IoT - M2M products & solutions

Digital
CATALOG

Founded in **1996** by Francis Raimbert, **ATIM** is a **radio** **expert** and **pioneer** in **IoT** and **M2M** based in Villard-de-Lans, in the French Alps.

As a **designer** and **manufacturer** of **wireless communication sensors**, our mission is to provide our customers with **industrial**, **plug & play** solutions.

Adaptability – Reactivity : ATIM masters the complete IoT chain. From the radio core, to the design and implementation of solutions, we adapt to our customers' needs.

Simplicity - Plug & Play : Installation and integration in less than 10 minutes.

Reliability – Quality : We manufacture in France and control all aspects of production, from component sourcing to delivery.

The Smart City-Building-Energy-Industry-Agriculture sectors use our remote solutions to connect their assets, collect information and solve daily maintenance, comfort or safety problems more efficiently.

Our strengths :

- RF, M2M and IoT expertise
- Financial and technical independence
- 100% French production
- Flexibility and customer proximity

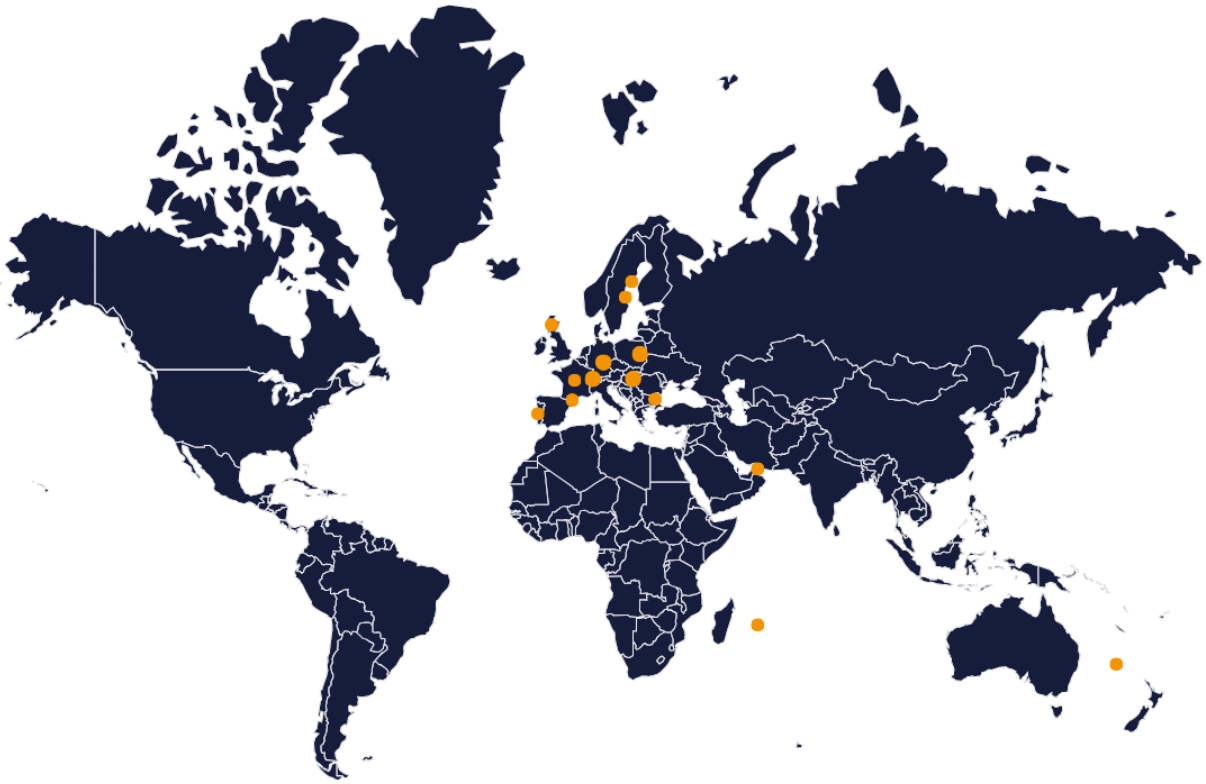
Our key figures :

- 350,000 products deployed worldwide
- 27 years of expertise in radio communications
- 12-strong team
- 35 complete solutions
- 2000 customers worldwide

THEY TRUST US

And many more...

OUR DISTRIBUTION NETWORK



If you are interested in distributing our products in your country, please contact us: contact@atim.com

IN THE WORLD

ACANDIA MÄT- & STYRTEKNIK

Becolve Digital

DIGITAL TWIN

ForestRock

THM PACIFIC

Infocontrol

Malthe Winje

MASTER CHIPS

0G BALTICS

ABUR Systemy automatyki

sb-controls

Sensational Systems

sigfox germany

SYDMA Kablosuz Kontrol

ShopOfThings by Thingware GmbH

TST Smart City

unabiz

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76300 Sotteville-lès-Rouen
France
02 32 91 51 51

E.T.N. Groupe

A WIDE RANGE OF BUSINESS SECTORS

ENERGY

Sustainable development and energy savings: temperature readings in buildings, water leakage detectors, presence detection to manage office lighting. ATIM radio modems help reduce energy consumption. For 20 years, ATIM products have also been used in nuclear power plants, hydroelectric dams and wind farms.

SMART CITY | SMART BUILDING

Building Management, Facility Management: Between local authorities and private buildings, the city of the future is taking shape today. Every week, a million people around the world move into the city! There's an enormous amount of equipment to connect: public lighting, water, gas and electricity meters, fuel tank level readings, people counting, building energy optimization, waste management, polling stations, parking spaces, fire extinguishers, alarms, etc....

AGRICULTURE

Wireless sensors to measure soil moisture and pH, reduce pesticide use and water consumption, weather stations, driverless tractors, connected cows ... farmers are high-tech! Atim Cloud Wireless® radio modems are widely used in fields and by horticulturalists.

INDUSTRY

ATIM radio modems have been used in the industrial world for many years. The applications are many and varied: call-for-car systems for line-side supply, remote sensors on industrial sites, industrial weighing, overhead cranes, conveyors, cranes, Automated guided vehicles (AGVs), stacker cranes, etc. Our sensors and radio modems have been selected for the management and optimization of key performance indicators (KPIs) on numerous industrial sites.

LPWAN & M2M TECHNOLOGIES

Difficult to choose ? As a designer and manufacturer of RF solutions, **ATIM** remains agnostic, and will show you the best solution for your application**.**

LPWAN technology

This communication protocol, created by the Grenoble-based company CYCLEO® and acquired by SEMTECH® in 2013, has become an essential new standard for tomorrow's IoT. It is based on LoRa® technology, offering exceptional performance in terms of range and low energy consumption. ORANGE is the main operator covering the French territory with its LoRaWAN® base stations. The LoRa Alliance brings together over 400 members, including giants such as IBM, CISCO and ST. Today, LoRa is mainly used in private mode, with anyone able to deploy their own network by installing one or more gateways.

Sigfox is a network operator for the Internet of Things (IoT). The Sigfox network covers the whole of France, as well as 70 other countries in Europe and worldwide.
Sigfox technology enables ATIM to send information (temperatures, humidity, meter readings, etc.) directly to Sigfox servers, regardless of distance.
The information stored in the Sigfox Cloud can then be pushed to platforms enabling data formatting (statistics, curves, alarms...) thanks to APIs or Callbacks.
Startup Unabiz acquired French company Sigfox, 4 months after the French company filed for insolvency in early 2022.

Cellular technologies

LTE-M (or CAT-M1) is also derived from 4G, enabling higher data rates than NB-IoT, as well as image and voice transmission. Roaming agreements between operators are underway.
Beware, however, of power consumption, which is much higher than with LoRa or Sigfox!

NB-IoT technology is based on existing 4G networks and is controlled by operators in the various countries. Radio performance is improved compared with 4G, and thanks to the low data rate, to enable better penetration of waves inside buildings and underground. Beware, however, of higher power consumption than LoRa or Sigfox!

M2M

Local FSK mode

This mode has been used for many years on ATIM radio modems. When it comes to establishing point-to-point or multipoint links on an industrial site, for example, this modulation (Frequency-Shift Keying) works very well. Sensitivities are much better than in the past, making it possible to achieve interesting ranges even at low power in 868MHz, e.g. 4kms at sight with 25mW (14dBm) and over 20kms with 500mW (27dBm). ATIM ARM-SE and ARM-D radio modems operate in this mode in the ISM band (unlicensed) in accordance with EN300-220. They are often used in mirror mode (I/O copying) or in Modbus.

