LoRaWAN™
Products & Services

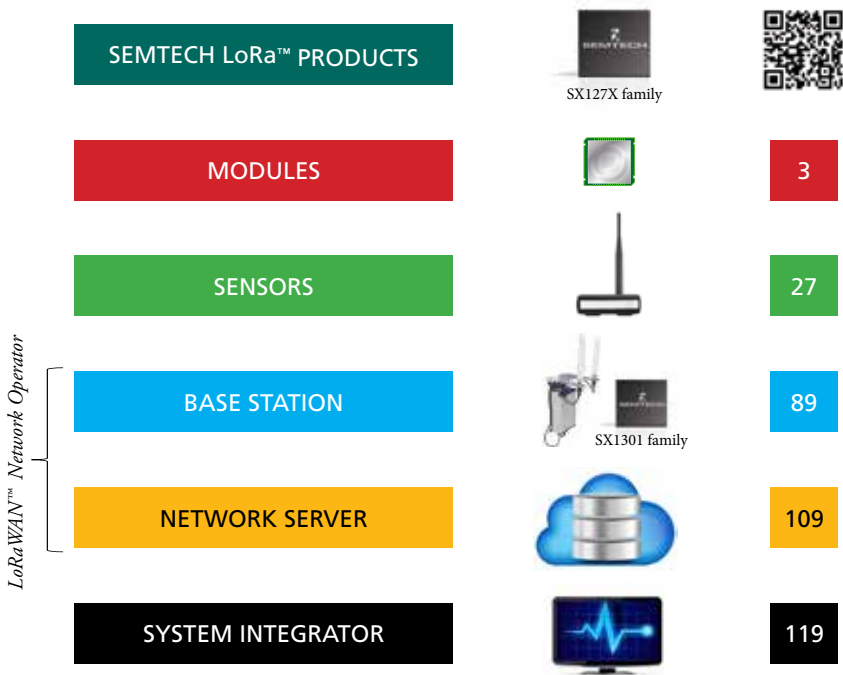## For Carrier Grade Low Power Wide Area Solutions

LoRa™ Alliance
Wide Area Networks for IoT

Version 6.1
January 2016

LoRa™ Valuechain

SEMTECH LoRa™ PRODUCTS

SX127X family

MODULES — 3

SENSORS — 27

LoRaWAN™ Network Operator

BASE STATION — 89

SX1301 family

NETWORK SERVER — 109

SYSTEM INTEGRATOR — 119

SEMTECH

LoRa™

smoke alarm

gas meter

pet tracking

water meter

vending machine

trash container

Adeunis

LoRaWAN™ module

RF Module optimized for very long range/low consumption applications. The LoRa™ technology provides ultra-long range spread spectrum communication and high interference immunity whilst minimizing current consumption

This module is particularly suitable for applications like Internet of things (IoT), sensor networks, environment, intelligent buildings, metering, security or M2M

This module is available as "Ready-to-use," focuses on ease of integration even for non RF specialists, thus limit technological risks, while reducing the development time and cost

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Internet of things (IoT)
- sensor networks
- Environment
- intelligent buildings
- Metering
- Security
- M2M

Company:	**Adeunis RF**
Country:	France
Type:	Module OEM, Modem OEM
Commercial Contact:	r.atayi@adeunis-rf.com
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AMIHO Technology
AE093-Evaluation Kit

The AMIHO AE093 Evaluation Kit includes 2 Nodes and everything you need to help you develop and test your Smart Metering, IoT or other types of long range application. The Evaluation Kit supports LoRa™ and Wireless Meter Bus, both at 868 and 169 MHz, compliant with the EN13757-4:2013 Standard.

Get up and running quickly with the AE093 which provides both Hardware and Software Tools to help you evaluate, develop, test and debug your application to prove your concepts with minimum fuss. The Kit includes, 2x AE093 Evaluation Boards, Micro-USB Cables, 2x 868 and 2x 169 MHz Antennas, Batteries, our AMIHO PC Tool Software, a Quick Start Guide and Application Notes. The PC Tool offers you the flexibility to choose between a variety of command lines (AT-commands and Human-Readable), as well as a number of pre-set modes for Concentrator and Meter and Demo Applications (e.g. Meter Simulation) for quick and easy testing.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Europe 169 MHz

Focus Markets
• Internet of Things (IoT)

• Smart Metering

• Asset Homes

• Smart Cities

• Battery operated devices

intelligent wireless

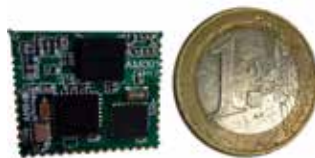|	
Company:	**Amiho Technology**
Country:	UK
Type:	Module OEM, Software, other
Commercial Contact:	Berenice Mann, bmann@amiho.co.uk
Technical Contact:	technical@amiho.co.uk

AMIHO Technology

AM091

The AMIHO AM091 module provides high performance with the combination of Wireless Meter-Bus at 169 MHz and long range LoRa™ capability, making it ideal for hard to reach meters and devices. Using NXP's Kinetis® family of MCUs, it is designed specifically for LoRa™ and Wireless M-Bus, but is also suitable for other ISM-band applications.

The AM091 is configurable for up to 700mW transmission power output. It comes supplied with AMIHO's EN13757-4 compliant fully-featured Wireless Meter-Bus and LoRa™ software stack and is also suitable for other 169 MHz ISM-band communications standards, e.g. KNX.

An Evaluation Kit, the AE093, is available with everything you need to get started and test our LoRa™ radio modules.

LoRaWAN™ Ready

February 2016

Radio Regions

Europe 169 MHz

Focus Markets

- Internet of Things (IoT)
- Smart Metering
- Asset Tracking
- Smart Cities
- Battery operated devices

intelligent wireless

Company:	**Amiho Technology**
Country:	UK
Type:	Module OEM, Software, other
Commercial Contact:	Berenice Mann, bmann@amiho.co.uk
Technical Contact:	technical@amiho.co.uk

AMIHO Technology

AM093

The AMIHO AM093 is a versatile, high performance radio module providing both Wireless Meter-Bus and long range LoRa™ with dual channels at 868 and 169 MHZ. It uses NXP's Kinetis® family of MCUs and Semtech's LoRa™ technology, allowing customers to prove their application.

The AM093 can be configured for up to 100mW transmission power output, low-power, embedded modem. It provides a highly integrated, high performance solution for sub-1GHz applications.

It is supplied with AMIHO's fully-featured, EN13757-4 compliant Wireless Meter-Bus and LoRa™ software stack and is also suitable for other 169 and 868 MHz ISM-band communications standards including KNX. The module uses an AT command interface and supports very low current standby for battery powered applications.

An Evaluation Kit, the AE093, is available with everything you need to get started and test our LoRa™ radio modules.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Europe 169 MHz

Focus Markets
• Internet of Things (IoT)

• Smart Metering

• Smart Homes

• Smart Cities

• Battery operated devices

intelligent wireless

Company:	**Amiho Technology**
Country:	UK
Type:	Module OEM, other
Commercial Contact:	Berenice Mann, bmann@amiho.co.uk
Technical Contact:	technical@amiho.co.uk

AMIHO Technology

AM094

The AMIHO AM094 module provides a highly versatile module with a unique combination of Wireless Meter-Bus, proprietary LoRa™ and LoRaWAN™ capability at 868 MHz, extending range to up to 15 km. Using NXP's Kinetis® family of MCUs, it is designed specifically for LoRa™, LoRaWAN™ and Wireless M-Bus, but is also suitable for other ISM-band applications.

The AM094 provides a high performance, cost-effective solution on our standard compact footprint (20.3 x 3 x 18.7 mm). It is configurable for up to 25mW transmission power output and is supplied with AMIHO's EN13757-4 compliant fully-featured software stack. The module uses an AT command interface and supports very low current standby for battery powered applications.

An Evaluation Kit, the AE093, is available with everything you need to get started and test our LoRa™ radio modules.

LoRaWAN™ Ready

April 2016

Radio Regions

Europe 169 MHz

Focus Markets

- Internet of Things (IoT)
- Smart Metering
- Smart Homes
- Smart Cities
- Battery operated devices

Company:	**Amiho Technology**
Country:	UK
Type:	Module OEM, Software, other
Commercial Contact:	Berenice Mann, bmann@amiho.co.uk
Technical Contact:	technical@amiho.co.uk

Anylink Systems

DP1276, SK1276

The DP1276 includes the LoRa™ long range modem that provides ultra-long range spread spectrum communication and high interference immunity whilst minimizing current consumption. Using Semtech's patented LoRa™ modulation technique DP1276 can achieve sensitivity of over -137 dBm. The high sensitivity combined with the integrated +20 dBm power amplifier yields industry leading link budget making it optimal for any application requiring range or robustness. LoRa™ also provides significant advantages in blocking and selectivity over conventional modulation techniques. Solving the design compromise between range, interference immunity and energy consumption.

The SK1276 is an advanced development tool to kick start your wireless project. It is powered by a strong STM32F4 microcontroller to Support all kinds of applicastions what gives the developer high flexibility for possible applications. The board can be controlled via GUI, this Software is easy to use and offers a fast way to find the right RF Settings for a specific device. The second way of Controlling the DP1276 Module is changing and Debugging the firmware.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 434-868 MHz

USA 915 MHz

433 MHz

Focus Markets
- Internet of things (IoT)
- Industrial Monitoring & Control
- Wireless Sensor Networks
- Tracking & Tracing
- AMR
- Point to Point and Point to Multipoint solution

ANYLINK SYSTEMS AG

Company:	**Anylink Systems AG**
Country:	Germany
Type:	Module OEM
Commercial Contact:	sales@anylink.de
Technical Contact:	support@anylink.de

ATIM

LoRaWAN™ module

The ARM-NANO transceivers from ATIM France exist in different frequencies : 868MHz, 433MHz, custom frequency

The LoRa™ version is optimized for low power and very high RF performances using the spread spectrum communication. The ARM-N8 LoRa™ is the right solution to design your RF device very fast

ATIM can help you to design the antenna and can also provide a complete range of radio modems (Atim Cloud Wireless®) and Web platform.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

433 MHz

Focus Markets
- Internet of things (IoT)
- Sensor networks
- Environment
- Intelligent buildings
- Metering
- Security
- M2M

Company:	**Atim**
Country:	France
Type:	Module OEM, Modem OEM
Commercial Contact:	lc@atim.com
Technical Contact:	yl@atim.com

ATIM

ACW/LR8-DI, ACW/LR8-TM,
ACW/LR8-TH & ACW/LR8-RS

This autonomous modem allows you to indicate when the state of the digital Inputs changes, for example the opening or closure of a contact. The ACW-DI also allows you to remote read the water, gas and electricity meters consumption.

The ACW-TM « Temperature Monitoring» radio modem benefits from all the advantages of the new LoRaWAN™ network: low cost, autonomous, and immediately connected to the web

The ACW-TH modem « Temperature and Humidity Monitoring » benefits from all the advantages of the new LoRaWAN™ network : low cost, autonomous, and immediately connected to the web.

The ACW-RS « Serial port » radio modem benefits from all the advantages of the new LoRaWAN™ network: low cost, autonomous, and immediately connected to the web.

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

Focus Markets
• Internet of things (IoT)

• Sensor networks

• Environment

• Intelligent buildings

• Metering

• Security

• M2M

Company:	**Atim**
Country:	France
Type:	Module OEM, Modem OEM
Commercial Contact:	lc@atim.com
Technical Contact:	corentin.bourget@atim.com

Augtek

LoRaWAN™ module
Connect Series

Connect Series Agent IoT wireless modules are designed for the next generation IoT & M2M applications

It features best-in-class RX sensitivity and sophisticated IP communication stack

It completely support LoRaWAN™, with ADR and CSMA technologies to achieve highly efficient network. Besides, it offers comprehensive AT commands to support complex applications

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
• Internet of things (IoT)

• Smart City

• Transportation

• Industrial Production

• Mining

• Security & Protection

Company:	**Augtek**
Country:	China
Type:	Module OEM, Base station manufacturer, Network server supplier
Commercial Contact:	info@augtek.com
Technical Contact:	info@augtek.com

Embedded Planet

LoRaWAN™ module

The EPM2M-NORAM Sensor Module is an industrial grade wireless sensor for LoRa™ based wireless sensor network technology from Semtech. LoRa™ is built for long range wireless sensor applications. The EPM2M-NOARM provides an easy to use, seamless connection between the physical sensing world and the EPM2M LoRa™ Gateway using LoRa™. At the heart of the EPM2M-NORAM module is the Semtech LoRa™ SX1272.

LoRaWAN™ Ready
Yes

Radio Regions
USA 915 MHz

Focus Markets
- Industrial
- Transportation
- Energy
- Medical

Company:	**Embedded Planet**
Country:	USA
Type:	Module OEM, Sensor manufacturer, Systems integrator
Commercial Contact:	hooverm@embeddedplanet.com
Technical Contact:	davisg@embeddedplanet.com

EmbiT

LoRaWAN™ module

EMB-LR1272 is a 868 / 915 MHz wireless module that combines high performance to small dimensions and low cost, providing the system integrator a simple and easy way to add LoRa™ connectivity and multi-hop networking into existing products

- output power can be set up to +19 dBm (79.43 mW)
- sensitivity up to -137 dBm
- extremely reduced power consumption in low
- power mode (≤1 µA in XLP sleep with a RTC clock running)
- open platform

The modules are provided with an embedded LoRa™ stack specifically developed by Embit that allows to be compliant with the latest LoRaWAN™ specs, allowing customer to develop firmware application and manage a compatible LoRa™ eco-system

The modules ship programmed with EBI LoRa™ which allows the customer to use the modules as a simple, ready-to-use modem (using AT-like commands over UART. The evaluation kit EMB-LR1272-EVK is strongly suggested to customers willing to develop their own firmware applications

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

Focus Markets

- Internet of things (IoT)
- Sensor networks
- Environment
- Intelligent buildings
- Metering
- Security
- M2M

Company:	**Embit**
Country:	Italy
Type:	Module OEM, Base station manufacturer, Consulting
Commercial Contact:	sales@embit.eu
Technical Contact:	sw.support@embit.eu

IMST

LoRaWAN™ module iM880A-L

The iM880A-L is a compact and low-cost radio module that operates in the unlicensed 868 MHz band and combines a powerful Cortex-M3 controller with the LoRa™ transceiver SX1272 of Semtech Corporation. The iM880A-L is pre-certified according the European R & TTE guideline and can be soldered like an SMD component. The iM880A-L can be ordered with a pre-programmed embedded protocol stack in two options:

iM880A-L LoRaWAN™: The LoRaWAN™ protocol stack, specified by the LoRa™ Alliance, is based on IBM's LMiC and IMST's WiMOD-OS. It comes with the WiMOD LoRaWAN™ HCI interface and allows easy configuration.

iM880A-L_LR_Base: This WiMOD Long Range firmware is a collection of functionalities and applications like Radio Link Test, Sensor App., Data Link Service, etc. embedded in our powerful WiMOD OS operating system. The WiMOD LR HCI interface provides to the user direct access to many radio parameters.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Internet of things (IoT)
- M2M
- Smart Cities
- Smart Metering

Company:	**IMST GmbH**
Country:	Germany
Type:	Module OEM, Modem OEM, Systems integrator, Consultant, Consulting, LoRa™ Certification Test Center
Commercial Contact:	sales@imst.de
Technical Contact:	wimod@imst.de

