

# HID over GATT Profile (HOGP)

## **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: No longer used**

**Table 0a: X.Y Versions (HID Device)**

*Prerequisite: HOGP 1/1 "HID Device"*

Item	Version	Reference	Status
1	HOGP v1.0	[1]	C.1
2	HOGP v1.1	[9]	C.1
3	HOGP v1.2	[10]	C.1

C.1: Mandatory to support one and only one.

**Table 0b: X.Y.Z Versions (HID Device)**

Table number reserved but not yet in use.

**Table 0c: X.Y Versions (Report Host)**

*Prerequisite: HOGP 1/2 "Report Host"*

Item	Version	Reference	Status
1	HOGP v1.0	[1]	C.1
2	HOGP v1.1	[9]	C.1
3	HOGP v1.2	[10]	C.1

C.1: Mandatory to support one and only one.

**Table 0d: X.Y.Z Versions (Report Host)**

Table number reserved but not yet in use.

**Table 0e: X.Y Versions (Boot Host)**

*Prerequisite: HOGP 1/3 "Boot Host"*

Item	Version	Reference	Status
1	HOGP v1.0	[1]	C.1
2	HOGP v1.1	[9]	C.1
3	HOGP v1.2	[10]	C.1

C.1: Mandatory to support one and only one.



**Table 0f: X.Y.Z Versions (Boot Host)**

Table number reserved but not yet in use.

## 2.2 Roles

**Table 1: Role Requirements**

Item	Role	Reference	Status
1	HID Device	[1] 2.1	C.1
2	Report Host	[1] 2.1	C.1
3	Boot Host	[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] 1	C.1
2	Profile supported over LE	[1] 1	C.2, C.3

C.1: Excluded for this Profile.

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

C.3: Mandatory for this Profile.

## 2.4 HID Device

### 2.4.1 Services (HID Device)

**Table 3: Services (HID Device)***Prerequisite: HOGP 1/1 "HID Device"*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	HID Service	[1] 3.1	M	[2] HIDS
2	Multiple Service instances – HID Service	[1] 3.1	O	N/A
3	Battery Service	[1] 3.2	M	[5] BAS
4	Device Information Service	[1] 3.3	M	[6] DIS
5	Scan Parameters Service	[1] 3.4	O	[7] SCPS
6	HID ISO Service	[9] 3.5	C.1	N/A

C.1: Mandatory IF HOGP 4/8 "HID ISO feature", otherwise Excluded.



## 2.4.2 Features (HID Device)

**Table 4: Features (HID Device)**

Prerequisite: HOGP 1/1 “HID Device”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Include HID Service UUID in AD in GAP Discoverable Mode	[1] 3.1.3	O	N/A
2	Include Local Name in AD or Scan Response Data	[1] 3.1.4	O	N/A
3	Include Appearance in AD or Scan Response Data	[1] 3.1.5	O	N/A
4	PnP ID	[1] 3.3.2	M	[6] DIS 2/11
5	Report Characteristic	[1] 4.8	C.1	[2] HIDS 2/12
6	Non-HID Service characteristic described within Report Map characteristic	[1] 4.8.1	C.1	N/A
7	Report Map Characteristic - External Report Reference Characteristic descriptor	[1] 4.8.1	C.2	[2] HIDS 2/11a
8	HID ISO feature	[9] 3.5	C.4	N/A
9	HID ISO Input Report type	[9] 6.5.1.1.3	C.3	N/A
10	HID ISO Output Report type	[9] 6.5.1.1.3	C.3	N/A
11	HID SCI	[10] 3.6, 7	C.5	[2] HIDS 2/19
12	HID ACL Flush	[10] 3.7	C.5	N/A

C.1: Mandatory to support at least one.

C.2: Mandatory IF HOGP 4/6 “Non-HID Service characteristic described within Report Map characteristic”, otherwise not defined.

C.3: Mandatory to support at least one IF HOGP 4/8 “HID ISO feature”, otherwise Excluded.

C.4: Optional IF NOT HOGP 0a/1 “HOGP v1.0”, otherwise Excluded.