LoRa® point-to-point (P2P)

ATIM's own implementation offering the possibility of communicating over an internal network while benefiting from the robustness of LoRa® technology. ATIM has developed its own point-to-point / multipoint communication protocol using the LoRa radio communication layer. This makes it possible to interface various products together via a direct link, while avoiding the need to deploy a complete network. The advantage is that the same module can be switched from LoRaWAN mode to LoRa mode simply by AT commands.
This makes it possible to establish local communication between several devices, while still having a link to a private gateway or to operated base stations.

EXAMPLES OF CUSTOMIZED PROJECTS

ATIM and TCT have joined forces to create an innovative product: the e-green sensor. This is a 100% autonomous current sensor (with no batteries or cables) communicating via LoRaWAN and BLE.

This partnership has been guided by a shared ambition: to create a product that combines ingenuity, practicality and efficiency.

Atim and Imagina International win innovative project to detect water leaks in Grenoble's district heating network.

This promising project promises to revolutionize water management in the region, helping not only to prevent water losses, but also to achieve substantial savings.

ATIM masters the entire chain, advising you on the choice of sensor, communication technology and infrastructure.
ATIM supports you from specifications to project industrialization, as well as product certification. Entrust us with your digitalization projects.

Contact us to put your ideas into practice.

SENSORS

ATIM Cloud Wireless® IoT range
Advanced Radio Modem® M2M range

SOFTWARE

Configurators
Simulators (autonomy, codecs)
Platform
Mobile App

TECHNOLOGIES

LPWAN
Public network
Private network

ACQUISITION

Web IoT platform
Codecs

atim cloud wireless™

IOT SENSORS






SMART CITY | SMART BUILDING | SMART AGRICULTURE | SMART INDUSTRY | TRANSPORT EVENTS

CURRENT TEMPERATURE SENSOR

e-green sensor

IoT sensor

Range 0A to 200ARMS
(Class 1 accuracy)

Self-contained product with energy recovery - No batteries required

Temperature measurement by external probe, type K thermocouple
Temperature probe supplied -50°C to 250°C (25x20mm adhesive pad)

Local (BLE) or remote (downlink) configuration

Features

The ***e-green sensor*** is an autonomous, self-powered sensor that measures the current in an electrical cable, as well as the temperature of a piece of equipment. This sensor contributes to sustainable development thanks to its energy recovery system. It contains no batteries.

Installation can be carried out under power, with no need to intervene on the installation (no need to uninstall the existing system or decable the wiring).

Measurements are transmitted regularly either locally or remotely via LoRaWAN.

References

Designation	Version	Technology
ACW/LW8-CTS	Current/ Temperature	LoRaWAN

FIELDS OF APPLICATION

Smart Building

Smart City

Smart Industry

Utilities

- Reduce your energy bill by analyzing your various consumption items.
- Monitor the temperature of your equipment and alert you in the event of abnormal overheating.

- List the electrical consumption of your machines (robots, motors, machining centers, etc.).
- Launch audit campaigns on your installations. Check the operation and temperature of your motors.

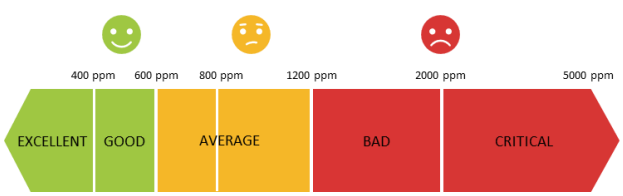
- The energy crisis is threatening ski resorts. With the e- green sensor, check your installations and optimize consumption.

AIR QUALITY

NDIR* SENSOR

IoT sensor

CFG-APP



Carbon dioxyde (CO_2)
Range: 0 to 40000ppm
Precision : +/- 40ppm +5% from 400 to 5000ppm

Volatile Organic Compounds
Range: 0 to 500 VOC
Resolution : 1

Air temperature
Range: -40°C to +125°C
Precision : +/- 0.2°C between -40°C and +80°C

Air humidity : 0% RH to 100% RH
Precision : +/- 2% RH between 0 and 100 % RH

Multifunction visual signal:
- network quality
- air quality
- mode of operation

Interchangeable batteries

Setup via USB, downlink or mobile app

Plug & Play

Features

The THAQ facilitates the monitoring of your rooms and buildings thanks to its CO2, VOC (volatile organic compounds), temperature and relative humidity sensors.

Equipped with a LED on the front panel (Green > Orange > Red) clearly indicating the need to ventilate the room, the air quality is displayed locally or the complete measurements are sent to an operated Sigfox or LoRaWAN network.

The configuration is done from the tools of the ATIM suite, either locally or remotely: CO2 thresholds are among other things configurable.

Compatible with the computer and mobile versions of the IoT web platform**, data visualization, remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.

References

Part number	Technology	
ACW/THAQ	Sigfox	LoRaWAN

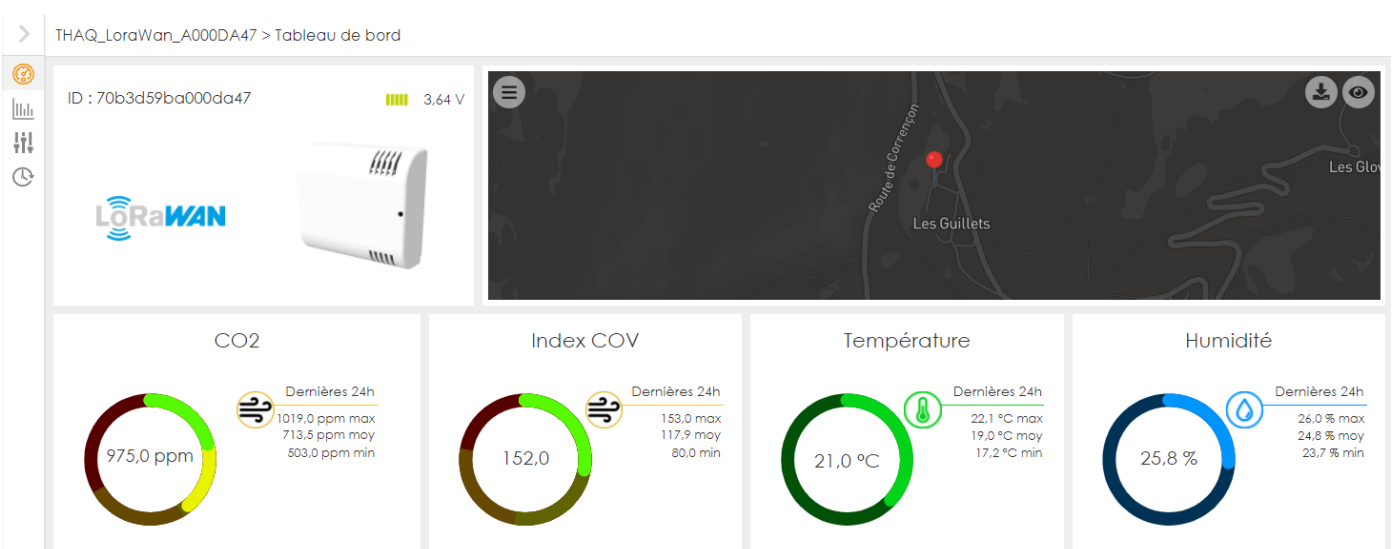
* Recognized by the High Council of Public health
** Disponible avec un abonnement à la plateforme web Atim Cloud Wireless™

Optimise and Monitore Air Quality

Smart Building | Smart City | Smart Industry

- Children spend most of their time in class, the quality of the air they inhale is a major issue for their health, especially since some VOCs are classified as carcinogenic and high CO2 levels facilitate the spread of the Covid virus.
- Thanks to the LED indicating the air quality according to a precise colour code, teachers will be able to take immediate ventilation measures (LED deactivatable by configuration).
- It has been proven that optimal air quality has an effect on the concentration and well-being of children (less coughing, allergies, etc.).

- The labour code states that for any closed work area, the air must be renewed in order to maintain a pure atmosphere and to avoid exaggerated temperature rises.
- A real time indicator of CO2, VOC, temperature and humidity levels makes it possible to ensure that the air treatment equipment is working properly and to intervene in case of malfunction.



