

# Running Speed and Cadence Profile (RSCP)

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

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# 1 Identification of the implementation

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## 1.1 Implementation Under Test (IUT) identification

Identification of the Implementation Under Test (IUT) is to be filled in to provide as much detail as possible regarding version numbers and configuration options.

An ICS contact person to respond to queries regarding information supplied in this ICS proforma is named in the Declaration of Compliance: Summary of Selected Specifications in Implementation.

## 1.2 Versions

Table 0: Versions

Item	Version	Reference	Status
1	RSCP 1.0	[1]	M

## 1.3 Profile roles

Table 1: Profile Roles

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 of RSCP 1/1 “RSC Sensor” OR RSCP 1/2 “Collector”.

## 1.4 Transport requirements

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.1

C.1: Mandatory to support at least one of RSCP 2/1 “Profile supported over BR/EDR” OR RSCP 2/2 “Profile supported over LE”.

## 1.5 RSC Sensor role

### 1.5.1 Services – RSC Sensor role

Table 3: Services - RSC Sensor Role

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
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.

### 1.5.2 DIS Requirements – RSC Sensor role

Table 4: DIS Requirements - RSC Sensor Role

Prerequisite: RSCP 1/1 “RSC Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Manufacturer Name String Characteristic	[1] 3.2	C.1	[7] DIS 2/2

Item	Capability	Reference	Status	Inter-Layer Dependency
2	Model Number String Characteristic	[1] 3.2	C.1	[7] DIS 2/3

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

### 1.5.3 GAP Requirements – RSC Sensor role

**Table 5: GAP Requirements - RSC Sensor Role**

*Prerequisite: RSCP 1/1 “RSC Sensor”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Peripheral	[1] 2.4	C.1	[4] GAP 5/3 or GAP 38/3
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

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.

### 1.5.4 SM Requirements – RSC Sensor role

**Table 6: SM Requirements - RSC Sensor Role**

*Prerequisite: RSCP 1/1 “RSC Sensor” AND RSCP 2/2 “Profile supported over LE”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	No security requirements	[1] 6.1	C.1	[5] SM 2/3
2	Unauthenticated no MITM protection	[1] 6.1	C.1	[5] SM 2/2
3	Authenticated MITM protection	[1] 6.1	C.1	[5] SM 2/1

C.1: Mandatory to support at least one of RSCP 6/1 “No security requirements” OR RSCP 6/2 “Unauthenticated no MITM protection” OR RSCP 6/3 “Authenticated MITM protection”.

## 1.6 RSC Collector role

### 1.6.1 Service Support – RSC Collector role

**Table 7: Service Support – RSC Collector Role**

*Prerequisite: RSCP 1/2 “Collector”*

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

### 1.6.2 Discover Services and Characteristics – RSC Collector role

**Table 8: Discover RSC Services and Characteristics – RSC Collector Role**

*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

Item	Capability	Reference	Status
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

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

**Table 9: Discover DIS Services and Characteristics – RSC Collector Role**

*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.

### 1.6.3 Features – Collector role

**Table 10: SC Control Point Procedures – RSC Collector Role**

*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 of RSCP 10/4 “Update Sensor Location” OR RSCP 10/5 “Request Supported Sensor Locations”.

**Table 11: Features – RSC Collector Role**

*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

Item	Capability	Reference	Status
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

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”, otherwise Excluded.

#### 1.6.4 GATT Requirements – Collector role

**Table 12: GATT Requirements – Collector Role**

*Prerequisite: RSCP 1/2 “Collector”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Generic Attribute Profile (GATT) Client	[1] 2.1	M	[3] GATT 1/1
2	Attribute Protocol Supported over BR/EDR (L2CAP fixed channel support)	[1] 4.2	C.4	[3] GATT 2/1
3	Attribute Protocol Supported over LE	[1] 4.2	C.5	[3] GATT 2/2
4	Discover All Primary Services	[1] 4.2	C.1	[3] GATT 3/2
5	Discover Primary Services 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	Notifications	[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 Descriptors	[1] 4.1	M	[3] GATT 3/19



Item	Capability	Reference	Status	Inter-Layer Dependency
13	Write Characteristic Descriptors	[1] 4.1	M	[3] GATT 3/21

C.1: Mandatory to support at least one of RSCP 12/4 “Discover All Primary Services” OR RSCP 12/5 “Discover Primary Services by Service UUID”.

C.2: Mandatory to support at least one of RSCP 12/6 “Discover All Characteristics of a Service” OR RSCP 12/7 “Discover Characteristics by UUID”.

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.

### 1.6.5 GAP Requirements – Collector role

**Table 13: GAP Requirements – Collector Role**

*Prerequisite: RSCP 1/2 “Collector”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Central	[1] 2.4	C.1	[4] GAP 5/4 or GAP 38/4
2	LE security mode 1	[1] 6.2	C.1	[4] GAP 35/1
3	Bondable mode	[1] 5.2, 5.3	O	[4] GAP 1/7 or GAP 34/2

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

### 1.6.6 SM Requirements – Collector role

**Table 14: SM Requirements – Collector Role**

*Prerequisite: RSCP 1/2 “Collector” AND RSCP 2/2 “Profile supported over LE”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	No security requirements	[1] 6.2	M	[6] SM 2/3
2	Unauthenticated no MITM protection	[1] 6.2	M	[6] SM 2/2
3	Authenticated MITM protection	[1] 6.2	M	[6] SM 2/1

## 2 References

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- [1] Running Speed and Cadence Profile Specification
- [2] ICS Proforma for Running Speed and Cadence Service (RSCS.ICS)
- [3] ICS Proforma for Generic Attribute Profile (GATT.ICS)
- [4] ICS Proforma for Generic Access Profile (GAP.ICS)
- [5] ICS Proforma for Security Manager (SM.ICS)
- [6] Bluetooth Core Specification, Volume 3, Part C, Version 4.0 or later
- [7] ICS Proforma for Device Information Service (DIS.ICS)

### 3 Revision history and acknowledgments

#### Revision History

Publication Number	Revision Number	Date	Comments
	D0.9.0	2012-03-26	First draft based on Glucose Profile ICS. Comments from S&F addressed and submitted for BTI review. Incorporated feedback from Laurence.
	D0.9.1	2012-03-28	Accepted all changes. Incorporated feedback from Guillaume and Jason N.
	D0.9.2	2012-04-09	Accepted all changes. Submitted for BTI review. Incorporated feedback from BTI.
	D0.9.3	2012-04-09	Accepted all changes.
	D1.0.0r0	2012-07-06	Changed revision to draft 1.0.0. Comments from Jason and Bob addressed.
	D1.0.0r1	2012-07-20	Accepted all changes. Incorporated feedback from BTI.
	D1.0.0r2	2012-07-23	Accepted all changes. Submitted for BTI vote. Added missing SM1L1 requirement to Tables 6 and 14.
	D1.0.0r3	2012-07-23	Accepted all changes.
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.

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