Running Speed and Cadence Profile (RSCP)

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

- **Revision:** RSCP.ICS.p9
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- **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	RSCP v1.0	[1]	M

Table 0a: X.Y.Z Versions

Item	Version	Reference	Status
1	RSCP v1.0.1	[6]	O

2.2 Roles

Table 1: Role Requirements

Item	Role	Reference	Status
1	RSC 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, C.3
2	Profile supported over LE	[1] 2.5	C.2, C.3

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

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

C.3: Mandatory to support at least one.

2.4 RSC Sensor role

2.4.1 Services (RSC Sensor)

Table 3: Services (RSC Sensor)

Prerequisite: RSCP 1/1 “RSC Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Running Speed and Cadence Service	[1] 3	M	[2] RSCS 3/1
2	Running Speed and Cadence Service UUID in AD in GAP Discoverable Mode	[1] 3.1.1.1	C.1	N/A

Item	Capability	Reference	Status	Inter-Layer Dependency
3	Local Name in AD or Scan Response	[1] 3.1.1.2	C.1	N/A
4	Appearance in AD or Scan Response	[1] 3.1.1.4	C.1	N/A
5	Device Information Service	[1] 3	O	N/A

C.1: Optional IF RSCP 2/2 “Profile supported over LE”, otherwise Excluded.

2.4.2 DIS requirements (RSC Sensor)

Table 4: DIS Requirements (RSC Sensor)

Prerequisite: RSCP 1/1 “RSC Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Manufacturer Name String Characteristic	[1] 3.2	C.1	[5] DIS 2/2
2	Model Number String Characteristic	[1] 3.2	C.1	[5] DIS 2/3

C.1: Optional IF RSCP 3/5 “Device Information Service”, otherwise not defined.

2.4.3 GAP requirements (RSC Sensor)

Table 5: GAP Requirements (RSC Sensor)

Prerequisite: RSCP 1/1 “RSC Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Peripheral	[1] 2.4	C.1	[4] GAP 5/3
2	LE security mode 1	[1] 6.1	C.1	[4] GAP 25/1
3	General discoverable mode (BR/EDR)	[1] 5.3.1.1	C.2	[4] GAP 1/3
4	No security requirements	[1] 6.1	C.3	[4] GAP 27b/4
5	Unauthenticated no MITM protection	[1] 6.1	C.3	[4] GAP 27b/3
6	Authenticated MITM protection	[1] 6.1	C.3	[4] GAP 27b/2

C.1: Mandatory IF RSCP 2/2 “Profile supported over LE”, otherwise not defined.

C.2: Mandatory IF RSCP 2/1 “Profile supported over BR/EDR”, otherwise not defined.

C.3: Mandatory to support at least one IF RSCP 2/2 “Profile supported over LE”, otherwise not defined.

Table 6: No longer used

2.5 RSC Collector role

2.5.1 Service Support (RSC Collector)

Table 7: Service Support (RSC Collector)

Prerequisite: RSCP 1/2 "Collector"

Item	Capability	Reference	Status
1	Discover Running Speed and Cadence Service	[1] 4	M
2	Discover Device Information Service	[1] 4	O

2.5.2 Discover Services and Characteristics (RSC Collector)

Table 8: Discover RSC Services and Characteristics (RSC Collector)

Prerequisite: RSCP 1/2 "Collector"

Item	Capability	Reference	Status
1	Discover Running Speed and Cadence Service	[1] 4.2.1	M
2	Discover RSC Measurement characteristic	[1] 4.3.1.1	M
3	Discover RSC Measurement - Client Characteristic Configuration Descriptor	[1] 4.3.1.1	M
4	Discover RSC Feature characteristic	[1] 4.3.1.2	M
5	Discover Sensor Location	[1] 4.3.1.3	O
6	Discover SC Control Point characteristic	[1] 4.3.1.4	O
7	Discover SC Control Point - Client Characteristic Configuration Descriptor	[1] 4.3.1.4	C.1
8	Discover RSC Feature characteristic – Client Configuration Characteristic Descriptor	[6] 4.3.1.2	C.2

C.1: Mandatory IF RSCP 8/6 "Discover SC Control Point characteristic", otherwise Excluded.

