

Proximity Profile (PXP)

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	PXP v1.0	[1] v1.0	C.1, C.2
2	No longer used	N/A	N/A

C.1: Mandatory.

C.2: Can only be supported with an active X.Y.Z version after Deprecation or Withdrawal. Deprecated 2021-02-01. Withdrawn 2022-02-01.

Table 0a: X.Y.Z Versions

Item	Version	Reference	Status
1	PXP v1.0.1	[1] v1.0.1	C.1

C.1: Mandatory IF PXP 0/1 “PXP v1.0”, otherwise Excluded.

2.2 Roles

Table 1: Role Requirements

Item	Role	Reference	Status
1	Proximity Reporter	[1] 2.1	C.1
2	Proximity Monitor	[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] 2.4	C.1
2	Profile supported over LE	[1] 2.4	C.2, C.3
3	No longer used	N/A	N/A

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 Proximity Reporter

2.4.1 Services – Proximity Reporter

Table 3: Services – Proximity Reporter

Prerequisite: PXP 1/1 “Proximity Reporter”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Link Loss Service	[1] 3.1	M	[4] LLS
2	Immediate Alert Service	[1] 3.2	C.1	[5] IAS
3	Tx Power Service	[1] 3.3	C.2	[6] TPS

C.1: Mandatory IF PXP 3/3 “Tx Power Service”, otherwise not defined.

C.2: Mandatory IF PXP 3/2 “Immediate Alert Service”, otherwise not defined.

2.4.2 GAP requirements – Proximity Reporter

Table 4: GAP Requirements – Proximity Reporter

Prerequisite: PXP 1/1 “Proximity Reporter” AND PXP 2/2 “Profile supported over LE”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Peripheral	[1] 2.4	O	[3] GAP 5/3 OR GAP 38/3
2	Central	[1] 2.4	O	[3] GAP 5/4 OR GAP 38/4
3–4	No longer used	N/A	N/A	N/A
5	Unauthenticated no MITM protection (Peripheral)	[1] 6.1	C.1	[3] GAP 27b/3
6	Authenticated MITM protection (Peripheral)	[1] 6.1	C.1	[3] GAP 27b/2
7	Unauthenticated no MITM protection (Central)	[1] 6.1	C.2	[3] GAP 37b/3
8	Authenticated MITM protection (Central)	[1] 6.1	C.2	[3] GAP 37b/2

C.1: Mandatory to support at least one IF PXP 4/1 “Peripheral”, otherwise not defined.

C.2: Mandatory to support at least one IF PXP 4/2 “Central”, otherwise not defined.

Table 5: No longer used

2.5 Proximity Monitor

2.5.1 Features – Proximity Monitor

Table 6: Features – Proximity Monitor

Prerequisite: PXP 1/2 “Proximity Monitor”

Item	Capability	Reference	Status
1	Set Alert level	[1] 4.3	M
2	Write alert level for link loss	[1] 4.3	M
3	Alert on link loss	[1] 4.4	M
4	Read Tx Power level	[1] 4.5	O
5	No longer used	N/A	N/A
6	Alert on path loss	[1] 4.6	C.2
7	Write Alert Level when path loss exceeds threshold	[1] 4.6	C.1
8	Write Alert Level when path loss falls below threshold	[1] 4.6	C.1
9	Verify Bond Status on Reconnection	[1] 5.2.3	M

C.1: Mandatory IF PXP 6/6 “Alert on path loss”, otherwise Excluded.

C.2: Optional IF PXP 6/4 “Read Tx Power level”, otherwise Excluded.