C.5: Excluded IF HOGP 0a/1 “HOGP v1.0” OR HOGP 0a/2 “HOGP v1.1”, otherwise Optional.

## 2.4.3 GAP requirements (HID Device)

**Table 5: GAP Requirements (HID Device)**

Prerequisite: HOGP 1/1 “HID Device”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Peripheral	[1] 2.4	M	[4] GAP 5/3
2–3	No longer used	N/A	N/A	N/A
4	Bondable mode (Peripheral)	[1] 6.1 [9] 7.1	M	[4] GAP 24/2
5	Bonding procedure (Peripheral)	[1] 6.1 [9] 7.1	M	[4] GAP 24/3
6	LE security mode 1 (Peripheral)	[1] 6.1 [9] 7.1	M	[4] GAP 25/1



Item	Capability	Reference	Status	Inter-Layer Dependency
7	Unauthenticated Pairing (LE security mode 1 level 2) (Peripheral)	[1] 6.1 [9] 7.1	M	[4] GAP 25/8
8	Authenticated Pairing (LE security mode 1 level 3) (Peripheral)	[1] 6.1 [9] 7.1	O	[4] GAP 25/7
9	Connected Isochronous Stream Peripheral Establishment procedure	[9] 5	C.1	[4] GAP 23/6
10	Shorter Connection Intervals	[10] 2.8.1	C.2	[4] GAP 23/8a

C.1: Mandatory IF HOGP 4/8 “HID ISO feature”, otherwise not defined.

C.2: Mandatory IF HOGP 4/11 “HID SCI”, otherwise not defined.

**Table 6: No longer used**

#### 2.4.4 HID ISO Characteristics (HID Device)

**Table 17: Characteristics (HID Device)**

*Prerequisite: HOGP 4/8 “HID ISO feature”*

Item	Capability	Reference	Status
1	HID ISO Properties Characteristic	[9] 6.5.1	M
2	LE HID Operation Mode Characteristic	[9] 6.5.2	M
3	Indicate LE HID Operation Mode Characteristic	[9] 6.5.2	C.1

C.1: Mandatory IF HOGP 19/1 “Device Mode Change”, otherwise Optional.

#### 2.4.5 HID ISO Protocol (HID Device)

**Table 18: HID ISO Protocol (HID Device)**

*Prerequisite: HOGP 4/8 “HID ISO feature”*

Item	Capability	Reference	Status
1	Redundancy	[9] 5.5	O
2	Multiple reports per SDU	[9] 5.5	O

#### 2.4.6 Device Mode Change (HID Device)

**Table 19: Device Mode Change (HID Device)**

*Prerequisite: HOGP 17/1 “HID ISO Properties Characteristic”*

Item	Capability	Reference	Status
1	Device Mode Change	[9] 5.2.2	O

## 2.4.7 Available Report Intervals (HID Device)

**Table 20: HID ISO Available Report Interval (HID Device)**

*Prerequisite: HOGP 4/8 "HID ISO feature"*

Item	Capability	Reference	Status
1	1 ms	[9] 5.3	O
2	1.25 ms	[9] 5.3	O
3	2 ms	[9] 5.3	O
4	2.5 ms	[9] 5.3	O
5	3 ms	[9] 5.3	O
6	3.75 ms	[9] 5.3	O
7	4 ms	[9] 5.3	O
8	5 ms	[9] 5.3	M
9	7.5 ms	[9] 5.3	M

## 2.4.8 LL requirements (HID Device)

**Table 20a: LL Requirements (HID Device)**

*Prerequisite: HOGP 1/1 "HID Device"*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	LE Flushable ACL Data	[10] 2.8.1	C.1	[11] LL 9/70

C.1: Mandatory IF HOGP 4/12 "HID ACL Flush", otherwise not defined.

