QNX | BlackBerry Subsidiary

PRODUCT BRIEF

QNX SDK for Bluetooth Connectivity

The advancements in Bluetooth technology over the years have led to explosive growth in Bluetooth and Bluetooth Low Energy devices in a wide range of general embedded markets including medical, industrial, consumer electronics, and automotive. With the surge in numbers of Bluetooth Low Energy (BLE) devices of late, many embedded systems will need to be capable of communicating with both these low energy peripherals as well as traditional Bluetooth devices, over a range of different profiles.

The QNX® SDK for Bluetooth® Connectivity, is a reliable and flexible software offering compliant with the Bluetooth Core Specification version 4.2, supporting a broad set of profiles and services. In addition, the SDK includes an optional IEEE 11073 Personal Health Data (PHD) stack to enable easy interoperability with a variety of personal health devices such as pulse oximeters and weight scales, for medical applications.

A flexible Bluetooth Smart Ready® stack – comprehensive offering, no vendor lock-in

Developers are faced with many considerations in selecting a Bluetooth host stack for their embedded platforms. These include choosing one that scales with changing requirements, and can be easily ported to different hardware configurations to accommodate low to high-end systems with minimal code changes.

The QNX SDK for Bluetooth Connectivity is a comprehensive, scalable solution, providing a range of Classic and BLE profiles to suit different applications, as well as the ability to augment the stack to support new profiles as required. The SDK has been ported to ARM and x86 processor architectures on different SoCs, running the QNX Neutrino OS. The stack also supports the host controller interface (HCI) protocol for standardized communication between host processor and Bluetooth radio module or chipset, making it possible to easily swap out processor or Bluetooth hardware, with minimal to no software changes.

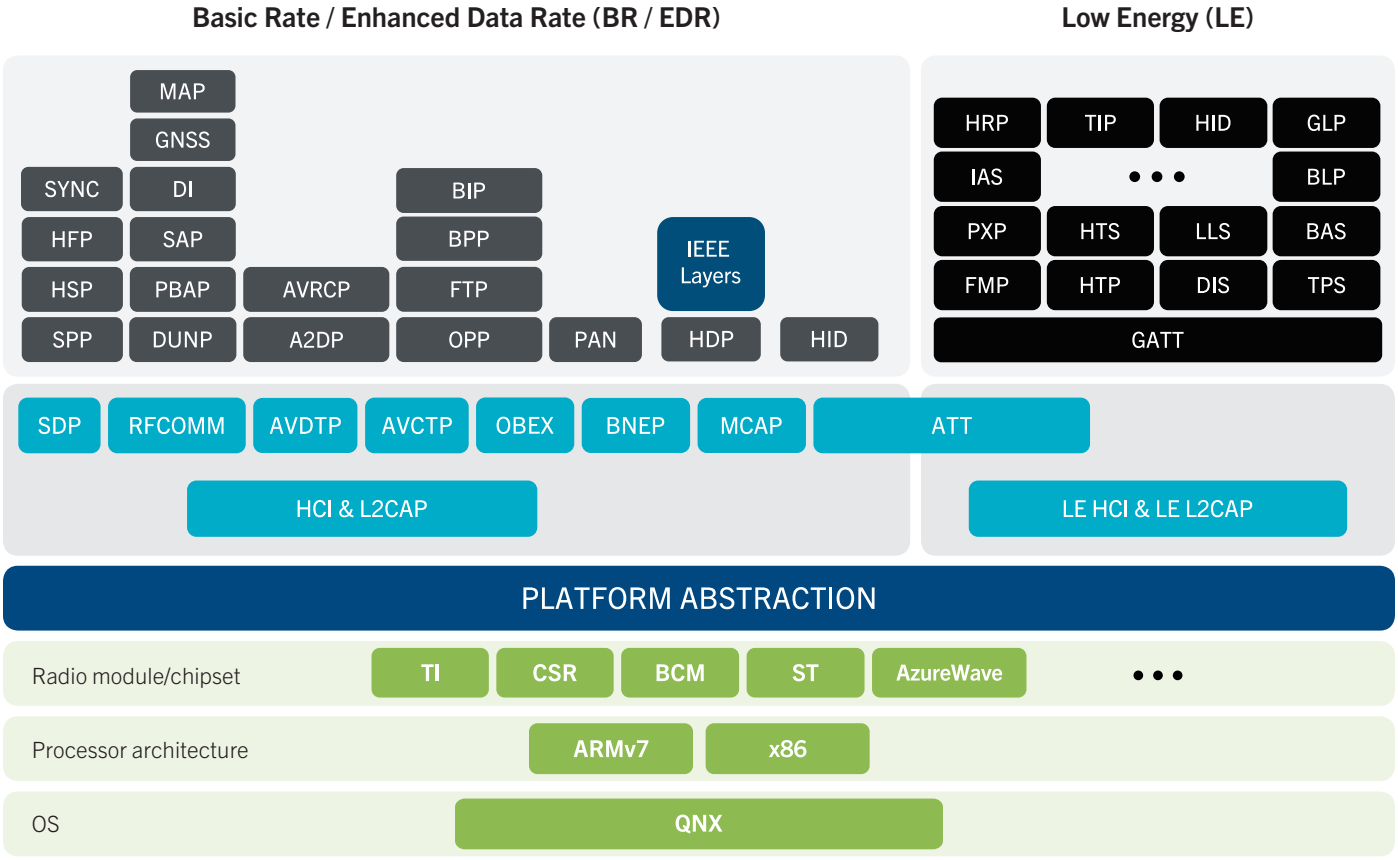
Proven and certified intellectual property (IP), compliant with latest Bluetooth specification helps guarantee interoperability