C.2: Optional IF RSCP 0/1 "RSCP v1.0" AND NOT RSCP 0a/1 "RSCP v1.0.1", otherwise Mandatory.

Table 9: Discover DIS Services and Characteristics (RSC Collector)

Prerequisite: RSCP 1/2 "Collector"

Item	Capability	Reference	Status
1	Discover Device Information Service	[1] 4, 4.2.2	C.1
2	Discover Manufacturer Name String Characteristic	[1] 4.3.2	C.2
3	Read Manufacturer Name String Characteristic	[1] 4.8	O
4	Discover Model Number String Characteristic	[1] 4.3.2	C.2
5	Read Model Number String Characteristic	[1] 4.8	O

C.1: Mandatory IF RSCP 9/2 "Discover Manufacturer Name String Characteristic" OR RSCP 9/4 "Discover Model Number String Characteristic", otherwise Optional.

C.2: Mandatory IF RSCP 9/3 "Read Manufacturer Name String Characteristic" OR RSCP 9/5 "Read Model Number String Characteristic", otherwise Optional.

2.5.3 Features (Collector)

Table 10: SC Control Point Procedures (RSC Collector)

Prerequisite: RSCP 1/2 "Collector"

Item	Capability	Reference	Status
1	Set Cumulative Value – Set to zero	[1] 4.7.1	O
2	Set Cumulative Value – Set to non-zero	[1] 4.7.1	O
3	Start Calibration	[1] 4.7.1	O
4	Update Sensor Location	[1] 4.7.1	C.1
5	Request Supported Sensor Locations	[1] 4.7.1	C.1

C.1: Mandatory to support none or all.

Table 11: Features (RSC Collector)

Prerequisite: RSCP 1/2 "Collector"

Item	Capability	Reference	Status
1	Configure RSC Measurement characteristic for notifications	[1] 4.4	M
2	Receive RSC Measurement characteristic notifications	[1] 4.4	C.1
3	Read RSC Feature characteristic	[1] 4.5	M
4	Read Sensor Location characteristic	[1] 4.6	O
5	Configure SC Control Point characteristic for indications	[1] 4.7	C.1
6	Receive SC Control Point characteristic indications	[1] 4.7.2, 4.7.3	C.1
7	Write to SC Control Point characteristic	[1] 4.7	C.1
8	SC Control Point Characteristic - Set Cumulative Value Op Code	[1] 4.7.2.1	C.2
9	SC Control Point Characteristic - Start Calibration Op Code	[1] 4.7.2.2	C.3
10	SC Control Point Characteristic - Update Sensor Location Op Code	[1] 4.7.2.3	C.4
11	SC Control Point Characteristic - Request Supported Sensor Locations Op Code	[1] 4.7.2.4	C.4
12	SC Control Point Characteristic – Procedure Time Out	[1] 4.7.4	C.1
13	Verify Bond Status on Reconnection	[1] 5.2.2	C.5
14	Configure characteristic for indications to determine supported features	[6] 4.5	C.6

C.1: Mandatory IF RSCP 10/1 "Set Cumulative Value – Set to zero" OR RSCP 10/2 "Set Cumulative Value – Set to non-zero" OR RSCP 10/3 "Start Calibration" OR RSCP 10/4 "Update Sensor Location" OR RSCP 10/5 "Request Supported Sensor Locations", otherwise Excluded.

C.2: Mandatory IF RSCP 10/1 "Set Cumulative Value – Set to zero" OR RSCP 10/2 "Set Cumulative Value – Set to non-zero", otherwise Excluded.

C.3: Mandatory IF RSCP 10/3 "Start Calibration", otherwise Excluded.

C.4: Mandatory IF RSCP 10/4 "Update Sensor Location" AND RSCP 10/5 "Request Supported Sensor Locations", otherwise Excluded.