## 2.5 HID Host

### 2.5.1 Client Services Support (Report Host)

**Table 7: No longer used**

**Table 7a: GATT based Profile Support (Report Host)**

*Prerequisite: HOGP 1/2 "Report Host"*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Scan Client	[1] 4.2	M	[8] SCPP 1/2

**Table 8: No longer used**



## 2.5.2 Discover Services and Characteristics (Report Host)

**Table 9: Discover Service and Characteristics (Report Host)**

Prerequisite: HOGP 1/2 "Report Host"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Discover HID Service	[1] 4.5.1	M	N/A
2	Discover Battery Service	[1] 4.5.3	M	N/A
3	Discover Device Information Service	[1] 4.5.2	M	N/A
4	Discover Scan Parameters Service	[1] 4.2	M	[8] SCPP 7/1
5	Discover HID Service characteristic: Report Map	[1] 4.6.1.1	M	N/A
6	Discover HID Service characteristic: Report Map – External Report Reference characteristic descriptor	[1] 4.6.1.1	M	N/A
7	Discover HID Service characteristic: Report	[1] 4.6.1.2	M	N/A
8	Discover HID Service characteristic: Report – Client Characteristic Configuration characteristic descriptor	[1] 4.6.1.2	M	N/A
9	Discover HID Service characteristic: Report – Report Reference characteristic descriptor	[1] 4.6.1.2	M	N/A
10	Discover HID Service characteristic: HID Information	[1] 4.6.1.4	M	N/A
11	Discover HID Service characteristic: HID Control Point	[1] 4.6.1.3	M	N/A
12	Discover HID Service characteristic: Protocol Mode	[1] 4.6.1.5	O	N/A
12a	Discover HID Service characteristic: HID SCI Information	[10] 4.6.1.6	C.2	N/A
12b	Discover HID Service characteristic: HID SCI Mode	[10] 4.6.1.7	C.2	N/A
13	Discover Battery Service characteristic: Battery Level	[1] 4.6.3.1	M	N/A
14	Discover Battery Service characteristic: Battery Level – Client Characteristic Configuration characteristic descriptor	[1] 4.6.3.1	M	N/A
15	Discover Device Information Service characteristic: PnP ID	[1] 4.6.2.1	M	N/A
16	Discover non-HID Service characteristic: Report Reference characteristic descriptor	[1] 4.8.1	M	N/A
17	Discover HID ISO Service	[9] 4.5.4	C.1	N/A
18	Discover HID ISO Service characteristic: HID ISO Properties characteristic	[9] 4.6.4.1	C.1	N/A

Item	Capability	Reference	Status	Inter-Layer Dependency
19	Discover HID ISO Service characteristic: LE HID Operation characteristic	[9] 4.6.4.2	C.1	N/A

C.1: Mandatory IF HOGP 11/29 “HID ISO feature”, otherwise Excluded.

C.2: Mandatory IF HOGP 11/35 “HID SCI feature”, otherwise Excluded.

### 2.5.3 Discover Services and Characteristics (Boot Host)

**Table 10: Discover Service & Characteristics (Boot Host)**

*Prerequisite: HOGP 1/3 “Boot Host”*

Item	Capability	Reference	Status
1	Discover HID Service	[1] 4.3.1	M
2	Discover Battery Service	[1] 4.3.3	O
3	Discover Device Information Service	[1] 4.3.2	O
4	Discover HID Service characteristic: Protocol Mode	[1] 4.4.1.1	M
5	Discover HID Service characteristic: Boot Keyboard Input Report	[1] 4.4.1.2	C.1, C.2
6	Discover HID Service characteristic: Boot Keyboard Input Report – Client Characteristic Configuration characteristic descriptor	[1] 4.4.1.2	C.3
7	Discover HID Service characteristic: Boot Keyboard Output Report	[1] 4.4.1.3	C.1, C.2
8	Discover HID Service characteristic: Boot Mouse Input Report	[1] 4.4.1.4	C.1
9	Discover HID Service characteristic: Boot Mouse Input Report – Client Characteristic Configuration characteristic descriptor	[1] 4.4.1.4	C.4
10	Discover Battery Service characteristic: Battery Level	[1] 4.4.3	O
11	Discover Battery Service characteristic: Battery Level – Client Characteristic Configuration characteristic descriptor	[1] 4.4.3.1	O
12	Discover Device Information Service characteristic: PnP ID	[1] 4.4.2.1	O

C.1: Mandatory to support at least one.

