Heart Rate Profile (HRP)

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

- **Revision:** HRP.ICS.p5
- **Revision Date:** 2026-02-17
- **Prepared By:** BTI
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Contents

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	HRP v1.0	[1]	M

2.2 Roles

Table 1: Role Requirements

Item	Transport	Reference	Status
1	Heart Rate Sensor	[1] 2.1	C.1
2	Collector	[1] 2.1	C.1

C.1: Mandatory to support at least one.

2.3 Transports

Table 2: Transport Requirements

Item	Transport	Reference	Status
1	Profile supported over BR/EDR	[1] 2.5	C.1
2	Profile supported over LE	[1] 2.5	C.2, C.3

C.1: Excluded for this Profile.

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

C.3: Mandatory for this Profile.

2.4 Heart Rate Sensor role

2.4.1 Services (Heart Rate Sensor)

Table 3: Services (Heart Rate Sensor)

Prerequisite: HRP 1/1 “Heart Rate Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Heart Rate Service	[1] 3.1	M	[2] HRS 2/1
2	Include Heart Rate Service UUID in AD in GAP Discoverable Mode	[1] 3.1.1	O	N/A
3	Include Local Name in AD or Scan Response	[1] 3.1.2	O	N/A
4	Device Information Service	[1] 3.2	M	[3] DIS 2/1

2.4.2 Device Information Service requirements (Heart Rate Sensor)

Table 4: Device Information Service Requirements (Heart Rate Sensor)

Prerequisite: HRP 1/1 "Heart Rate Sensor"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Manufacturer Name String Characteristic	[1] 3.2	M	[3] DIS 2/2

2.4.3 GAP requirements (Heart Rate Sensor)

Table 5: GAP Requirements (Heart Rate Sensor)

Prerequisite: HRP 1/1 "Heart Rate Sensor"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Peripheral	[1] 2.4	M	[5] GAP 5/3
2	Bondable mode	[1] 6.1	O	[5] GAP 24/2
3	LE security mode 1	[1] 6.1	C.1	[5] GAP 25/1
4	Unauthenticated Pairing (LE security mode 1 level 2)	[1] 6.1	C.2	[5] GAP 25/8
5	Authenticated Pairing (LE security mode 1 level 3)	[1] 6.1	C.2	[5] GAP 25/7

C.1: Mandatory IF HRP 5/2 "Bondable mode", otherwise not defined.

C.2: Mandatory to support at least one IF HRP 5/2 "Bondable mode", otherwise not defined.

Table 6: No longer used

2.5 Collector role

Table 7: No longer used

2.5.1 Discover Services and Characteristics (Collector)

Table 8: Discover Services and Characteristics (Collector)

Prerequisite: HRP 1/2 "Collector"

Item	Capability	Reference	Status
1	Discover Heart Rate Service	[1] 4.2.1	M
2	Discover Heart Rate Measurement characteristic	[1] 4.3.1.1	M
3	Discover Heart Rate Measurement – Client Characteristic Configuration Descriptor	[1] 4.3.1.1	M
4	Discover Body Sensor Location characteristic	[1] 4.3.1.2	O
5	Discover Heart Rate Control Point characteristic	[1] 4.3.1.3	C.1

C.1: Mandatory IF HRP 9/4 “Write Heart Rate Control Point characteristic – Reset Energy Expended”, otherwise Optional.

2.5.2 Features (Collector)

Table 9: Features (Collector)

Prerequisite: HRP 1/2 “Collector”

Item	Capability	Reference	Status
1	Configure Heart Rate Measurement characteristic for notifications	[1] 4.4	M
2	Receive Heart Rate Measurement characteristic notifications	[1] 4.4	M
3	Read Body Sensor Location characteristic	[1] 4.5	O
4	Write Heart Rate Control Point characteristic – Reset Energy Expended	[1] 4.6.1	O
5	Verify Bond Status on Reconnection	[1] 5.2.2	C.1

C.1: Mandatory IF HRP 12/3 “Bondable mode”, otherwise Excluded.

2.5.3 Discover DIS and Related Characteristics (Collector)

Table 10: DIS and Related Characteristics (Collector)

Prerequisite: HRP 1/2 “Collector”

Item	Capability	Reference	Status
1	Discover Device Information Service	[1] 4.2.2	O
2	Manufacturer Name String Characteristic	[1] 3.2, 4.3.2, 4.7	C.2

C.1: No longer used.