TEMPERATURE - HUMIDITY

IoT sensor

CFG-APP

Range: -40°C to +125°C
Precision : +/- 0.2°C between -40°C to +80°C

Range : 0% RH to 100% RH
Precision : +/- 2% RH between 0 and 100 % RH

IP30 protection rating

Autonomy > 10 years*

Interchangeable batteries

Setup via downlink or mobile app

Multifunction visual signail:
- Network quality
- mode of operation

Plug & Play

Features

The THX-v2 enables the monitoring of comfort and energy efficiency indicators in your rooms and buildings thanks to its temperature and humidity sensors.

Thanks to its low power consumption, the new version of the ACW-THX-v2 benefits from improved autonomy.
A pull-out mode has been integrated: if the product is pulled out, an alert is immediately sent.

Measurements are regularly transmitted to a local gateway or via the Sigfox or LoRaWAN operated networks. The THX benefits from the latest features of the ACW range: Datalogging and data redundancy.

The configuration is done from the ATIM suite tools, either locally or remotely.

Compatible with the computer and mobile versions of the IoT web platform**, the visualization of data, the remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.

References

Part number	Technology	
ACW/THX-v2	Sigfox	LoRaWAN

* The autonomy of a product depends on several external factors (ambient temperature and humidity, transmission frequency, network quality, etc.).
Subject to environmental conditions

**Available with a subscription to the Atim Cloud Wireless™ web platform.

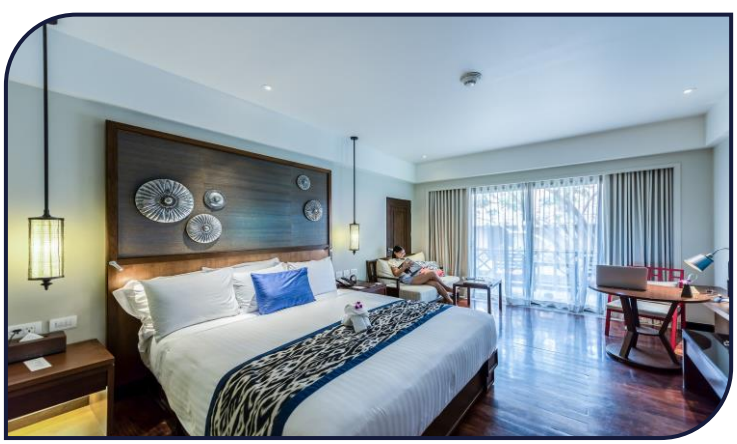
OPTIMIZE AND CONTROL ENERGY PERFORMANCE

Smart Building

Smart City

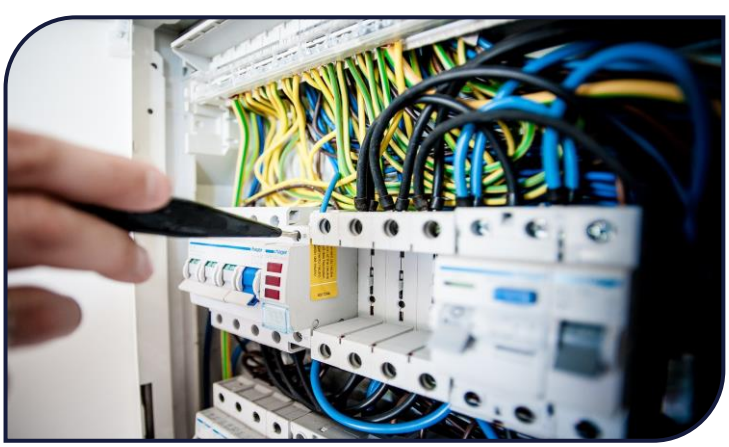
Smart Industry

- Monitoring of the ambient temperature and humidity of a public building.
- Comply with the law on energy transition which recommends an ambient temperature of 19 ° C in tertiary buildings and 22 ° C in hospitals.
- Limit periods of overheating.
- Rapid ROI thanks to energy savings.
- ATIM works with the largest energy suppliers.



- Guarantee the comfort and satisfaction of your clients.
- Ensure optimum temperature in all rooms.
- Control the building's energy budget.
- ATIM sensors are installed in many hotels in France and abroad.

- Monitor the temperature inside a work site electrical cabinet.
- Prevent the potential risk of fire due to an electrical overload or too high temperature.
- Locate your electrical cabinets on different sites and ease inventories thanks to the GPS version.
- ATIM equips thousands of construction sites for a major player in the construction industry.



DEPORTED PROBE TEMPERATURE - HUMIDITY

IoT sensor

CFG-APP

Features

The TCR-v2 enables the monitoring of comfort and energy efficiency indicators in your rooms and buildings thanks to its temperature and humidity sensors.

Thanks to its low power consumption, the new version of the ACW-TCR-v2 benefits from improved autonomy.
A pull-out mode has been integrated: if the product is pulled out, an alert is immediately sent.

Measurements are regularly transmitted to a local gateway or via the Sigfox or LoRaWAN operated networks. The THX benefits from the latest features of the ACW range: Datalogging and data redundancy.

The configuration is done from the ATIM suite tools, either locally or remotely.

Compatible with the computer and mobile versions of the IoT web platform**, the visualization of data, the remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.

- Range : -40°C to +125°C
  Precision : +/- 0.2°C between -25°C to +70°C
- Range : 0% RH to 100% RH
  Precision : +/- 2% RH between 0 to 100 % RH
- IP66 protection rating
- Autonomy > 10 years
- Interchangeable batteries
- Setup via USB, downlink or mobile app
- Redundancy of data and datalogging modes
- Visual signal showing network quality and sensor correct connection
- Plug & Play

References

Part number	Technology	
ACW/TCR-v2	Sigfox	LoRaWAN

* The autonomy of a product depends on several external factors (ambient temperature and humidity, transmission frequency, network quality, etc.). Subject to environmental conditions

**Available with a subscription to the Atim Cloud Wireless™ web platform.

COMPLY WITH SANITARY STANDARDS

Smart Building

Smart City

Smart Industry

- Monitor the storage conditions of goods during their transportation and logistics.
- Ensure an insurance coverage in the event of damaged good when cold chain is maintained and proved so.
- Increase food safety.

- Guarantee compliance with the cold chain and hygiene rules.
- Control the temperature of your cold rooms, refrigerated banks, refrigerated trucks.
- Keep the data transmitted in the event of an inspection.
- Control and avoid any health risk.

- Greenhouses require close supervision of temperature & humidity on specific locations.
- Central visualization of the measured conditions to take action for irrigation, and parameters adjustments.
- Increase crops development and production efficiency of gardens.

DEPORTED PROBE(S) TEMPERATURE

IoT sensor

CFG-APP

Range : -50°C to +200°C for TMxP
-196°C to +150°C for TMxP-CRYO

Precision : +/- 0,15°C +0,2% for TMxP
+/- 0,15°C +0,2% for TMxP-CRYO

IP65 protection rating

1 or 2 temperature measurements/hour
Sigfox 7+ years*
LoRaWAN 14+ years*

Interchangeable batteries

Setup via USB, downlink or mobile app

Redundancy of data and datalogging modes

Visual signal showing network quality
and sensor correct connection

Plug & Play

Features

The TMxP can monitor one to two remote temperature sensors -196°C | +200°C.

It is commonly deployed in buildings, energy installations and cold chain control.

The measurements are regularly transmitted by radio (Sigfox or LoRa technology) and the configuration is done from the tools of the ATIM suite locally or remotely.

Compatible with the computer and mobile versions of the IoT web platform, data visualization, remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.

