Binary Sensor Profile (BSP)

Bluetooth® Implementation Conformance Statement (ICS) Proforma

- **Revision:** BSP.ICS.p3
- **Revision Date:** 2025-11-04
- **Prepared By:** Personal User Interface Device Working Group
- **Published during TCRL:** TCRL.pkg101

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	BSP v1.0	[1]	M

2.2 Roles

Table 1: Role Requirements

Item	Role	Reference	Status
1	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”.

C.3: Mandatory for this Profile.

2.4 Sensor Role

2.4.1 Service (Sensor)

Table 3: Service (Sensor)

Prerequisite: BSP 1/1 “Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Binary Sensor Service	[1] 2.5	M	[4] BSS 3/1
2	Service UUID	[1] 3.1.1.1	O	[3] GAP 20a/1
3	Local Name	[1] 3.1.1.2	O	[3] GAP 20a/2

2.4.2 GAP requirements (Sensor)

Table 4: GAP Requirements (Sensor)

Prerequisite: BSP 1/1 "Sensor"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Peripheral	[1] 2.4	M	[3] GAP 5/3
2	LE security mode 1	[1] 7.1	M	[3] GAP 25/1
3	Unauthenticated Pairing (LE security mode 1 level 2)	[1] 7.1	M	[3] GAP 25/8

Table 5: No longer used

2.5 Collector Role

2.5.1 Service (Collector)

Table 6: Service (Collector)

Prerequisite: BSP 1/2 "Collector"

Item	Capability	Reference	Status
1	Discover Binary Sensor Service	[1] 4.2.1	M
2	Discover BSS Control Point characteristic	[1] 4.3.1.1	M
3	Discover BSS Response characteristic	[1] 4.3.1.2	M
4	Discover BSS Response – Client Characteristic Configuration Descriptor	[1] 4.3.1.2	M
5	Configure BSS Response for Indications	[1] 4.3.1.2	M

Table 7: Binary Sensor Procedures (Collector)

Prerequisite: BSP 1/2 "Collector"

Item	Capability	Reference	Status
1	Get Sensor Status Command	[1] 4, 4.4.1	M
2	Setting Sensor Command	[1] 4, 4.4.2	M
3	Sensor Status Event	[1] 4, 4.4.3	M

2.5.2 GATT requirements (Collector)

Table 8: GATT Requirements (Collector)

Prerequisite: BSP 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] 2.1	M	[2] GATT 1a/1
3	Discover All Primary Services	[1] 4.1	C.1	[2] GATT 3/2
4	Discover Primary Services by Service UUID	[1] 4.1	C.1	[2] GATT 3/3
5	Discover All Characteristics of a Service	[1] 4.1	C.2	[2] GATT 3/5
6	Discover Characteristics by UUID	[1] 4.3.1	C.2	[2] GATT 3/6
7	Write Characteristic Value	[1] 4.4	M	[2] GATT 3/14
8	No longer used	N/A	N/A	N/A

C.1: Mandatory to support at least one.

C.2: Mandatory to support at least one.

2.5.3 GAP requirements (Collector)

Table 9: GAP Requirements (Collector)

Prerequisite: BSP 1/2 "Collector"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Central	[1] 2.4	M	[3] GAP 5/4
2	LE security mode 1	[1] 7.2	M	[3] GAP 35/1
3–4	No longer used	N/A	N/A	N/A
5	Unauthenticated Pairing (LE security mode 1 level 2)	[1] 7.2	M	[3] GAP 35/8
6	Authenticated Pairing (LE security mode 1 level 3)	[1] 7.2	M	[3] GAP 35/7
7	LE security mode 1 level 4	[1] 7.2	M	[3] GAP 35/9

Table 10: No longer used

3 References

[1] Binary Sensor Profile (BSP) Specification

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

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

[4] ICS Proforma for Binary Sensor Service (BSS)

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2019-07-02	Binary Sensor Profile adopted by the Board of Directors. Prepared for publication.
	p1r00–r01	2022-09-07 – 2022-10-13	TSE 19261 (rating 1): Updated to align with current ICS conventions/template. Removed Support columns and added an Inter-Layer Dependency column where appropriate. Added a Publication Number column to the Revision History. Revised the document numbering convention, setting the last release publication of 1.0.0 as p0. Aligned the copyright page with v2 of the DNMD.
1	p1	2023-02-07	Approved by BTI on 2022-12-28. Prepared for TCRL 2022-2 publication.
	p2r00–r01	2025-04-29 – 2025-04-30	TSE 27348 (rating 1): Updated the Status value for BSP 2/2 and added conditions C.2 and C.3. Deleted draft revision history comments prior to p0. Incorporated editorials to align the document with the latest ICS template, including updates to Section 1 and the addition of a section heading for the ICS declarations section.
2	p2	2025-07-08	Approved by BTI on 2025-06-15. Prepared for TCRL pkg100 publication.
	p3r00	2025-07-17	TSE 27534 (rating 1): Updated ILD in BSP 4/1 and BSP 9/1.
3	p3	2025-11-04	Approved by BTI on 2025-10-02. Prepared for TCRL pkg101 publication.

Acknowledgments

Name	Company
David Chapman	Bluetooth SIG, Inc.
Frank Berntsen	Nordic Semiconductor