



Mindtree

A Larsen & Toubro Group Company

Welcome to possible



BlueWiz Dual Mode Bluetooth v5.2

Optimized Link Layer, Digital PHY, Comprehensive Stacks and Profiles.

Introduction

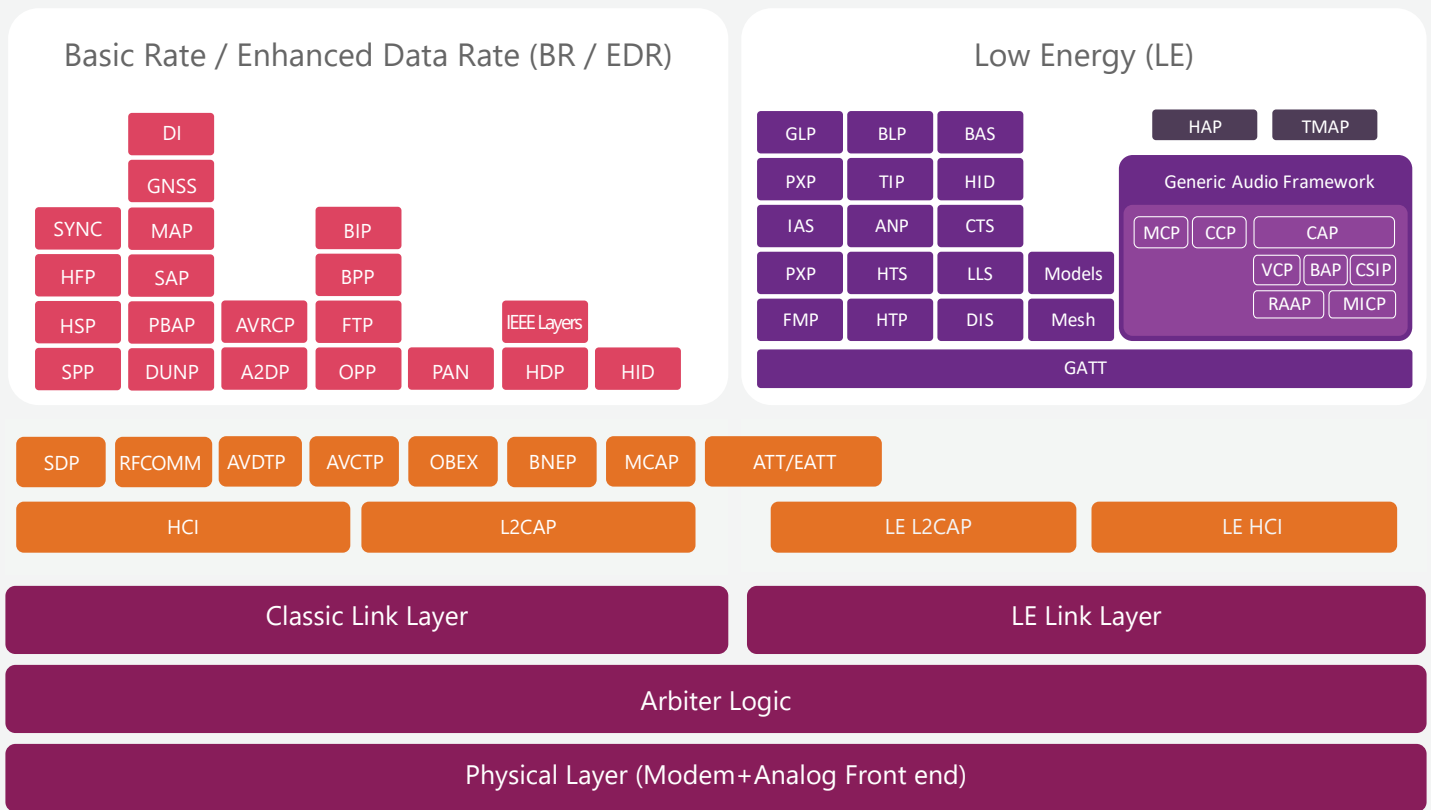
BlueWiz is Mindtree's Dual Mode Bluetooth Semiconductor IP, which supports v5.2 Bluetooth specification. Mindtree has invested over 500 person-years in Bluetooth technology since 2000. We have implemented several Bluetooth specifications and certified them (Bluetooth SIG - search for Mindtree).