IMST

LoRa™ Explorer kit

The LoRa™ Explorer Kit is to demonstrate and evaluate the LoRaWAN™ features. It consists of:

- WiMOD iU880A
- WiMOD iC880A
- Raspberry Pi B+
- Micro SD card (OS pre installed)
- iM880A-L + Demo-Board
- 2 Antennas
- Power supplies for Raspberry Pi B+ and iC880A
- Micro-USB Cable for powering the Raspberry Pi B+
- Mini-USB Cable for data transfer between Raspberry Pi B+ and iC880A
- USB-Cable for data transfer between PC and Demo-Board
- Network cable (cross-over)
- Demo Software demonstrating the basic LoRaWAN™ features.
- The LoRa™ Explorer Kit does not include a real LoRaWAN™ server

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Internet of things (IoT)
- M2M
- Smart Cities
- Smart Metering

Company:	**IMST GmbH**
Country:	Germany
Type:	Module OEM, Modem OEM, Systems integrator, Consultant, Consulting, LoRa™ Certification Test Center
Commercial Contact:	sales@imst.de
Technical Contact:	wimod@imst.de

IMST

Long Range Starter kit

The Starter Kit SK-iM880A with the software WiMOD LR Studio is a plug & play solution to explore the features and capabilities of the Long Range Radio modules iM880A-L. The modules are pre-programmed with the Long Range Radio firmware WiMOD LR Base

SK-iM880A kit content:
- 2x demo board
- 2x radio module soldered on adapter board
- 2x external antenna
- 2x USB cable
- 4x battery
- Application & software

WiMOD LR Studio
- DLL and GUI for Windows
- Module configuration
- Radio Link test
- Data Link services
- Packet sniffer
- Real time clock
- Radio test function
- Comprehensive Logging capabilities

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Internet of things (IoT)
- M2M
- Smart Cities
- Smart Metering

Company:	**IMST GmbH**
Country:	Germany
Type:	Module OEM, Modem OEM, Systems integrator, Consultant, Consulting, LoRa™ Certification Test Center
Commercial Contact:	sales@imst.de
Technical Contact:	wimod@imst.de

Ineo-sense

LoRaWAN™ module

Clover-Sense modules focus on industrial sensing operated in private networks as well as in public LoRaWAN™ networks

Scalable framework (Clover-Net), including dedicated profile network configuration, this module is able to address efficiently various application use cases as RFID, Telemetry, Metering, Public Lighting, Energy efficiency

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

Focus Markets
- Internet of things (IoT)
- Sensor networks
- Environment
- Intelligent buildings
- Metering
- Security
- M2M

Company:	**Ineo-sense**
Country:	France
Type:	Module OEM, Sensor Manufacturer
Commercial Contact:	contact@ineo-sense.com
Technical Contact:	contact@ineo-sense.com

Link Labs

LoRaWAN™ module LL RP 20

The LL-RLP-20 is a highly-integrated, low power, bi-directional radio transceiver module optimized for use in the 915 MHz ISM and the 868 MHz ETSI frequency bands. The module uses LoRa™ to maximize range while minimizing power consumption and interference

The LL-RLP-20 has an ultra-low sleep current (<1 uA, from a regulated power source), has 3 RF outputs (U.FL, trace antenna, or SMA pin), and supports LoRaWAN™, Symphony Link, and NoMAC protocol stacks

The Link Labs LoRa™ module is an FCC/IC certified LoRa™ module

The module comes with (a) or without (b) trace antenna

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
• Internet of things (IoT)

• Sensor networks

• Environment

• Intelligent buildings

• Metering

• Security

• M2M

Company:	**Link Labs**
Country:	USA
Type:	Module OEM, Modem OEM, Base station manufacturer
Commercial Contact:	glenn.schatz@link-labs.com
Technical Contact:	glenn.schatz@link-labs.com

M2M4ALL

Bee LoRaWAN™ communication module

The SODAQ Bee LoRaWAN™ is a communication module that functions within the Arduino Integrated Development Environment

It is the perfect solution for prototyping as well as large scale implementation, simplifying the bridge between the two

It is a plug and play solution and can easily be interfaced with the base stations

It is also the first crowd funded LoRa™ communications module, as it was part of the SODAQ Autonomo campaign

In combination with the Autonomo, a microcontroller board, makers and companies can create a completely autonomous IoT device

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets
• Internet of things (IoT)

• Sensor networks

• Environment

• Intelligent buildings

• Metering

• Security

• M2M

Company:	**M2M4ALL**
Country:	Netherlands
Type:	Module OEM, Modem OEM, Sensor manufacturer, Systems integrator, Consulting
Commercial Contact:	janwillem@m2m4all.com
Technical Contact:	janwillem@m2m4all.com

MCT

LoRaWAN™ module

MSM320 Talk Long is LoRa™ Module consists of SX1276 transceiver

MSM320 is advanced RF module optimized for use in sensor networks and IoT applications based on LoRaWAN™ and enables seamless connectivity in long distance communication

MSM320 supports standard MAC of IEEE802.15.4 and supports optionally 6LoWPAN and IPv6

MCT provides a development kit including evaluation board

LoRaWAN™ Ready
January 2016

Radio Regions
Korea 917-923 MHz

Focus Markets
• Internet of things (IoT)
• Smart Metering
• Home/Building automation
• Wireless Alarms
• Security systems
• Industrial monitoring/control
• Irrigation Systems

Company:	**MCT Co., Ltd.**
Country:	Korea
Type:	Module OEM, Modem OEM, Base station manufacturer
Commercial Contact:	hikang@mctalk.co.kr
Technical Contact:	psdong@mctalk.co.kr

Microchip

LoRaWAN™ module

Microchip Technology Inc. The Embedded Control Solutions Company® is a leading provider of microcontroller, analog and RF semiconductors, providing low-risk product development, lower cost and faster time to market for thousands of diverse customers worldwide. Headquartered in Arizona, Microchip offers outstanding technical support along with dependable delivery and quality.

As a founder member of the LoRa™ Alliance, Microchip participates in the strategic, marketing and technical committees and is 100% committed to providing the 'golden standard' in LoRaWAN™ compliant end-node solutions.

The first products in the family are the RN2483 and RN2903 modems, which are pre-certified for the 434/868MHz EU bands & 915MHz FCC band respectively.

By integrating LoRa™ radio, PIC MCU and LoRaWAN™r1.0 class-A protocol stack, and with an easy-to-use high-level ASCII command set, these Microchip modems offer the quickest route to adopt LoRa™ technology.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 434-868 MHz

USA 915 MHz

Focus Markets
• Internet of things (IoT)
• Smart agriculture
• Smart city
• Sensor networks
• Industrial automation
• Smart meters
• Asset tracking
• Street lighting
• M2M

MICROCHIP

Company:	**Microchip**
Country:	USA
Type:	Module OEM
Commercial Contact:	Jonathan.Pearce@microchip.com
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MultiTech

MultiConnect® mDot™

The MultiConnect® mDot™ is a secure, CE/FCC certified, ARM® mbed™ programmable, low-power LoRa™ RF module, that provides long-range, low bit rate M2M data connectivity to sensors, industrial equipment and remote appliances.

The MultiConnect mDot is LoRaWAN™ 1.0 compliant, providing bi-directional data communication up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings, using sub-GHz ISM bands in North America and Europe.

As the first ARM mbed Platform listed on mbed.org that is industry certified and deployment ready, applications can be written and compiled quickly online using developer friendly libraries, downloaded and hosted within the mDot. Decision making and control is distributed to the edge, enabling data to be more actionable without the heavy lift required to optimize RF performance, implement complex M2M middleware and security protocols needed to deploy a low touch install.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Agriculture
- Distributed Enterprise
- Energy (Oil & Gas, Utilities)
- Smart Cities
- Public LoRa™ Network
  Operators

MULTITECH®

Company:	**MultiTech**
Country:	USA
Type:	Module OEM, Base station manufacturer
Commercial Contact:	sales@multitech.com
Technical Contact:	https://support.multitech.com

Nemeus

LoRaWAN™ module

MM002 is a LoRa™ module with LoRaWAN™ 1.0 EU protocol embedded (tested with different network operators)

The module supports personalization or over the air activation. It provides an AT command interface through UART and implements an optimized power saving mechanism to minimize consumption

The Nemeus-MM002 module has been designed to match with the European R & TTE guidelines and is compliant with ETSI EN300-220

Module size is 14.4mm * 26.4mm

Consumption is following : Stand-By (RTC mode) : 1.7uA | Tx @14dBm : 39mA

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
• Internet of things (IoT)
• Sensor networks
• Environment
• Intelligent buildings
• Metering
• Security
• M2M

Company:	**Nemeus**
Country:	France
Type:	Module OEM, Modem OEM, Systems Integrator
Commercial Contact:	contact@nemeus.fr
Technical Contact:	support@nemeus.fr

Pangaea Solutions

LoRaWAN™ module

RF Module optimized for very long range/low consumption applications. The LoRa™ technology provides ultra-long range spread spectrum communication and high interference immunity whilst minimizing current consumption

This module is particularly suitable for applications like Internet of things (IoT), sensor networks, environment, intelligent buildings, metering, security or M2M

This module is available as "Ready-to-use," focuses on ease of integration even for non RF specialists, thus limit technological risks, while reducing the development time and cost

LoRaWAN™ Ready
Date not provided

Radio Regions
Korea 917 MHz

Focus Markets
• Internet of things (IoT)
• sensor networks
• Environment
• intelligent buildings
• Security
• M2M

Company:	**Pangaea Solution**
Country:	Korea
Type:	Module OEM, System Integrator
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Technical Contact:	april03thday@gmail.com

Peak Gain Wireless

PGW LoRa™ Module v1

Peak Gain Wireless is making the wireless world a better place by providing creative product development and design services. We help our customers at any scale in their development.

Our module is the first product we are bringing to market. It is optimized for long range/low power consumption applications and flexibility. It is ready to use and can be paired with easy to use development kits to fit numerous applications.

We aim to provide a total turn-key IoT solution by pairing our industry proven wireless design services with a flexible RF module.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz,

USA 915 MHz

Focus Markets
- Internet of things (Iot)
- Smart agriculture
- Smart city
- Sensor network
- Industrial automation
- Smart metering
- Asset tracking
- Street lighting
- M2M

Company:	**Peak Gain Wireless**
Country:	USA
Type:	Module OEM, Consultant
Commercial Contact:	nwarzyn@peakgainwireless.com
Technical Contact:	nwarzyn@peakgainwireless.com

Wi6labs

WM LR 1X

WM LR 1X end point modem solution speed up LoRaWAN™ connectivity application. WM LR 1X is available in 868 / 433 MHz and custom band. This Wi6labs wireless module is ultra-low power, secured and LoRaWAN™ Ready

WM LR 1X modem targets IOT application for Smart Cities and Smart Building.

This module is ready to use, driven by command through UART (AT commands style) and already interoperable with telecom operator and network server vendor. Wi6labs provides a development kit including evaluation board.

Wi6labs offers design house services to support customers building their IOT application.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

433 MHz

Focus Markets
• IoT

• Metering

• Smart Cities

• Intelligent Building System

• Security

Company:	**Wi6labs**
Country:	France
Type:	Modem OEM, Sensor manufacturer, Consultant
Commercial Contact:	ulrich.rousseau@wi6labs.com
Technical Contact:	jeremy.ardouin@wi6labs.com

1M2M

Tracking sensors
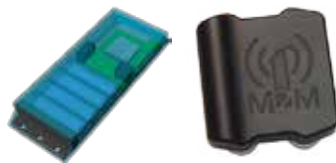
1M2M provides standard LoRa™ GPS/Glonass trackers as well as custom designs with or without GPS

Our main competence is design of embedded hardware and low level and application software, however we have also developed server applications for our own use and for customers

One of our goals is to provide LoRaWAN™ solutions to companies that have good ideas but no knowledge or interest in low level development

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
• Asset tracking

• General purpose starter kit

Sensors
• Low Power tracking

• Generic multi sensor kit

Company:	**1M2M**
Country:	Netherlands
Type:	Module OEM, Modem OEM, Sensor manufacturer, Network server supplier, Consultant,
Commercial Contact:	rs@1m2m.eu
Technical Contact:	jph@1m2m.eu

Abeeway

LoRaWAN™ Master Tracker

APY is a small and well designed LoRa™ tracker
with many functionalities

- Alarm button
- Movement detection
- GPS tracking
- Detection of theft
- GPS fix on demand

You need a full solution:
  we have an application that can be customized

You already have an interface:
  we have an API which can transmit the
  information to your solution

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz
USA 915 MHz

Focus Markets
- Pet tracking
- Lone worker
- Assets tracking
- Theft detection

Company:	**Abeeway**
Country:	France
Type:	Module OEM, Modem OEM, Sensor manufacturer, Application provider
Commercial Contact:	florian.sforza@abeeway.com
Technical Contact:	florian.sforza@abeeway.com

Adeunis

LoRa™ Demonstrator

The LoRa™ demonstrator by ADEUNIS RF is a ready to use system, which provides connection to the any operated network using the LoRaWAN™ protocol.With 3 integrated sensors (GPS, accelerometer, temperature) this demonstrator allows to transmit and instantly view the radio frames on the compatible networks

This demonstrator is particularly suitable for the validation of applications like sensor networks, environment, intelligent buildings, metering, security, or M2M

These applications can thus be validated on site before the deployment of infrastructure. With built-in rechargeable battery, this demonstrator allows formany hours of use

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Internet of things (IoT)
- Sensor networks
- Environment
- Intelligent buildings
- Metering
- Security
- M2M

Company:	**Adeunis RF**
Country:	France
Type:	Module OEM, Modem OEM
Commercial Contact:	r.atayi@adeunis-rf.com
Technical Contact:	p.saguin@adeunis-rf.com

allora Factory

Celsius Air Indoor

The Celsius Air Indoor Sensor is a Low-Power, long range, LoRa™ wireless sensor that provides 0.25°C accurate temperature monitoring inside homes, office rooms, data centers.

Fully compliant with LoRaWAN™ 1.0 long range, Low-Power networks.

Two modes

Reporting mode: Periodically measure and transmit the temperature sensor data every reporting interval (default is 10 minutes).

immediate alert mode: Short measurement interval (default 2 minutes) Immediate notification report when the temperature exceeds configured Low and High limits.

Cost effective: up to 10 years on a primary 3.6V AA battery, depends on parameter settings. Let our experts calculate the expected lifetime of your application.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Indoor Temperature Monitoring
- Smart Home
- Facility Management/ Smart building
- Server/IT/datacenter monitoring

Company:	**allora Factory**
Country:	Belgium
Type:	Sensor Manufacturer, Systems integrator
Commercial Contact:	pieter@allorafactory.com
Technical Contact:	support@allorafactory.com

allora Factory

Celsius Air Industrial

The Celsius Air Industrial Sensor is a Low-Power, long range, LoRa™ wireless sensor that provides 0.25°C accurate temperature monitoring in freezers, fridges, and outside (IP65).

- Temperature range: from 35°C to + 85°C
- Resolution: 0.0625°C
- Accuracy: ± 0.25°C (typical), ± 0.50°C (max)

Fully compliant with LoRaWAN™ 1.0 long range, Low-Power networks.

