

Ranging Service (RAS)

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	RAS v1.0	[1]	M

Table 0a: X.Y.Z Versions

Table number reserved but not yet in use.

2.2 Transports

Table 1: Transport Requirements

Item	Transport	Reference	Status
1	Service supported over BR/EDR	[1] 2.3	C.1
2	Service supported over LE	[1] 2.3	C.2, C.3

C.1: Excluded for this Service.

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

C.3: Mandatory for this Service.

2.3 Features

Table 2: Ranging Service

Item	Capability	Reference	Status
1	RAS Features characteristic	[1] 3.1	M
2	Real-time Ranging Data characteristic	[1] 3.2.3	O
3	On-demand Ranging Data characteristic	[1] 3.2.4	M
4	RAS Control Point characteristic	[1] 3.3	M
5	Ranging Data Ready characteristic	[1] 3.4	M
6	Notify Ranging Data Ready characteristic	[1] 3.4	O
7	Read Ranging Data Ready characteristic	[1] 3.4	O
8	Ranging Data Overwritten characteristic	[1] 3.5	M
9	Notify Ranging Data Overwritten characteristic	[1] 3.5	O
10	Read Ranging Data Overwritten characteristic	[1] 3.5	O
11	Simultaneous notification and indication enablement for a characteristic	[1] 3.2.3.1, 3.2.4.1	O

2.3.1 RAS Control Point

Table 3: RAS Control Point Op Codes

Item	Capability	Reference	Status
1	Get Ranging Data	[1] 3.3.2.1	M
2	ACK Ranging Data	[1] 3.3.2.2	M
3	Retrieve Lost Ranging Data Segments	[1] 3.3.2.3	O
4	Abort Operation	[1] 3.3.2.5	O
5	Set Filter	[1] 3.3.2.4	O

2.4 GATT requirements

Table 4: GATT Requirements

Item	Capability	Reference	Status	Inter-Layer Dependency
1	GATT Server over LE	[1] 2.5	M	[2] GATT 1a/3
2	Exchange MTU	[1] 2.5	M	[2] GATT 4/1
3	Write Without Response	[1] 2.5	M	[2] GATT 4/12
4	Single Notification	[1] 2.5	M	[2] GATT 4/17
5	Indication	[1] 2.5	M	[2] GATT 4/18
6	Read Characteristic Descriptor	[1] 2.5	M	[2] GATT 4/19
7	Write Characteristic Descriptor	[1] 2.5	M	[2] GATT 4/21
8	Read Characteristic Value	[1] 2.5	M	[2] GATT 4/8

3 References

- [1] Ranging Service Specification, Version 1.0
- [2] ICS Proforma for Generic Attribute Profile (GATT)



4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	p0	2024-11-19	Approved by BTI on 2024-10-29. RAS v1.0 adopted by the BoD on 2024-11-12. Prepared for initial publication.
	p0ed2r00	2025-07-11	TSE 27307 (rating 1): Updated the Status for RAS 1/2, added conditions C.2 and C.3, and updated the Capability in RAS 4/4.
	p0 edition 2	2025-08-05	Approved by BTI on 2025-08-05. Prepared for edition 2 publication.
	p1r00	2025-08-14	TSE 27767 (rating 2): Added new Item 2/11.
1	p1	2025-11-04	Approved by BTI on 2025-10-02. Prepared for TCRL pkg101 publication.
	p2r00-r01	2025-12-04 – 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.
2	p2	2026-02-17	Approved by BTI on 2026-01-21. Prepared for TCRL pkg102 publication.

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