C.2: Mandatory to support none or all.

C.3: Mandatory IF HOGP 10/5 “Discover HID Service characteristic: Boot Keyboard Input Report”, otherwise Excluded.

C.4: Mandatory IF HOGP 10/8 “Discover HID Service characteristic: Boot Mouse Input Report”, otherwise Excluded.

### 2.5.4 Features (Report Host)

**Table 11: Features (Report Host)**

*Prerequisite: HOGP 1/2 “Report Host”*

Item	Capability	Reference	Status
1	Read Report Map characteristic	[1] 4.7	M
2	Read Report Map characteristic: External Report Reference characteristic descriptor	[1] 4.7	M



Item	Capability	Reference	Status
3	Read Report characteristic: Report Type: Input Report	[1] 4.8	C.2
4	Write Report characteristic: Report Type: Input Report	[1] 4.8	C.2
5	Read Report characteristic: Report Type: Output Report	[1] 4.8	C.3
6	Write - Report characteristic: Report Type: Output Report	[1] 4.8	C.3
7	Read - Report characteristic: Report Type: Feature Report	[1] 4.8	C.4
8	Write - Report characteristic: Report Type: Feature Report	[1] 4.8	C.4
9	Read Report characteristic: Report Reference characteristic descriptor	[1] 4.8	M
10	Read Report characteristic: Input Report: Client Characteristic Configuration characteristic descriptor	[1] 4.8	M
11	Report characteristic configuration: enable notifications	[1] 4.8	M
11a	Report characteristic configuration: disable notifications	[1] 4.8	C.2
12	Read HID Information characteristic	[1] 4.10 [10] 4.20	C.10
13	Suspend State	[1] 4.9	O
14	Exit Suspend State	[1] 4.9	C.1
15	Write HID Control Point characteristic: Suspend command	[1] 4.9	C.1
16	Write HID Control Point characteristic: Exit Suspend command	[1] 4.9	C.1
17	Read Protocol Mode characteristic: Get Protocol command	[1] 4.8	O
18	Write Protocol Mode characteristic: Set Report Protocol Mode command	[1] 4.8	O
19	Read Battery Level characteristic	[1] 4.15	C.5
20	Read Battery Level characteristic: Client Characteristic Configuration characteristic descriptor	[1] 4.15	C.6
21	Battery Level characteristic configuration: enable notifications	[1] 4.15	C.6
21a	Battery Level characteristic configuration: disable notifications	[1] 4.15	O
22	Read non-HID Service characteristic: Report Reference characteristic descriptor	[1] 4.8	M
23	Read PnP ID characteristic	[1] 4.16	M
24	Notify Report characteristic	[1] 4.8	M
25	Notify Battery Level characteristic	[1] 4.15	C.5
26	Report Characteristic: Input Report type supported	[1] 4.8	M
27	Report Characteristic: Output Report type supported	[1] 4.8	O
28	Report Characteristic: Feature Report type supported	[1] 4.8	O
29	HID ISO feature	[9] 4.19	C.7
30	Read HID ISO Properties characteristic	[9] 6.5.1.2	C.8
31	Write LE HID Operation Mode characteristic: Hybrid Operation Mode	[9] 5.1	C.8
32	Write LE HID Operation Mode characteristic: Default Operation mode	[9] 5.1	C.8
33	HID ISO Input Report type	[9] 6.5.1.1.3.1	C.9
34	HID ISO Output Report type	[9] 6.5.1.1.3.1	C.9
35	HID SCI feature	[10] 4.20, 7	C.11



Item	Capability	Reference	Status
36	Write HID Control Point characteristic: Enable SCI Default mode	[10] 7.41	C.12
37	Write HID Control Point characteristic: Enable SCI Fast mode	[10] 7.41	C.12
38	Write HID Control Point characteristic: Enable SCI Low Power mode	[10] 7.41	C.13
39	Write HID Control Point characteristic: Enable SCI Full Range mode	[10] 7.41	C.12
40	Read HID SCI Information characteristic	[10] 4.6.1.6	C.13
41	Read HID SCI Mode characteristic	[10] 4.6.1.7	C.13
42	Notify HID SCI Mode characteristic	[10] 4.6.1.7	C.13
43	HID ACL Flush	[10] 4.21	C.11