References

Part number	Technology	
ACW/TM0P	Sigfox	LoRaWAN
ACW/TM1P	Sigfox	LoRaWAN
ACW/TM2P	Sigfox	LoRaWAN
ACW/TM1P-CRYO	Sigfox	LoRaWAN

* Subjected to the environment conditions
**Available with a subscription to Atim Cloud Wireless™ web platform

COMPLY WITH SANITARY STANDARDS

Smart Building

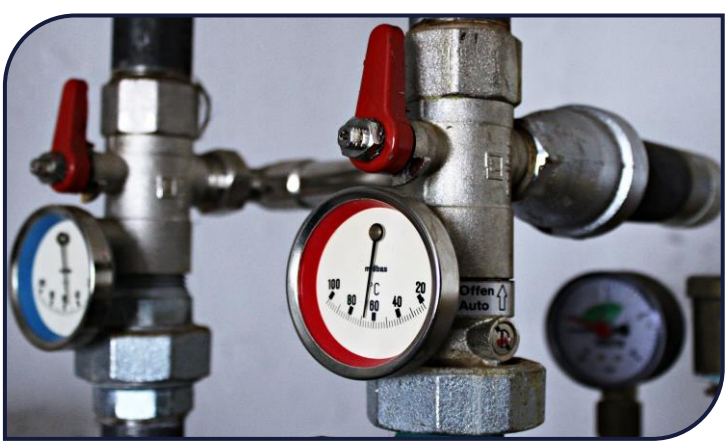
Smart City

Smart Industry

- Monitor the temperature at the inlet to the outlet of the domestic water network.
- Comply with legislation requiring regular monitoring of the water temperature, which must be between 55 ° C and 60 ° C in all public buildings.
- Limit the legionella risk.

- Guarantee compliance with the cold chain and hygiene rules.
- Control the temperature of your cold rooms, refrigerated banks, refrigerated trucks.
- Keep the data transmitted in the event of an inspection.
- Control and avoid any health risk.

- Monitor the water temperature at the outlet of the network.
- Avoid overheating the water, it is advisable not to heat above 60 ° C to avoid the risk of severe burns.
- Reduce the energy bill by maintaining an optimal and constant temperature.



SMART METERING

IoT sensor

CFG-APP

- 4 inputs to be setup in index metering or 30 Vmax dry contacts
- IP65 protection rating
- Up to 4 consumption measurements/hour
  Sigfox 2+ years*
  LoRaWAN 7+ years*
- Interchangeable batteries
- Setup via USB, downlink or mobile app
- Redundancy of data and datalogging modes
- Visual signal showing network quality and sensor correct connection
- Plug & Play

Features

The MR4 facilitates the remote reading of meters with pulse output and also the reporting of dry contact status.

Each channel can be configured alternatively as a count or as a Boolean state of the corresponding input.

The information collected is transmitted regularly via the Sigfox or LoRaWAN networks or locally by installing one or more gateways on site.

Compatible with the computer and mobile versions of the ATIM Cloud Wireless web platform, the visualization of data, the remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.

An ATEX zone 2 version is available with 2 inputs.

References

Part number	Technology	
ACW/MR4	Sigfox	LoRaWAN
ACW/MR2-EX	Sigfox	LoRaWAN

Options

Mechanical head	Opening /closing
CAPT-MECA	CAPT-DOCK

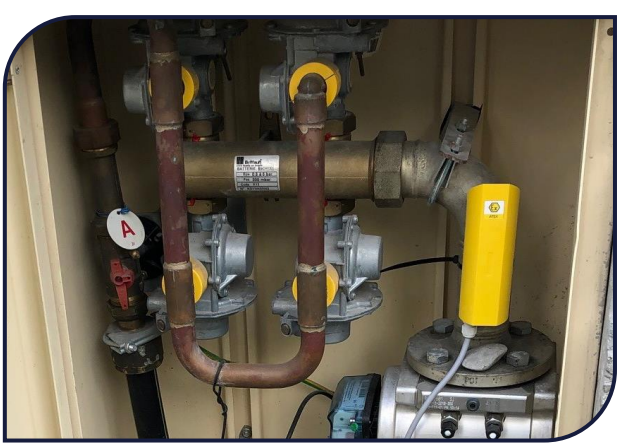
* Subjected to the environment conditions

**Available with a subscription to Atim Cloud Wireless™ web platform

ENERGY AND SECURITY MANAGEMENT WITHIN A BUILDING

Smart Building | Smart City | Smart Industry | Utilities

- Monitor the consumption index of your electricity or water meters in real time.
- Analyse data and detect peaks in consumption.
- Identify the most energy-intensive workstations or sectors and develop an appropriate action plan to reduce consumption.
- Identify water leaks with an alert in the event of abnormal consumption.



- Monitor the consumption index of your gas meters in real time.
- Quickly identify a gas leak in the event of unusual consumption.
- React quickly to avoid the risks associated with this leak.

- Connect the opening and closing system of a secured door to monitor a limited access site such as a warehouse.
- Detect an intrusion or an opening outside of common time slots.

INFRARED PRESENCE DETECTION

IoT sensor

ACW-PIR90-I

ACW-PIR360-I

ACW-PIR90-O

ACW-ILB

ACW-PIR180-O

- Distance detection: up to 100 meters
  Angle detection: 90 to 360°
- IP30 protection rating -I versions
  IP54 or IP55 protection ratings -O versions
- 3+ years* with 1 detection/hour versions -I
  5+ years* with 1 detection/hour versions -O
- Interchangeable batteries
- Setup via downlink or factory settings
- Plug & Play

Features

The PIR range facilitates the monitoring of sites thanks to its detection modes.

There are two operating modes:
- alarm mode (intrusion detection)
- counting mode (determine percentages of attendance or occupancy)

The alerts are transmitted on Sigfox or LoRaWAN networks and its configuration is configurable from the tools of the ATIM suite.

Compatible with the computer and mobile versions of the IoT web platform**, data visualization, remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.

References

Part number	Technology	
ACW/PIR90-I	Sigfox	LoRaWAN
ACW/PIR90-O	Sigfox	LoRaWAN
ACW/PIR180-O	Sigfox	LoRaWAN
ACW/PIR360-I	Sigfox	LoRaWAN
ACW/ILB30	Sigfox	LoRaWAN
ACW/ILB100	Sigfox	LoRaWAN

* Subjected to the environment conditions

**Available with a subscription to Atim Cloud Wireless™ web platform

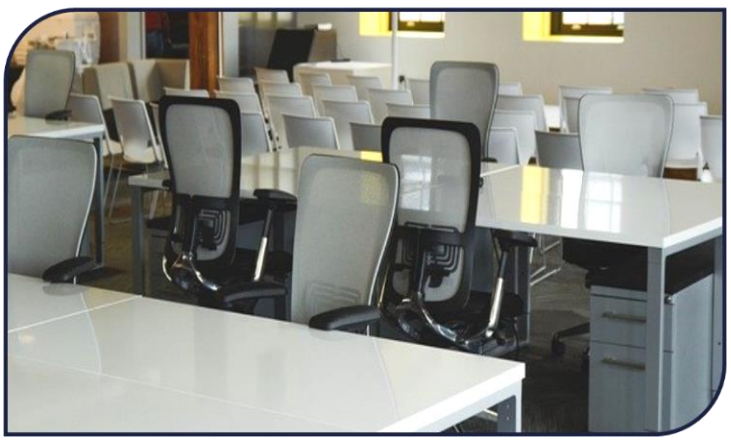
DETECT AND ALERT

Smart Building

Smart City

Smart Industry

- Analyse the occupancy rate of the various workspaces in a building.
- Organize the meeting room reservation schedule.
- Thanks to the information transmitted regularly, it is possible to ensure that the occupancy gauges (Covid-19) are respected.



- Depending on the information transmitted, it is possible to adapt the management of rooms and open spaces (cleaning, maintenance, etc.).
- Heating being a very expensive item, it will become easy to identify unoccupied rooms and adapt the heating system accordingly (energy savings).

- The alarm mode allows you to be warned in the event of an unwanted or intrusive presence.
- This operation is ideal for monitoring a protected access, an intrusion, or places with restricted access.
- Thanks to the alert sent immediately, the intervention is quick.

LEAKS DETECTION

IoT sensor

- Presence of liquid detection
- Buzzer alerting
- Localisation of the leak
- IP30 protection rating -I versions
  IP66 protection rating -O versions
- 5 to 10 years*
- Interchangeable batteries
- Setup via USB, downlink or mobile app
- Redundancy of data and datalogging modes
- Visual signal showing network quality, sensor correct connection and liquid detection
- Plug & Play

Features

The WL facilitates the monitoring of sites at risk of flooding thanks to its liquid presence detection options.

It is equipped with a volume buzzer alerting when a detection is made.

Alerts are transmitted on Sigfox or LoRaWAN networks and its configuration is configurable from the ATIM suite tools.

