF (Wiji Protocol)
Radio	500 m	
Modbus	RS485 half duplex	
Power supply	8...30V DC / 2W max. - Internal backup battery	8...30V DC / 2W max. - Internal backup battery
Connector	M12 5PTS	
HF antenna	1/4 Wave Length	
GSM antenna	Internal Quad-Band Patch	
Operating temperature	-40 ...85°C	
Housing	ABS 20% Glass fiber	
Sealing	IP65 with aerateur	
Configuration	AVELOUR software or remotely by GPRS	AVELOUR software
Certification	CE	



#### Wiring

- 1 : V+
- 2 : GND
- 3 : RS485 High
- 4 : RS485 Low
- 5 : Shield



Plug ref : C0J00003



► **Contacts**

**For all information, please contact us or your local distributor**

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