Outdoor model: IP65

Two modes:

Reporting mode: Periodically measure and transmit the temperature sensor data every reporting interval (default is 10 minutes).

Immediate Alert mode: Short measurement interval (default 2 minutes). Immediate notification report when the temperature exceeds configured Low and High limits.

Cost effective: up to 10 years on a primary 3.6V AA battery, depends on parameter settings.

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

Focus Markets

- Indoor/Outdoor Temperature Monitoring
- Cold Chain/ Food Safety
- Facility Management/ Smart Factory
- Server/IT/datacenter monitoring

Company:	**allora Factory**
Country:	Belgium
Type:	Sensor Manufacturer, Systems integrator
Commercial Contact:	pieter@allorafactory.com
Technical Contact:	support@allorafactory.com

allora Factory

Humidi Indoor

The Humidi Indoor Sensor is a Low-Power, long range, LoRa™ wireless sensor that monitors the relative humidity and temperature inside homes, office rooms, data centers. Our vented enclosure is optimised for reliable sensor readings.

Humidity range from 0 to 100 %R.H. tolerance 2 %R.H. in 20 to 80 %R.H. range (typ)

Temperature range from 0°C to +80 °C accuracy 0.3 °C in 5 to 60°C range (typ)

Reliable and accurate relative humidity and temperature monitoring

Fully compliant with LoRaWAN™ 1.0 long range, Low-Power networks.

Two modes
Reporting mode: Periodically measure and transmit the temperature sensor data every reporting interval (default is 10 minutes).

Immediate alert mode: Short measurement interval (default 2 minutes). Immediate notification report when the temperature exceeds configured Low and High limits.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Indoor air quality Monitoring/Smart Home
- Humidity and Temperature Monitoring
- Facility Management/ Smart building
- Server/IT/datacenter monitoring

Company:	**allora Factory**
Country:	Belgium
Type:	Sensor Manufacturer, Systems integrator
Commercial Contact:	pieter@allorafactory.com
Technical Contact:	support@allorafactory.com

allora Factory

Pirio Indoor

The Pirio Motion Sensor is a Low-Power, long range, LoRa™ wireless sensor that detects the presence or absence of occupants in any space. The ultra Low-Power passive infrared (PIR) motion sensor detects occupants' presence by sensing the difference between heat emitted by moving people and background heat.

Accurate occupancy monitoring

PIR

range	94° x 82°
distance	5m
zones	64 zones
detectable	4°C between target and background
timeout interval	30 seconds, If motion is detected the sensor stops counting for the configured timeout interval

Class A device, fully compliant with LoRaWAN™ 1.0 LoRa™networks.

Two modes: Reporting mode and Immediate Alert mode.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
• Room occupancy rate
• Flex desk occupancy rate
• Facility management/ Smart building
• Smart home

Company:	**allora Factory**
Country:	Belgium
Type:	Sensor Manufacturer, Systems integrator
Commercial Contact:	pieter@allorafactory.com
Technical Contact:	support@allorafactory.com

Arveni

LoRaWAN™ door/window monitoring sensor

Arveni door/window sensor embed our high yield mechanical harvester, thus it has UNLIMITED LIFETIME & with LoRa™ operated by telecom companies, there is no need for local network: UNLIMITED COMMUNICATION

Arveni is expert in piezo energy harvesting, and owns 6 patents worldwide, and was awarded 7 prizes for innovation in Europe and USA.

Arveni door & window LoRa™ sensor embeds piezo energy harvester, which powers the radio, and transmits each time the door/window is opened or closed. Thus it can be used for general purpose surveillance, anti-burglar device or silver economy applications

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz
USA 915 MHz

Focus Markets
- Waste management
- Recycling management
- Smart Cities

Sensors
- Security
- Building Automation

Company:	**Arveni**
Country:	France
Type:	Sensor Manufacturer
Commercial Contact:	jfredmartin@arveni.fr
Technical Contact:	jfredmartin@arveni.fr

Ascoel

LoRaWAN™ infrared sensor

IR868LR   PB868LR   CM868LR   CO868LR

Wireless Infrared Sensor: IR868LR passive pyroelectric effect sensor for indoor use with a range of up to 16mt

Push Button Sensor: PB868LR is a push button sensor available for indoor applications.

Magnetic Contact Sensor: CM868LR magnetic contact available to detect opening or closure of doors and windows.

Indoor Air Quality Sensor: CO868LR is a digital CO_2 sensor available for indoor applications in order to check the air quality.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
• Security
• Building Automation

Company: **Ascoel**
Country: Italy
Type: Sensor manufacturer
Commercial Contact: info@ascoel.it
Technical Contact: info@ascoel.it

Autotronic Enterprise

LoRaWAN™sensors

Sensor modules with LoRaWAN™ connectivity

Sensors included

- RH&T
- Gases (CO_2, CO, VOC, NO2, SO2, TOXIC GASES, NH3, HCHO)
- Water quality
- Soil moisture

LoRaWAN™ Ready

Date not provided

Radio Regions

Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets

- Environmental sensing
- Level measurement
- Flow measurement
- Security

Company:	**Autotronic Enterprise**
Country:	Taiwan
Type:	Module OEM, Sensor module design
Commercial Contact:	sabrina.chen@aecl.com.tw
Technical Contact:	sy_lau@aecl.com.tw

Datalong 16

Data-logger

The DL16 is a small, autonomous and compact data-logger with real time internet connectivity and a GPS position-enhancer

DL16 has various sensors such as high quality temperature probes, humidity and pressure sensors, and a powerful 3D orientation sensor and impact detectors

All captured data is stored in its memory and uploaded online, making it a powerful data-logger connected in real time and accessible through a browser

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
- Environmental sensing
- Level measurement
- Flow measurement
- Security

Company:	**Datalong 16**
Country:	Spain
Type:	Sensor manufacturer, Systems integrator, Consultant, Application provider, Consulting
Commercial Contact:	mlongobuco@datalong16.com
Technical Contact:	mlongobuco@datalong16.com

Enevo

Waste collection for Smart Cities

Enevo ONe is a comprehensive logistics solution that saves time, money and the environment. It uses wireless sensors to measure and forecast the fill-level of waste containers and generates smart collection plans using the most efficient schedules and routes. The solution provides up to 50% in direct cost savings

Easy-to-use web service: All real-time measurements and forecasts can be accessed through our easy-to-use web service. The web service alerts you if something unexpected happens i.e. a container is only partially collected or a sudden and extreme change in temperature occurs. The web service also shows you how much you have saved thanks to Enevo ONe

LoRaWAN™ Ready
April 30 2016

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Waste management
- Recycling management
- Smart Cities

Sensors
- Fill rate monitoring

Company:	**Enevo**
Country:	Finland
Type:	Sensor Manufacturer, Application provider
Commercial Contact:	info@enevo.com
Technical Contact:	pirkka@enevo.com

EnerTrac

Heating Fuels Delivery Automation

EnerTrac Tank Delivery Automation Solutions uses eSensor technology and the power of the internet to electronically monitor all of your customers' tanks remotely for propane, oil and diesel fuels

Products & Services:

- Tank instrumentation hardware and software
- Cloud based data access and delivery
- Data integration for ERP or back office systems

Benefits:

- A reduction in delivery costs by as much as 30%
- No more run-outs or unnecessary deliveries
- A decrease in deliveries; 2-3 fewer visits per year, per customer
- Simplified operations, quicker response times, and better customer service
- Increased profitability and new opportunities to grow your businesss

LoRaWAN™ Ready

Yes

Radio Regions

USA 915 MHz

Focus Markets

- Heating Fuel Distribution
- Agriculture Co-ops

Company:	**EnerTrac**
Country:	USA
Type:	Sensor manufacturer, Application provider
Commercial Contact:	sales@enertrac.com
Technical Contact:	support@enertrac.com

Éolane

Evaluation Kit

Éolane commercialize a LoRa™ Evaluation Kit to evaluate the performances of éolane LoRa™ wireless platforms that embed LoRa™ long range spread spectrum technology, The evaluation Kit is fully representative of LoRa™ radio performances and will allow you to get a precise idea of the disruptive range offered by éolane LoRa™ wireless platforms.

The éolane LoRa™ Evaluation Kit is composed of either one metering sensor (to be connected to any type of pulse meter) or a temperature sensor, one USB modem to be connected to a PC and one Evaluation software for the set-up process, sensors remote parameterization and sensors data retrieving (sensor values, logged events, RSSI, SNR, ...)

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Building management
- Smart lighting
- Fire detection
- Smart metering
- Industrial Process monitoring
- Smart farming
- Supply chain

Company:	**éolane**
Country:	France
Type:	Electronic Service & platforms provider
Commercial Contact:	regis.lauret@eolane.com
Technical Contact:	regis.lauret@eolane.com

Éolane

Sensor Reference Design

The LoRa™ Reference Design is dedicated for the development of LoRa™ sensors targeting several B2B applications and B2C applications in healthcare & wellness, home automation, asset tracking and geo-localization

The LoRa™ Reference Design, based on a transceiver Sx1272 from Semtech and a microcontroller EFM32 Cortex M3 from Silicon Labs, is equipped with an accelerometer, a gyroscope, a temperature and humidity sensor and a large set of digital interfaces such as SPI, UART, I2C and USB

The Reference Design, with a transmit power of 25 mw and a sensitivity of -137dbm, has a power consumption of 11 mA in receive mode and 40 mA in transmit mode and supports the LoRaMac™ 3.0 and LoRaWAN™1.0 protocols

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz
USA 915 MHz

Focus Markets
- Building management
- Smart lighting
- Fire detection
- Smart metering
- Industrial Process monitoring
- Smart farming
- Supply chain

éolane

Company:	**éolane**
Country:	France
Type:	Electronic Service & platforms provider
Commercial Contact:	regis.lauret@eolane.com
Technical Contact:	regis.lauret@eolane.com

Flashnet

Outdoor lighting and LoRaWAN™ networks

inteliLIGHT® is a street lighting remote management system with in-depth grid management capabilities that ensures real-time feedback of any change occurring along the grid, increases energy efficiency (up to 35% energy saving through dimming and smart scheduling) and optimizes maintenance activities (up to 42% reduced operational costs)

inteliLIGHT® is a base platform for smart city applications like EV chargers, city-wide sensing devices or safety infrastructure – all powered and managed from the street lighting grid

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Street lighting
- Security infrastructure
- Traffic control
- Electric vehicle chargers

Sensors
- Street lighting

FLASHNET

Company:	**Flashnet**
Country:	Rumania
Type:	Module OEM, Sensor manufacturer, Network server supplier Systems integrator Consultant Application provider
Commercial Contact:	mozes.lorand@flashnet.ro
Technical Contact:	radnoti.lorand@flashnet.ro

GlobalSat

Link tracking solutions

GlobalSat is launching series of tracking-related products based on LoRa™ Technology

This series of products and solutions are aiming to resolve or reduce the barrier of the legacy problems of GPS trackers such as, high power consumption, high recurring telecom fees, or lack of communication signal coverage

The Link Series consists of GPS Tracker, Mobile Gateway, Gateway, Signal Repeater, USB Dongle and LoRa™ module based on the LoRaWAN™ standard set by LoRa™ Alliance

GlobalSat will provide "Moving Objects Security & Tracking Solution (MOST)" incorporating sorted Link products with Cloud service and App on mobile devices for various application scenarios

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets
• Tracking

• Security

• Recovery

Company:	**Globalsat**
Country:	Taiwan
Type:	Module OEM, Modem OEM, Sensor manufacturer, Base station manufacturer, Systems integrator, Application provider
Commercial Contact:	albert.chen@globalsat.com.tw
Technical Contact:	albert.chen@globalsat.com.tw

Holley

LoRaWAN™ smart meters

Holley Metering Limited is a cross-regional and export-oriented company focusing on R&D, manufacture and marketing of energy meters.

With 38 years experience in metering field, Holley is currently the biggest meter manufacturer in China whose annual production capacity achieves 25 million pcs

The company provides wide range of products from mechanical/electronic meters to integrated terminal system with reputable production capability and product quality

Holley manufactures LoRaWAN™ smart meters for Water, Gas and Electricity

LoRaWAN™ Ready
Yes

Radio Regions
Asia 470 MHz

Focus Markets
• Utilities

Company:	**Holley**
Country:	China
Type:	Module OEM, Sensor manufacturer, Application provider
Commercial Contact:	hong.zhu@holley.cn
Technical Contact:	hong.zhu@holley.cn

Homerider Systems

Water meter sensor

HOMERIDER has developed integrated end points (Water Trak) in partnership with manufacturers of water meters: Actaris/Itron, Sappel, Elster, and Sensus. It should be noted that the generic remote module the Pulse Trak, can be installed on nearly any intelligent meter: pulse entry, serial interface, so open collector, …

The modules provide comprehensive data to meet needs for meter management, network and consumption supervision:

- Up to 96 indexes per day
- Maximum & minimum debit by 6 hour slot
- Back flow: Number, Volume
- Stopped period
- 28 day consumption histogram
- Continuous flow by debit period
- Alarms: leaks, back flow, battery, fraud.

The flexibility of the HOMERIDER AMR system and data management is exceptional. Costs of meter reading and customer support can be significantly reduced. The grounds for customer contention are considerably reduced as are water losses due to rapid detection of leaks and over consumption

LoRaWAN™ Ready
January 2016

Radio Regions
Europe 868 MHz

Asia 470 MHz

433 MHz

Focus Markets
- Water Distribution
- Water AMR

HOMERIDER SYSTEMS

Company:	**Homerider Systems**
Country:	France
Type:	Sensor manufacturer
Commercial Contact:	ahmed.kasttet@homeridersystems.com
Technical Contact:	ahmed.kasttet@homeridersystems.com

Ido-Link

GAS AMI

AMI is advanced gas metering solution that provides real-time usage tracking and customer management service that solves inefficiency of usage tracking through visitation.

AMI solution consists of Smart Meter, DCU that connects to multiple meter, AMI platform and Utility provider meter reading/management server.

LoRaWAN™ Ready
Yes

Radio Regions
Korea 917 MHz

Focus Markets
- Smart metering
- Utilities

 IDOLINK

Company:	**Ido-Link**
Country:	Korea
Type:	Sensor Manufacturer, Base station manufacturer, Network server supplier, Systems integrator
Commercial Contact:	market@ido-link.com
Technical Contact:	support@ido-link.com

Ido-Link

Smart location tracking system

Smart location system works with local CCTV and bus information/location tracking terminal at bus stops to provide combined monitoring system. It works to prevent elderly suffering from dementia or Alzheimer's from getting lost, and helps faster responses to various emergencies.