- C.1: Mandatory IF HOGP 11/13 “Suspend State”, otherwise Excluded.
- C.2: Optional IF HOGP 11/26 “Report Characteristic: Input Report type supported”, otherwise Excluded.
- C.3: Optional IF HOGP 11/27 “Report Characteristic: Output Report type supported”, otherwise Excluded.
- C.4: Optional IF HOGP 11/28 “Report Characteristic: Feature Report type supported”, otherwise Excluded.
- C.5: Mandatory to support at least one.
- C.6: Mandatory IF HOGP 11/25 “Notify Battery Level characteristic”, otherwise Excluded.
- C.7: Optional IF NOT HOGP 0c/1 “HOGP v1.0”, otherwise Excluded.
- C.8: Mandatory IF HOGP 11/29 “HID ISO feature”, otherwise Excluded.
- C.9: Optional IF HOGP 11/29 “HID ISO feature”, otherwise Excluded.
- C.10: Mandatory IF HOGP 11/35 “HID SCI feature”, otherwise Optional.
- C.11: Excluded IF HOGP 0c/1 “HOGP v1.0” OR HOGP 0c/2 “HOGP v1.1”, otherwise Optional.
- C.12: Mandatory IF HOGP 11/35 “HID SCI feature”, otherwise Excluded.
- C.13: Optional IF HOGP 11/35 “HID SCI feature”, otherwise Excluded.

## 2.5.5 Features (Boot Host)

**Table 12: Features (Boot Host)**

*Prerequisite: HOGP 1/3 “Boot Host”*

Item	Capability	Reference	Status
1	Read Protocol Mode characteristic: Get Protocol Mode command	[1] 4.11	M
2	Write Protocol Mode characteristic: Set Boot Protocol Mode command	[1] 4.11	M
3	Read HID Service characteristic: Boot Keyboard Input Report	[1] 4.12	C.1
4	Write HID Service characteristic: Boot Keyboard Input Report	[1] 4.12	C.1
5	Read Client Characteristic Configuration characteristic descriptor for Boot Keyboard Input Report	[1] 4.12	C.1
6	Boot Keyboard Input Report characteristic configuration: enable notifications	[1] 4.12	C.1
6a	Boot Keyboard Input Report characteristic configuration: disable notifications	[1] 4.12	O



Item	Capability	Reference	Status
7	Read HID Service characteristic: Boot Keyboard Output Report	[1] 4.13	C.1
8	Write HID Service characteristic: Boot Keyboard Output Report	[1] 4.13	C.1
9	Read HID Service characteristic: Boot Mouse Input Report	[1] 4.14	C.2
10	Write HID Service characteristic: Boot Mouse Input Report	[1] 4.14	C.2
11	Read Client Characteristic Configuration characteristic descriptor for Boot Mouse Input Report	[1] 4.14	C.2
12	Boot Mouse Input Report characteristic configuration: enable notifications	[1] 4.14	C.2
12a	Boot Mouse Input Report characteristic configuration: disable notifications	[1] 4.14	O
13	Notify Boot Keyboard Input Report characteristic	[1] 4.12	C.1
14	Notify Boot Mouse Input Report characteristic	[1] 4.14	C.2
15	Read Battery Level characteristic	[1] 4.15	O
16	Read Battery Level characteristic: Client Characteristic Configuration characteristic descriptor	[1] 4.15	O
17	Battery Level characteristic configuration: enable notifications	[1] 4.15	O
17a	Battery Level characteristic configuration: disable notifications	[1] 4.15	O
18	Notify Battery Level characteristic	[1] 4.15	O
19	Read PnP ID characteristic	[1] 4.16	O

C.1: Mandatory IF HOGP 10/5 “Discover HID Service characteristic: Boot Keyboard Input Report” OR HOGP 10/7 “Discover HID Service characteristic: Boot Keyboard Output Report”, otherwise Excluded.

