

Glucose Profile (GLP)

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	GLP v1.0	[1]	C.1, C.2

C.1: Mandatory.

C.2: Can only be supported with an active X.Y.Z version after Deprecation or Withdrawal. Deprecated 2023-02-01. Withdrawn 2025-02-01.

Table 0a: X.Y.Z Versions

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

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

2.2 Roles

Table 1: Role Requirements

Item	Role	Reference	Status
1	Glucose 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 Services – Sensor Role

Table 3: Services – Sensor Role

Prerequisite: GLP 1/1 “Glucose Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Glucose Service	[1] 3	M	[2] GLS
2	Service UUID	[1] 3.1.1	O	[5] GAP 20a/1

Item	Capability	Reference	Status	Inter-Layer Dependency
3	Local Name	[1] 3.1.2	O	[5] GAP 20a/2
4	Public Target Address	[1] 3.1.4	C.3	[5] GAP 20a/12
4a	Random Target Address	[1] 3.1.4	C.3	[5] GAP 20a/13
4b	Target Address in AD or Scan Response	[1] 3.1.4	C.1	N/A
5–6	No longer used	N/A	N/A	N/A
7	Device Information Service	[1] 3	M	[3] DIS
8	Support for Multiple Bonds	[1] 3.1.4	C.2	N/A
9	Support for Single Bond	[1] 3.1.4	C.2	N/A

C.1: Optional IF GLP 3/8 “Support for Multiple Bonds”, otherwise Excluded.

C.2: Mandatory to support at least one.

C.3: Mandatory to support at least one IF GLP 3/4b “Target Address in AD or Scan Response”, otherwise not defined.

2.4.2 DIS requirements – Sensor Role

Table 4: DIS Requirements – Sensor Role

Prerequisite: GLP 1/1 “Glucose Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Manufacturer Name String Characteristic	[1] 3.2	M	[3] DIS 2/2
2	Model Number String Characteristic	[1] 3.2	M	[3] DIS 2/3
3	System ID Characteristic	[1] 3.2	M	[3] DIS 2/8

2.4.3 GAP requirements – Sensor Role

Table 5: GAP Requirements - Sensor Role

Prerequisite: GLP 1/1 “Glucose Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Peripheral	[1] 2.4	M	[5] GAP 5/3 OR GAP 38/3
2	LE security mode 1	[1] 6.1	M	[5] GAP 25/1
3	Writable Device Name	[1] 3.1.3	O	[5] GAP 27/6
4	Bondable mode	[1] 5.1.1	M	[5] GAP 24/2
5	Unauthenticated no MITM protection	[1] 6.1	C.1	[5] GAP 27b/3
6	Authenticated MITM protection	[1] 6.1	C.1	[5] GAP 27b/2

C.1: Mandatory to support at least one.

Table 6: No longer used

2.5 Collector Role

2.5.1 Service Support – Collector Role

Table 7: Client Services Supported

Prerequisite: GLP 1/2 “Collector”

Item	Capability	Reference	Status
1	Discover Glucose Service	[1] 4	M
2	Discover Device Information Service	[1] 4	O

2.5.2 Discover Services and Characteristics – Collector Role

Table 8: Discover Services and Characteristics – Collector Role

Prerequisite: GLP 1/2 “Collector”

Item	Capability	Reference	Status
1	Discover Glucose Service	[1] 4.2.1	M
2	Discover Glucose Measurement characteristic	[1] 4.3.1.1	M
3	Discover Glucose Measurement - Client Characteristic Configuration Descriptor	[1] 4.3.1.1	M
4	Discover Glucose Measurement Context characteristic	[1] 4.3.1.2	M
5	Discover Glucose Measurement Context - Client Characteristic Configuration Descriptor	[1] 4.3.1.2	M
6	Discover Glucose Feature characteristic	[1] 4.3.1.3	M
6a	Discover Glucose Feature - Client Characteristic Configuration Descriptor	[6] 4.3.1.3	M
7	Discover Record Access Control Point characteristic	[1] 4.3.1.4	M
8	Discover Record Access Control Point - Client Characteristic Configuration Descriptor	[1] 4.3.1.4	M

2.5.3 Features – Collector Role

Table 9: Features – Collector Role

Prerequisite: GLP 1/2 “Collector”

Item	Role/Service	Reference	Status
1	Configure Glucose Measurement characteristic for notifications	[1] 4.4	M
2	Receive Glucose Measurement characteristic notifications	[1] 4.4	M
3	Configure Glucose Measurement Context characteristic for notifications	[1] 4.5	M



