

# Isochronous Adaptation Layer (IAL)

## **Bluetooth® Implementation Conformance Statement (ICS) Proforma**

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# Contents

- 1 General principles ..... 4
  - 1.1 Implementation Under Test (IUT) identification ..... 4
  - 1.2 Enforcement of inter-layer dependencies ..... 4
  - 1.3 Supported features ..... 5
  - 1.4 LL requirements ..... 5
- 2 References ..... 6
- 3 Revision history and acknowledgments ..... 7



# 1 General principles

## 1.1 Implementation Under Test (IUT) identification

Using the Bluetooth SIG qualification tool, the implementer is expected to declare details about what will be implemented.

## 1.2 Enforcement of inter-layer dependencies

This ICS includes one or more tables with inter-layer dependencies (ILDs). ILDs are used for specification requirements that are dependent on other supporting specifications. ILDs can refer to an individual ICS item in a separate layer (individual ILD), or it can refer to the full layer (full-layer ILD).

ILDs residing in an X2Core layer will be enforced from the Bluetooth SIG qualification tool in the following conditions, depending on where the referred ILD is residing:

| Referred ILD resides in | Individual ILD  | Full-layer ILD  |
|-------------------------|---|---|
| Controller layer        | Core-Complete configuration, or Referred layer is supported                             | N/A   |
| Lower HCI layer         | HCI is supported  | N/A   |
| Upper HCI layer         | Core-Host configuration, or UHCI is supported   | N/A   |
| Host layer              | Core-Host configuration, or Core-Complete configuration, or Referred layer is supported | N/A   |
| X2Core layer            | Core-Host configuration, or Core-Complete configuration, or Referred layer is supported | Core-Host configuration, or Core-Complete configuration |

Table 1.1: Enforcement of an ILD within the Bluetooth SIG qualification tool

## 1.3 Supported features

**Table 1: Supported Features**

| Item | Capability                              | Reference | Status |
|------|---|-----------|--------|
| 1    | Segmentable Framed Data Traffic         | [1] 2.2   | M      |
| 2    | Unframed Data Traffic                   | [1] 2.1   | M      |
| 3    | Connected Isochronous Stream Adaptation | [1] 2     | O      |
| 4    | Broadcast Isochronous Stream Adaptation | [1] 2     | O      |
| 5    | Synchronized Receiver Adaptation        | [1] 2     | O      |
| 6    | Unsegmented Framed Data Traffic         | [2] 2.2   | O      |

## 1.4 LL requirements

**Table 2: LL Requirements**

| Item | Capability                                | Reference | Status | Inter-Layer Dependency |
|------|---|-----------|--------|------------------------|
| 1    | Connected Isochronous Stream - Central    | [1] 2     | C.1    | [3] LL 9/31            |
| 2    | Connected Isochronous Stream - Peripheral | [1] 2     | C.1    | [3] LL 9/32            |
| 3    | Isochronous Broadcaster                   | [1] 2     | C.2    | [3] LL 9/33            |
| 4    | Synchronized Receiver                     | [1] 2     | C.3    | [3] LL 9/34            |
| 5    | Unsegmented Framed Mode                   | [1] 2.2   | C.4    | [3] LL 9/53            |

- C.1: Mandatory to support at least one IF IAL 1/3 “Connected Isochronous Stream Adaptation”, otherwise not defined.
- C.2: Mandatory IF IAL 1/4 “Broadcast Isochronous Stream Adaptation”, otherwise not defined.
- C.3: Mandatory IF IAL 1/5 “Synchronized Receiver Adaptation”, otherwise not defined.
- C.4: Mandatory IF IAL 1/6 “Unsegmented Framed Data Traffic”, otherwise not defined.

## 2 References

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- [1] Specification of the Bluetooth System, Volume 6, Part G (Isochronous Adaptation Layer), Version 5.2 or later
- [2] Specification for the Bluetooth System, Volume 6, Part G (Isochronous Adaptation Later), Version 6.0 or later
- [3] ICS Proforma for Link Layer (LL)

### 3 Revision history and acknowledgments

#### Revision History

| Publication Number | Revision Number | Date                    | Comments   |
|--------------------|-----------------|-------------------------|--|
| 0                  | p0              | 2020-01-07              | Approved by BTI on 2019-12-22. Prepared for TCRL 2019-2 publication.   |
|                    | p1r00–r04       | 2020-02-21 – 2021-06-11 | TSE 13553 (rating 1): Updated Table 1 C.1 conditional to properly reference LL feature Connected Isochronous Stream Slave as LL 9/32.<br>TSE 15449 (rating 1): Updated instances of “Master” to “Central” and “Slave” to “Peripheral”.<br>Template-related and consistency checker editorials. |
| 1                  | p1              | 2021-07-13              | Approved by BTI on 2021-06-27. Prepared for TCRL 2021-1 publication.   |
|                    | p2r00–r04       | 2024-05-20 – 2024-07-31 | Incorporated changes from Enhancements_for_ISOAL_TEST_CR_r12: In Table 1, updated the Capability for Item 1 and added Item 6 and C.4. Updated the list of references. Incorporated integration review feedback and made template-related and consistency checker editorial updates.            |
| 2                  | p2              | 2024-09-04              | Approved by BTI on 2024-08-14. Prepared for TCRL 2024-2 publication.   |
|                    | p3r00           | 2025-01-30              | TSE 26827 (rating 2): Updated 1/3–1/6 to Optional and removed all conditionals. Added new Table 2 to cover LL ICS items through ILDs. Added a reference to the LL ICS to the references list.  |
| 3                  | p3              | 2025-05-06              | Approved by BTI on 2025-04-16. Prepared for TCRL 2025-2 publication.   |

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