LoRaWAN™ Ready
Yes

Radio Regions
Korea 917 MHz

Focus Markets
• Tracking

IDOLINK

Company:	**Ido-Link**
Country:	Korea
Type:	Sensor Manufacturer, Base station manufacturer, Network server supplier, Systems integrator
Commercial Contact:	sales@ido-link.com
Technical Contact:	support@ido-link.com

IMST

LoRaWAN™ USB stick iU880A

The iU880A is a compact and cost–effective USB adapter based on the Long Range Radio Module iM880A-L. It provides an adjustable output power of up to +18 dBm (EIRP). USB to UART Bridge Virtual COM Port (VCP) drivers for Microsoft Windows, WindowsCE and Linux are available. It can be ordered with a embedded protocol stack in two options:

iU880A_LoRaWAN™; the LoRaWAN™ protocol stack, specified by the LoRa™ Alliance, is based on IBM's LMiC and IMST's WiMOD-OS. It enables Low Power Wide Area Networks (LPWANs) for Internet-of-Things (IoT) and Machine-to Machine (M2M) applications and supports Direct or Over The Air (OTA) activation. It comes with the WiMOD LoRaWAN™ HCI interface and allows easy configuration

iU880A_LR_Base; the WiMOD Long Range firmware is a collection of functionalities and applications like Radio Link Test, Sensor App., Data Link Service, etc. embedded in the powerful WiMOD OS operating system

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Internet of things (IoT)
- M2M
- Smart Cities
- Smart Metering

Company:	**IMST GmbH**
Country:	Germany
Type:	Module OEM, Modem OEM, Systems integrator, Consultant, Consulting, LoRa™ Certification Test Center
Commercial Contact:	sales@imst.de
Technical Contact:	wimod@imst.de

Intesens

LoRaWAN™ energy consumption sensor

IDIAG – Ammeter for Energy consumption analysis and overconsumption diagnostics

- RMS current acquisition every 10s
- Send to datacenter every 10 minutes
- Mean RMS current, maximum and minimum

Specifications

- Range : 100A
- Accuracy: 1%
- Resolution: 0.1A
- Type: Split
- Max cable section: 16mm
- Cable length: 1m
- IP class: IP40

LoRaWAN™ Ready

February 2016

Radio Regions

Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets

- Industrial maintenance
- Electrical motors
- Ventilators
- Pumps
- Compressors

Company:	**Intesens**
Country:	France
Type:	Sensor Manufacturer, Systems integrator
Commercial Contact:	info@intesens.com
Technical Contact:	info@intesens.com

Intesens

LoRaWAN™ temperature sensor

IDIAG – Temperature sensor for temperature amplitudes, thermal cycling, heating monitoring

- Temperature acquisition every 1 min
- Send to datacenter every 10 minutes
- Mean temperature, maximum and minimum

Specifications

- Range: [-50 ; +125°C] or [-100 ; +150°C]
- Accuracy: +/- 1°C
- Resolution: 0.1°C
- Type: PT100 Class B
- Cable length: 1m
- Sensor waterproofness: IP68

LoRaWAN™ Ready
February 2016

Radio Regions
Europe 868 MHz
USA 915 MHz
Asia 470 MHz
433 MHz

Focus Markets
- Industrial monitoring
- Building automation
- Cold chain

intesens
THE CONNECTED MAINTENANCE

Company: **Intesens**
Country: France
Type: Sensor Manufacturer, Systems integrator
Commercial Contact: info@intesens.com
Technical Contact: info@intesens.com

Intesens

LoRaWAN™ pressure sensor

IDIAG – Pressure sensor for any fluid (air, gas, liquids), stainless-steel cell to resist to any corrosive gas or liquids

- Pressure acquisition every 1 min
- Send to datacenter every 10 minutes
- Mean pressure, maximum and minimum

Specifications

- Range: [0 ; 20 bars]
- Accuracy: 1%
- Resolution: 0.1 bar
- Cable length: 1m

LoRaWAN™ Ready

February 2016

Radio Regions

Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets

- Industrial maintenance
- Building automation
- HVAC
- Leak detection
- Compressed air

Company:	**Intesens**
Country:	France
Type:	Sensor Manufacturer, Systems integrator
Commercial Contact:	info@intesens.com
Technical Contact:	info@intesens.com

Intesens

LoRaWAN™ humidity sensor

IDIAG – Humidity sensor to detect humidity issues and dew point tracking

- Humidity and temperature acquisition every 1 min
- Send to datacenter every 10 minutes
- Mean humidity and temperature, maximum and minimum

Specifications

- Range: [0-100%RH] [-40;+85°C]
- Accuracy: 1%
- Resolution: 0.1 % & 0.1°C
- Cable length: 10cm

LoRaWAN™ Ready

February 2016

Radio Regions

Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets

- Industrial monitoring
- Building automation
- HVAC
- Logistics/Storage
- Due point monitoring

Company:	**Intesens**
Country:	France
Type:	Sensor Manufacturer, Systems integrator
Commercial Contact:	info@intesens.com
Technical Contact:	info@intesens.com

Invenit

Tracking product and OEM modules

Design and manufacturing of CLICKEY devices and OEM modules for the consumer- and business market. End-to-end (tailor-made) solutions supported by our cloud portal and usage of our front-end interfaces, dashboard, API's and APP's

CLICKEY is a smart compact 2-way transponder that transmits its position 6 times per hour to a central server and to the mobile application of the owner. CLICKEY does not have to be recharged as the battery will last for more than 1 year. The current position is shown on a digital map of the smartphone of the owner. For tracing of small objects the user can zoom in and activate the audio signal of the CLICKEY for recovery

A Clickey has an integrated Bluetooth Low Energy (BLE) module, which can be activated by the smartphone of the owner

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
• Personal safety and security
• Asset management
• Remote monitoring

Sensors
• Clickey for tracking
• OEM modules

Company:	**Invenit**
Country:	The Netherlands
Type:	Module OEM, Systems integrator, Application provider, End product supplier
Commercial Contact:	l.vanderputten@clickey.eu
Technical Contact:	p.desmit@clickey.eu

Invenit

CLICKEY-PRO; multi-purpose LoRa™ module

This 'Swiss Army Knife' among LoRa™ IoT systems is a multi-purpose professional system with on-board temperature- and tilt sensor. For connecting external sensors, processes or systems 5 additional bi-directional digital- and analog I/O ports are available. CLICKEY-PRO is powered with two AAA penlight batteries. External antenna for optimal gain.

CLICKEY's are made in Europe by INVENIT and offer maximum price quality ratio.

CLICKEY's are combined with use of International CLCIKEY Cloud Portal for Dashboard and/or smartphone APP. Signal strength and battery status are indicated in CLICKEY APP or Dashboard

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA & Asia on request

Focus Markets
• LoRa™ demo & test

• Professional use

• Vehicle protection

• Process monitoring

• Process control

• Vehicle protection

Sensors
• Temperature

• Motion

• Others on request

Company:	**Invenit**
Country:	The Netherlands
Type:	Temperature Motion Sensor Device
Commercial Contact:	l.vanderputten@clickey.eu
Technical Contact:	p.desmit@clickey.eu

Invenit

CLICKEY-PIR; LoRa™ Motion detector

This compact stand-alone LoRa™security device detects motion within a range of 10 meters at angle of 120 degrees.

Motion Alerts are send to CLICKEY App on smart phone of the owner. (De)-Activation by APP.

CLICKEY-PIR is powered with two AA penlight batteries. Internal antenna for optimal gain.

CLICKEY's are made in Europe by INVENIT and offer maximum price quality ratio.

CLICKEY's are combined with use of International CLICKEY Cloud Portal for Dashboard and/or smartphone APP. Signal strength and battery status are indicated in CLICKEY APP

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Personal and business security
- Intrusion detection

Sensors
- Motion

Company:	**Invenıt**
Country:	The Netherlands
Type:	Module OEM, Systems integrator, Application provider, End product supplier
Commercial Contact:	l.vanderputten@clickey.eu
Technical Contact:	p.desmit@clickey.eu

Invenit

CLICKEY-TEMP SENZ; LoRa™ Temperature Logger

This compact stand-alone LoRa™temperature sensor monitors temperature in a range of -30°C to +100°C with 0,1°C accuracy. Programmable interval upload of Min, Max and Average temperature. Alert on programmable warning threshold temperature value. Powered with replaceable coin battery for upto 2 years of operation (subject to interval. Internal antenna for optimal gain.

CLICKEY's are made in Europe by INVENIT and offer maximum price quality ratio.

CLICKEY's are combined with use of International CLICKEY Cloud Portal for Dashboard and/or smartphone APP. Signal strength and battery status are indicated in CLICKEY APP

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA & Asia on request

Focus Markets
• Food preparation

• Heating systems

• Cooling systems

Sensors
• Temperature

Company:	**Invenit**
Country:	The Netherlands
Type:	Temperature Motion Sensor Device
Commercial Contact:	l.vanderputten@clickey.eu
Technical Contact:	p.desmit@clickey.eu

iSecur®

Den – Domestic Smoke Detector

Den is the world's first LoRaWAN™ domestic smoke detector. It has been developed to address two customers' requests

- the obligation to be equipped with a smoke detector in numerous countries (by law or due to the insurance's request), or the need to be safe in other countries
- the wish to be notified as soon as smoke is detected for peace of mind

Because, 1 in 2 fires is caused by electrical failure, power usually goes out, along with the local internet connection. The only way to have a reliable link is to use a self-powered internet link, making use of the LoRaWAN™ Network

Den is equipped with a temperature and humidity sensor, allowing the user to keep track of the indoor air quality

Upon online registration, the user has access to the status of the detector, and the air quality indexes. One can set up scenarios and receive notifications when the temperature drops too low

Trust iSecur for your safety, patent pending

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Japan 820 MHz

Focus Markets
- Home Security
- 'Do it yourself' security

Sensors
- Smoke detector
- Ventilation Winch
- Pressure Monitoring
- LoRa™ tool

Company:	**Finsecur**
Country:	France
Type:	Sensor Manufacturer, Application provider
Commercial Contact:	olivier.comets@finsecur.com
Technical Contact:	olivier.comets@finsecur.com

iSecur®

Ventilation winch sensor

The cost of leaving vents opened and unattended topped 200M€ last year in France only. This total cost includes damages due to water leaks, weather, intrusion, etc. With real time information, corrective action can be decided, therefore reducing drastically the costs

Tomorrow you will find the LoRaWAN™ Vent Winch everywhere from superstores, to your building stairwell. Building managers and safety officers will be notified in real time every time someone opens a vent for ventilation and leaves it opened

The winch will also send a notification if maintenance has not been done after a pre-determined amount of time

Trust iSecur for your safety, patent pending

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Japan 820 MHz

Focus Markets
• Site security

• Safety and comfort

• Industrial/equipment monitoring

Sensors
• Smoke detector

• Ventilation Winch

• Pressure Monitoring

• LoRa™ tool

FINSECUR GROUP   iSECUR

Company:	Finsecur
Country:	France
Type:	Sensor Manufacturer, Application provider
Commercial Contact:	olivier.comets@finsecur.com
Technical Contact:	olivier.comets@finsecur.com

iSecur®

LoRa™ Tool

Keep an eye on (electrical) equipment and be warned when one them is down

This basic and universal intelligent device can add remote control to virtually any equipment. Monitoring a complex site or a plant with a few LoRa™ "Tool" allows management to react to any failure ASAP for very little money and without adding expensive pieces of equipment. Possible applications include distant supervision of small stores (fridge, door sensor), local equipment rooms for water utilities or phone companies

The LoRa™ "Tool" can be operated by an external power chord as well as a battery inside. It includes: - 2 IN (including 1 analogic input in a future version)- 1 OUT 24V or a 4-20mA

Trust iSecur for your safety, patent pending

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz
USA 915 MHz
Japan 820 MHz

Focus Markets
• Site security
• Safety and comfort
• Industrial/equipment monitoring

Sensors
• Smoke detector
• Ventilation Winch
• Pressure Monitoring
• LoRa™ tool

Company: **F**insecur
Country: France
Type: Sensor Manufacturer, Application provider
Commercial Contact: olivier.comets@finsecur.com
Technical Contact: olivier.comets@finsecur.com

iSecur®

Pressure sensor

Be warned when pressure drops in your pipes

This pressure control module allows you to know in real time if pressure drops below a certain level. These modules will allow you to keep an eye on fire hose cabinets, gas pipes, liquid pipe systems, water pumps etc.

Set it up on your pipe system and the module will run on a battery for over 10 years

Different versions will be available: the basic version will tell you if the pressure is sufficient or not, while the advanced one will allow you to follow accurately the pressure in the pipes. Different versions will be available for different pressures. Trust iSecur for your safety, patent pending

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz
USA 915 MHz
Japan 820 MHz

Focus Markets
• Site security
• Safety and comfort
• Industrial/equipment monitoring

Sensors
• Smoke detector
• Ventilation Winch
• Pressure Monitoring
• LoRa™ tool

Company:	Finsecur
Country:	France
Type:	Sensor Manufacturer, Application provider
Commercial Contact:	olivier.comets@finsecur.com
Technical Contact:	olivier.comets@finsecur.com

Ixel

LoRaWAN™ smart meter sensor

LoRa™ TIC is a sensor which connects electric meter through the TIC port

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

Focus Markets
- Utilities
- Smart metering

Company: **Ixel**
Country: France
Type: Modem OEM
Commercial Contact: p.ronci@ixel.fr
Technical Contact: g.courpron@ixel.fr

Libelium

Waspmote Plug & Sense

Ready to install and easy to deploy, each Waspmote Plug & Sense! node is equipped with six connectors to which more than 80 different sensor probes can be attached directly, allowing services to be scalable and sustainable. The Waspmote Plug & Sense! platform may be solar powered to allow energy harvesting and years of autonomy.

Waspmote Plug & Sense! models are pre-configured to create such widely applicable services to the Internet of Things, as Smart Cities, Smart Parking, Pollution Control, Air Quality, Smart Water, Smart Agriculture, Security, and Ambient Control, out of the box. Waspmote Plug & Sense! sensor nodes are ready for deployment anywhere in the world, in terms of available radio frequencies (868-900-433 MHz) and certification (CE, FCC, IC).

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz
USA 915 MHz
433 MHz

Focus Markets
• Smart Cities
• Smart Parking
• Pollution Control
• Air Quality
• Smart Water
• Smart Agriculture
• Security
• Ambient Control

Company:	**Libelium**
Country:	Spain
Type:	Sensor manufacturer, Systems integrator
Commercial Contact:	salesteam@libelium.com
Technical Contact:	d.gascon@libelium.com

Libelium

Waspmote LoRaWAN™ Module

Libelium provides a ready-to-use LoRaWAN™ module so that system integrators can create reliable solutions for any application of the Internet of Things, such as Smart Cities, Smart Parking, Pollution Control, Air Quality, Smart Water, Smart Agriculture, Security, and Ambient Control.

Thanks to an easy-to-use and high-level API, comprehensive documentation and useful code examples, developers are able to implement worldwide projects, covering three different bands: 868 MHz in Europe, 915 MHz in the U.S., and 433 MHz in China, Japan and Korea.

Its standard form-factor makes this module compatible with popular platforms like Arduino, Raspberry Pi or Waspmote, and allows universities, researchers and makers to develop their own Low-Power Wide-Area Networks and DIY projects.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets
- Smart Cities
- Smart Parking
- Pollution Control
- Air Quality
- Smart Water
- Smart Agriculture
- Security
- Ambient Control

Company:	**Libelium**
Country:	Spain
Type:	Sensor manufacturer, Systems integrator
Commercial Contact:	salesteam@libelium.com
Technical Contact:	d.gascon@libelium.com

Mirakonta

Water meter clip on

Universal Clip-On reader for water meters. Supports magnetic or inductive coupling metrology

Three simultaneous approaches to read the meters:

- walk-by: walking or driving down the streets
- Fixed-Network: using repeaters and concentrators
- long-range collects using LoRa™ gateways.