Item	Role/Service	Reference	Status
4	Receive Glucose Measurement Context characteristic notifications	[1] 4.5	M
5	Configure Record Access Control Point characteristic for indications	[1] 4.7	M
6	Receive Record Access Control Point characteristic indications	[1] 4.7	M
7	Write to Record Access Control Point characteristic	[1] 4.7	M
8	RACP Characteristic - Report Stored Records Op Code	[1] 4.7.3.4, 4.7.2	M
9	RACP Characteristic - Delete Stored Records Op Code	[1] 4.7.3.3, 4.7.2	O
10	RACP Characteristic - Abort Operation Op Code	[1] 4.7.3.5, 4.7.2	O
11	RACP Characteristic - Report Number of Stored Records Op Code	[1] 4.7.3.2, 4.7.2	O
12	Sequence Number Filter Type of RACP Characteristic	[1] 4.7.2	M
13	User Facing Time Filter Type of RACP Characteristic	[1] 4.7.2	O
14	Read Glucose Feature characteristic	[1] 4.6	M
15	Verify Bond Status on Reconnection	[1] 5.2.2	M
16	Support for Multiple Bonds	[1] 5.2.2	O
17	Configure characteristic for indications to determine supported features	[6] 4.6	C.1

C.1: Optional IF GLP 0/1 "GLP v1.0" AND NOT GLP 0a/1 "GLP v1.0.1", otherwise Mandatory.

Table 9a: Determining Supported Features - Configure Characteristic for Indications

Prerequisite: GLP 9/17 "Configure characteristic for indications to determine supported features"

Item	Capability	Reference	Status
1	Configure and receive Glucose Feature characteristic indications	[6] 4.3.1.3, 4.6	C.1
2	Read Glucose Feature characteristic on reconnection	[6] 4.6	C.1

C.1: Mandatory to support at least one IF GLP 9/16 "Support for Multiple Bonds", otherwise Excluded.

Table 10: Report Stored Records Operators and Filter Parameters

Prerequisite: GLP 9/8 "RACP Characteristic - Report Stored Records Op Code"

Item	Capability	Reference	Status
1	All records Operator	[1] 4.7.3.4, 4.7.2	M
2	Less than or equal to Operator	[1] 4.7.3.4, 4.7.2	O
3	Less than or equal to Operator – Sequence Number Operand	[1] 4.7.3.4, 4.7.2	C.1
4	Less than or equal to Operator – User Facing Time Operand	[1] 4.7.3.4, 4.7.2	C.2
5	Greater than or equal to Operator	[1] 4.7.3.4, 4.7.2	M

Item	Capability	Reference	Status
6	Greater than or equal to Operator – Sequence Number Operand	[1] 4.7.3.4, 4.7.2	M
7	Greater than or equal to Operator – User Facing Time Operand	[1] 4.7.3.4, 4.7.2	C.3
8	Within range of (inclusive) Operator	[1] 4.7.3.4, 4.7.2	O
9	Within range of (inclusive) Operator – Sequence Number Operand	[1] 4.7.3.4, 4.7.2	C.4
10	Within range of (inclusive) Operator – User Facing Time Operand	[1] 4.7.3.4, 4.7.2	C.5
11	First record Operator	[1] 4.7.3.4, 4.7.2	O
12	Last record Operator	[1] 4.7.3.4, 4.7.2	O

- C.1: Mandatory IF GLP 10/2 “Less than or equal to Operator”, otherwise Excluded.
C.2: Optional IF GLP 10/2 “Less than or equal to Operator”, otherwise Excluded.
C.3: Optional IF GLP 10/5 “Greater than or equal to Operator”, otherwise Excluded.
C.4: Mandatory IF GLP 10/8 “Within range of (inclusive) Operator”, otherwise Excluded.
C.5: Optional IF GLP 10/8 “Within range of (inclusive) Operator”, otherwise Excluded.

Table 11: Delete Stored Records Operators and Filter Parameters

Prerequisite: GLP 9/9 “RACP Characteristic - Delete Stored Records Op Code”

Item	Capability	Reference	Status
1	All records Operator	[1] 4.7.3.3, 4.7.2	M
2	Less than or equal to Operator	[1] 4.7.3.3, 4.7.2	O
3	Less than or equal to Operator – Sequence Number Operand	[1] 4.7.3.3, 4.7.2	C.1
4	Less than or equal to Operator – User Facing Time Operand	[1] 4.7.3.3, 4.7.2	C.2
5	Greater than or equal to Operator	[1] 4.7.3.3, 4.7.2	O
6	Greater than or equal to Operator – Sequence Number Operand	[1] 4.7.3.3, 4.7.2	C.3
7	Greater than or equal to Operator – User Facing Time Operand	[1] 4.7.3.3, 4.7.2	C.4
8	Within range of (inclusive) Operator	[1] 4.7.3.3, 4.7.2	O
9	Within range of (inclusive) Operator – Sequence Number Operand	[1] 4.7.3.3, 4.7.2	C.5
10	Within range of (inclusive) Operator – User Facing Time Operand	[1] 4.7.3.3, 4.7.2	C.6
11	First record Operator	[1] 4.7.3.3, 4.7.2	O
12	Last record Operator	[1] 4.7.3.3, 4.7.2	O