C.2: Mandatory IF HOGP 10/8 “Discover HID Service characteristic: Boot Mouse Input Report”, otherwise Excluded.

## 2.5.6 GATT requirements (Report Host)

**Table 13: GATT Requirements (Report Host)**

*Prerequisite: HOGP 1/2 “Report Host”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	GATT Client over LE	[1] 4.1	M	[3] GATT 1a/1
2	No longer used	N/A	N/A	N/A
3	Discover All Primary Services	[1] 4.1	C.1	[3] GATT 3/2
4	Discover Primary Service by Service UUID	[1] 4.1	C.1	[3] GATT 3/3
5	Find Included Services	[1] 4.1	M	[3] GATT 3/4
6	Discover All Characteristics of a Service	[1] 4.1	C.2	[3] GATT 3/5
7	Discover Characteristics by UUID	[1] 4.1	C.2	[3] GATT 3/6
8	Discover All Characteristic Descriptors	[1] 4.1	M	[3] GATT 3/7
9	Read Characteristic Value	[1] 4.1	C.3	[3] GATT 3/8



Item	Capability	Reference	Status	Inter-Layer Dependency
10	Read Using Characteristic UUID	[1] 4.1	C.3	[3] GATT 3/9
11	Read Long Characteristic Value	[1] 4.1	C.4	[3] GATT 3/10
12	Read Characteristic Descriptor	[1] 4.1	M	[3] GATT 3/19
13	Write Without Response	[1] 4.1	M	[3] GATT 3/12
14	Write Characteristic Value	[1] 4.1	M	[3] GATT 3/14
15	Write Characteristic Descriptor	[1] 4.1	M	[3] GATT 3/21
16	Single Notification	[1] 4.1	M	[3] GATT 3/17
17	Exchange MTU	[1] 4.1	O	[3] GATT 3/1

C.1: Mandatory to support at least one.

C.2: Mandatory to support at least one.

C.3: Mandatory to support at least one.

C.4: Mandatory IF HOGP 13/9 “Read Characteristic Value” OR HOGP 13/10 “Read Using Characteristic UUID”, otherwise not defined.

## 2.5.7 GATT requirements (Boot Host)

**Table 14: GATT Requirements (Boot Host)**

*Prerequisite: HOGP 1/3 “Boot Host”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	GATT Client over LE	[1] 4.1	M	[3] GATT 1a/1
2	No longer used	N/A	N/A	N/A
3	Discover All Primary Services	[1] 4.1	C.1	[3] GATT 3/2
4	Discover Primary Service by Service UUID	[1] 4.1	C.1	[3] GATT 3/3
5	Discover All Characteristics of a Service	[1] 4.1	O	[3] GATT 3/5
6	Discover Characteristics by UUID	[1] 4.1	O	[3] GATT 3/6
7	Discover All Characteristic Descriptors	[1] 4.1	M	[3] GATT 3/7
8	Read Characteristic Value	[1] 4.1	M	[3] GATT 3/8
9	Read Using Characteristic UUID	[1] 4.1	M	[3] GATT 3/9
10	Read Characteristic Descriptor	[1] 4.1	M	[3] GATT 3/19
11	Write Without Response	[1] 4.1	M	[3] GATT 3/12
12	Write Characteristic Value	[1] 4.1	M	[3] GATT 3/14
13	Write Characteristic Descriptor	[1] 4.1	M	[3] GATT 3/21
14	Single Notification	[1] 4.1	M	[3] GATT 3/17

C.1: Mandatory to support at least one.



## 2.5.8 GAP requirements (HID Host)

**Table 15: GAP Requirements (HID Host)**

*Prerequisite: HOGP 1/2 "Report Host" OR HOGP 1/3 "Boot Host"*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Central	[1] 2.4	M	[4] GAP 5/4
2	LE security mode 1 (Central)	[1] 6.2 [9] 7.2	M	[4] GAP 35/1
3	Unauthenticated Pairing (LE security mode 1 level 2) (Central)	[1] 6.2 [9] 7.2	M	[4] GAP 35/8
4	Authenticated Pairing (LE security mode 1 level 3) (Central)	[1] 6.2 [9] 7.2	O	[4] GAP 35/7
5	Connected Isochronous Stream Central Establishment procedure	[9] 5	C.1	[4] GAP 33/7
6	Shorter Connection Intervals	[10] 2.8.1	C.2	[4] GAP 33/9a

C.1: Mandatory IF HOGP 11/29 "HID ISO feature", otherwise not defined.