The QNX SDK for Bluetooth Connectivity is compliant to the latest version of the Bluetooth Core Specification, version 4.2. Deploying a system with IP that maintains lock-step with the latest adopted standard helps guarantee maximum interoperability with existing in-field devices. A system built with a 4.2 compliant stack will be compatible with other 4.2 Bluetooth-enabled devices, in addition to legacy devices.

Mindtree's Bluetooth IP, at the heart of the QNX SDK for Bluetooth Connectivity, has shipped in millions of systems worldwide over the last decade. The Bluetooth IP has been certified by the Bluetooth Special Interest Group (SIG), and the IEEE 11073 stack has been certified by the Continua Health Alliance. Pre-certification of these middleware components provides a much easier path to system certification.

Product and service offerings – reap the benefits of a single supplier

Choosing the QNX SDK for Bluetooth Connectivity reduces the risks of interfacing with multiple suppliers for different components of the software stack. Customers benefit from receiving more of the overall software solution from a single supplier – operating system, Bluetooth stack protocols and profiles, and possibly other middleware components. Adding services to the mix can dramatically streamline development cost, reduce risk, and accelerate time-to-market. Tasks such as custom hardware ports, HCI driver development, sub-system integration, interoperability testing, and application development can be offloaded, so customers can focus on their areas of expertise. Having a dedicated supplier as a single point of contact to help customers solve tough integration and development issues can make all the difference in meeting start of production deadlines, on schedule and on budget.



Note: Not all Bluetooth profiles are illustrated in diagram

Product Packages

- Package 1: 4.2 dual mode Bluetooth stack protocols with PAN and SPP – Classic Bluetooth profiles
- Package 2: 4.2 dual mode Bluetooth stack protocols with
  - Classic Bluetooth profiles: PAN, SPP, HDP, HID (host), FTP, OPP and
  - Low Energy profiles: HRP, HOGP (host), PXP, FMP, BAS
- Package 3: Pkg 2 + IEEE 11073 stack with support for pulse ox and weight scale device specializations

Hardware Support

- Processor architectures:
  - ARMv7
  - x86
- Supports any Bluetooth certified radio module, chip set that supports HCI over a USB or UART transport

Target Reference Implementations

- Freescale i.MX6 SABRE Smart + TI WiLink 8 radio module
- TI OMAP5 uEVM + TI WiLink 8 radio module
- Intel NUC (BayTrail) + AzureWave AW-CB178NF (Marvell-based)

Professional Services

- Ports to custom hardware
- System integration and optimization
- HCI driver development
- Add-on Classic or Low Energy profiles
- Interoperability testing
- Application development

Note: The QNX SDK for Bluetooth Connectivity must be installed with an existing QNX SDP 6.6 development seat (not included).

About QNX Software Systems

QNX Software Systems Limited, a subsidiary of BlackBerry, is a leading vendor of operating systems, development tools, and professional services for connected embedded systems. Global leaders such as Audi, Cisco, General Electric, Lockheed Martin, and Siemens depend on QNX technology for vehicle infotainment units, network routers, medical devices, industrial automation systems, security and defense systems, and other mission- or life-critical applications. Founded in 1980, QNX Software Systems Limited is headquartered in Ottawa, Canada; its products are distributed in more than 100 countries worldwide. **Visit www.qnx.com**

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