C.5: Mandatory IF RSCP 13/3 "Bondable mode (LE)", otherwise Excluded.

C.6: Optional IF RSCP 0/1 "RSCP v1.0" AND NOT RSCP 0a/1 "RSCP v1.0.1", otherwise Mandatory.

Table 11a: Determining Supported Features (Configure Characteristic for Indications)

Prerequisite: RSCP 11/14 "Configure characteristic for indications to determine supported features"

Item	Capability	Reference	Status
1	Configure and receive RSC Feature characteristic indications	[6] 4.5	C.1
2	Read RSC Feature characteristic on reconnection	[6] 4.5	C.1

C.1: Mandatory to support at least one IF RSCP 13/3 "Bondable mode (LE)" OR RSCP 13/7 "Bondable mode (BR/EDR)", otherwise Excluded.

2.5.4 GATT requirements (Collector)

Table 12: GATT Requirements (Collector)

Prerequisite: RSCP 1/2 "Collector"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	No longer used	N/A	N/A	N/A
2	GATT Client over BR/EDR	[1] 4.2	C.4	[3] GATT 1a/2
3	GATT Client over LE	[1] 4.2	C.5	[3] GATT 1a/1
4	Discover All Primary Services	[1] 4.2	C.1	[3] GATT 3/2
5	Discover Primary Service by Service UUID	[1] 4.2	C.1	[3] GATT 3/3
6	Discover All Characteristics of a Service	[1] 4.3.1	C.2	[3] GATT 3/5
7	Discover Characteristics by UUID	[1] 4.3.1	C.2	[3] GATT 3/6
8	Discover All Characteristic Descriptors	[1] 4.3.1	M	[3] GATT 3/7
9	Read Characteristic Value	[1] 4.1	M	[3] GATT 3/8
10	Single Notification	[1] 4.1, 4.4, 5.2.1	M	[3] GATT 3/17
11	Write Characteristic Value	[1] 4.1, 4.7.2	C.3	[3] GATT 3/14
12	Read Characteristic Descriptor	[1] 4.1	M	[3] GATT 3/19
13	Write Characteristic Descriptor	[1] 4.1	M	[3] GATT 3/21

C.1: Mandatory to support at least one.

C.2: Mandatory to support at least one.

C.3: Mandatory IF RSCP 10/1 "Set Cumulative Value – Set to zero" OR RSCP 10/2 "Set Cumulative Value – Set to non-zero" OR RSCP 10/3 "Start Calibration" OR RSCP 10/4 "Update Sensor Location", otherwise not defined.

C.4: Mandatory IF RSCP 2/1 "Profile supported over BR/EDR", otherwise not defined.

C.5: Mandatory IF RSCP 2/2 "Profile supported over LE", otherwise not defined.

2.5.5 GAP requirements (Collector)

Table 13: GAP Requirements (Collector)

Prerequisite: RSCP 1/2 "Collector"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Central	[1] 2.4	C.1	[4] GAP 5/4
2	LE security mode 1	[1] 6.2	C.1	[4] GAP 35/1
3	Bondable mode (LE)	[1] 5.2	C.2	[4] GAP 34/2
4	No security requirements	[1] 6.1	C.1	[4] GAP 37b/4
5	Unauthenticated no MITM protection	[1] 6.1	C.1	[4] GAP 37b/3
6	Authenticated MITM protection	[1] 6.1	C.1	[4] GAP 37b/2
7	Bondable mode (BR/EDR)	[1] 5.3	C.3	[4] GAP 1/7

C.1: Mandatory IF RSCP 2/2 "Profile supported over LE", otherwise not defined.

C.2: Optional IF RSCP 2/2 "Profile supported over LE", otherwise not defined.

C.3: Optional IF RSCP 2/1 "Profile supported over BR/EDR", otherwise not defined.

