

# Heart Rate Service (HRS)

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

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# 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

## 2 ICS declarations

### 2.1 Versions

Table 0: X.Y Versions

Item	Version	Reference	Status
1	HRS v1.0	[1]	M

### 2.2 Transports

Table 1: Transport Requirements

Item	Transport	Reference	Status
1	Service supported over BR/EDR	[1] 1.5	C.1
2	Service supported over LE	[1] 1.5	C.2, C.3

C.1: Excluded for this Service.

C.2: Excluded for this Service IF CORE 41/1 “BR/EDR Core Configuration” OR CORE 40/1 “Core-Controller”.

C.3: Mandatory for this Service.

### 2.3 Service requirements

Table 2: Service Requirements

Item	Capability	Reference	Status
1	Heart Rate Service	[1] 2	M
2	Heart Rate Measurement Characteristic	[1] 3.1	M
3	Support for Heart Rate Measurement Values in UINT16 format	[1] 3.1.1.1.1	O
4	Sensor Contact feature	[1] 3.1.1.1.2	O
5	Energy Expended feature	[1] 3.1.1.3	O
6	RR-Interval feature	[1] 3.1.1.4	O
7	Body Sensor Location Characteristic	[1] 3.2	O
8	Heart Rate Control Point Characteristic	[1] 3.3	C.1
9	Heart Rate Control Point Characteristic – Reset Energy Expended	[1] 3.3.1	C.1

C.1: Mandatory IF HRS 2/5 “Energy Expended feature”, otherwise Excluded.

### 2.4 GATT requirements

Table 3: GATT Requirements

Item	Capability	Reference	Status	Inter-Layer Dependency
1	No longer used	N/A	N/A	N/A
2	GATT Server over LE	[1] 1.5	M	[2] GATT 1a/3
3	Write Characteristic Value	[1] 1.4	C.1	[2] GATT 4/14
4	Single Notification	[1] 1.4	M	[2] GATT 4/17



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Item	Capability	Reference	Status	Inter-Layer Dependency
5	Read Characteristic Descriptor	[1] 1.4	M	[2] GATT 4/19
6	Write Characteristic Descriptor	[1] 1.4	M	[2] GATT 4/21

C.1: Mandatory IF HRS 2/8 "Heart Rate Control Point Characteristic", otherwise not defined.

## 3 References

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- [1] Heart Rate Service Specification, Version 1.0
- [2] ICS Proforma for Generic Attribute Profile (GATT)



## 4 Revision history and acknowledgments

### Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2011-07-12	Adopted by Bluetooth SIG Board of Directors
	1.0.1r0	2011-12-15	TSE 4632: Update Table 1 to align with GATT based services and profiles
1	1.0.1	2012-03-30	Prepare for publication.
	1.0.2r00	2016-10-05	TSE 7518: Table 0 added; copyedited table notes; "References" updated; new(ish) template.
2	1.0.2	2016-12-13	Approved by BTI. Prepared for TCRL 2016-2 publication.
	1.0.2 edition 2r00	2018-11-26	Editorial changes only. Template updated. Revision History and contributors moved to the end of the document.
	1.0.2 edition 2	2019-12-13	Updated copyright page and confidentiality markings to support new Documentation Marking Requirements, performed minor formatting updates, and accepted all tracked changes to prepare for edition 2 publication.
	p3r00	2022-10-18	TSE 19333 (rating 1): Updated to align with current ICS conventions/template. Removed Support columns and added an Inter-Layer Dependency column where appropriate. Updated the references list. Added a Publication Number column to the Revision History. Revised the document numbering convention, setting the last release publication of 1.0.2 as p2. Performed additional template-related formatting fixes. Replaced the Bluetooth logo in the footer and updated the copyright page to align with v2 of the DNMD.
3	p3	2023-02-07	Approved by BTI on 2022-12-28. Prepared for TCRL 2022-2 publication.
	p3ed2r00	2025-07-10	TSE 27298 (rating 1): Updated the title for Table 0. Updated the Status for HRS 1/2, added conditions C.2 and C.3, and updated the Capability in HRS 3/4.
	p3 edition 2	2025-08-05	Approved by BTI on 2025-08-05. Prepared for edition 2 publication.
	p4r00-r01	2025-12-04 – 2026-01-08	TSE 28169 (rating 1): Updated the conditions in the transport table to make sure the layer is excluded when the design is an implementation of the Core-Controller Configuration by adding "OR CORE 40/1 "Core-Controller"" to an already excluded transport based on Core Configuration support.
4	p4	2026-02-17	Approved by BTI on 2026-01-21. Prepared for TCRL pkg102 publication.

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