Compatible with the computer and mobile versions of the IoT web platform, data visualization, remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.

References

Part number	Technology	
ACW/WL-I	Sigfox	LoRaWAN
ACW/WL-O	Sigfox	LoRaWAN

* Subjected to the environment conditions
**Available with a subscription to Atim Cloud Wireless™ web platform

REAL-TIME ALERTS TO PREVENT DAMAGE

Smart Building | Smart City | Smart Industry | Utilities

- Watch for water leaks in data centers and avoid the risk of fires and floods.
- Avoid downtime as well as the damage caused.

- Watch for water leaks and the risk of flooding in underground heat networks.
- Respond quickly in the event of an alert and shut off the water supply.
- Reduce water consumption by preventing and repairing water leaks.
- The ACW/WL(L) has been in operation on heating networks since 2012.

- Detect liquid leaks in electrical transformer stations.
- React quickly from the alert to avoid a power outage that would deprive a number of homes of electricity.

ULTRASONIC DISTANCE

IoT sensor

CFG-APP

Range: 20 cm to 5 m
Precision: 1% of measurement

IP67 protection rating

3+ years* with 24 measurements/day

Interchangeable batteries

Setup via USB, downlink or mobile app

Redundancy of data and datalogging modes

Visual signal showing network quality and sensor correct connection

Plug & Play

Features

The ACW/LVL is intended for remote monitoring of the levels of many types of containers, such as dumpsters, agricultural silos or even liquid tanks.

It facilitates the wireless reporting of a distance thanks to its powerful ultrasonic sensor.

The measurements are regularly transmitted on Sigfox or LoRaWAN networks and its configuration is configurable from the tools of the ATIM suite.

Compatible with the computer and mobile versions of the IoT web platform**, data visualization, remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.

References

Part number	Technology	
ACW/LVL	Sigfox	LoRaWAN

* Subjected to the environment conditions
**Available with a subscription to Atim Cloud Wireless™ web platform

MONITOR THE FILLING LEVEL OF TANKS

Smart Building

Smart City

Smart Industry

- Monitor snow levels to prevent heavy snowfall.
- Identify the height of snow during heavy falls.
- React and take safety measures when levels are high or critical.

- Remotely monitor the filling rate of liquids, waste or grain containers.
- Collect measurement data from tanks installed in locations that are difficult for technicians to access.
- Organize filling.
- Optimize rounds and orders.

- Monitor the water level of a river.
- Identify rising water levels during heavy rains.
- React and take safety measures when you notice the level rising too quickly.

SMART METERING / CONTROL
REMOTE EQUIPMENTS

IoT sensor

- 1 to 16 dry contacts inputs: 30Vmax
- Up to 8 inputs in metering mode
- 10-30 Vdc external power supply
- Setup via USB, downlink
- GPS option in LoRaWAN

Features

The DINDxx facilitates the reporting of the status of up to 16 dry contacts or up to 8 pulse counter indices.

It also allows to remotely control industrial equipment and to check their proper functioning (up to 8 outputs).

A Jack connector allow the addition of a digital probe, available in option.

The readings are regularly transmitted on Sigfox or LoRaWAN networks and its configuration is configurable from the ATIM suite tools.

Compatible with the computer and mobile versions of the IoT web platform*, data visualization, remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.

*Available with a subscription to Atim Cloud Wireless™ web platform

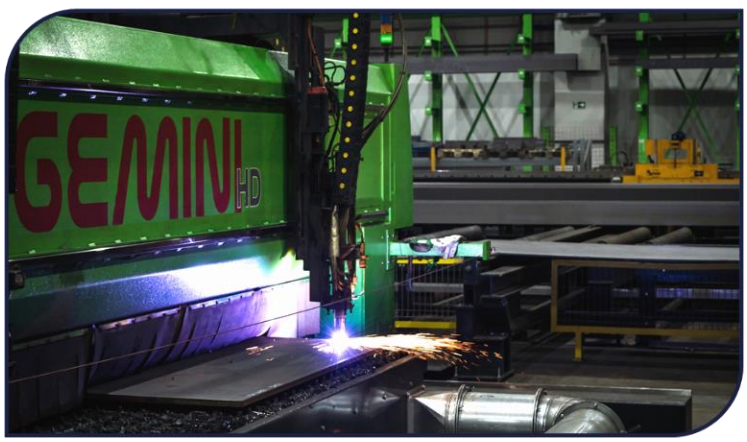
References

Part number	Technology	
ACW/DIND21	Sigfox	LoRaWAN
ACW/DIND44	Sigfox	LoRaWAN
ACW/DIND80	Sigfox	LoRaWAN
ACW/DIND88	Sigfox	LoRaWAN
ACW/DIND160	Sigfox	LoRaWAN
ACW/DINDIO80-G	LoRaWAN + GPS	
ACW/DINDIO160-G	LoRaWAN + GPS	

SUPERVISE AND CONTROL YOUR EQUIPMENT

Smart Building | Smart City | Smart Industry | BTP

- Communicate with the automatons of a production line.
- Immediately detect a failure or a stop and react quickly.
- Reset the PLC remotely thanks to the dry contact outputs.
- Increase the productivity of the production line by limiting downtime and making installations more reliable.



- Connect the public lighting of a city.
- Quickly identify a failure, react quickly to restore normal operation.
- Remotely turn on or off the lighting in a specific area.
- Reduce the city's energy consumption by ensuring compliance with regulatory lighting ranges.

- Detect a circuit breaker in an electrical cabinet.
- Control the number of stops of the construction equipment.
- Improve site productivity by reducing the number and hours of downtime (a stopped crane represents a significant financial loss).
- Product of the year selected by a major construction company for all its public worksites in France.

4-20 mA or 0-10 V gateway

IoT Sensor

- 1 analogue input 4-20 mA | 0-10 V
- 2 dry contacts inputs: 30Vmax
- 10-30 Vdc external power supply
- Setup via USB, downlink

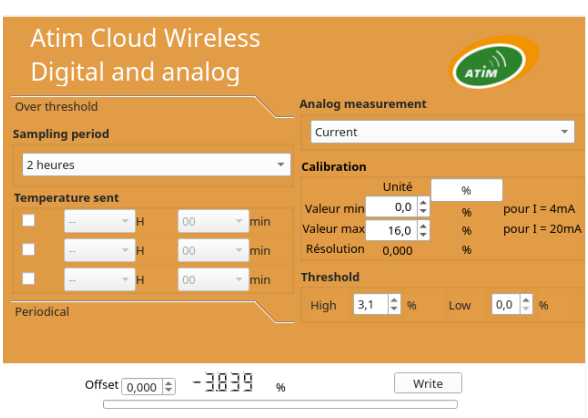
Features

The DINDA facilitates the transfer 1 analogue input 4-20 mA or 0-10V.

Through a serial connection, it interfaces with any equipment with such analogue outputs. There are 2 dry contacts inputs available additionally.

The readings are regularly transmitted on Sigfox or LoRaWAN networks and its configuration is configurable from the tools of the ATIM suite.

Compatible with the computer and mobile versions of the IoT web platform*, data visualization, remote parameterization of the sensor and the configuration of alerts according to predefined thresholds are made possible in a few clicks.



References

Designation	Technology	
ACW/DINDA	Sigfox	LoRaWAN

*Available with a subscription to the Atim Cloud Wireless™ web platform.

ANALOGUE DATA MONITORING

Smart Building

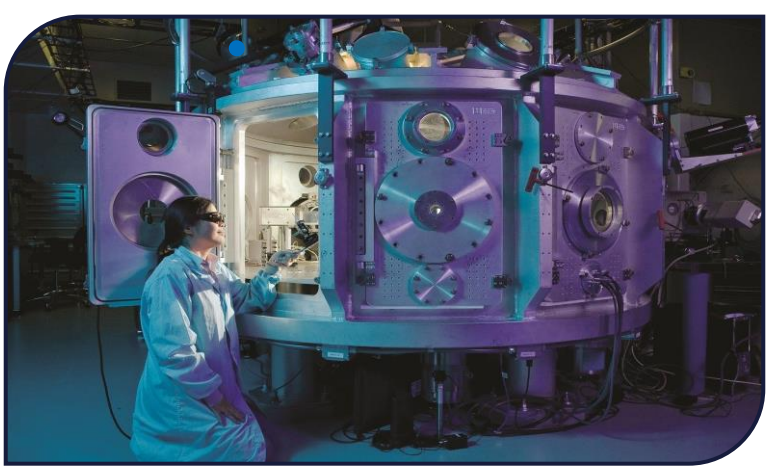
Smart City

Smart Industry

- Connect your anemometers to the network.
- Get real-time information on wind power.
- Quickly identify a favorable window for energy production.
- Anticipate risks and accidents related to strong winds.