C.2: Mandatory IF HOGP 11/35 "HID SCI feature", otherwise not defined.

**Table 16: No longer used**

## 2.5.9 HID ISO Protocol (HID Host)

**Table 21: HID ISO Protocol (HID Host)**

*Prerequisite: HOGP 11/29 "HID ISO feature"*

Item	Capability	Reference	Status
1	Redundancy	[9] 5.5	M
2	Multiple reports per SDU	[9] 5.5	M

## 2.5.10 Available Report Intervals (HID Host)

**Table 22: HID ISO Available Report Interval (HID Host)**

*Prerequisite: HOGP 11/29 "HID ISO feature"*

Item	Capability	Reference	Status
1	1 ms	[9] 5.3	O
2	1.25 ms	[9] 5.3	O
3	2 ms	[9] 5.3	O
4	2.5 ms	[9] 5.3	O
5	3 ms	[9] 5.3	O
6	3.75 ms	[9] 5.3	O
7	4 ms	[9] 5.3	O
8	5 ms	[9] 5.3	C.1



Item	Capability	Reference	Status
9	7.5 ms	[9] 5.3	C.1

C.1: Mandatory to support at least one.

### 2.5.11 LL requirements (Report Host)

**Table 23: LL Requirements (Report Host)**

*Prerequisite: HOGP 1/2 "Report Host"*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	LE Flushable ACL Data	[10] 2.8.1	C.1	[11] LL 9/70

C.1: Mandatory IF HOGP 11/43 "HID ACL Flush", otherwise not defined.

## 3 References

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- [1] HID over GATT Profile Specification, Version 1.0 or later
- [2] ICS Proforma for HID Service (HIDS)
- [3] ICS Proforma for Generic Attribute Profile (GATT)
- [4] ICS Proforma for Generic Access Profile (GAP)
- [5] ICS Proforma for Battery Service (BAS)
- [6] ICS Proforma for Device Information Service (DIS)
- [7] ICS Proforma for Scan Parameters Service (SCPS)
- [8] ICS Proforma for Scan Parameters Profile (SCPP)
- [9] HID over GATT Profile Specification, Version 1.1 or later
- [10] HID over GATT Profile Specification, Version 1.2
- [11] ICS Proforma for Link Layer (LL)

## 4 Revision history and acknowledgments

### Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2011-12-27	Adopted by the Bluetooth SIG Board of Directors
	1.0.1r0	2012-06-05	TSE 4728: Add item 11a to Table 11.
1	1.0.1	2012-07-24	Prepare for publication.
	1.0.2r1	2012-09-04	TSE 4888: Removed conditionals in Table 1, Profile Roles.  TSE 4868: Table 13: GATT Requirements – Report Host, change item 10 from M to O.  Added Version table, Table 0 per BQRB decision.
2	1.0.2	2012-10-30	Prepare for Publication
	1.0.3r01	2013-09-30	TSE 5313: Addition of Table 7a
3	1.0.3	2013-12-03	Prepare for Publication
	1.0.4r00	2015-05-10	TSE 6257: Revised status of item 13/17 (Exchange MTU) to Optional
	1.0.4r01	2015-05-12	Updated to the current ICS template and revised per the standard conventions for items like conditionals and pre-requisites.
4	1.0.4	2015-07-14	Prepared for TCRL 2015-1 publication
	1.0.5r00	2015-10-01	TSE 6412: In Table 11 of Section 1.5.5 - updated conditionals; revised capability characteristics for items 11/6, 11/7, and 11/8; changed item 11/12 status to Optional; and added new items 11/26, 11/27, and 11/28. In Table 13 of Section 1.5.7 - updated conditionals. TSE 6653: Revised and added multiple capability characteristics in Section 1.5.5, Table 11 and Section 1.5.6, Table 12.
5	1.0.5	2015-12-22	Prepared for TCRL 2015-2 publication.
	1.0.6r00	2017-05-25	TSE 9148: Template conversion. Correct copy/paste table numbering errors (3 Table 5's).
6	1.0.6	2017-06-26	Approved by BTI. Prepared for TCRL 2017-1 publication.
	p7r00–r05	2022-09-14 – 2022-11-15	TSE 19166 (rating 2): Updated the ILD column for Table 4, Item 7. Other edits for this TSE made for TSE 19178. TSE 19178 (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 1.0.6 as p6.