Meters can be easily deployed independently the way they can be read later

LoRaWAN™ Ready
31 January 2016

Radio Regions
Europe 868 MHz

Focus Markets
• Water Distribution

Company:	**Mirakonta**
Country:	Spain
Type:	Module OEM, Modem OEM, Sensor manufacturer, Systems integrator, Consultant, Application provider, Consulting
Commercial Contact:	nestor@mirakonta.com
Technical Contact:	nestor@mirakonta.com

Mueller Systems

LoRaWAN™ sensors and water management solutions

Mueller Systems Mi.Net AMI System

When you are ready for a true two-way AMI system, the Mi.Net® Mueller Infrastructure Network for Utilities is your ideal solution

The Mi.Net System is a communications network that fully automates the meter-reading-to-billing process, linking meters, distribution sites and control devices in a single, highly efficient data network

The Mi.Net System is flexible and scalable, enabling utilities to deploy newer technology in stages, as their needs and budgets allow

The Mi.Net System uses Mi.Node transceivers on metering devices to gather and pass data through radio frequency technology to area Mi.Hubs. These gateways collect and upload the data to either the utility's server or our hosted server with Mi.Host MDM software via GPRS or other data back-haul options

The many benefits of the Mi.Net System include "On Demand" meter readings, e-mail alerts and alarms based upon near real-time information, and the ability to best manage your water resources through on-going access to custom data and information

LoRaWAN™ Ready
Date not provided

Radio Regions
USA 915 MHz

Focus Markets
• Water utilities

Company:	**Mueller Systems**
Country:	USA
Type:	Sensor Manufacturer, Solution provider
Commercial Contact:	dhack@muellersystems.com
Technical Contact:	tcullinan@muellersystems.com

Myfox

LoRaWAN™ Security Sensor

Myfox Home Alarm is the only Smart Home Security System that prevents break-Ins before they happen

Connected through WiFi, Home Alarm also has a LoRaWAN™ ready radio head to provide communication back-up

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
• Smart Home

• Security

Company:	**Myfox**
Country:	France
Type:	Sensor manufacturer
Commercial Contact:	sales@getmyfox.com
Technical Contact:	mck@myfox.fr

NKE Watteco

LoRaWAN™ TIC sensor

This module is energy harvesting and draws the energy from the TIC output signal

The sensor decodes the TIC signal and transmits data frames periodically or upon alert (1 to 2 frames transmitted per minute)

It is fully compatible with LoRaWAN™ specification and is compatible with the following meters:

- CBEMM
- CBEMM-ICC
- CJE
- ICE

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

Focus Markets

- AMR
- Liquid level monitoring
- Building automation

Sensors

- Sens'O
- Press'O
- TIC sensor
- Pulse Sensor
- Smart plug

Company:	**NKE Watteco**
Country:	France
Type:	Sensor manufacturer
Commercial Contact:	jlmalaval@nke.fr
Technical Contact:	sdutertre@nke.fr

NKE Watteco

LoRaWAN™ pulse sensor

Pulse sensor could be used with any meter with a pulse signal output (Water, gas, electricity, heat) or any system that has an ON/OFF signal to transmit over LoRa™ radio network (door sensor, push button sensor, etc..)

NKE100 is a Pulse sensor integrated in a plastic housing 75x70x21mm, the following functions

- LoRa™ radio transceiver
- Battery
- S0 Pulse interface
- Maximum input signal: 75v/3.5microamps
- Pulses are counted on rising or falling edge (configurable)

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

Focus Markets

- AMR
- Liquid level monitoring
- Building automation

Sensors

- Sens'O
- Press'O
- TIC sensor
- Pulse Sensor
- Smart plug

Company:	**NKE Watteco**
Country:	France
Type:	Sensor manufacturer
Commercial Contact:	jlmalaval@nke.fr
Technical Contact:	sdutertre@nke.fr

NKE Watteco

LoRaWAN™ smart plug

NKE 400 is a LoRa™ Smart plug dedicated to measure power consumption and transmit information over a LoRaWAN™ radio network to an Energy Monitoring platform

It incorporates a switched relay to be operated upon information received from the energy supervision system

NKE 400 is ideally suite for energy consumption monitoring system

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

Focus Markets

- AMR
- Liquid level monitoring
- Building automation

Sensors

- Sens'O
- Press'O
- TIC sensor
- Pulse Sensor
- Smart plug

Company:	**NKE Watteco**
Country:	France
Type:	Sensor manufacturer
Commercial Contact:	jlmalaval@nke.fr
Technical Contact:	sdutertre@nke.fr

NKE Watteco

LoRaWAN™ In'O sensor

IN'O is a LoRa™ state report and output control module operating over the LoRaWAN™ radio network

It incorporates, in a plastic housing, the following functions

- LoRa™ radio transceiver
- A lithium battery(3.6v; 3.6Ah)
- Low voltage power input (9v to 15v and 300mW)
- 10 ON/OFF Inputs
- 4 Opto isolated outputs

Application of the IN'O module are numerous: Industrial process control, automation systems, etc.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz
USA 915 MHz

Focus Markets
- AMR
- Liquid level monitoring
- Building automation

Sensors
- Sens'O
- Press'O
- TIC sensor
- Pulse Sensor
- Smart plug

Company:	**NKE Watteco**
Country:	France
Type:	Sensor manufacturer
Commercial Contact:	jlmalaval@nke.fr
Technical Contact:	sdutertre@nke.fr

NKE Watteco

LoRaWAN™ Press'O sensor

Press'o is a LoRa™ sensor which can measure an analog input (0-10V or 4-20mA) and transmit regularly according to configuration

When used with a pressure gauge, it can measure liquid height level like water or fuel

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- AMR
- Liquid level monitoring
- Building automation

Sensors
- Sens'O
- Press'O
- TIC sensor
- Pulse Sensor
- Smart plug

Company:	**NKE Watteco**
Country:	France
Type:	Sensor manufacturer
Commercial Contact:	jlmalaval@nke.fr
Technical Contact:	sdutertre@nke.fr

NKE Watteco

LoRaWAN™ Sens'O sensor

Sens'O is a clip-on module that fits on top of water meters

It uses an optical sensor to read the meter cycle rotation and count the number of rotations and store the number.

It transmits regularly, depending on configuration, the following information

- Meter index
- Reflow
- Leakage alarm
- Battery low level alarm
- Tampering

For one transmission per day, battery life expectancy exceeds 12 years

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz
USA 915 MHz

Focus Markets
- AMR
- Liquid level monitoring
- Building automation

Sensors
- Sens'O
- Press'O
- TIC sensor
- Pulse Sensor
- Smart plug

Company:	**NKE Watteco**
Country:	France
Type:	Sensor manufacturer
Commercial Contact:	jlmalaval@nke.fr
Technical Contact:	sdutertre@nke.fr

Okidokeys

LoRaWAN™ Smart lock and smart keys

OKIDOKEYS is a brand new line of Smart-Locks and Smart-Keys: secure, simple and practical

OKIDOKEYS gives consumers the freedom to lock and unlock all doors, garage doors and entrance gates using smartphones, cell phones and contact-less tags

Users can create, share or revoke Smart-Keys at anytime, from anywhere. Always in control, they are notified of who is entering their home via the OKIDOKEYS free App. Consumers can give friends, family and trusted service providers safe access to their home when needed, or define a time-shift corresponding to the baby-sitter needs

OKIDOKEYS leverages OpenWays proven technology currently used in major hotels around the world. With high quality materials and modern designs, OKIDOKEYS products are built to be a lasting revolution to the home

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
• Home Security

• 'Do it yourself' security

Sensors
• Smart locks

• Smart keys

Company: **Okidokeys**
Country: France
Type: Sensor Manufacturer, Application provider
Commercial Contact: fxmallet@okidokeys.com
Technical Contact: fxmallet@okidokeys.com

Omniimpex

LoRaWAN™ sensors

Antenna   Lock   RFID reader   Pager

Tamper proof antennas for different frequencies with integrated LoRa™ module and serial interface

- Tamper resistant, through hole, glued or magnetic mount
- Serial interface RS 232 (RS485, USB, other interfaces on request)

Insurance certified lock for cars, bikes, bicycles, dealers, trailers

- Movement sensor including optional GPS

RFID Card Reader for driver authorization (electronic driver license)

- GPS (optional), crash sensor, Vehicle or rechargeable battery powered , 2 years battery life, outdoor casing

Bidirectional Pager and Man Down Alarm

- Sunlight readable Dual color OLED display, waterproof, rechargeable, receiving and sending pre-stored messages, confirm start and end of task for automatic billing, GPS optional

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

169 MHz

Focus Markets
- Internet of Things
- Security
- Insurance

Company:	**Omniimpex**
Country:	Switzerland
Type:	Module OEM, Modem OEM, Sensor manufacturer, System Integrator, Consulting
Commercial Contact:	no2@omniimpex.ch
Technical Contact:	no2@omniimpex.ch

Pyrescom

LoRaWAN™ sensors

Aivia Smart monitoring cabinet for the public access to defibrillators, indoor or outdoor

Aivia standalone monitoring system for defibrillators

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
• Security

• Safety

• First responders

Company: **Pyrescom**
Country: France
Type: Sensor Manufacturer, Systems Integrator
Commercial Contact: p.anweiler@pyres.com
Technical Contact: jm.cabanat@pyres.com

Real Time Solutions

LoRaWAN™ geo information sensor

Small sensor modules placed in landslide prone areas will warn the downstream communities of land movement

LoRaWAN™ Ready
Date not provided

Radio Regions
433 MHz

Focus Markets
- Geo monitoring
- Government
- Local Authorities

Company:	**Real Time Solutions**
Country:	Nepal
Type:	Sensor manufacturer, Solution provider
Commercial Contact:	support@wscada.com
Technical Contact:	saroj@wscada.com

RFI Engineering

LoRaWAN™ sensors

LoRaWAN™ tracking device, for tracking small packages, animals, vehicles, assets etc.

Low power GPS and motion sensor on board

Compatible with LoRaWAN™ networks

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets
• Internet of Things

• Tracking

Company:	**RFI Engineering**
Country:	Netherlands
Type:	Sensor Manufacturer
Commercial Contact:	ivanling@rfi-engineering.com
Technical Contact:	rlammers@rfi-engineering.com

Rising HF

LoRaWAN™ sensors

RisingHF is solution provider for AMR, environment monitoring and smart city

We design and manufacture LoRa™ module and modem, IP64 LoRaWAN™ T&H sensor and WSA (7 sensors supported) for both indoor and outdoor environment monitoring

LoRaWAN™ module and modem are easy-to-use and plug&play device which interface with customer via USB/UART with AT command with ultra low sleep current-- only 1.45uA

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Asia 470 MHz

433 MHz

Focus Markets
• AMR
• Environment monitoring
• Smart cities

Company:	**Rising HF**
Country:	China
Type:	Module manufacturer, Modem manufacturer, Sensor manufacturer, Application provider
Commercial Contact:	Sales@risinghf.com
Technical Contact:	support@risinghf.com

Sensing Labs

Intelligent building and smart metering

High added value meter data analytics, strong radio robustness and sensitivity combined with ruggedized and IP 68+ design make Senlab© metering sensors unrivalled for meters data retrieving solutions

Senlab© metering wireless sensors embed LoRaWAN™ long range spread spectrum disruptive technology, providing significantly longer range than conventional modulation techniques as well as high interference immunity whilst minimizing current consumption

Senlab© sensors natively support bidirectional communications and are compliant with private networks (customer managed 3G or Modbus gateway) as well as third party managed networks. Meter data analytics integrate leak or burst detection, load profile and consumption patterns

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
• Smart Metering
• Smart Building
• Smart Agriculture

Sensors
• Telemetry
• Metering
• Universal (I2C / Analog) and Non- Universal (IC2 / Analog)

Company: **Sensing Labs**
Country: France
Type: Sensor Manufacturer
Commercial Contact: ludovic.callier@sensing-labs.com
Technical Contact: ludovic.callier@sensing-labs.com

Sidhe Boann

LoRaWAN™ street light sensor

Sidhe Boann is a company which develop/construct sensors on demand

We provide a smart street light with LED, fully compliant with all CE standards and 5 additional for Switzerland

The street light is high quality standard and include LoRaWAN™ wireless capabilities with ability to connect any type of sensors (on demand)

- End to End Solution - Street Lighting Management
- LoRa™ / W-Mbus / KNX / IP Bridges
- Water /gaz / Electricity Metering Solutions for Existing/New Meters
- High end sensors quality for Environment, Agriculture, Water, Security, Health *(coming soon)*
- Bespoke or on demand sensor development

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

Focus Markets
- Smart City
- Environment
- Energy
- Agriculture
- Building Management

Company:	**Sidhe Boann SA**
Country:	Switzerland
Type:	Sensor Manufacturer, Systems integrator, consultant
Commercial Contact:	info@sidheboann.com
Technical Contact:	nizar.ishuayed@sidheboann.com

Smarteo Water

LoRaWAN™ Water meter

Smarteo smart water meter is ready to send data through a LoRa™ network

It can send following data :

- Reading
- alerts (leak, back flow, fraud, ...)
- a monthly report about consumer profile

This product is based on Arad water meters

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Smart City
- Water AMR

Company:	**Smarteo Water**
Country:	France
Type:	Sensor Manufacturer, Application provider
Commercial Contact:	smarteo@smarteo-water.com
Technical Contact:	smarteo@smarteo-water.com

Solvera Lynx

ComBox.L are innovative wireless sensors for today's energy management

They use LoRaWAN™ and cover a wider range of innovative IoT applications in Home, Building and Factory Energy Management, Smart Metering, Smart Grids and Smart Cities.

PULSE SENSOR (ComBox.L CI) could be used with any meter with a pulse signal output *(like electricity, gas, water, heat).*

STATE SENSOR (ComBox.L DI) could be used with any system that has an on/off output signal *(like door switch, relay output, push button).*

TEMPERATURE SENSOR (ComBox.L 2T) can connect up to two temperature probes (PT1000).

ANALOG GATEWAY (ComBox.L AI) can connect up to two sensing probes with 4..20mA or 0..10V output *(like pressure, flow probes).*

MODBUS GATEWAY (ComBox.L MB) can read intelligent devices with RS-232 output which provide Modbus protocols.

ACTIVATION MODULE (ComBox.L S0) contains output for remote activation / deactivation.

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Energy Management (home, building, factory)
- Smart metering
- Smart Grids
- Smart cities

Company:	**Solvera Lynx d.d.**
Country:	Slovenia
Type:	Sensor manufacturer, Systems integrator, Application provider, Consulting
Commercial Contact:	peter.kobal@solvera-lynx.com
Technical Contact:	marko.sepic@solvera-lynx.com

Solvera Lynx

GemaLogic

GemaLogic is a powerful tool for energy management, which enables the users to reduce their energy costs. It is suitable for industrial, commercial or public companies regardless of its business or size. It brings state of the art solutions for energy data acquisition and monitoring, energy data analyses and implements continuous improvements in energy efficiency.

GemaLogic is built as SOA enterprise architecture consisting of database, application server and various client applications. It could operate on almost any operating system (Windows, Linux) and supports all major database vendors (Microsoft SQL, Oracle, PostgreSQL, MySQL, DB2). As a web server application, It can be implemented as a service in the cloud (SaaS) or as an integrated system installed at customer's premises.

