

Wavenis Technology Platform

Product summary

An optimized ultra-low-power and long-range wireless solution for M2M applications

The wireless industry is evolving in giant steps, with ever-growing numbers of devices connected to each other in all types of industrial and domestic environments. Many technologies focus on providing high-speed connections for multimedia, information and entertainment applications. At the other end of the spectrum, a new type of smart devices based on wireless sensors have a very different set of requirements, such as:

- Multiple years battery life
- Connections up to hundreds of yards
- Deployment in hard-to-reach places
- Low traffic
- Small amounts of data

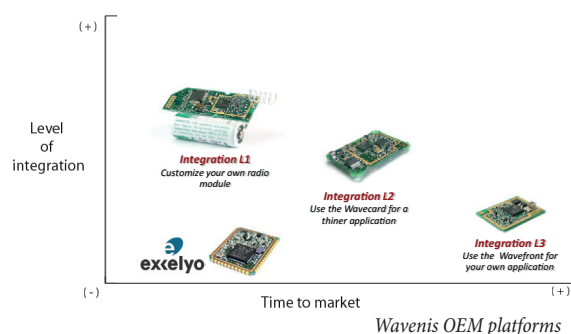
Wavenis wireless technology is the first solution on the market to offer the optimal trade-off of these key features, providing unprecedented convenience and connectivity for consumers and service operators.

Over 7 million Wavenis products deployed

Wavenis technology was designed and developed by wireless experts to meet the needs of the utility industry as well as to provide a wireless standard for a variety of other sensor-related fields with similar cost-performance requirements.

This includes home comfort, alarms, home healthcare, centralized building management, access control, cold-chain monitoring, plus long-range UHF RFID applications for identifying, tracking, and locating people and objects. Robust 2-way communications give Wavenis customers a unique way to create applications that meet their exact expectations in all these areas.

OEM platforms that meet your time-to-market needs



Wavenis allows integrators and OEMs to innovate in their markets with a wireless solution that has been proven effective around the world. Several Wavenis platform options are available depending on your time-to-market and volume constraints:

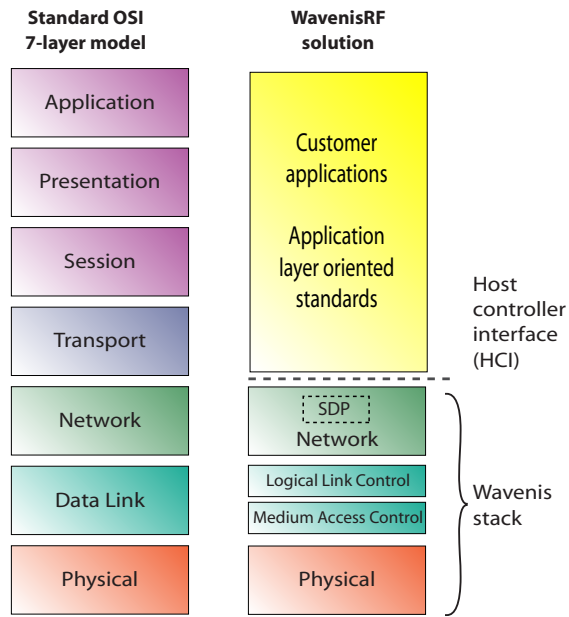
	Wavefront	Wavecard	Excelyo	Vertical solutions
Wavenis transceiver	✓	✓	✓	✓
Microcontroller		✓	✓	✓
Casing ¹ , battery ¹ , antenna				✓

The pervasiveness of wireless devices in the coming years is incontestable and even though no single technology can be used in all cases, Wavenis is the only technology in the ultra-low-power market supporting such a wide variety of application-oriented standards, wireless applications and services reliably.



Wavenis Properties Overview

- Operates in license-free ISM 433, 868 or 915MHz
- EN300-220 / FCC15.247 certified & compliant
- Typical rate:
 - 9.6kbps (433 & 868MHz)
 - 19.2kbps (915MHz)
 - more on demand
- Frequency Hopping Spread Spectrum (FHSS)
- GFSK modulation
- Single channel operation for narrowband applications (alarms)
- Data interleaving, Forward error Correction BCH (31,21)
- Automatic Frequency Control (AFC) for optimal performances over operating lifetime
- Quality of Service management (RSSI) and output power control
- Point-to-Point, Point-to-Multipoint (broadcast, polling) modes and native repeater (up to 3 hops)
- Tree and star network topologies
- Designed for reliability, power savings, network coexistence
- Accesses hard-to-reach devices with link budget of 124dB (25mW)
 - Line-of-sight range up to 1km (25mW / +14dBm)
 - Line-of-sight range up to 4km (500mW / +27dBm)
 - Sensitivity: -110dBm @ 9.6kbps

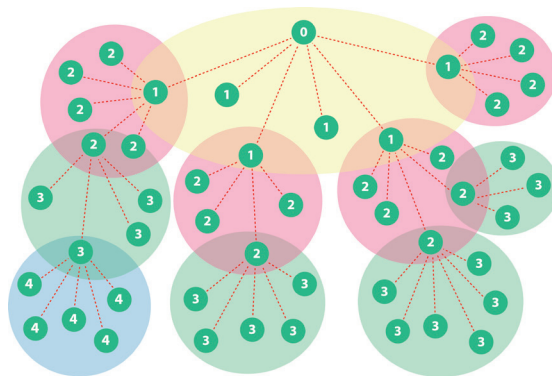


Wavenis provides a highly specialized ultra-low-power and long range RF solution

Scalable wireless mesh networking

Wavenis-powered wireless products support mesh network configurations scalable up to any size. Data exchange can be partially or entirely automated, depending on the application. Wavenis wireless technology provides the ultra-low-power and long-range connections required by today's most demanding networked devices, including:

- Ultra-low power consumption
- Long wireless range capability
- Robustness against physical and electrical interferences
- Openness to WAN and complementary wireless technologies
- Developer APIs and product development toolkit



Flexible machine-to-machine networks of any size

(1) For ready-to-use versions only

Evaluation kit available!
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