- Query isolated sensors such as soil sensors (temperature, humidity, pH, etc.).
- Consult sensor information on the Internet and analyze the data.
- Adapt the management of your crops (irrigation, solenoid valve control).

- Connect your sensors in a controlled atmosphere room (pressure, temperature, humidity, etc).
- Regularly monitor whether levels are sufficient or too high.
- React quickly to changes in any of the levels with configurable alerts.



NETWORK TESTER

IoT sensor

- Quality of network
- Push button
- Visual LED
- Signal quality color scale
- USB rechargeable battery
- Plug & Play

References

Part number	Technology	
ACW/TST	Sigfox	LoRaWAN

Features

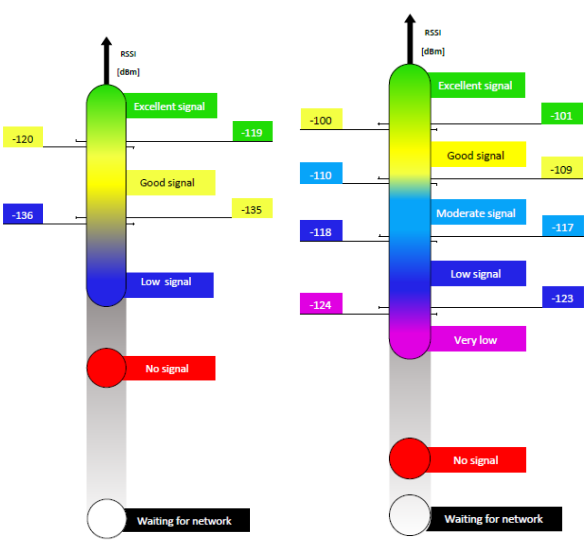
The ACW/TST is a tester that allows you to check the radio coverage and signal reception quality of Sigfox and LoRaWAN networks.

It allows you to optimize and validate the positioning of your IoT sensors in the field.

The operation is very simple: a push on a button and a colour code indicates the radio quality.

A registration of the ACW/TST on a public or private IoT network is required to test its quality.

Compatible with computer and mobile versions of the IoT web platform*, the visualization of the network quality is made possible in a few clicks.



*Available with a subscription to Atim Cloud Wireless™ web platform

LoRaWAN REPEATER

IoT sensor

- Repetition mode
- Up to 8x ACW/LoRaWAN sensors supported
- IP65 protection rating
- 220V power supply
- Option: solar panel power supply

References

Part number	Technology
ACW/LW8-GW	LoRa

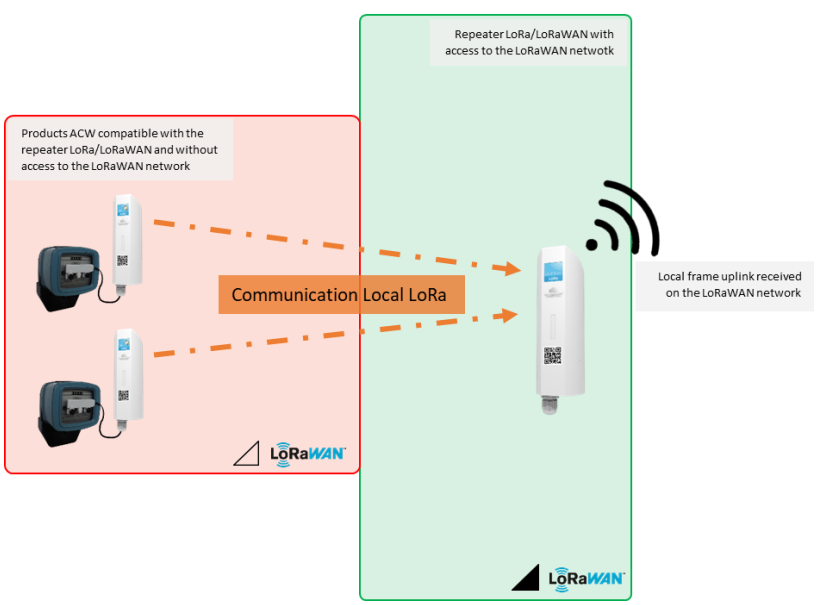
Features

The LW8-GW allows the densification of the LoRaWAN network.

It matches typically for sensors located on blank coverage and isolated aeras: especially on basement boiler rooms, underground car parks, pipes, etc…

Thanks to its proprietary protocol, it facilitates the transmission of up to 8 isolated sensors.

Frames received by the sensors are regularly transmitted on the LoRaWAN backend, both operator and private, and its configuration is configurable from the tools of the ATIM suite.



atim cloud wireless™

LoRaWAN GATEWAYS

Modbus LoRaWAN™

webdyn
flexitron group

ATIM CERTIFIED PARTNER

WebdynEasy LoRaWAN

Gateway for sensors using LoRaWan network

The WebdynEasy LoRaWAN equipment is specific to wireless networks using LoRa radio technology. Its main function is to provide the connection between sensors and a data server using the LoRaWAN network. The purpose of the hub is to collect LoRaWAN and/or Modbus data and to send it at a regular frequency to a remote server (IS) using Ethernet or 3G/4G. The configuration is done from the embedded webserver. It uses "Over The Air Activation", and it listens on 8 different frequencies at once. This allows it to capture data emitted using LoRaWAN from sensors that are far away. The channels can be configured locally or remotely.

Main Features

- 4G/3G
- LoRaWAN
- RS485 RS422
- Ethernet
- IP67
- Plug & Play
- Remote configuration
- Modbus RTU/TCP
- FTP/s
- Class A & C Server
- MQTT

HARDWARE SOFWARE

Strenghts & Benefits

- Plug & Play
- LoRaWAN server monitors up to 1000 LoRaWAN sensors and 10 gateways
- Compatible with commercially available sensors
- Reduce maintenance costs
- Optimised energy efficiency
- Optimisation and adaptation of speed and power

Applications

- Remote readings of all types of sensor (temperature, humidity, etc.)
- Remote reading of all types of meter (electricity, gas, water, etc.)

contact@webdyn.com | webdyn.com

OPTION

CloudGate

4.0 NEXT GENERATION

option.com

IoT gateways designed with Option CloudGate signature features

- Ruggedized design
- Industrial grade temperature ranges
- Timed wake-up & ignition sensing
- Passive & active GPS antenna support
- SIM connection

INTRODUCING mini & micro

All CloudGate 4.0 next generation IoT gateways feature world-wide connectivity & optional Li-ion battery.

