Global Navigation Satellite System Profile (GNSS)

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

- **Revision:** GNSS.ICS.p4
- **Revision Date:** 2026-02-17
- **Prepared By:** BTI
- **Published during TCRL:** TCRL.pkg102

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	GNSS v1.0	[1]	M

2.2 Core Configuration

Table 0a: Core Configuration Requirements

Item	Core Configuration	Reference	Status
1	Profile supported over BR/EDR	[1] 2.1	C.1, C.3
2	Profile supported over LE	[1] 2.1	C.2

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.

C.3: Mandatory for this Profile.

2.3 Roles

Table 1: Role Requirements

Item	Role	Reference	Status
1	Server	[1] 2.2.1	C.1
2	Client	[1] 2.2.1	C.1

C.1: Mandatory to support at least one.

2.4 Server role

Table 2: GNSS Capabilities of the Server

Prerequisite: GNSS 1/1 “Server”

Item	Capability	Reference	Status
1	Accept GNSS Connection	[1] 3.2	M
2	Release GNSS Connection	[1] 3.5	O
3	NMEA-0183 data transfer to Client	[1] 3.4.1	M
4	No longer used	N/A	N/A

2.5 Client role

Table 3: GNSS Capabilities of the Client

Prerequisite: GNSS 1/2 "Client"

Item	Capability	Reference	Status
1	Initiate GNSS Connection	[1] 3.2	M
2	Release GNSS Connection	[1] 3.5	M
3	NMEA-0183 data transfer from Server	[1] 3.4.1	M

2.6 Profile and Protocol Dependencies

2.6.1 SDP requirements

Table 4: SDP Requirements

Prerequisite: GNSS 1/1 "Server"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Server	[1] 4.4	M	[4] SDP 1b/1
2	ProtocolDescriptorList	[1] 4.4	M	[4] SDP 9/2
3	BluetoothProfileDescriptorList	[1] 4.4	M	[4] SDP 9/14

2.6.2 GAP requirements

Table 5: GAP Requirements for Server

Prerequisite: GNSS 1/1 "Server"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Limited discoverable mode	[1] 4.5.1	C.1	[2] GAP 1/2
2	General discoverable mode	[1] 4.5.1	C.1	[2] GAP 1/3
3	Bondable mode	[1] 4.5.1	M	[2] GAP 1/7
4	Initiation of general bonding	[1] 4.5.1	M	[2] GAP 3/5
5	No longer used	N/A	N/A	N/A

C.1: Mandatory to support at least one.

Table 5a: GAP Requirements for Client

Prerequisite: GNSS 1/2 "Client"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Initiation of general inquiry	[1] 4.5.1	M	[2] GAP 3/1

2.6.3 RFCOMM requirements

Table 6: RFCOMM Requirements

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Initialize RFCOMM Session	[1] 4.1	C.1	[3] RFCOMM 1/1
2	Respond to Initialization of an RFCOMM Session	[1] 4.1	C.2	[3] RFCOMM 1/2

C.1: Mandatory IF GNSS 1/2 “Client”, otherwise Optional.

C.2: Mandatory IF GNSS 1/1 “Server”, otherwise Optional.

3 References

[1] Global Navigation Satellite Systems (GNSS) Profile Specification, Version 1.0 or later

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

[3] ICS Proforma for RFCOMM (RFCOMM)

[4] ICS Proforma for Service Discovery Protocol (SDP)

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2012-03-14	Prepare for publication.
	1.0.1r0	2017-04-10	TSE 8346: Template conversion and miscellaneous editorial changes. Table 0 added.
1	1.0.1	2017-07-03	Approved by BTI. Prepared for TCRL 2017-1 publication.
	p2r00–r01	2022-11-01 – 2022-11-10	TSE 19325 (rating 3): Updated to align with current ICS conventions/template. Removed Support columns and “is supported” language. Added ILD columns where appropriate. Corrected GAP references. Added missing GAP items (Security mode 1, 2, 3, 4). Replaced SPP requirements with RFCOMM requirements. Made minor changes to section headings. Added a Publication Number column to the Revision History. Revised the document numbering convention, setting the last release publication of 1.0.1 as p1. Performed additional template-related formatting fixes. Replaced the Bluetooth logo in the footer and updated the copyright page to align with v2 of the DNMD.
2	p2	2023-02-07	Approved by BTI on 2022-12-19. Prepared for TCRL 2022-2 publication.
	p3r00–r01	2025-02-25 – 2025-05-13	TSE 26954 (rating 2): Updated Table 0 title. Added “Core Configuration” section and Table 0a. Updated Tables 1 and 5 conditional C.1. Applied the current ICS template.
3	p3	2025-07-08	Approved by BTI on 2025-05-30. Prepared for TCRL pkg100 publication.
	p4r00–r01	2025-12-05 – 2026-01-14	TSE 28346 (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.
4	p4	2026-02-17	Approved by BTI on 2026-01-22. Prepared for TCRL pkg102 publication.

Acknowledgments

Name	Company
Sowmya Ramjee	Bluetooth SIG, Inc.
Burch Seymour	Continental Automotive Systems