2.5.2 Discover Services & Characteristics – Proximity Monitor

Table 7: Discover Services & Characteristics – Proximity Monitor

Prerequisite: PXP 1/2 “Proximity Monitor”

Item	Capability	Reference	Status
1	Discover Link Loss Service	[1] 4.1	M
2	Discover Immediate Alert Service	[1] 4.1	C.2
3	Discover Tx Power Service	[1] 4.1	C.1
4	Discover Alert Level characteristic for Link Loss	[1] 4.2	M
5	Discover Alert Level characteristic for Immediate Alert	[1] 4.2	C.1
6	Discover Tx Power Level characteristic	[1] 4.2	C.2
7	Discover Tx Power Level Characteristic Presentation Format Descriptor	[1] 4.2	O
8	Discover Tx Power Level Client Characteristic Configuration Descriptor	[1] 4.2	O
9	No longer used	N/A	N/A

C.1: Mandatory IF PXP 7/2 “Discover Immediate Alert Service”, otherwise Excluded.

C.2: Mandatory IF PXP 7/3 “Discover Tx Power Service”, otherwise Excluded.

2.5.3 GATT requirements – Proximity Monitor

Table 8: GATT Requirements – Proximity Monitor

Prerequisite: PXP 1/2 “Proximity Monitor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	GATT Client over LE	[1] 1.1	M	[2] GATT 1a/1
2–3	No longer used	N/A	N/A	N/A
4	Discover All Primary Services	[1] 4.1, 7	C.1	[2] GATT 3/2
5	Discover Primary Services by Service UUID	[1] 4.1, 7	C.1	[2] GATT 3/3
6	Discover All Characteristics of a Service	[1] 7	M	[2] GATT 3/5
7	Discover All Characteristic Descriptors	[1] 7	O	[2] GATT 3/7
8	Read Characteristic Value	[1] 7	O	[2] GATT 3/8
9	Write Characteristic Value	[1] 7	M	[2] GATT 3/14
10	Read Characteristic Descriptors	[1] 7	O	[2] GATT 3/19
11	Single Notification	[1]	O	[2] GATT 3/17

C.1: Mandatory to support at least one.

2.5.4 GAP requirements – Proximity Monitor

Table 9: GAP Requirements – Proximity Monitor

Prerequisite: PXP 1/2 “Proximity Monitor” AND PXP 2/2 “Profile supported over LE”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Central	[1] 2.4	O	[3] GAP 5/4 OR GAP 38/4
2	Peripheral	[1] 2.4	O	[3] GAP 5/3 OR GAP 38/3
3–4	No longer used	N/A	N/A	N/A
5	Unauthenticated no MITM protection (Central)	[1] 6.1	C.1	[3] GAP 37b/3
6	Authenticated MITM protection (Central)	[1] 6.1	C.1	[3] GAP 37b/2
7	Unauthenticated no MITM protection (Peripheral)	[1] 6.1	C.2	[3] GAP 27b/3
8	Authenticated MITM protection (Peripheral)	[1] 6.1	C.2	[3] GAP 27b/2

C.1: Mandatory to support at least one IF PXP 9/1 “Central”, otherwise not defined.

C.2: Mandatory to support at least one IF PXP 9/2 “Peripheral”, otherwise not defined.

Table 10: No longer used

3 References

- [1] Proximity Profile Specification, Version 1.0 or later
- [2] ICS Proforma for Generic Attribute Profile (GATT)
- [3] ICS Proforma for Generic Access Profile (GAP)
- [4] ICS Proforma for Link Loss Service (LLS)
- [5] ICS Proforma for Immediate Alert Service (IAS)
- [6] ICS Proforma for Tx Power Service (TPS)

