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Step 4 - Project: BT + LE PSS

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Product Type Verification

Product Type Selection in PROD Table: **Profile Subsystem**

Status

Valid

Product Type Selection from Dropdown: **Profile Subsystem**

• Product Type Conformance Check: **Profile Subsystem**

-- All mandatory profiles are being claimed. --

PROFILE: [[A2DP](#) [AVRCP](#) [BIP](#) [BPP](#) [1.2](#) [DUN](#) [DID](#) [FAX](#) [FTP](#) [GAVDP](#) [HFP](#) [1.5](#) [HDP](#) [HID](#) [HSP](#) [IOP](#) [MAP](#) [MCAP](#) [OPP](#) [PBAP](#) [SAP](#) [SPP](#) [SYNC](#)]**Human Interface Device**
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HID Roles

[\[top \]](#)**Table 1: Roles**

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|-------------------------|-----------------------|--------|--|
| 1 | Host, Report protocol ? | 5.0 | O.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 2 | HID Role ? | 6.0 | O.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 3 | Host, Boot protocol ? | 5.0 | C.1 | <input type="radio"/> <input checked="" type="radio"/> |

O.1: It is Mandatory to support One of these roles.

C.1: Excluded if Host Role (1/1) is supported; otherwise Optional.

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Host Application Procedures

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Prerequisite: (1/1)

NOTE: Items 10 and 11 are not Prerequisites for 1/1 due to Boot Mode Host dependencies on these items

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|--|-----------------------|--------|--|
| 1 | Establish HID connection | 7.1.1 | M.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 2 | Accept HID connection | 7.1.1 | M.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 3 | Terminate HID connection | 7.1.1 | M.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 4 | Accept Termination of HID connection | 7.1.1 | M.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 5 | Support for virtual cables | 6.4 | M.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 6 | HID initiated reconnection | 6.4 | M.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 7 | Host initiated reconnection | 6.4 | M.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 8 | Host data transfer to HID | 7.1.4 | C.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 9 | HID data transfer to Host | 7.1.3 | C.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 10 | HID Boot mode data transfer to Host | 7.2.1 | C.2 | <input checked="" type="radio"/> <input type="radio"/> |
| 11 | Host Boot mode data transfer to HID | 7.2.1 | C.2 | <input checked="" type="radio"/> <input type="radio"/> |
| 12 | Support for Application to send GET_Report ? | 7.4.3 | O | <input type="radio"/> <input checked="" type="radio"/> |
| 13 | Support for Application to send SET_REPORT ? | 7.4.4 | O | <input type="radio"/> <input checked="" type="radio"/> |

M.1: Mandatory to support IF (1/1) supported.

C.1: Excluded for Boot Mode Only Hosts (1/3); otherwise Mandatory for Host Role (1/1)

C.2: Mandatory for Boot Mode Only Hosts (1/3); otherwise Optional









HID Protocol Procedures

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Prerequisite: (1/1) OR (1/3)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|------------|-----------------------|--------|-----------------------|
|------|------------|-----------------------|--------|-----------------------|

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| | | | | |
|---|--|--------|-----|---|
| 1 | Data reports larger than host MTU on Control channel | 7.4.10 | C.1 |   |
| 2 | Data reports larger than host MTU on Interrupt channel | 7.4.10 | C.1 |   |
| 3 | Data reports to host | 7.4.9 | C.1 |   |
| 4 | Boot mode reports to host | 7.2.1 | C.2 |   |

C.1: Excluded for Boot Mode Only Hosts (1/3); otherwise Mandatory for Host Role (1/1)

C.2: Mandatory for Boot Mode Only Hosts (1/3); otherwise Optional

Table 4: Host to Device Transfers

Prerequisite: (1/1)















| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|--|-----------------------|--------|---|
| 1 | Data reports larger than device MTU on Control channel | 7.4.10 | C.1 |   |
| 2 | Data reports larger than device MTU on Interrupt channel | 7.4.10 | C.1 |   |
| 3 | Data reports to device | 7.4.9 | C.2 |   |
| 4 | Boot mode reports to device | 7.2.1 | O |   |

C.1: Excluded for Boot Mode Only Hosts (1/3); otherwise Optional

C.2: Excluded for Boot Mode Only Hosts (1/3); otherwise Mandatory for Host Role (1/1)

Table 5: HID Control Commands

Prerequisite: (1/1)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|--|-----------------------|--------|---|
| 1 | Set_Protocol command  | 7.4.6 | C.1 |   |
| 2 | Get_Protocol command  | 7.4.5 | C.1 |   |
| 3 | Set_Idle command | 7.4.8 | O |   |
| 4 | Get_Idle command | 7.4.7 | O |   |
| 5 | Set_Report command | 7.4.4 | M.1 |   |
| 6 | Get_Report command | 7.4.3 | M.2 |   |

M.1: Mandatory IF (1/1) supported AND (2/13) supported.