- energy data analyses
- customised reports and dashboards:
- customised alerts

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Energy Management (building and factory)
- Smart Grids

Company:	**Solvera Lynx d.d.**
Country:	Slovenia
Type:	Sensor manufacturer, Systems integrator, Application provider, Consulting
Commercial Contact:	peter.kobal@solvera-lynx.com
Technical Contact:	marko.sepic@solvera-lynx.com

TE Connectivity Sensor Solutions

LoRaWAN™ sensors

TE Connectivity is a global technology leader. We design and manufacture highly engineered connectors, sensors and electronic components essential in our increasingly connected world

TE Connectivity provides solutions for

- Pressure sensors and load cells
- Temperature, humidity and heaters
- Position, rotary and tilt
- Vibration and optical sensors
- Piezoelectric sensors

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets
- Building automation
- Facility Management

Company:	**TE Connectivity**
Country:	USA
Type:	Sensor Manufacturer
Commercial Contact:	romuald.gallorini@te.com
Technical Contact:	william.markezana@te.com

Telog Instruments

Wireless Water Infrastructure sensor

Telog offers a wireless monitoring application solution for every sensor, meter and instrument found in remote water distribution and wastewater collection system

Telog's LPR-41 Line Pressure Recorder is a compact (1.8" height, 2.8" diameter) unit that attaches to a ¼" NPT fitting. The unit records and monitors pressure in underground vaults anywhere within a water distribution system

The LPR-41 is the flagship product for Telog's new 4000 series Recording Telemetry Units (RTUs). The 4000 series with embedded LoRa™ Long Range spread spectrum radio technology provides reliable, low cost, 10 year battery powered monitoring solutions for water system pressures, flows, levels, pump activity, water quality, overflows and other applications

Telog's host application and Cloud platform provides you with access to historic and real-time alarm events via website. Operating in a MS Windows environment data is readily shared with 3rd party data management platforms

LoRaWAN™ Ready

January 15 2016

Radio Regions

USA 915 MHz

Focus Markets

- Water Distribution
- Hydrant pressure
- Aquifer level monitoring
- Service water level monitoring
- Tank level monitoring
- Water flow monitoring
- Water pressure monitoring

Company:	**Telog Instruments Inc.**
Country:	USA
Type:	Sensor manufacturer, Application provider
Commercial Contact:	TelogSales@telog.com
Technical Contact:	bceci@telog.com

Turbo Technologies

LoRaWAN™ sensors
and applications

TBM-N100M module is customizable in shape and size. Integrated data collection device for sensors and wearable's

- Wireless transmitter, MCU and flash integrated
- Ultra-low power consumption design, 500nA while sleep
- SPI/I2C/UART/Bluetooth supported

TBM-N100C is a wireless transmit module designed for geomagnetic detector information. Real-time transmit vehicle's type, speed, flow rate and status of parking space, longer than 5 years battery life

TBM-N100B is a wireless transmit module designed for power meter information, interface protocols compatible with Chinese power grid transmission standard. Transmits multiple parameters for water meter & gas meter solutions

LoRaWAN™ Ready

Date not provided

Radio Regions

Asia 470 MHz

China 780 MHz

433 MHz

Focus Markets

- Internet of Things
- Smart City
- M2M
- Industrial automation
- Smart home
- Smart meters
- Sensor networks

Company:	**Turbo Technologies**
Country:	China
Type:	Module OEM, Modem OEM, Sensor manufacturer, Application provider
Commercial Contact:	rhliu@turboes.com
Technical Contact:	yzheng@turboes.com

Wi6labs

WS LR PULSE

WS LR PULSE metering sensor is designed for automatic meter reading system (AMR).

It is compatible with any meter delivering a pulse output.

It can also monitor any binary signal for application such alarm detection, push button.

This sensor is integrated in IP65 plastic housing and features:

- LoRaWAN™ protocol stack
- Long Life Battery
- Configurable pulse interface

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets

- IoT
- Metering
- Smart Cities
- Smart Agriculture
- Intelligent Building System
- Security

Company:	**Wi6labs**
Country:	France
Type:	Modem OEM, Sensor manufacturer, Consultant
Commercial Contact:	ulrich.rousseau@wi6labs.com
Technical Contact:	jeremy.ardouin@wi6labs.com

Wi6labs

WS LR TIC

WS LR TIC sensor is designed for automatic meter reading system.

This sensor decodes any frame from digital meter and transmit power consumption index periodically and / or alarm.

This sensor is integrated in IP65 plastic housing and features:

- LoRaWAN™ protocol stack
- Long Life Battery

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets
- IoT
- Metering
- Smart Cities
- Intelligent Building System
- Security

Company:	**Wi6labs**
Country:	France
Type:	Modem OEM, Sensor manufacturer, Consultant
Commercial Contact:	ulrich.rousseau@wi6labs.com
Technical Contact:	jeremy.ardouin@wi6labs.com

Augtek

Base station Slim & Rock

Connect Series Slim/Rock IoT communication base station is a leading LPWAN access device with ultra-low power consumption, especially for key applications that require high stability and long communication range

Rock base station have a maximum of 32 channels, multiple uplink methods and IP67 design

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
- Carriers
- Network Operators
- OEM's
- OEM solution providers

Company:	**Augtek**
Country:	China
Type:	Module OEM, Base station manufacturer, Network server supplier
Commercial Contact:	info@augtek.com
Technical Contact:	info@augtek.com

Calao Systems

Toti LoRaWAN™ Pico base station

ARCHIPEL, "the internet of things spirit" , the complete range of LoRa™ Infrastructure products based on CALAO Systems platforms

Toti LoRa™ Pico: a LoRaWAN™ Indoor Base Station with Gateway features for Private network or Cloud service operator

- Modular access: 3G,4G, Ethernet, WiFi
- Telecom carrier grade
- Superior facilities management
- Industrial quality

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 920/925 MHz

433 MHz

Focus Markets
- Public Network Operators
- Private Network Operators

Company:	**Calao Systems**
Country:	France
Type:	Base Station Manufacturer, Network server supplier
Commercial Contact:	sales@calao-systems.com
Technical Contact:	sales@calao-systems.com

Calao Systems

Toti LoRaWAN™ Outdoor base station

ARCHIPEL, "the internet of things spirit" , the complete range of LoRa™ Infrastructure products based on CALAO Systems platforms

Toti LoRa™ Outdoor: a LoRaWAN™ Outdoor Base Station with Gateway features for Private network or Cloud service operator

- Modular access: 3G,4G, Ethernet, WiFi
- Telecom carrier grade
- Superior facilities management
- Industrial quality

LoRaWAN™ Ready
Yes

Radio Regions
Asia 920/925 MHz

USA 915 MHz

433 MHz

Focus Markets
- Smart City
- Private Network Operators

Company:	**Calao Systems**
Country:	France
Type:	Base Station Manufacturer, Network server supplier
Commercial Contact:	sales@calao-systems.com
Technical Contact:	sales@calao-systems.com

Calao Systems

Zandoli LoRaWAN™ base station

ARCHIPEL, "the internet of things spirit" , the complete range of LoRa™ Infrastructure products based on CALAO Systems platforms

Zandoli LoRa™: a LoRaWAN™ outdoor Base Station with Gateway features for very large network density and extreme outdoor conditions for Private network or Cloud service operator

- Modular access: 3G,4G, Ethernet, WiFi
- Telecom carrier grade
- Superior facilities management
- Industrial quality

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

Asia 920/925 MHz

433 MHz

Focus Markets

- Public Network Operators
- Private Network Operators

Company:	**Calao Systems**
Country:	France
Type:	Base Station Manufacturer, Network server supplier
Commercial Contact:	sales@calao-systems.com
Technical Contact:	sales@calao-systems.com

Embedded Planet

Base station

The EPM2M LoRa™ Gateway is an industrial grade complete cellular gateway for Semtech LoRa™ based wireless sensor networks. Semtech's LoRa™ technology provides significant benefits for range, robust performance, and battery lifetime. The EPM2M LoRa™ includes optional plans for cellular service and cloud based data access. Embedded Planet can provide a complete end-to-end solution from sensor to cloud visualization for your sensor data.

LoRaWAN™ Ready
Yes

Radio Regions
USA 915 MHz

Focus Markets
- Industrial
- Transportation
- Energy
- Medical

EMBEDDED PLANET

Company:	**Embedded Planet**
Country:	USA
Type:	Module OEM, Sensor manufacturer, Systems integrator
Commercial Contact:	sales@embeddedplanet.com
Technical Contact:	info@embeddedplanet.com

ExpEmb

Base station

The SGW LoRa™ X86 rugged multi-service gateway offers great flexibility

Based on an Intel Atom Bay Trail processor, this gateway is an open platform able to support various interfaces such as Ethernet, serial, cellular (3G), Wi-Fi, USB and a solid-state local storage (SSD) enabling the connection of various equipment's

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
• Wide area M2M/IoT networks

Company:	**ExpEmb**
Country:	France
Type:	Base station manufacturer
Commercial Contact:	jc.rerat@expemb.com
Technical Contact:	f.desnoues@expemb.com

Gemtek Technology Co

LoRa™ IoT base station

This Internet of Things (IOT) Access Point/Gateway is specifically designed for wide area smart city applications

Applications include, but not limited to automatic meter reading, monitoring fault indicators, monitoring street lights, etc.

Typical deployment is using star network configuration similar to mobile network base station

Because of its long range and many device capabilities, it is a much more cost effective way for service providers to deploy this for sensor networks compared to deploying a GPRS network for sensor network applications

LoRaWAN™ Ready

Yes

Radio Regions

Asia 920/925 MHz

USA 915 MHz

433 MHz

Focus Markets

• Smart City

• Private Network Operators

Gemtek
Wireless Broadband Anywhere

Company:	**Gemtek Technology**
Country:	Taiwan
Type:	Sensor manufacturer, Base station manufacturer, Systems integrator
Commercial Contact:	Cory_Lam@gemteks.com
Technical Contact:	Cory_Lam@gemteks.com

Gupsy

Base station Gupsygate

Gupsy introduces a new gateway dedicated to the Internet of Things: GupsyGate. It is a powerful LoRaWAN™ compliant gateway for IoT applications. Radio ranges are possible up to 15 km. Line of Sight and 1 km in urban areas

Network connectivity is possible via 4G, 3G, Wi-Fi and Ethernet. 3 USB ports are available for connectivity with peripheral devices

GupsyGate is powered by an ARM Cortex A9 application processor with up to 4 cores, 4 GB of RAM and 64 GB of flash memory + a μ-SD card slot, and supports several flavors of Linux. Apart from the LoRaWAN™ software also other powerful applications can be run from the gateway

Gupsy has a strong experience with sensors (IEEE 802.15.4) used in pest control and food safety applications for temperature and humidity measurement, radon detection and animal tracking

LoRaWAN™ Ready
March 2016

Radio Regions
Europe 868 MHz

Focus Markets
- Vehicle and asset tracking
- Telemetry and sensor reading
- Building automation
- Medical

Company:	**Gupsy**
Country:	Germany
Type:	Sensor manufacturer, Base station manufacturer, Network server supplier
Commercial Contact:	info@gupsy.com
Technical Contact:	info@gupsy.com

IMST

Concentrator module iC880A

The concentrator module iC880A is a multi-channel high performance transmitter/receiver module designed to receive several LoRa™ packets simultaneously using different spreading factors on multiple channels. The concentrator module iC880A can be integrated into a gateway as a complete RF front end of this gateway. It provides the possibility to enable robust communication between a LoRa™ gateway and a huge amount of LoRa™ end-nodes spread over a wide range of distance. The iC880A needs a host system for proper operation. This host system can be a PC or MCU that will be connected to iC880A via USB or SPI

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Internet of things (IoT)
- M2M
- Smart Cities
- Smart Metering

Company:	**IMST GmbH**
Country:	Germany
Type:	Module OEM, Modem OEM, Systems integrator, Consultant, Consulting, LoRa™ Certification Test Center
Commercial Contact:	sales@imst.de
Technical Contact:	wimod@imst.de

Kerlink

LoRa™ IoT base station

The Long Range IoT Station is a terminal designed to meet M2M & IoT connectivity service providers that want to operate their network by themselves

The Station incorporates the Long Range LoRa™ technology developed by Semtech and communication functions (Ethernet and 3G)

Thanks to a rugged case - IP 67 -, LoRa™ IoT Station can handle with harsh installation environments (moisture, dust, wind...)

Installed on the relay antenna of a telecommunications operator, on the roof of a building or a water tower, it can establish bidirectional communications with several thousands items of intelligent equipment (sensors, meters, connected things) which are several kilometers away

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 920/925 MHz

433 MHz

Focus Markets
- Mobile Operators
- Private Network Operators

Company:	**Kerlink**
Country:	France
Type:	Base Station Manufacturer
Commercial Contact:	sales@kerlink.fr
Technical Contact:	p.savary@kerlink.fr

Link Labs

Base station LL-BST-8

The LL-BST-8 is a Long Range Internet of Things (IoT) gateway, optimized for use with Link Labs SymphonyTM modules, and other modules compliant with the LoRaWAN™ standard

Easy-to-use and inexpensive gateway can be used in the 915 MHz ISM and the 868 MHz ETSI frequency bands, and can communicate with thousands of devices at a range of many kilometers

Paired with Link Labs' Conductor back end, the LL-BST-8 truly is "connectivity in a box." This gateway can be customized to suit your needs, with backhaul via Ethernet, WiFi, or GSM cellular, and an optional a NEMA4/IP66 for use in harsh environments

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets
• Carriers

• Network Operators

• OEM's

• OEM solution providers

Company:	**Link Labs**
Country:	USA
Type:	Module OEM, Modem OEM, Base station manufacturer
Commercial Contact:	glenn.schatz@link-labs.com
Technical Contact:	glenn.schatz@link-labs.com

Link Labs

Base station LL-BST-24

The LL-BST-48 and LL-BST-64 are Long Range Internet of Things (IoT) carrier-grade base stations, optimized for use with Link Labs Symphony Link modules, and other modules compliant with the LoRaWAN™ standard

The LL-BST-48 has 48 receive channels, and is designed for cross-polarized sector antennas. The LL-BST-64 has 64 receive channels and is designed for locations with large amounts of available license-free spectrum, such as ITU Region 2 countries

These base stations can be customized to suit your needs, with custom-designed cavity filters and bi-directional amplifier (as required), power conditioning, and a battery backup. Backhaul is via Ethernet or cellular, and the whole system is available in 2U or NEMA4/IP65 form factors

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets
- Carriers
- Network Operators
- OEM's
- OEM solution providers

Company:	**Link Labs**
Country:	USA
Type:	Module OEM, Modem OEM, Base station manufacturer
Commercial Contact:	glenn.schatz@link-labs.com
Technical Contact:	glenn.schatz@link-labs.com

Manthink Technology

LoRaWAN™ module

The LW401 of Manthink is a transparent transmitting module based on SX1278 with the characteristics of long-range, low-power and high sensitivity for the Chinese market.

Module supports LoRaWAN™ public protocol. Users could configure the running baud rate and frequency of the module. The module could satisfy the need of concentrator and collector in AMR applications by the private protocol. The module also resolves the collision and avoidance in different metering area.

Commands of LW401 are divided into MAC and protocol layers and the command of the MAC layer is hidden for users. Its main achievement is solving the conflict between different metering areas. The main application areas are industrial instrumentation (water, electricity, gas and heat meter data transmission), the smart traffic and agriculture.