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2011-06-26	Prepare for publication.
	1.0.1r0	2011-11-23	TSE 4591: Table 6: Add C.3; update item 6/6.
	1.0.1r1	2012-02-012	TSE 4667 Remove GAP connection requirements; update Table 2, Table 4, Table 8, Table 9.
1	1.0.1	2012-03-30	Prepare for publication.
	1.0.2r1	2013-05-02	TSE 5150: Removed Table 7, Item 9 “A bonded collector shall authenticate at connection creation” because it is a duplication of 6/9. 7/9 now “intentionally left blank”.
	1.0.2r2	2013-05-05	Updated version and references to align with ESR06, added Table 0. (Rejected in revision 3)
	1.0.2r3	2013-06-05	Removed ESR06 revisions, updated revision history and versioning.
2	1.0.2	2013-07-02	Prepare for Publication.
	1.0.1.0r00	2015-05-20	ESR08 update: Added item 2 to Table 0 for PXP v1.0.1 Numbering note: Spec version has added a 3 rd digit and changes from 1.0 to 1.0.1. This pushes the numbering to indicate the version of this ICS document out to the 4 th digit, making this 1.0.1.1.
	1.0.1.0r01	2015-06-04	Deleted Section 1.2 (Global Statement of Conformance) per current ICS template standards.
	1.0.1.0r02	2015-06-07	Reviewed by Alicia Courtney. Converted to current document template. Other editorial updates.
3	1.0.1.0	2015-07-14	Prepared for TCRL 2015-1 publication.
	1.0.1.1r00	2019-04-08	TSE 11378 (rating 2): Updated template. Added a minor profile version table. Removed no longer needed items and conditionals related to BR/EDR features that were removed from the Specification before the 1.0 adoption. Applied ICS conventions to conditional wording. Placed the revision history and contributors tables at the end of the document.
	1.0.1.1r01	2019-06-18	Corrected inverted or redundant conditional logic conventions in Tables 3 and 7.
4	1.0.1.1	2019-07-29	Approved by BTI. Prepared for TCRL 2019-1 publication.
	1.0.1.1ed2 r00	2021-01-16	TSE 15987 (rating 1): Changes for deprecation. Template-related editorials, including setting previous v1.0.1.1 as p4.
	1.0.1.1 edition 2	2021-02-01	Approved by BTI on 2021-01-18. Prepared for edition 2 publication.

Publication Number	Revision Number	Date	Comments
	1.0.1.1 ed3r00	2021-07-23	TSE 16894 (rating 1): Corrected Inter-Layer Dependency for PXP 9/2 to “Peripheral”. Template-related editorials.
	1.0.1.1 edition 3	2021-08-20	Approved by BTI on 2021-08-19. Prepared for edition 3 publication.
	p5r00–r02	2021-08-27 – 2021-11-10	TSE 16791 (rating 2): Updated inter-layer dependencies, corrected references (removed unused references), updated deprecation & withdrawal formatting, and made other various editorial corrections. TSE 17841 (rating 2): Made additional consistency checker fixes. Performed template-related formatting fixes. Updated copyright page to align with v2 of the DNMD.
5	p5	2022-01-25	Approved by BTI on 2022-01-06. Prepared for TCRL 2021-2 publication.
	p6r00–r01	2023-10-09 – 2023-12-06	TSE 23176 (rating 2): Resolved GAP and SM inter-layer dependencies. Updated C.1 for Tables 0, 0a, and 1. In Table 3, updated the Capability values for Items 1–3, added an ILD column, and updated C.1 and C.2. In Table 4, combined the rows for Items 3 and 4, and added Items 5–8, C.1, and C.2. Marked Tables 5 and 10 as no longer used. In Table 8, updated the Capability and ILD values for Item 1, marked Item 3 as no longer used, and updated conditional C.1. In Table 9, marked Item 4 as no longer used and added Items 5–8, C.1, and C.2. Made editorial edits to align the document with the latest ICS template, including updates to table titles and spacing, removal of “is supported” language in conditionals, and updates to the way a “No longer used” item is noted. Updated the references.
6	p6	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.
	p6ed2r00– r01	2025-07-11 – 2025-07-15	TSE 27359 (rating 1): Updated the Status for PXP 2/2 and added conditions C.2 and C.3.
	p6 edition 2	2025-08-05	Approved by BTI on 2025-08-05. Prepared for edition 2 publication.

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