C.1: Mandatory for Boot Mode Only Hosts (1/3); otherwise Optional. If either Set_Protocol or Get_Protocol supported, both are Mandatory.
































M.2: Mandatory IF (1/1) Supported AND (2/12) Supported

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Table 6: Host Link Manager Procedures

Prerequisite: (1/1)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|---|-----------------------|--------|---|
| 1 | Initiate Authentication before connection completed  | 6.7.1.1 | C.1 |   |
| 2 | Initiate Authentication after connection completed  | 6.7.1.1 | C.1 |   |
| 3 | Initiate pairing before connection completed  | 6.7.1.1 | C.2 |   |
| 4 | Initiate pairing after connection completed  | 6.7.1.1 | C.2 |   |
| 5 | Encryption  | 9.0 | O |   |
| 6 | Initiate encryption | 9.0 | C.3 |   |
| 7 | Accept encryption requests | 9.0 | C.3 |   |
| 8 | Role switch (Master/Slave) | 9.0 | M.1 |   |
| 9 | Request Master Slave switch | 9.0 | M.1 |   |
| 10 | Accept Master Slave switch requests | 9.0 | M.1 |   |
| 11 | Hold Mode | 9.0 | O |   |
| 12 | Sniff mode | 9.0 | M.1 |   |
| 13 | Park mode | 9.0 | O |   |

C.1: IF Host Authentication supported, both (6/1) AND (6/2) must be supported.

C.2: IF Pairing supported both (6/3) AND (6/4) must be supported.

M.1: Mandatory IF (1/1) supported.





C.3: Mandatory IF (6/5) encryption supported

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Table 7: Host Link Control Requirements

Prerequisite: (1/1)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|-----------------------------------|-----------------------|--------|---|
| 1 | Supports inquiry, 79 channel | 10.7.3 | M.1 |   |
| 2 | Supports inquiry scan, 79 channel | B:10.7.2 | X |   |

M.1: Mandatory to support IF (1/1) supported.

X: Feature should not be used by a Host, but can be supported in LM.

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Table 8: HID Device Roles

Prerequisite: (1/2)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|----------------------|-----------------------|--------|--|
| 1 | Pointing HID ? | 6.0 | O.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 2 | Keyboard HID ? | 6.0 | O.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 3 | Identification HID ? | 6.0 | O.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 4 | Other HID | 6.0 | O.1 | <input checked="" type="radio"/> <input type="radio"/> |

O.1: It is Mandatory to support One of these roles IF (1/2) is selected

HID Application Procedures

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Table 9: HID Application Procedures

Prerequisite: (1/2)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|--------------------------------------|-----------------------|--------|--|
| 1 | Establish HID connection | 7.1.1 | O | <input type="radio"/> <input checked="" type="radio"/> |
| 2 | Accept HID connection | 7.1.1 | M.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 3 | Terminate HID connection | 7.1.1 | O | <input checked="" type="radio"/> <input type="radio"/> |
| 4 | Accept Termination of HID connection | 7.1.1 | M.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 5 | Support for virtual cables | 6.4 | O | <input checked="" type="radio"/> <input type="radio"/> |
| 6 | HID initiated reconnection ? | 6.4 | C.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 7 | Host initiated reconnection | 6.4 | C.1 | <input type="radio"/> <input checked="" type="radio"/> |
| 8 | Host data transfer to HID | 7.1.4 | C.2 | <input checked="" type="radio"/> <input type="radio"/> |
| 9 | HID data transfer to Host | 7.1.3 | C.2 | <input checked="" type="radio"/> <input type="radio"/> |
| 10 | HID Boot mode data transfer to Host | 7.2.1 | C.3 | <input checked="" type="radio"/> <input type="radio"/> |
| 11 | Host Boot mode data transfer to HID | 7.2.1 | C.4 | <input checked="" type="radio"/> <input type="radio"/> |
| 12 | Output reports declared ? | 7.4.4 | C.4 | <input checked="" type="radio"/> <input type="radio"/> |
| 13 | Input reports declared ? | 7.4.3 | C.3 | <input checked="" type="radio"/> <input type="radio"/> |
| 14 | Feature reports declared ? | 7.4.3, 7.4.4 | O | <input type="radio"/> <input checked="" type="radio"/> |

M.1: Mandatory IF (1/2) supported.

C.1: One of these is Mandatory IF (9/5) is supported (SDP attribute 0x204=True)

C.2: One of these is Mandatory.