LoRaWAN™ Ready
January 2016

Radio Regions
China 470 MHz

433 MHz

Focus Markets
- Industrial Instrumentation (water, electricity and gas meters)
- Smart Traffic
- Agriculture

ManThink

Company:	**Manthink**
Country:	China
Type:	Module OEM
Commercial Contact:	zhaomingfei@manthink.cn
Technical Contact:	zhaomingfei@manthink.cn

Manthink Technology

LoRaWAN™ module

The LW801 of Manthink is a transparent transmitting module based on SX1276 with the characteristics of long-range, low-power and high sensitivity for the European and American market.

Module supports LoRaWAN™ public protocol. Users could configure the running baud rate and frequency of the module. The module could satisfy the need of concentrator and collector in AMR applications by the private protocol. The module also resolves the collision and avoidance in different metering area. Commands of LW801 are divided into MAC and protocol layers and the command of the MAC layer is hidden for users.

Its main achievement is solving the conflict between different metering areas. The main application areas are industrial instrumentation (water, electricity, gas and heat meter data transmission), the smart traffic and agriculture.

LoRaWAN™ Ready
January 2016

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
• Industrial Instrumentation (water, electricity and gas meters)

• Smart Traffic

• Agriculture

ManThink

Company:	**Manthink**
Country:	China
Type:	Module OEM
Commercial Contact:	zhaomingfei@manthink.cn
Technical Contact:	zhaomingfei@manthink.cn

MultiTech

MultiConnect® Conduit™

MultiConnectR Conduit™ is the industry's most configurable, manageable, and scalable cellular communications gateway for industrial IoT applications. Network engineers can remotely configure and optimize their Conduit through DeviceHQ™, the world's first IoT Application Store and Device Management platform.

The Conduit features two accessory card slots that enable users to plug in MultiConnectR mCard™ accessory cards supporting their preferred wired or wireless interface to connect assets locally to the gateway. Available options include a LoRaWAN™ mCard capable of supporting thousands of MultiConnectR mDot™ long range RF modules connected to remote sensors or appliances.

The Conduit's flexibility supports a myriad of customer LoRa™use cases providing support for both IBM's Node-RED, a graphical interface and mLinux™ Open Embedded/Yocto development environments. The Conduit is ideal for private and public LoRa™deployments, Actility, Orbiwise, Senet, and Loriot.io.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
• Agriculture

• Distributed Enterprise

• Energy (Oil & Gas, Utilities)

• Smart Cities

• Public LoRa™ Network
  Operators

MULTITECH®

Company:	**MultiTech**
Country:	USA
Type:	Module OEM, Base station manufacturer
Commercial Contact:	sales@multitech.com
Technical Contact:	https://support.multitech.com

SICONIA™

Outdoor Gateway (SGW)

SAGEMCOM is one the main leader in switching and routing devices; SAGEMCOM has already developed & rolled-out nationwide data concentrators for utilities and xDSL /FTTx/ DOCSIS/4G gateways for Telcos worldwide.

Based on that robust industrial manufacturing expertise, SAGEMCOM introduces a disruptive IoT LPWAN solution in its global Carrier-grade gateways portfolio. This outdoor IP65 GW comes with two options, MV1 (data only), MV2 (with accurate time stamping for precise & reliable geolocation), both rail DIN based

CPU: ARM based

Communication
- *Sensivity: -141dBm*
- *Ethernet port*
- *Optional: 3G or GPRS Wan interface*

Embedded GPS

Temperature sensor

POE 48V power supply

Environment
- *IP65*
- *-20°C / +60°C*
- *MTBF: 20 years*

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Mobile & Fixed Operators
- Smart City
- Smart Metering

SICONIA™

Company:	**SAGEMCOM**
Country:	France
Type:	Base station manufacturer, network server supplier
Commercial Contact:	didier.guillot@sagemcom.com
Technical Contact:	marc.legourrierec@sagemcom.com

SICONIA™

Indoor Nano-Gateway (SnGW)

Thanks to its successful experience as international leading company within Multiple play CPEs in Home Environments, SAGEMCOM offers this indoor nano GW (SnGW), that can be wall mounted for sake of simplicity.

The internal antennas solution can be easily deployed, whilst keeping an optional external antennas alternative depending on the environment.

This offers yet another innovative & cost efficient solution for rolling-out LPWAN networks through a smooth and cost-efficient densification approach

- Compact Product (21x20x3)
- AC Power, or POE
- MV1 modem – 8 simultaneous LoRa™ Channels
- Ethernet WAN (10/100BT)
- Internal Antennas, with possibility of external antenna *(option)*
- Wall mounted

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Mobile & Fixed Operators
- Smart City
- Smart Metering
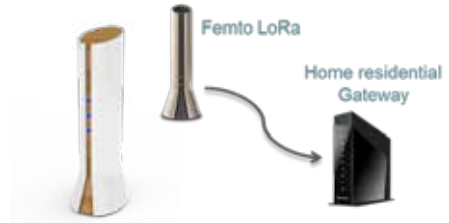
Company:	**SAGEMCOM**
Country:	France
Type:	Base station manufacturer, network server supplier
Commercial Contact:	didier.guillot@sagemcom.com
Technical Contact:	marc.legourrierec@sagemcom.com

SICONIA™

Indoor Femto GW (SfGW)

Femto LoRa

Home residential Gateway

Thanks to its successful experience as international leading company within Multiple play CPEs in Home Environments, SAGEMCOM also offer this Femto GW, that can be either plugged, or directly embedded onto an ISP Residential Gateway, thus taking advantage of existing Backhaul to make Home an ideal deployment site for IoT coverage both indoor and outdoor.

This offers an innovative & cost-efficient roll-out solution to densify smoothly IoT LPWAN Networks, whilst also increasing the reliability of global Geolocation thanks to additional information. This is a perfect complementary solution to outdoor deployed GWs.

- USB interface
- 4*10*2 cms
- 2 LEDs
  - *power ON/OFF*
  - *Connectivity to server*
- 1 reset button

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Mobile & Fixed Operators
- Smart City
- Smart Metering

SICONIA™

Company:	**SAGEMCOM**
Country:	France
Type:	Base station manufacturer, network server supplier
Commercial Contact:	didier.guillot@sagemcom.com
Technical Contact:	marc.legourrierec@sagemcom.com

SICONIA™

Indoor Pico-Gateway (SpGW)

SAGEMCOM also offers a full range of Indoor Products solutions to allow coverage densification, taking advantage of backhaul availability within premises.

- AC Power
- Ethernet WAN (10/100BT)
- External Antennas

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
- Mobile & Fixed Operators
- Smart City
- Smart Metering

Company:	**SAGEMCOM**
Country:	France
Type:	Base station manufacturer, network server supplier
Commercial Contact:	didier.guillot@sagemcom.com
Technical Contact:	marc.legourrierec@sagemcom.com

VVamir

LoRaWAN™ base station

VVAMIR utilizes vast and versatile leading edge technologies into a viable working and advanced Control System (SCADA, DCS, C&C) using top leading companies for the Control Hardware (PLCs, RTUs, PAC, DAC) from companies such as Siemens, ABB, Allen Bradley, Schneider, GE and many others; and with SCADA/DCS packages such as Cimplicity, WinCC, PCS7, ControlMaestro, RSLink, Wonderware and others; all providing better production performance, lower overhead, utilize resources more efficiently, respond to alarms and events more rapidly

InBeeBox Base station for LoRaWAN™ networks with optional or Node-RED support

LoRaWAN™ Ready

January 2016

Radio Regions

Europe 868 MHz

USA 915 MHz

Focus Markets

• Industrial

Company:	**VVamir**
Country:	Israel
Type:	Module OEM, Sensor manufacturer, Systems integrator
Commercial Contact:	sales@vvamir.com
Technical Contact:	support@vvamir.com

Actility

LoRaWAN™ Network Server

Actility provides the end-to-end ThingPark Wireless LoRaWAN™ core network solution to mobile operators, utilities and other infrastructure owners

ThingPark Wireless includes the LRC Network Server for routing and authentication, the ThingPark Wireless OSS including the Device Manager portal, the Base Station Manager Portal and the LoRaWAN™ Base Stations from Actility's base station partners

Actility works on interoperability with device partners within its eco-system to provide pre-integrated LoRaWAN™ sensors covering key verticals such as Smart Parking, Energy efficiency, tracking and security

Actility provides LoRa™ device vendors with partner kits including LoRa™ base stations connected to the ThingPark Wireless core network together with access to the ThingPark Wireless Device Manager Portal and the Wireless Logger tool for troubleshooting

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
- Mobile Operators
- Private Network Operators

ThingParkWireless

Company:	**Actility**
Country:	France
Type:	Network server supplier, Systems integrator, Application provider
Commercial Contact:	contact@actility.com
Technical Contact:	contact@actility.com

Actility

LoRaWAN™ ThingPark Cloud Server

To allow LoRaWAN™ application developers to easily develop applications on top of LoRaWAN™ sensors Actility provides the ThingPark Cloud APIs with northbound exposure of ETSI-M2M and ONE-M2M REST APIs for application developers with support for REST drivers for popular IoT and automation semantics like ModBus, ZigBee ZCL, KNX, MBUS

Operators rolling out ThingPark Cloud have a high availability platform with publication and subscribe-notify mechanisms allowing developers to design multiple applications to interact with LoRaWAN™ devices through the same real-time API

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
• Mobile Operators

• Private Network Operators

ThingPark Cloud

Company:	**Actility**
Country:	France
Type:	Network server supplier, Systems integrator, Application provider
Commercial Contact:	contact@actility.com
Technical Contact:	contact@actility.com

Actility

LoRaWAN™ ThingPark Store

Actility provides the ThingPark Store marketplace engine for automated marketplace management of LoRaWAN™ devices and application suppliers, including delivery and activation workflows

Operators using ThingPark Store can support multiple vendors of IoT offers with automated eShop creation and management

The ThingPark Store comes with custom offer bundle creation tool allowing users to pick LoRaWAN™ connectivity plans and any LoRa™ device or application from the ThingPark Store marketplace catalog

Users purchasing from the store can then use the unified user portal with full single-sign-on (SSO) support and gain access to subscribed applications from any marketplace application partner

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
• Mobile Operators

• Private Network Operators

ThingPark Store

Company:	**Actility**
Country:	France
Type:	Network server supplier, Systems integrator, Application provider
Commercial Contact:	contact@actility.com
Technical Contact:	contact@actility.com

Cisco

Cisco IR910

The Cisco 910 Industrial Router is part of the Cisco 900 Series Industrial Routers Family. This rugged IoT gateway can aggregate both the wireless sensor networks (WSN), including Low Power WAN (LPWA) technology such as Semtech® LoRa™ and wired sensors and ties them into an IP network. Offering an open hardware and software platform, the IR910 can quickly and easily host partner applications and sensor communication cards. Use the IR910 for local WSN management, raw data collection, caching, processing, and forwarding to data center in the cloud through a variety of WAN IP interfaces.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

433 MHz

Focus Markets
• Smart City

Company:	**Cisco**
Country:	USA
Type:	Base station manufacturer, Network server supplier, Systems integrator, Consultant
Commercial Contact:	jwen2@cisco.com
Technical Contact:	pgrosset@cisco.com

IBM Research

*Long Range Signaling and
Control (LRSC) network server*

IBM LRSC is a deployment-ready set of software components to operate a LoRaWAN™ network. Current information about LRSC is made available at http://lrsc.ch

LRSC is a scalable, end-to-end cloud solution for operating a LoRaWAN™ network - a network of gateways and end devices equipped with a LoRa™ radio. It is designed to operate a nationwide telecommunication grade deployment, but can be scaled down to run smaller private networks

For end users and developers, the system is designed to be quick & easy to adapt. All the client software is available as examples, and the LoRaWAN™ device implementation is open source under EPL

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

Focus Markets

- Mobile Operators
- Private Network Operators

Company:	**IBM**
Country:	Switzerland
Type:	Network server supplier, Consultant, Consulting, Device Software contributor
Commercial Contact:	Mib (at) zurich.ibm.com
Technical Contact:	Lrsc (at) zurich.ibm.com

Invenit

CLICKEY-International Cloud Portal

Telco-grade, professional, multi-tenant, back office system for large scale IoT applications. Supports Both Public- and Private LoRa™ networks.

Commissioning/Decommissioning, Account management, 24/7 support, full API, Dashboard and APP integration. Scalable to support large numbers of subscriptions and devices. Flexible license contracts

LoRaWAN™ Ready
Yes

Radio Regions
N/A

Focus Markets
- Telco's
- LoRa™ service providers

Company:	INVENIT
Country:	The Netherlands
Type:	Cloud Portal
Commercial Contact:	L.vanderputten@clickey.eu
Technical Contact:	P.desmit@clickey.eu

LORIOT

LoRaWAN™ Application Server

A scalable, resilient LoRaWAN™ Network Server with strong focus on security and distributed operation. An all-in-one solution for LoRaWAN™ network operations / control center.

Features flexible, modular data output interfaces currently include HTTP / REST, WebSocket, TLS Socket, MQTT, CoAP and a number of 3rd party services such as PubNub, IBM Bluemix or Amazon AWS IoT. Output of the LORIOT Network Server can be directly tied to LORIOT Application Server.

Web interfaces are available for
- gateway management and monitoring
- application and device management and monitoring
- network operation and network diagnostics
- billing records and device subscription management
- sample end-user interface (device provisioning, data retrieval)

Most of currently available LoRa™gateways are already pre-integrated. Number of end-to-end applications are available out-of-the-box through our partner network. A free, generally available trial account is available for gateway owners.

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

Asia 470 MHz

Asia 920 MHz

Australia 920 MHz

433 MHz

Focus Markets

- Private Network Operators
- Utilities
- Smart Cities
- Smart Agriculture

LORIOT

Company:	**LORIOT.io**
Country:	Switzerland
Type:	Mobile Operator, Network server supplier, Systems integrator, Consultant
Commercial Contact:	julian@loriot.io
Technical Contact:	vit@loriot.io

LORIOT

LoRaWAN™ Network Server

A scalable, resilient LoRaWAN™ Application Server with strong focus on security, big data storage, real-time data analysis and distributed operation. A solid foundation for end-to-end LoRa™ application.

API access allows simple interfacing with existing infrastructure or rapid development of custom front end. A flexible data parsing and processing engine allows for server-side data transformation and outputs well-formated data to existing systems with minimum or no adjustments needed.

Web interfaces are available for
- user roles, access rights, authentication and authorization
- definition of payload parsers
- data retrieval (real time and historical)
- device provisioning, including meta data storage
- device monitoring
- seamless integration of non-LoRaWAN™ data inputs

Numerous payload parsers are available out-of-the-box for our partner solutions. Application Server can be directly connected to the output of LORIOT Network Server.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

Australia 920 MHz

Asia 920 MHz

Focus Markets
- Private Network Operators
- Smart Cities
- Smart Agriculture
- Asset Tracking
- Building Automation

Company:	**LORIOT.io**
Country:	Switzerland
Type:	Mobile Operator, Network server supplier, Systems integrator, Consultant
Commercial Contact:	julian@loriot.io
Technical Contact:	vit@loriot.io

Orbiwise

LoRaWAN™ network server

Complete network software solution for LoRa™ based networks.