- C.1: Mandatory IF GLP 11/2 “Less than or equal to Operator”, otherwise Excluded.
C.2: Optional IF GLP 11/2 “Less than or equal to Operator”, otherwise Excluded.
C.3: Mandatory IF GLP 11/5 “Greater than or equal to Operator”, otherwise Excluded.
C.4: Optional IF GLP 11/5 “Greater than or equal to Operator”, otherwise Excluded.

- C.5: Mandatory IF GLP 11/8 “Within range of (inclusive) Operator”, otherwise Excluded.
 C.6: Optional IF GLP 11/8 “Within range of (inclusive) Operator”, otherwise Excluded.

Table 12: Report Number of Stored Records Operators and Filter Parameters

Prerequisite: GLP 9/11 “RACP Characteristic - Report Number of Stored Records Op Code”

Item	Capability	Reference	Status
1	All records Operator	[1] 4.7.3.2, 4.7.2	M
2	Less than or equal to Operator	[1] 4.7.3.2, 4.7.2	O
3	Less than or equal to Operator – Sequence Number Operand	[1] 4.7.3.2, 4.7.2	C.1
4	Less than or equal to Operator – User Facing Time Operand	[1] 4.7.3.2, 4.7.2	C.2
5	Greater than or equal to Operator	[1] 4.7.3.2, 4.7.2	M
6	Greater than or equal to Operator – Sequence Number Operand	[1] 4.7.3.2, 4.7.2	M
7	Greater than or equal to Operator – User Facing Time Operand	[1] 4.7.3.2, 4.7.2	C.3
8	Within range of (inclusive) Operator	[1] 4.7.3.2, 4.7.2	O
9	Within range of (inclusive) Operator – Sequence Number Operand	[1] 4.7.3.2, 4.7.2	C.4
10	Within range of (inclusive) Operator – User Facing Time Operand	[1] 4.7.3.2, 4.7.2	C.5
11	First record Operator	[1] 4.7.3.2, 4.7.2	O
12	Last record Operator	[1] 4.7.3.2, 4.7.2	O

- C.1: Mandatory IF GLP 12/2 “Less than or equal to Operator”, otherwise Excluded.
 C.2: Optional IF GLP 12/2 “Less than or equal to Operator”, otherwise Excluded r.
 C.3: Optional IF GLP 12/5 “Greater than or equal to Operator”, otherwise Excluded.
 C.4: Mandatory IF GLP 12/8 “Within range of (inclusive) Operator”, otherwise Excluded.
 C.5: Optional IF GLP 12/8 “Within range of (inclusive) Operator”, otherwise Excluded.

2.5.4 Discover DIS and Related Characteristics – Collector Role

Table 13: Client Services Supported

Prerequisite: GLP 1/2 “Collector” AND GLP 7/2 “Discover Device Information Service”

Item	Capability	Reference	Status
1	Discover Device Information Service	[1] 4.2.2	C.1
2	Manufacturer Name String Characteristic	[1] 3.2, 4.3.2, 4.8	O
3	Model Number String Characteristic	[1] 3.2, 4.3.2, 4.8	O
4	System ID Characteristic	[1] 3.2, 4.3.2, 4.8	O

- C.1: Mandatory IF GLP 13/2 “Manufacturer Name String Characteristic” OR GLP 13/3 “Model Number String Characteristic” OR GLP 13/4 “System ID Characteristic”, otherwise Optional.



2.5.5 GATT requirements – Collector Role

Table 14: GATT Requirements – Collector Role

Prerequisite: GLP 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] 2.5	M	[4] GATT 1a/1
3	Discover All Primary Services	[1] 4.2	C.1	[4] GATT 3/2
4	Discover Primary Services by Service UUID	[1] 4.2	C.1	[4] GATT 3/3
5	Discover All Characteristics of a Service	[1] 4.3.1, 4.3.2	C.2	[4] GATT 3/5
6	Discover Characteristics by UUID	[1] 4.3.1, 4.3.2	C.2	[4] GATT 3/6
7	Discover All Characteristic Descriptors	[1] 4.3.1	M	[4] GATT 3/7
8	Single Notification	[1] 4.5	M	[4] GATT 3/17
9	Write Characteristic Value	[1] 4.5	M	[4] GATT 3/14
10	Authentication procedure	[1] 5.2, 6.2	M	[4] GATT 7/4
11	Read Characteristic Descriptors	[1] 4.1	M	[4] GATT 3/19
12	Write Characteristic Descriptors	[1] 4.1	M	[4] GATT 3/21

C.1: Mandatory to support at least one.