C.3: Mandatory IF (8/1) OR (8/2) is selected

C.4: Mandatory IF (8/2) is supported (for status indicators)

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Table 10: Device to Host Transfers

Prerequisite: (1/2)

NOTE: If the device declares an input report (a device to host data transfer) in its HID descriptor, SDP attribute 0x20B, mark the following features if applicable. All tests are applicable to hosts.

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|--|-----------------------|--------|--|
| 1 | Data reports larger than host MTU on Control channel | 7.4.10 | O | <input checked="" type="radio"/> <input type="radio"/> |
| 2 | Data reports larger than host MTU on Interrupt channel | 7.4.10 | O | <input checked="" type="radio"/> <input type="radio"/> |
| 3 | Data reports to host | 7.4.9 | O | <input checked="" type="radio"/> <input type="radio"/> |
| 4 | Boot mode reports to host | 7.2.1 | C.1 | <input checked="" type="radio"/> <input type="radio"/> |

C.1: Mandatory IF (8/1) OR (8/2) is supported. Optional for other HID.

Table 11: Host to Device Transfers

Note: If the device declares output reports (a host to device data transfer) in its HID descriptor, SDP attribute 0x20B; mark the following features if applicable.

Prerequisite: (1/2)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|--|-----------------------|--------|--|
| 1 | Data reports larger than device MTU on Control channel | 7.4.10 | O | <input checked="" type="radio"/> <input type="radio"/> |
| 2 | Data reports larger than device MTU on Interrupt channel | 7.4.10 | O | <input checked="" type="radio"/> <input type="radio"/> |
| 3 | Data reports to device | 7.4.9 | O | <input checked="" type="radio"/> <input type="radio"/> |
| 4 | Boot mode reports to device | 7.2.1 | C.1 | <input checked="" type="radio"/> <input type="radio"/> |

C.1: Mandatory IF (8/2) is supported. Optional for other HID.

Table 12: HID Control Commands

Prerequisite: (1/2)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|------------------------|-----------------------|--------|--|
| 1 | Set_Protocol command ? | 7.4.6 | C.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 2 | Get_Protocol command ? | 7.4.5 | C.1 | <input checked="" type="radio"/> <input type="radio"/> |
| 3 | Set_Idle command | 7.4.8 | C.2 | <input checked="" type="radio"/> <input type="radio"/> |
| 4 | Get_Idle command | 7.4.7 | C.2 | <input checked="" type="radio"/> <input type="radio"/> |
| 5 | Set_Report command | 7.4.4 | C.3 | <input checked="" type="radio"/> <input type="radio"/> |

| | | | | |
|---|--------------------|-------|-----|---|
| 6 | Get_Report command | 7.4.3 | C.4 |   |
|---|--------------------|-------|-----|---|

C.1: Mandatory IF (8/1) OR (8/2) is supported. Optional for other HIDs. If either Set_Protocol or Get_Protocol supported, both are Mandatory.

C.2: Mandatory IF (8/2) Keyboard is selected. Optional for other HIDs.

C.3: Mandatory if (9/12) or (9/14) supported.




























C.4: Mandatory if (9/13) or (9/14) supported

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Table 13: HID Link Manager Procedures

Prerequisite: (1/2)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|--|-----------------------|--------|---|
| 1 | Initiate Authentication before connection completed | 6.7.1.1 | O |   |
| 2 | Initiate Authentication after connection | 6.7.1.1 | O |   |
| 3 | Initiate pairing before connection completed | 6.7.1.1 | X |   |
| 4 | Initiate pairing after connection completed | 6.7.1.1 | X |   |
| 5 | Encryption  | 9.0 | C.1 |   |
| 6 | Initiate encryption | 9.0 | O |   |
| 7 | Accept encryption requests | 9.0 | C.2 |   |
| 8 | Role switch (Master/Slave) | 9.0 | C.3 |   |
| 9 | Request Master Slave switch | 9.0 | O |   |
| 10 | Accept Master Slave switch requests | 9.0 | C.3 |   |
| 11 | Hold mode | 9.0 | O |   |
| 12 | Sniff mode | 9.0 | O |   |
| 13 | Park mode | 9.0 | O |   |

C.1: Mandatory IF (8/2) OR (8/3) is selected. Optional for other HIDs.

C.2: Mandatory IF (13/5) supported.

C.3: Mandatory IF (9/6) is supported.





X: Feature should not be used by a HID device, but can be supported in LM.

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Table 14: HID Link Control Requirements

Prerequisite: (1/2)

| Item | Capability | System Spec Reference | Status | Support [Yes] or [No] |
|------|-----------------------------------|-----------------------|--------|---|
| 1 | Supports inquiry, 79 channel | 10.7.3 | O |   |
| 2 | Supports inquiry scan, 79 channel | 10.7.2 | M.1 |   |

M.1: Mandatory IF 1/2 is supported.

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