Publication Number	Revision Number	Date	Comments
			Performed additional template-related formatting fixes. Replaced Bluetooth logo in footer and updated the copyright page to align with v2 of the DNMD.
7	p7	2023-02-07	Approved by BTI on 2022-12-28. Prepared for TCRL 2022-2 publication.
	p8r00-r01	2023-10-27 – 2023-12-11	TSE 23418 (rating 2): In Table 5 (GAP requirements), marked Items 2 and 3 as no longer used. Made editorial edits to align the document with the latest ICS template, including updates to the section titles. Deleted draft revision history comments prior to p0.
8	p8	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.
	p9r00-r01	2025-05-07 – 2025-05-08	TSE 27353 (rating 1): In Table 2, updated the Status value for HOGP 2/2 and added conditions C.2 and C.3. 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.
9	p9	2025-07-08	Approved by BTI on 2025-06-15. Prepared for TCRL pkg100 publication.
	p10r00-r05	2025-05-08 – 2025-06-27	Work for p10 began after p9 content was finalized; publication of p9 occurred later due to internal processes. Incorporated HOGP_ULL.ICS.0.9.0r08_Sang CR. To account for the HID ISO ULL feature enhancement in HID Over GATT Profile Specification v1.1, added Tables 0b, 0d, 0f, 17–20, 21, and 22 and marked Table 0 and as no longer used. Added Items HOGP 3/6, 4/8, 4/9, 5/9, 9/17 – 9/19, 11/29 – 11/34, 15/5 and several corresponding conditions. Updated the references list.
10	p10	2025-08-12	Approved by BTI on 2025-07-14. HOGP v1.1 adopted by the BoD on 2025-08-11. Prepared for TCRL pkg100-addition publication.
	p11r00	2025-08-13	TSE 27555 (rating 1): Updated the ILD column for Items 5/1 and 15/1 to delete references to GAP Table 38.
11	p11	2025-11-04	Approved by BTI on 2025-10-02. Prepared for TCRL pkg101 publication.
	p12r00-r01	2025-12-04 – 2025-12-31	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.
12	p12	2026-02-17	Approved by BTI on 2026-01-21. Prepared for TCRL pkg102 publication.

Publication Number	Revision Number	Date	Comments
	p13r00-r02	2026-02-23 – 2026-03-13	Incorporated changes to accommodate integration of Shorter Connection Intervals change request for HOGP v1.2 (HOGP_SCI.ICS.CRr02): Added Items HOGP 0a/3, HOGP 0c/3, and HOGP 0e/3 to account for v1.2. In Table 4, added HOGP 4/11 and 4/12 and condition C.5. In Table 5, added HOGP 5/10 and condition C.2. In Table 9, HOGP 9/12a, HOGP 9/12b, and condition C.2. In Table 11, updated the reference and status values for HOGP 11/12 and added HOGP 11/35–11/43 and conditions C.10–C.13. In Table 15, added HOGP 15/6 and condition C.2. Added two new sections and Tables 20a and 23 to cover LL requirements. Updated the references list. TSE 28986 (rating 1): Corrected the title of Table 17, which referenced a role that does not exist.
13	p13	2026-05-05	Approved by BTI on 2026-03-27. HOGP v1.2 adopted by the BoD on 2026-04-20. Prepared for TCRL pkg102-addition publication.

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