C.2: Mandatory to support at least one.

2.5.6 GAP requirements – Collector Role

Table 15: GAP Requirements – Collector Role

Prerequisite: GLP 1/2 “Collector”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Central	[1] 2.4	M	[5] GAP 5/4 OR GAP 38/4
2	LE security mode 1	[1] 6.2	M	[5] GAP 35/1
3	Unauthenticated no MITM protection	[1] 6.1	M	[5] GAP 37b/3
4	Authenticated MITM protection	[1] 6.1	M	[5] GAP 37b/2

Table 16: No longer used

3 References

- [1] Glucose Profile Specification, Version 1.0 or later
- [2] ICS Proforma for Glucose Service
- [3] ICS Proforma for Device Information Service (DIS)
- [4] ICS Proforma for Generic Attribute Profile (GATT)
- [5] ICS Proforma for Generic Access Profile (GAP)
- [6] Glucose Profile Specification, Version 1.0.1

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2012-04-03	Adopted by the Bluetooth SIG Board of Directors
	1.0.1r00	2015-05-10	Added functioning references throughout document. Updated conditional language to current conventions. TSE 6282: Added item 8 to table 3 for Single Bond.
1	1.0.1	2015-07-14	Prepared for TCRL 2015-1 publication
	1.0.2r00	2016-10-04	TSE 7516: Added Table 0. Added reference to "GAP 27/6" in GLP.ICS 5/3. Editorial changes to conditionals in Tables 10 – 12. Editorial changes to References.
2	1.0.2	2016-12-13	Approved by BTI. Prepared for TCRL 2016-2 publication.
	p3r00–r06	2021-03-10 – 2021-12-21	<p>TSE 16856 (rating 4): Updated ICS conditionals in Table 0 for GLP v1.0. Addition of new ICS item 0a/1 for CGMP v1.0.1 and new conditionals in Table 0a. Added new ICS items 6a and 9/17 and table (Table 9a) for E16276 - proper handling of changing supported features by characteristic indication. Added a reference for Glucose Profile Specification v1.0.1.</p> <p>TSE 18150 (rating 3): Added ILDs to Table 3 and aligned to the GAP ICS. Added new ICS items 4a - Random Target Address (C.3) (ILD = GAP 20a/13), and 4b - Target Address in AD or Scan Response (C.1) (No ILD). Changed the conditional of item 4 "Public Target Address" to C.3 and ILD = GAP 20a/12. Added C.3 - Mandatory to support either GLP 3/4 "Public Target Address" OR GLP 3/4a "Random Target Address" IF GLP 4b "Target Address in AD or Scan Response" is supported, otherwise not defined. Removed ICS items 3/5 and 3/6.</p> <p>TSE 18151 (rating 1): Corrected the description of item 9/10 from "Abort Procedure" to "Abort Operation" to correspond with the opcodes in Table 4.4.</p> <p>Editorials, including updating the ICS to the latest template, making consistency checker fixes, and aligning the copyright data with v2 of the DNMD.</p>
3	p3	2022-01-25	Approved by BTI on 2022-01-06. Prepared for TCRL 2021-2 publication.
	p4r00–r01	2023-09-26 – 2023-12-12	TSE 23174 (rating 2): Resolved GAP and SM inter-layer dependencies. Made editorial edits to align the document with the latest ICS template, including updates to the titles of Tables 0 and 0a and C.1 for Tables 0, 0a, and 1 and removal of "is supported" language. In Table 3, updated C.1–C.3. In Table 5, added Items 5 and 6 and conditional C.1. Marked Tables 6 and 16 as no longer used. Updated the prerequisite for Table 13. In Table 7, updated the Capability value for Items 1 and 2. In Tables 9 and 9a,

Publication Number	Revision Number	Date	Comments
			updated C.1. In Table 14, marked Item 1 as no longer used, updated the Capability and ILD values for Item 2, and updated C.1 and C.2. Added Items 3 and 4 to Table 15. Updated the references. Deleted draft revision history comments prior to p0.
4	p4	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.
	p4ed2r00–r01	2025-07-09 – 2025-07-16	TSE 27352 (rating 1): Updated the Status for GLP 2/2 and added conditions C.2 and C.3.
	p4 edition 2	2025-08-05	Approved by BTI on 2025-08-05. Prepared for edition 2 publication.

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