Packetcraft Controller

Product Brief

Highlights:

- Bluetooth LE 5.4 qualified, including PAwR
- Full Bluetooth LE 5.3 and 5.2 feature sets including isochronous BIS, CIS, ISOAL, LE power control, supporting all device roles and states
- Full Bluetooth LE 5.1 and 5.0 feature sets including 2Mbps, long range, AoA/AoD distance ranging, extended advertising & scanning
- Hardware abstraction layer supports portability to different CPUs, radios, OS
- Optimized for limited resource embedded systems
- Simultaneous BLE and 15.4

Applications:

- Advanced Bluetooth audio: TWS earbuds, speakers, headphones, hearing aids
- Health & fitness devices
- Talking sensors
- Auracast™ broadcast audio wireless infrastructure
- Bluetooth LE semiconductors
- Multi-protocol wireless chips

Contact:

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Highly Optimized Bluetooth Qualified LE Controller

Packetcraft's innovation and first-to-market Bluetooth qualifications support customers with early access to new features and mature extensively tested solutions. Packetcraft is the first independent software company to have a Bluetooth 5.4 qualified solution that includes the host protocol stack and link layer with support for all low energy features of the specification including Periodic Advertising with Responses (PAwR). Additionally, Packetcraft's link layer achieved first qualification with Bluetooth 5.3 isochronous channels, which enable multi-stream audio and Auracast™ broadcast audio. Packetcraft's ships commercial software with some products now in the market.

Packetcraft Controller sets a high bar for embedded software features, robustness and efficiency. Packetcraft Controller implements a Bluetooth 5.4 link layer with optional 802.15.4 MAC, using a common radio event scheduler for simultaneous multi-protocol operation. An optional Link Robustness Package can further improve robustness and interference resistance, targeted at improving audio quality and streaming performance with DAA, Dynamic Power Control, and Antenna Switching. Packetcraft Controller is ideal for chip companies looking to accelerate time-to-market with full access to source code.

When combined with Packetcraft Host and/or Packetcraft LC3, licensees receive a comprehensive, fully-integrated Bluetooth LE solution from a single software supplier complemented with exceptional support. Also offered is Packetcraft Controller Tester, a versatile tool for testing the link layer and 15.4 MAC. This Python-based tool includes scripts implementing thousands of test cases for Bluetooth qualification, with optional support for hundreds more Packetcraft developed test cases.

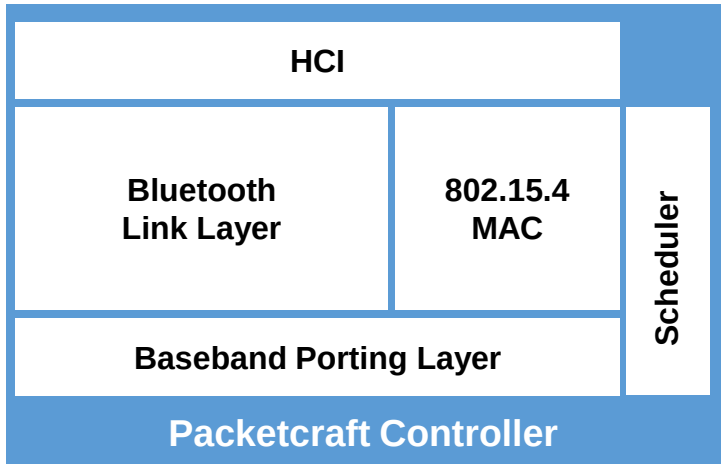
Features

- Full BLE 5.4 feature set including: PAwR
- Full BLE 5.3 feature set including: LE enhanced connection update & LE channel classification
- Full BLE 5.2 feature set including: Isochronous BIS and CIS, ISOAL, and LE power control
- Full BLE 5.1 feature set including: 2Mbps, long range, extended advertising & scanning, and optional AoA / AoD support
- 802.15.4 MAC with concurrent LE & 15.4 operation (optional add-on)
- Architected for portability to different radios

Packetcraft, Inc
With several hundred million devices enabled, Packetcraft continues to deliver a legacy of extensively used and well-tested embedded software and protocol stacks for Bluetooth Low Energy.

Packetcraft prides itself on both efficient design and achieving first-to-market qualifications which help ensure their customers are at the leading-edge for product innovation and distinction.

Packetcraft's leadership in Bluetooth LE began in 2009 with the founding of Wicentric, continued through Arm's ownership in 2015, and is maintained today as new technological innovations such as LE Audio, PAwR, and Channel Sounding come to market.



Compliance

Packetcraft Controller is qualified to the Bluetooth LE specification v5.4. Fully qualified and listed with the Bluetooth SIG, QDID is 203230.

Deliverables

- API source code files
- Full source code or object code library (license tier)
- API documentation
- User's guide and release notes

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