As an IP provider, Mindtree is one of the few companies that is committed to Bluetooth technology. The BlueWiz IP comprises the following modules.

- Dual Mode Baseband
- Digital Modem
- Stack and Profiles

Product Features

BlueWiz IP has two component IPs – BlueWiz Baseband and BlueWiz-SP (Stack and Profiles).



BlueWiz Baseband is a hardware firmware solution that consists of Firmware (HCI+LM+LC+LL (BR/EDR + Bluetooth LE)) and Hardware Accelerator (BR/EDR + Bluetooth LE).

Key Features

- Firmware optimized for low code and data foot-print
- Hardware accelerator for time critical function, encryption engines and interface to modem
- Firmware to manage links and interface to host layer
- Registers for configuration, control and status
- Interrupt from hardware to request service
- FIFO for data exchange
- OS, MCU and transport abstraction layers for easy portability

BlueWiz - SP (Stack and Profiles) is designed to be easily portable across a variety of processors, chipsets, transport and OS.

Key Features

- Implements dual mode stack, profiles and GAF
- Supports all mandatory and optional features, and all adopted profiles and services
- Architected for low memory footprint, Portable across 8/16/32-bit microcontrollers application development framework for all implemented profiles
- Clean abstraction layers for OS, transport and microcontrollers for easy integration into required platforms
- ANSI C code that enables easy portability to processor of choice
- Modular configurable architecture
 - Feature/compilation flags for core Stack and Profiles
 - Runtime/compile time tunable parameters
- Testability support in design

Key Benefits of Partnering with Mindtree

Reduced development risk

- Robust, interoperable and optimized implementation
- Leverages over 21 years of experience in helping product companies engineer low footprint and low power applications

Faster time-to-market

- Total Dual Mode Bluetooth solution comprising Baseband, Modem, Stack and Profile
- Well-defined platform with abstraction layer for easy and risk-free porting and integration
- Highly customizable for product-specific optimization and differentiation

Reduced product costs

- Optimized use of resources for low footprint, gate count and MIPS
- Bluetooth-specific power management for ultra-low power consumption
- Backed by solid documentation

Competitive differentiation

- Supports all mandatory and optional features, and all modes, with extensive profile support
- One-stop-shop for total solution in Dual Mode Bluetooth
- Flexible support in various stages of development and productization cycle
- Helps customers win business by adding new profiles, feature licensing and providing support in selling

BlueWiz Deliverables

Hardware

- Synthesizable Verilog RTL
- Behavioral models
- Module test bench and test cas

Development Tools/Platforms

- BlueWiz FPGA platform
- Flash download utility
- HCI Commander – HCI application


Software

- HCI/LM/LC/LL firmware source code in C
- Transport drivers (UART, USB)
- Platform drivers for development platform
- OSAL for MINT OS/FreeRTOS

Documents


- BlueWiz architecture document
- BlueWiz verification document
- SoC integration approach note
- User manuals for development tools

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About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company, helping enterprises marry scale with agility to achieve competitive advantage. "Born digital," in 1999 and now a Larsen & Toubro Group Company, Mindtree applies its deep domain knowledge to 275+ enterprise client engagements to break down silos, make sense of digital complexity and bring new initiatives to market faster. We enable IT to move at the speed of business, leveraging emerging technologies and the efficiencies of Continuous Delivery to spur business innovation. Operating in more than 15 countries across the world, we're consistently regarded as one of the best places to work, embodied every day by our winning culture made up of over 22,000 entrepreneurial, collaborative and dedicated "Mindtree Minds."