OPTION		CloudGate Industrial grade, highly customizable cellular connectivity	CloudGate mini Industrial grade cellular connectivity with advanced IO	CloudGate micro Industrial grade, cost-effective cellular connectivity
		CloudGate LTE WW REV4	CloudGate mini	CloudGate micro
WWAN Modem LTE	Supported frequency bands	• LTE FDD: B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B26, B28 • TDD: 38/39/40/41	• LTE FDD: B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B26, B28 • TDD: 38/39/40/41	• LTE FDD: B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B26, B28 • TDD: 38/39/40/41
	Max. connectivity speeds	• LTE DL 150 Mbps, UL50 Mbps	• LTE DL 150 Mbps, UL50 Mbps	• LTE DL 150 Mbps, UL50 Mbps
WWAN Modem 3G/2G	Supported frequency bands	• GSM/GPRS/EDGE: 850/900/1800/1900 MHz (B2, B3, B5, B8) • UMTS/HSDPA/HSUPA/HSPA+: 800-850/ 900/AWS (1700/2100)/1800/1900/2100 MHz (B1, B2, B4, B5, B6, B8, B19)	• UMTS/HSDPA/HSUPA/HSPA+: 800-850/ 900/AWS (1700/2100)/1800/1900/2100 MHz (B1, B2, B4, B5, B6, B8, B19)	• UMTS/HSDPA/HSUPA/HSPA+: 800-850/ 900/AWS (1700/2100)/1800/1900/2100 MHz (B1, B2, B4, B5, B6, B8, B19)
	Max. connectivity speeds	• DC-HSPA+ DL 42 Mbps, UL 5,76 Mbps	• DC-HSPA+ DL 42 Mbps, UL 5,76 Mbps	• DC-HSPA+ DL 42 Mbps, UL 5,76 Mbps
	Rx Diversity	Simultaneous Equalization and Rx Diversity on all bands	Simultaneous Equalization and Rx Diversity on all bands	Simultaneous Equalization and Rx Diversity on all bands
WWAN Antenna	Antenna connector	• 1 × SMA: WWAN Main • 1 × SMA: WWAN Div/GPS	• 1 × SMA: WWAN Main • 1 × SMA: WWAN Mimo/Div/GPS	• 1 × SMA: WWAN Main • 1 × SMA: WWAN Mimo/Div/GPS
GPS		• Standalone GPS, Assisted GPS, GPS OneXTRA™ • Wideband GPS processing (20MHz) for improved measurement accuracy • Passive/active GPS antenna support	• Standalone GPS, Assisted GPS, GPS OneXTRA™ • Wideband GPS processing (20MHz) for improved measurement accuracy • Passive/active GPS antenna support	• Standalone GPS, Assisted GPS, GPS OneXTRA™ • Wideband GPS processing (20MHz) for improved measurement accuracy • Passive/active GPS antenna support
SIM	USIM/SIM connection – Class B and Class C	✓	✓	✓
CPU		i.MX280 (ARM926EJ-S @ 450 MHz) Memory available for customer apps 512 MB Flash (20 MB for data, 30 MB for application, 372 MB extra data partition)	i.MX280 (ARM926EJ-S @ 450 MHz) Memory available for customer apps 256 MB Flash (20 MB for data, 30 MB for application, 0 MB extra data partition)	i.MX280 (ARM926EJ-S @ 450 MHz) Memory available for customer apps 256 MB Flash (20 MB for data, 30 MB for application, 0 MB extra data partition)
Ethernet (IEEE 802.3)	10/100Mb/s RJ45 Connector	✓	✓	✓
microSD card holder		on main PCB	on main PCB	on main PCB
Power control	Timed Wakeup	✓	✓	✓
	Ignition Sensing	✓	✓	✓
Battery	Optional	Li-Ion battery: optional last gasp function (up to 1h with limited functionality) Battery backup RTC (7 days)	Li-Ion battery: optional last gasp function (up to 1h with limited functionality)	Li-Ion battery: optional last gasp function (up to 1h with limited functionality)
Power input		• DC input voltage: 9-33 V DC • Connector: Micro-Fit 3.0TM, Dual row, 4-position	• DC input voltage: 9-33 V DC • Connector: Micro-Fit 3.0TM, Dual row, 4-position	• DC input voltage: 9-33 V DC • Connector: Micro-Fit 3.0TM, Dual row, 4-position
USB		✓ with optional expansion card	✗	✗
Rear Expansion card		✓ with optional expansion card	✓ with optional WAN or LoRa expansion card	✗
Front Expansion card		✓ with optional expansion card	✗ fixed functionality: I2C, 3 x GPIO, RS485 or RS232 and CAN bus port (up to 1 Mbps)	✗
Aluminium Case	Dimension (115 × 105 × 45mm)	115 × 106 × 45 mm 4.52 × 4.17 × 1.77 in	115 × 106 × 45 mm 4.52 × 4.17 × 1.77 in	115 × 106 × 45 mm 4.52 × 4.17 × 1.77 in
	Weight	285 g / 10.05 oz	285 g / 10.05 oz	285 g / 10.05 oz
	Mounting, Bulkhead, 4x M4 holes, DINrail with adapter	✓	✓	✓
	System status LED	✓	✓	✓
Environ-mentals	Operating temperature	-30°C to +70°C / -22°F to to 158°F	-30°C to +70°C/ -22°F to to 158°F	-30°C to +70°C / -22°F to to 158°F
	Storage temperature	-40°C to +85°C / -40°F to to 185°F	-40°C to +85°C / -40°F to to 185°F	-40°C to +85°C / -40°F to to 185°F
	Mounting, Bulkhead, 4x M4 holes, DIN rail with adapter	5% - 95%	5% - 95%	5% - 95%
Certifications		CE, FCC, PTCRB, ISED, AT&T, VZW, US Cellular	CE, FCC, PTCRB, ISED, AT&T, VZW, US Cellular	CE, FCC, PTCRB, ISED, AT&T, VZW, US Cellular
Std. compliance	ROHS, Reach, WEEE	✓	✓	✓
CloudGate Universe	Device can be configured OTA using CloudGate Universe	✓	✓	✓
For developers	CloudGate development kit: developer board, breadboard, SDK, HDK	✓	✓	✓
In the box	Accessories are available (i.e. Power cable, antenna's etc...)	CloudGate Gateway	CloudGate Gateway	CloudGate Gateway
Product Code		CG0124	CM1123	CM0125

atim cloud wireless™

ADVANCED RADIO MODEMS®

M2M

MODBUS ETHERNET TRANSMISSION

Radio modem

- Modbus slave, mirror Modbus RTU or Modbus TCP to Modbus RTU modes
- RS232 or RS485 connection
- Mirror mode
- 1 digital input + 1 digital output
- 10-30 Vdc external power supply
- Setup and update via Ethernet
- 10+ km* radio range

Features

The ARM/868-SE is a radio modem that enables remote communication via serial or ethernet link.

It can be used as a bridge between multiple Ethernet devices.

The modem is equipped by RS232/RS485 serial port for transparent, secured or Modbus mode communications.

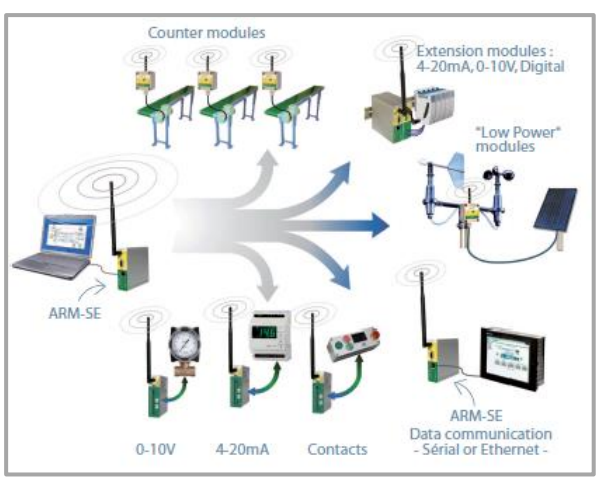
The ARM/868-SE also deals with a repeater mode.

The applications are numerous: timing, lapping time report, digital display, road signs, water and energy management, camera control, telemetry, quarries, mines or industrial radio transmissions…

* Subjected to the environment conditions

References

Part number	Technology
ARM/868-SE	Local 868MHz



Radio modem

Modbus M2M sigfox LoRaWAN

- 2 digital inputs/outputs
- Option: up to 4 digital/analogue inputs/outputs
- RS485 connection
- Modbus Slave mode
- 10-30 Vdc external power supply
- Setup and update via USB
- Radio range:
  10+ km* in Local 868MHz
  6+ km* for Sigfox|LoRaWAN

Features

The ARM-Dxxxx is a radio modem that monitors digital/analogue inputs/outputs that are sent via P2P radio or through Sigfox| LoRaWAN networks.

By default, the modem deals with 2 digital inputs + 2 digital outputs.
In option, up to 4 digital/analogue inputs/outputs can be added.

In P2P, the modem can be setup in Mirror or Modbus Slave modes.

