



Communication skills for ultra low powered objects



ACCESSING WAVENIS SENSOR NETWORKS FROM FIXED PCs AND MOBILE HANDHELDS

Complete mobility and easy access to installed Wavenis sensor modules of all kinds – Waveport gives you both. With USB, Compact Flash/PCMCIA card, or serial connections for your laptop or handheld PC, Coronis Waveport is the ideal accessory for reading, controlling, and configuring Wavenis-based wireless sensors in a wide variety of industrial, domestic, and professional applications.

Whichever connection type you choose, this versatile product lets you connect mobile equipment directly to installed Wavenis nodes in wireless mesh networks. Waveport is as useful in automatic metering, telemetry, and industrial monitoring, as it is in access control, security, healthcare, and UHF RFID systems. Use it with your application-specific software to read and control remote sensors quickly and wirelessly, saving the time and expense of manual operations. When used in conjunction with the Coronis Wavehub data concentrator, for example, you can query a single module to get the latest readings from up to a hundred sensors in a single action.

EASY CONNECTIONS FOR YOUR SOFTWARE TOOLS

With its Win 32 DLL and Active X drivers, there's no limit to the applications you can use with Waveport. Our fully documented application programming interfaces (APIs) allow you to write custom applications to meet your exact needs, and to configure Waveport's internal parameters and services to match your installed network nodes. Frequency hopping (FHSS) and data interleaving ensure robustness and interference-free wireless operation. From network configuration and administration to walk-by data monitoring, Waveport provides a robust connection to the entire line of Wavenis-powered solutions.



Available with external antenna connector for custom integration and ruggedized readers

- Access Wavenis networks with mobile computers and handhelds in walk-by scenarios
- Manage Wavenis LAN configurations from your PC
- USB, RS-232, or Compact Flash (type II) connectors
- Benefit from wireless features for your software applications



Indispensable field tools for wireless mesh sensor networks



Waveport Specifications

GENERAL FEATURES

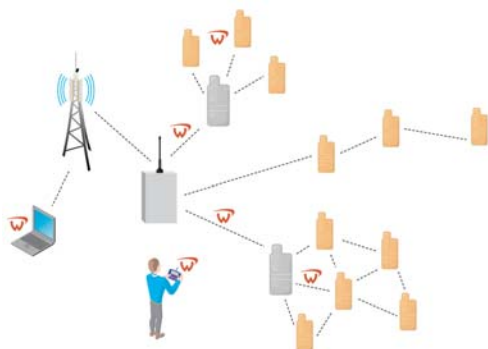
- Integrated Wavenis platform with protocol stack
- 25mW class for ultra low power
- 500mW class for very long-range
- Temperature range:
 - Operating -20° / +70°C (-4° / - 158°F)
 - Storage -40° / +85°C (-40° - 185° F)
- Dimensions
 - USB:** 9.6 x 4.7 x 2.4 cm (3.7 x 1.9 x 0.9 in.); **Serial:** 5.5 x 2.5 x 10 (2.2 x 1 x 0.4 in); **CF II:** 5.2 x 4.3 x 0.6 cm (0.2 x 1.7 x 0.2 in)
- Serial module includes 1 m cable and 4.5-6V DC power supply

SYSTEM REQUIREMENTS

- Windows® 98, Me, 2000 or XP, or Windows Pocket PC and CE.net / Mobile 2003
- USB or serial port for external Waveport
- CF (or slot for using CF card with PCMCIA adapter)

WAVENIS PROTOCOL STACK

- Point-to-Point, Point-to-Multipoint (broadcast, polling), and repeater modes
- Tree, star, and mesh network topologies
- Self-configuration and dynamic routing algorithm optimized for ULP networks
- Programmable access time: standby-receive duty cycle in operating mode 10ms < 1s (typical value) < 10s
- Complete Wavenis API Host Controller Interface (HCI)
- Active X drivers: Win32, and WinCE.net Windows; Wavenis DLL for Win32



RF PROPERTIES

- Operates in license-free ISM 433 868, and 915 MHz frequency bands
- FCC15.247 / ETS300-220 certified
- 4.8 – 100 kbps throughput (typical usage around 10 kbps)
- Designed for reliability, power savings, network coexistence
- Frequency Hopping Spread Spectrum (FHSS)
- Single channel operation for narrowband applications (alarms)
- GFSK modulation
- Data interleaving, Forward Error Correction BCH (31,21)
- Quality of Service management (RSSI) and output power control
- Automatic Frequency Control (AFC) for optimal performance over operating lifetime
- Automatic sensitivity threshold management for increased power savings
- Accesses hard-to-reach devices with link budget of 125 dB (25mW) or more
 - Line-of-sight range up to 1 km (25mW)
 - Line-of-sight range up to 4 km (500mW)
 - Up to +15 dBm & +27dBm output power
 - Sensitivity: -110 dBm @ 9.6 kbps Frame Error rate: 0.1% with Wavenis protocol

COMPATIBLE SOLUTIONS

- All Wavenis-based wireless products
- Wavewalk, Wavenet Manager, and Wavenet Builder software

Waveport products use the Coronis Wavecard, and may be branded with your company name and logo. Please inquire about using this solution in your own custom-designed products. Write to info@coronis-systems.com.