The solution includes, among other features:

- A network server, supporting all features of the LoRaWAN™ 1.0 specification
- An O&M tools suite for the operation and management of the entire network from a web-based interface. Includes extensive network debug capability.
- A Data Access Sub-system, with REST based APIs towards application servers and additional interfaces for network operator and customers

The solution already supports multiple commercially-available LoRa™ gateways.

Extensive interoperability testing conducted with different device types and protocol stacks available on the market.

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

Focus Markets

- Mobile Operators
- Private Network Operators

Company:	**Orbiwise**
Country:	Switzerland
Type:	Network server supplier
Commercial Contact:	domenico.arpaia@orbiwise.com
Technical Contact:	peter.thomsen@orbiwise.com

SICONIA™

LoRa™ Network Server (SLNS)

Based on our recognized & successful expertise in developing & deploying front end servers for nationwide utility deployment, SAGEMCOM continue to propose highly scalable, modular, robust and secure Core Network solutions, called Siconia™ LoRa™ Network Server *(SLNS)*, fully compliant to LoRaWAN™ 1.0.

Our cost efficient solution is fully relying on Virtual Machines *(VM)* architecture, whilst offering full range of Carrier grade features, such as Application & system management *(Data collection, Gateways Management, provisioning, Alarms & faults, Network supervision, Radio supervision, device supervision, Gateway & device SW Mgt)*, Engineering tools *(radio planning, radio optimization, RRM)*, Security *(KMS interface, OTA provisioning, GW Authentication, SSL, CMP)*.

Our Siconia™ LNS is already deployed by Tier-1 Operator for nationwide roll-out, and several Trials worldwide, whilst running with many different LoRaWAN™ devices from the Market.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Focus Markets
• Mobile & Fixed Operators

• Smart City

• Smart Metering

Company:	**SAGEMCOM**
Country:	France
Type:	Base station manufacturer, network server supplier
Commercial Contact:	didier.guillot@sagemcom.com
Technical Contact:	marc.legourrierec@sagemcom.com

CGI

LoRaWAN™ IoT platform provider

Our platform is a cloud-based service that empowers our clients to increase operational efficiencies and launch new services and products based on IoT capabilities—all from a single platform. The platform collects and aggregates data from potentially millions of assets that operate on different communication networks or use different protocols for communication, and makes that data available across business areas, applications and services, enabling new ways of doing business and process improvements

As assets transfer data to the platform, it processes the data and either stores it for later retrieval or distributes it to business applications for conversion into valuable business information that drives innovative products and services. The platform provides an open application programming interface (API) that allows for easy application integration, thus creating an interconnected ecosystem of devices and services

In addition, the platform provides supporting data services such as data analytics, data modeling and event processing

LoRaWAN™ Ready

January 2016

Radio Regions
   All
Focus Markets

- IoT
- M2M
- Smart City

Company:	**CGI**
Country:	Netherlands
Type:	Systems integrator Consulting, Integrated product development
Commercial Contact:	jan.dengelbronner@cgi.com
Technical Contact:	jan.dengelbronner@cgi.com

CG Wireless

LoRaWAN™ solution provider

CG-Wireless is a consulting company and Design House specialized in designing wireless products

CG-WIRELESS experienced team of engineers assist you from product specification to industrialization

Based in Brittany, CG-WIRELESS is specialized in the design of products using the most advanced radio technologies

CG-WIRELESS carries out in-house research to offer their customers turn-key radio solutions, as platform ready reference design

CGI Wireless provides a LoRa™ Reference Design, aimed to be directly integrated on the Customer PCB board

LoRaWAN™ Ready
January 2016

Radio Regions
Europe 868 MHz

Focus Markets
• Wireless sensors

Company:	**CG Wireless**
Country:	France
Type:	Module OEM, Consulting, Application provider
Commercial Contact:	claude.guichaoua@cgwi.fr
Technical Contact:	claude.guichaoua@cgwi.fr

Cari Electronic

Systems Integrator

"Cari-Linc" is new platform for connected objects made by Cari Electronic

LoRaWAN™ Ready

Date not provided

Radio Regions

Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets

- Aeronautic
- Telecommunication
- Nuclear and energy
- Medical
- Industry

Company:	**Cari Electronic**
Country:	France
Type:	Systems Integrator
Commercial Contact:	jean-pierre.ceysson@cari-electronic.com
Technical Contact:	jean-pierre.ceysson@cari-electronic.com

Gorke Electronic

LoRaWAN™ solution provider

We specialize in producing radio devices, sending and receiving, designed for remote controlling, personal security and site patrolling, as well as sending information wirelessly

A significant group of devices is a family of radio monitoring devices

We provide systems for radio transmission signals from secured fixed objects to monitoring center

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

433 MHz

136-174 MHz

Focus Markets
• Security

Company:	**Gorke Electronic**
Country:	Poland
Type:	Systems integrator Consulting, Integrated product development
Commercial Contact:	marek.gorke@gorke.com.pl
Technical Contact:	dariusz.janusek@gorke.com.pl

IMST

LoRaWAN™ Certification

The LoRaWAN® certification is first of all a protocol check of any class A device (class B and c will be covered in future) against the LoRaWAN™ specification. The following test cases are currently covered:

- OTA Activation
- Activation by personalization
- Frequency Hopping
- Data Rate Adaptation
- Transmit Power Control
- Packet Error Rate
- Confirmed Packet
- Frame Sequence Counter Check,
- 2nd Receive Window Test
- Cryptography Test
- Add Modify Channel Test
- Retransmission Test
- Rx Timing Sensitivity Test.

The report comes with qualitative and quantitative results and can be used to gather the LoRaWAN® certification from the LoRa™ alliance. If any DUT dependent failure occurs within the testing, our experienced test centre staff provide support to identify and solve the problem.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

Focus Markets
- Internet of things (IoT)
- M2M
- Smart Cities
- Smart Metering

Company:	**IMST GmbH**
Country:	Germany
Type:	Module OEM, Modem OEM, Systems integrator, Consultant, Consulting, LoRa™ Certification Test Center
Commercial Contact:	sales@imst.de
Technical Contact:	wimod@imst.de

IMST

LoRaWAN™ Integration

IMST GmbH is a leading design house and development center for wireless modules, communication systems, antennas, EDA software, and regulatory certification using an in-house accredited/certified regulatory test center. IMST offers both standard products such as radio modules with hardware/software as well as complete system and product design.

Individualized support during every phase of product development including wireless technologies like LoRaWAN, from initial consulting to series production is one of the unique selling propositions of IMST.

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
- Internet of things (IoT)
- M2M
- Smart Cities
- Smart Metering

Company:	**IMST GmbH**
Country:	Germany
Type:	Module OEM, Modem OEM, Systems integrator, Consultant, Consulting, LoRa™ Certification Test Center
Commercial Contact:	sales@imst.de
Technical Contact:	wimod@imst.de

Industrial Internet

LoRaWAN™ solution provider

Industrial Internet design solutions for internet, wireless and M2M enabled devices. For use in building automation, industrial control, asset condition monitoring and assisted living

Industrial Internet specialize in the integration of sensor networks, devices and automation systems to systems, Things, the cloud and enterprise systems using web services

Industrial Internet provides a generic industrial sensor and actuator board for rapid proto-typing and proof of concept development

Recent projects include: Wide area (LPWAN) sensor network design to monitor track circuits (signals) on rail infrastructure

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz
433 MHz

Focus Markets
• Building Automation

industrial Internet

Company:	**Industrial Internet**
Country:	UK
Type:	Sensor manufacturer, Systems integrator, Consulting
Commercial Contact:	lawrence@industrialinternet.co.uk
Technical Contact:	lawrence@industrialinternet.co.uk

Keysight

Radio Test equipment

Keysight vector signal analyzers and generator enable designers and manufacturers to verify the receiver and transmitter performance of wireless devices

Arbitrary waveforms based on model or capture data can be loaded and replayed at low signal levels to test receiver sensitivity

Transmitter spectrum occupancy can be verified. Vector Signal Analyzers can verify modulation metrics for GMSK. The 89601B FMCW Radar option can visualize and provide metrics for chirp modulated signals

Keysight Battery Drain Analysis tools enable developers to optimize software and hardware designs to extend battery lifetime

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
- Signal generation and analysis
- Battery drain analysis
- Tools for R&D and manufacturing test

Company:	**Keysight**
Country:	USA
Type:	Test and Measurement tool provider
Commercial Contact:	ian_reading@keysight.com
Technical Contact:	ian_reading@keysight.com

Lacroix Electronics

Systems Integrator

Lacroix Electronics designs, industrializes, and manufactures electronic systems for its customers' products

Lacroix Electronics has strong electronic design and manufacturing for industrial, home and building automation, automotive, medical and aerospace market segments

Our electronic manufacturing across Europe can handle complex design, mixed and high volume with multiple certifications

Our engineers are supporting customers at each phase of the design with specialties such as wireless, embedded processing, power manager, mechatronics, test, industrialization

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

433 MHz

Focus Markets
• Aerospace & Defense

• Automotive

• Home Automation

• Industrial

• Medical

• Smart Cities

Company:	**Lacroix Electronics**
Country:	France
Type:	Systems Integrator
Commercial Contact:	Sales@lacroix-electronics.com
Technical Contact:	Sales@lacroix-electronics.com

Nuri Telecom

LoRaWAN™ network solution provider

NURI Telecom is a South Korean publicly listed company, founded in 1992, offering IT integrated Enterprise Management Solutions, Wireless Telecommunication Solution, and Smart Grid-related solutions for the Electricity, Water and Gas utility companies

A leading global supplier of end-to-end AMR/AMI who has successfully deployed AMI solutions worldwide

- Over 500,000 smart electric, gas and water meters deployed
- Nuri's global partnership with industry leaders ensure interoperability and infrastructure optimization

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
- Smart Metering
- Network operators

Company:	**Nuri Telecom**
Country:	Korea
Type:	Mobile Operator, Sensor manufacturer, Base station manufacturer, Network server supplier, Systems integrator, Application provider
Commercial Contact:	sgyu@nuritelecom.com
Technical Contact:	sgyu@nuritelecom.com

Sanav

Systems Integrator

We offer customer-specific applications that are fully integrated into our customers requirements

With our innovative design, years of manufacturing experience and capabilities, together with the latest technologies such as LoRa™ we are able to deliver our customers with high quality solutions from start to finish

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
• Tracking solutions

• Industrial solutions

SANAV
San Jose Technology, Inc.

Company: **Sanav**
Country: Taiwan
Type: Systems integrator
Commercial Contact: julian.liang@sanav.com
Technical Contact: julian.liang@sanav.com

Talkpool

Systems Integrator

IoT and M2M specialist with over 15 years of radio network deployments

IoT Global Business Unit with base in Sweden with presence in Europe, Africa and Central America

Our offering include Solution Design Services, Network Roll-out and Sensors based on our generic communication platform

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
- Internet of Things
- Horizontal Solutions
- Proof of concepts
- Network planning & Roll Out

Company:	**Talkpool**
Country:	Sweden
Type:	Sensor manufacturer, Systems integrator, Consulting
Commercial Contact:	robert.spertina@talkpool.com
Technical Contact:	stefan.lindgren@talkpool.com

TTP

Consultancy and product development

TTP is a leading independent developer of products and technologies, active in healthcare, industrial, utility, enterprise, consumer and smart city markets

Our specialist integration service develops low-cost, differentiated products ready for volume production by our customers or contract manufacturer partners

TTP's communications group is a major center of wireless expertise, with an outstanding track record in the development of new wireless protocols, standards and software stacks

LoRaWAN™ Ready
Yes

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
• Industrial

• Utilities

• Enterprise

• Smart City

Company:	**TTP**
Country:	UK
Type:	Systems integrator Consulting, Integrated product development
Commercial Contact:	antony.rix@ttp.com
Technical Contact:	antony.rix@ttp.com

TTP

TTPClip reference design

TTPClip is a reference design for an ultra-low cost pervasive wireless sensor. It measures key parameters of the environment and communicates these to cloud-based management systems, for applications including asset tracking, energy, security and social care. Using LoRaWAN™ for the low-power wide area connection will help to ensure long battery life, while avoiding the need for proprietary gateway devices or networks.

TTPClip is part of TTP's consultancy, design and product development services that we offer to companies wishing to deploy Internet of Things (IoT) solutions at scale.

LoRaWAN™ Ready
Date not provided

Radio Regions
Europe 868 MHz

USA 915 MHz

Asia 470 MHz

433 MHz

Focus Markets
- Industrial
- Utilities
- Enterprise
- Smart City

Company:	**TTP**
Country:	UK
Type:	Systems integrator Consulting, Integrated product development
Commercial Contact:	antony.rix@ttp.com
Technical Contact:	richard.sims@ttp.com

Select Software Solutions

LoRaWAN™ solution provider

For two decades our business has specialized in large volumes of transactions with full validation, reconciliation, rating, tariffing and billing.The Selcomm Suite from Select Software – IOT Billing has withstood the challenge of billing enormous volumes of data efficiently, quickly and accurately. Our solution and support provide you with flexible, robust and scalable solutions for competitive edge and rapid time to market.

The Converged Billing and BSS handles every element of Device Management, Charging, Billing, Ordering, Provisioning, Customer Care, Dealers, CRM, and integration with existing enterprise solutions - worldwide. We provide services to incorporate multiple vendor solutions to meet your business needs exactly.

Crucially, we provide Billing and Customer Care services to the exact degree needed, integrating with your existing systems to ensure the smoothest and most cost effective outcome. Whatever you need, we provide it – one, some, or all elements.

LoRaWAN™ Ready
Yes

Radio Regions
All

Focus Markets
- IoT
- M2M
- Operator
- Utilities

Company:	**Select Software Solutions**
Country:	Australia
Type:	Systems integrator Consulting, Integrated product development
Commercial Contact:	JohnC@IoT-Billing.com
Technical Contact:	JohnC@IoT-Billing.com

SRETT

LoRaWAN™ telemonitoring solutions

SRETT designs and supplies complete telemonitoring systems:

- Battery powered wireless sensors
- Gateways
- IoT platform
- Customized metier application

LoRaWAN™ Ready

Yes

Radio Regions

Europe 868 MHz

USA 915 MHz

Asia 470 MHz

Focus Markets

- Oil & Gas
- Healthcare
- Aeronautic

SRETT

Company:	**SRETT**
Country:	France
Type:	Sensor manufacturer, Base station manufacturer, Systems integrator
Commercial Contact:	a.berthier@srett.com
Technical Contact:	m.longhin@srett.com

Stream Technologies

LoRaWAN™ solution provider

Stream provide IoT and M2M connectivity via IoT-X, a Unified Access Connectivity Environment

IoT-X enables commercial data networks to Monitor, Manage, and Monetize LoRaWAN™ deployments

IoT-X also extends network capabilities for provisioning subscribers, customer segmentation, data routing and transit, and accelerates IoT Deployments

LoRaWAN™ Ready

Yes

Radio Regions

All

Focus Markets

- Mobile Operators
- Private Network Operators
- IoT Operators
- Utilities
- Governments
- SMART Cities

Company:	**Stream Technologies**
Country:	UK
Type:	Systems integrator, Application provider
Commercial Contact:	tracy@stream-technologies.com
Technical Contact:	tracy@stream-technologies.com