C.2: Optional IF HRP 10/1 “Discover Device Information Service”, otherwise Excluded.

2.5.4 GATT requirements (Collector)

Table 11: GATT Requirements (Collector)

Prerequisite: HRP 1/2 “Collector”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	No longer used	N/A	N/A	N/A
2	GATT Client over LE	[1] 2.5	M	[4] GATT 1a/1
3	Discover All Primary Services	[1] 4.2	C.1	[4] GATT 3/2
4	Discover Primary Service by Service UUID	[1] 4.2	C.1	[4] GATT 3/3
5	Discover All Characteristics of a Service	[1] 4.3.1, 4.3.2	C.2	[4] GATT 3/5
6	Discover Characteristics by UUID	[1] 4.3.1, 4.3.2	C.2	[4] GATT 3/6
7	Discover All Characteristic Descriptors	[1] 4.3.1	M	[4] GATT 3/7
8	Read Characteristic Value	[1] 4.5	C.3	[4] GATT 3/8

Item	Capability	Reference	Status	Inter-Layer Dependency
9	Write Characteristic Value	[1] 4.6	C.4	[4] GATT 3/14
10	Single Notification	[1] 4.4	M	[4] GATT 3/17
11	Read Characteristic Descriptor	[1] 4.1	M	[4] GATT 3/19
12	Write Characteristic Descriptor	[1] 4.1	M	[4] GATT 3/21

C.1: Mandatory to support at least one.

C.2: Mandatory to support at least one.

C.3: Mandatory IF HRP 9/3 “Read Body Sensor Location characteristic”, otherwise Optional.

C.4: Mandatory IF HRP 9/4 “Write Heart Rate Control Point characteristic – Reset Energy Expended”, otherwise Optional.

2.5.5 GAP requirements (Collector)

Table 12: GAP Requirements (Collector)

Prerequisite: HRP 1/2 “Collector”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Central	[1] 2.4	M	[5] GAP 5/4
2	LE security mode 1	[1] 6.2	M	[5] GAP 35/1
3	Bondable mode	[1] 6.1	O	[5] GAP 34/2
4	Unauthenticated Pairing (LE security mode 1 level 2)	[1] 6.1	M	[5] GAP 35/8
5	Authenticated Pairing (LE security mode 1 level 3)	[1] 6.1	M	[5] GAP 35/7

Table 13: No longer used

3 References

[1] Heart Rate Profile, Version 1.0

[2] ICS Proforma for Heart Rate Service (HRS)

[3] ICS Proforma for Device Information Service (DIS)

[4] ICS Proforma for Generic Attribute Profile (GATT)

[5] ICS Proforma for Generic Access Profile (GAP)

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	1.0.1r0	2011-11-04	TSE 4581: Table 9, Change C.1. Table 12, add row 3 TSE 4555: Tables 2, 5, 11, 12. Cf. TSE 4515 for HTP ICS
	1.0.2r00	2016-08-16	TSE 7488: Added Table 0. Corrected reference in Table 3. Updated conditionals for Table 5, 8, 9, and 10. Updated References section.
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–r01	2022-10-17 – 2022-11-15	TSE 19334 (rating 2): Updated to align with current ICS conventions/template. Replaced SM references with GAP references. Added missing “otherwise” clauses. Removed Support columns and added an Inter-Layer Dependency column where appropriate. Deleted Tables 6 and 13 because they are no longer used. Updated references. 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–r01	2025-07-09 – 2025-07-15	TSE 27354 (rating 1): Updated the Status for HRP 2/2 and added conditions C.2 and C.3.
	p3 edition 2	2025-08-05	Approved by BTI on 2025-08-05. Prepared for edition 2 publication.
	p4r00	2025-08-22	TSE 28078 (rating 1): Updated the ILD column for Items 5/1 and 12/1 to delete references to GAP Table 38.
4	p4	2025-11-04	Approved by BTI on 2025-10-02. Prepared for TCRL pkg101 publication.

Publication Number	Revision Number	Date	Comments
	p5r00–r01	2025-12-04 – 2025-12-31	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.
5	p5	2026-02-17	Approved by BTI on 2026-01-21. Prepared for TCRL pkg102 publication.

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