

A DEPLOYMENT-READY CELLULAR GATEWAY SOLUTION FOR TRANSMITTING MEDICAL DEVICE DATA TO THE CLOUD

The 2net™ Hub serves as an “information highway”, enabling machine-to-machine (M2M) connectivity for medical devices into and out of the home. The 2net Hub is a compact plug-and-play connectivity gateway comprised of three short-range radios that collect data from medical devices and biometric sensors, and then sends that data via its wide area network (WAN) cellular module to the 2net Platform’s cloud-based data server. The 2net Platform is a new service offered by Qualcomm Life, a wholly owned subsidiary of Qualcomm Incorporated.

The 2net Hub: Seamless Connectivity

The 2net Hub, one of the four gateways used to access the 2net Platform’s data center, delivers a new dimension of short-range radio flexibility, security and seamless data transfer, while serving as the information highway for machine-to-machine (M2M) connectivity for medical devices into and out of the home. The 2net Hub is an FDA-listed, compact plug-and-play connectivity gateway that supports Bluetooth, Bluetooth Low Energy, WiFi and ANT+ local area radio protocols. The 2net Hub is Continua-certified, and also supports 3G and 2G cellular communications.

- **Bluetooth:** The 2net Hub supports Class 2 Bluetooth ver 2.1 + EDR capable of maintaining simple pairing and data rates of 2Mbps, while supporting connections with both Continua Certified and non-Continua medical devices with one or more of the following profiles: GAP, SDAP, SPP, or HDP. Bluetooth Low Energy (LE) mode is planned with a future firmware upgrade.
- **WiFi:** The 2net Hub provides 802.11 a/b/g/n Micro AP module capable of performing WPA2 secure Access Point functionality.
- **ANT+:** The 2net Hub supports the ANT+ protocol deployed in a growing number of medical devices.
- **Wireless Wide Area Network (WWAN):** The 2net Hub provides over-the-air connectivity between medical devices and the 2net Platform’s cloud-based data center. The WWAN module allows for HSDPA/EDGE/GPRS/GSM connectivity, and supports HSDPA DL [3.6 mBPS/ul: 384 KBPS] and other supported bands including UMTS 850 / 1900MHz, with fallback of EDGE/GPRS/GSM 850/900/1800/1900MHz and mobile terminated SMS.

Processor/Operating System

The 2net Hub’s core processor features a 32bit ARM9-based microcontroller to power an Android-based “Gingerbread” operating system that allows for easy extensibility of features over-the-air.

Memory and Storage

The 2net Hub includes memory sized to allow for headroom with 256MB RAM and 512MB NAND.

Security & Standards

The 2net Platform and Hub support SSL secure communication of data and are FDA listed as a Class 1 Medical Device Data System (MDDS). The MDDS device was designed, developed and manufactured in accordance with a quality system compliant with ISO13485 standards, meaning it aligns with the quality requirements of U.S. and international regulatory agencies in the healthcare industry.

The 2net Platform

The 2net Platform is truly unique, designed to be a technology-agnostic cloud-based service that interconnects customers’ medical devices so that information is easily accessible by device users and their healthcare providers and caregivers. It offers two-way connection capabilities and a broad spectrum of connection options, including four gateways that connect to the 2net Platform’s data center:

- The 2net Hub - a standalone FDA-listed external device
- Medical devices with an embedded cellular component
- Medical data sent from mobile phones
- Service platform integration between the 2net Platform to customer service platforms using application programming interfaces (APIs)