Table 14: No longer used

3 References

[1] Running Speed and Cadence Profile Specification, Version 1.0 or later

[2] ICS Proforma for Running Speed and Cadence Service (RSCS)

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

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

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

[6] Running Speed and Cadence Profile Specification, Version 1.0.1

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2013-08-07	Prepare for Publication
	1.0.1r01	2013-09-30	TSE 5295: Updated item 11/2 status to C.1 instead of M.
1	1.0.1	2013-12-03	Prepare for Publication
	1.0.2r00	2014-10-20	TSE 5799: Updated 11/12 from M to C.1.
2	1.0.2	2014-12-05	Prepare for TCRL 2014-2 publication
	1.0.3r00	2015-10-01	TSE 6555: Added item 13/3 for Bondable Mode in Table 13 and made item 11/13 (Verify Bond Status) in Table 11 dependent on it.
	1.0.3r01	2015-10-22	Converted to new document template.
3	1.0.3	2015-12-22	Prepared for TCRL 2015-2 publication.
	1.0.4r00	2017-10-08	TSE 9952 (rating 1): Updated ICS template. Added a table 0 for version.
4	1.0.4	2018-06-27	Approved by BTI. Prepared for TCRL 2018-1 publication.
	p5r00–r02	2022-03-18 – 2022-05-04	TSE 18600 (rating 2): Updated the prerequisite for Tables 6 and 14. Updated the status for items 1 and 2 and the reference and inter-layer dependency for item 3 in Table 13. Added C.1 for Table 13. TSE 18724 (rating 1): Editorials to align the document with the latest ICS template in anticipation of a future .Z release. Editorials, including assigning publication number 4 to previous v1.0.4, consistency checker fixes, and aligning the copyright page with v2 of the DNMD.
5	p5	2022-06-28	Approved by BTI on 2022-05-31. Prepared for TCRL 2022-1 publication.
	p6r00	2023-10-10	TSE 23177 (rating 2): Resolved GAP and SM inter-layer dependencies. Updated C.1 for Tables 1, 2, and 10. In Table 5, added Items 4–6 and C.3. Marked Tables 6 and 14 as no longer used. In Table 76, updated the Capability value for Items 1 and 2. In Table 12, marked Item 1 as no longer used, updated the Capability and ILD values for Items 2 and 3, and updated conditionals C.1 and C.2. Added Items 4–6 to Table 13. Made editorial edits to align the document with the latest ICS template, including updates to section and table titles and line spacing. Updated the references. Deleted draft revision history comments prior to p0.
6	p6	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.

Publication Number	Revision Number	Date	Comments
	p7r00–r03	2024-08-02 – 2024-09-05	TSE 17244 (rating 4): Per E17171, added new Tables 0a and 11a. Added Item 8/8 and conditional C.2 to Table 8. Added Item 11/14 and conditional C.6 to Table 11. In Table 13, updated the capability for Item 13/3 and added Item 13/7. Updated the references list and acknowledgments. TSE 25593 (rating 1): Per E15810, E17171, and E18756, added a version table for RSCP v1.0.1 as part of the .Z release. Updated the references list. Incorporated consistency checker updates.
7	p7	2024-10-08	Approved by BTI on 2024-09-11. RSCP v1.0.1 adopted by the BoD on 2024-10-01. Prepared for TCRL 2024-2-addition publication.
	p7ed2r00–r01	2025-07-08 – 2025-07-15	TSE 27379 (rating 1): Updated “Transport requirements” Section to “Transports”. Updated the Status for RSCP 2/1 and RSCP 2/2, added conditions C.1 and C.2, and renumbered the previous C.1 as C.3.
	p7 edition 2	2025-08-05	Approved by BTI on 2025-08-05. Prepared for edition 2 publication.
	p8r00	2025-08-14	TSE 27565 (rating 1): Updated the ILD column for Items 5/1 and 13/1 to delete references to GAP Table 38.
8	p8	2025-11-04	Approved by BTI on 2025-10-02. Prepared for TCRL pkg101 publication.
	p9r00–r01	2025-12-07 – 2026-01-09	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.
9	p9	2026-02-17	Approved by BTI on 2026-01-21. Prepared for TCRL pkg102 publication.

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