References

Part number	Technology		
ARM/Dxxxx	Local	Sigfox	LoRaWAN
ARM/D88 (option)			

For example

- 2 digital inputs
- 2 digital outputs
- 1 analogue input
- 1 analogue output

ARM-Dxxxx
I/O Digital
I/O Analog

The reference is **ARM-D2211**

* Subjected to the environment conditions

BRIDGE MODBUS RADIO MODEM

Radio modem

- Bridge mode
- RS232 or RS485 connections
- 10-30 Vdc external power supply
- Setup via USB
- 22+ km* radio range

References

Part number	Technology
ACW/DINRS+	Local 868MHz

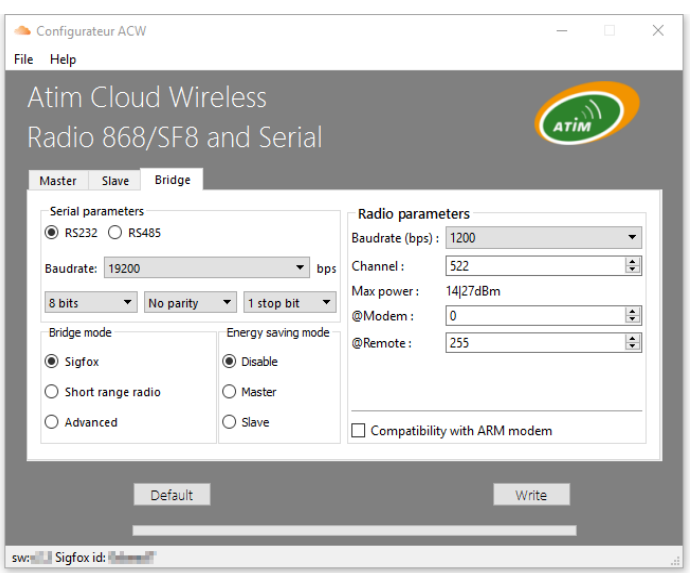
Features

ACW-DINRS+ transmits data from one Modbus device to another via radio.
500mW radio power provides a great range suitable for many applications.

The devices are connected to the PLCs via an RS232 or RS485 link (transparent mode).

Bridge mode: allows you to create a point-to-point or point-to-multipoint link by interconnecting devices equipped with an RS232 or RS485 interface.

The bridge mode setup is to be made on the ACW configurator.



* Subjected to the environment conditions

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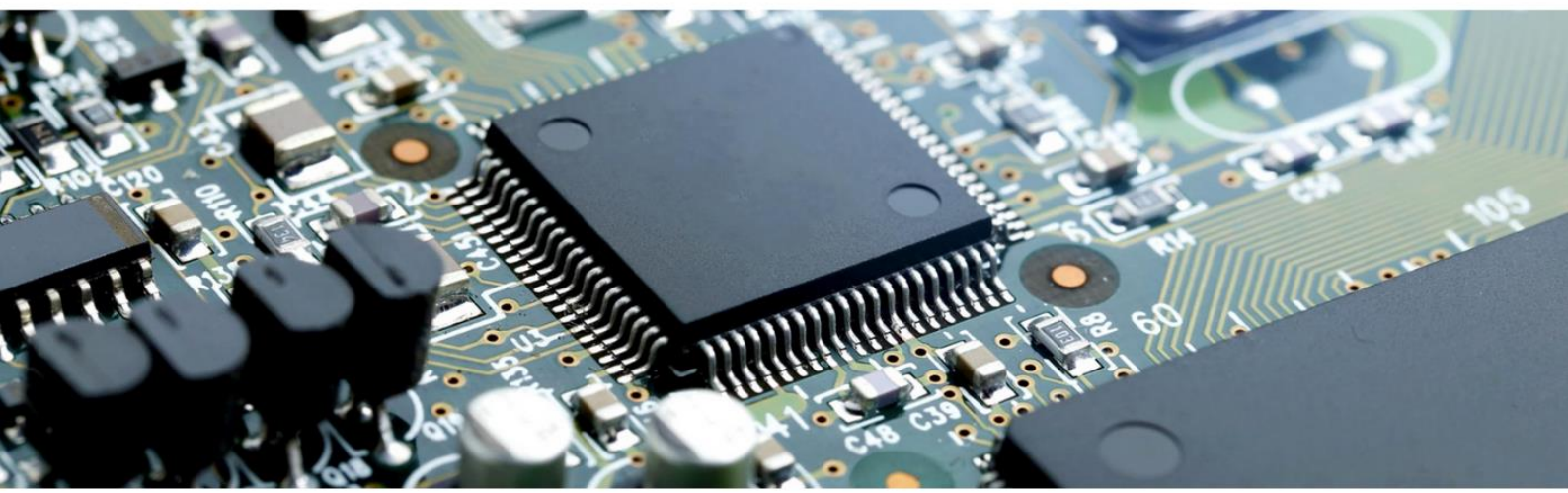
RADIO MODULES

ADVANCED MODEM RADIO®

sigfox LoRaWAN M2M



Sigfox module

Operates on every single Sigfox radio zones thanks to its Monarch embedded service. This module deals with ultra high sensibility and optimized consumption.
The module is available in two versions:

- RC1 without Monarch Option
- RC1-2-3-4-5-6 Monarch embedded

Part number	Technology
ARM-N8-SF	Sigfox RC1
ACW-NWW	All Sigfox RCz

Power Tx	25mW / 200mW
Sensitivity	-131 dBm
Current Rx (3,3V)	17,8 mA
Current Tx (14 dBm / 3,3V)	23 mA
Current Tx (22 dBm / 3,3V)	177 mA
Standby current	1,25 µA
Dimensions	30 x 18 x 2 mm

LoRa-LoRaWAN module

Ultra high sensibility : -141 dBm (SF12).
Operates on both LoRa P2P et LoRaWAN.
In addition to the “standard” mode, the “standalone” mode enables immediate operation via settings, without any additional programming.

Part number	Technology
ARM-N8-LRW	LoRaWAN

Power Tx	25mW / 100mW
Link budget	+ 155 dB/+161 dB
Datarate	300 à 47 Kbits/s
Current Tx	53 mA/120 mA
Current Rx	22 mA
Standby current	<1 µA
Dimensions	30 x 18 x 2 mm

Point to Point modules

Same form factor than the ARM module product line, N8-LP and N8-LD modules are optimized for a local mode communication in 868 MHz.
ARM-N8-LD with a radio power of 500mW (27dBm) allows a long-distance radio transmission (20+ km on sight) when the ARM-N8-LP has a very low power consumption.

Part number	Technology
ARM-N8-LP	Local 868MHz
ARM-N8-LD	Local 868MHz

	N8-LD	N8-LP
Power Tx	500mW	25mW
Link budget	+ 149 dB	+ 137 dB
Datarate	1200 à 115 200 bits/s	1200 à 115 200 bits/s
Current Tx	500 mA	62 mA
Current Rx	33 mA	30 mA
Standby current	<1 µA	<1 µA
Dimensions	30 x 18 x 2 mm	30 x 18 x 2 mm

atim cloud wireless™

EXTENSION CARDS

ATIM CLOUD WIRELESS®

sigfox LoRaWAN™ M2M

ACW-USB

The USB dongle allows to integrate the ATIM ARM-Nano modules to your development board equipped with USB ports. Plug it in to access to Sigfox or LoRaWAN™ networks.

Part number	Technology		
ACW-USB	Local 868MHz	Sigfox	LoRaWAN

ACW-RPI

This adaptation card allows you to easily integrate the Sigfox or LoRaWAN™ technology on Raspberry Pi boards.

Part number	Technology		
ACW-RPI	Local 868MHz	Sigfox	LoRaWAN

ACW-XBEE

The shield for the XBee™ module allows you to integrate easily the Sigfox or LoRaWAN™ technology into your microcomputer and connect your device to LPWANs.

Part number	Technology		
ACW-XBEE	Local 868MHz	Sigfox	LoRaWAN

ACW-DUINO

The ACW-DUINO shield provides connection to LPWANs from your Arduino board.

Part number	Technology		
ACW-DUINO	Local 868MHz	Sigfox	LoRaWAN

ACW-MPCIE

This card connects to the Mini PCI Express bus and allows you to easily integrate Sigfox or LoRaWAN ™ technology on your development boards.

Part number	Technology		
ACW-MPCIE	Local 868MHz	Sigfox	LoRaWAN

ACW-SDK

This SDK “Starter Development Kit” will allow you to test ATIM ARM-Nano product line easily. Standard pack includes a battery pack and a USB connector.

Part number	Technology		
ACW-SDK	Local 868MHz	Sigfox	LoRa-LoRaWAN

ACW-MANGOH

This Shield adapts to the MangOH® and allows you to easily integrate Sigfox or LoRaWAN™ technology into your microcomputer.

Part number	Technology		
ACW-MANGOH	Local 868MHz	Sigfox	LoRaWAN

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