

**Member Declarations****Supplier Declaration of Conformity**

Declarer: Cevin Reed, Other, Bosch Security Systems, Inc.

Compliant Portion: 99455, End Product

I, the declarer named above, am authorized to make this Declaration of Compliance for the above-listed Compliant Portion on behalf of Bosch Security Systems, Inc. and as such bind Bosch Security Systems, Inc. to the following declarations:

- i. The Compliant Portion (as shown above) has been qualified according to the provisions of the Bluetooth Qualification Program Reference Document (PRD).
- ii. The Compliant portion complies with all applicable requirements for the declared product type (as shown above) as required by the compliance requirements of the Specification.

I, on behalf of my employer, acknowledge that this Declaration constitutes an essential requirement of the Qualification Process, that the Bluetooth SIG and other Bluetooth SIG Members will be relying on the accuracy of this Declaration and hereby authorize Bluetooth SIG, Inc., to audit any materials necessary to verify compliance to the Qualification Requirements as specified in the Qualification Auditing, Surveillance and Enforcement (QEP) Policy document. I further acknowledge that if any part of this Declaration is found to be misleading, inaccurate or incomplete, it may cause loss or harm to the Bluetooth SIG and its Members.

I, on behalf of my employer, acknowledge that:

- i. It is optional to use the services provided by a Bluetooth Qualification Expert (BQE) recognized by Bluetooth SIG, Inc. and that the BQE can neither make Qualification policy decisions nor relieve the Declarer from any responsibilities pertaining to the Qualification Requirements and compliance to the Specification; and
- ii. The Bluetooth SIG, Inc. qualification tools and related programs are provided AS IS and without warranty of any kind. Bluetooth SIG does not warrant, guarantee, or make any representations regarding this Declaration of Conformity. Bluetooth SIG makes no warranties, express or implied, including the warranty of merchantability or fitness for any particular purpose. Bluetooth SIG, Inc. does not accept any liability for Member's use of such.

I HAVE READ THE ABOVE DECLARATION AND UNDERSTAND ITS TERMS AND ON BEHALF OF MY EMPLOYER, HEREBY AGREE TO THE TERMS AND CONDITIONS HEREOF.

ATTESTED BY DECLARER, AUTHORIZED BY A DULY AUTHORIZED OFFICER OF THE MEMBER COMPANY.

By:

\_\_\_\_\_

[Declarer]

\_\_\_\_\_

[Date]

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[Duly Authorized Officer of Member Company]

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[Date]

## Declaration of Compliance (DoC) - New Compliant Portion

Declarer: Cevin Reed, Other, Bosch Security Systems, Inc.

Compliant Portion: 99455

I, the declarer named above, am authorized to make this Declaration of Compliance for the above-listed Compliant Portion on behalf of Bosch Security Systems, Inc. and as such bind Bosch Security Systems, Inc. to the following declarations:

- i. The Compliant Portion (as shown above) implements and is compliant with the Bluetooth Specifications listed (in attached Appendix A, which is incorporated herein by this reference); and
- ii. Meets the requirements set forth in the Bluetooth Qualification Process; and
- iii. Has been qualified pursuant to the Bluetooth Qualification process; and
- iv. Meets the requirements in the Bluetooth Patent/Copyright License Agreement and the Bluetooth Trademark License Agreement.

I, on behalf of my employer, acknowledge that this Declaration constitutes an essential requirement of the Declaration process, that the Bluetooth SIG and other Bluetooth SIG Members will be relying on the accuracy of this Declaration and hereby authorize Bluetooth SIG, Inc. to audit any materials necessary to verify compliance to this Declaration. I further acknowledge that if any part of this Declaration is found to be misleading, inaccurate or incomplete, it may cause loss or harm to the Bluetooth SIG and its Members.

I, on behalf of my employer, acknowledge that the Bluetooth SIG, Inc. qualification tools and related programs are provided AS IS and without warranty of any kind. Bluetooth SIG does not warrant, guarantee, or make any representations regarding this Declaration of Compliance. Bluetooth SIG makes no warranties, express or implied, including the warranty of merchantability or fitness for any particular purpose. Bluetooth SIG, Inc. does not accept and hereby disclaims any liability for Member's use of such.

I HAVE READ THE ABOVE DECLARATION AND UNDERSTAND ITS TERMS AND ON BEHALF OF MY EMPLOYER, HEREBY AGREE TO THE TERMS AND CONDITIONS HEREOF.

By:

\_\_\_\_\_  
[Declarer]

\_\_\_\_\_  
[Date]

\_\_\_\_\_  
[Duly Authorized Officer of Member Company]

\_\_\_\_\_  
[Date]

## Appendix A

## Combined QD ID(s) Claimed

Combined QD ID(s): [ B024756 B024755 ]

## Core ICS Information

<p align="center"><b>Summary ICS</b> External to all Layers</p>
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## Core Specification

Table 21: Controller Configuration Specification Version

Select the Specification Version used for the Controller Core Configuration

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
3	Core Specification 2.0	Core 2.0	C.1	X
4	Core Specification 2.0 + EDR	Core 2.0+EDR	C.1	X
5	Core Specification 2.1	Core 2.1	C.1	X
6	Core Specification 2.1 + EDR	Core 2.1+EDR	C.1	X
7	Core Specification Addendum 1 (CSA1), Adopted 26 June 2008	CSA1	C.2	X
8	Core Specification 3.0	Core 3.0	C.1	X
9	Core Specification 4.0	Core 4.0	C.1	X
10	Core Specification Addendum 2 (CSA2), Adopted 27 Dec 2011	CSA2	C.3	X
11	Core Specification Addendum 3 (CSA3), Adopted 24 July 2012	CSA3	C.4	X
12	Core Specification Addendum 4 (CSA4), Adopted 19 February 2013	CSA4	C.5	X
13	Core Spec Version 4.1, Adopted 03 December 2013	Core 4.1	C.1	X
14	Core Specification Version 4.2, Adopted 02 December 2014	Core 4.2	C.1	X
15	Core Specification Addendum 5 (CSA5), Adopted 01 December 2015	Controller- CSA5	C.6	X
16	Core Specification Version 5.0. Adopted 06 December 2016	Core 5.0	C.1	X

C.1: Mandatory to support only one Controller Core Specification Version.

C.3: Optional if one of 21/5, 21/6, 21/8 or 21/9 (Core Spec 2.1 – 4.0) is supported, otherwise Excluded.

C.2: Optional if one of 21/3, 21/4, 21/5, or 21/6 (Core Spec 2.0 – 2.1+EDR) is supported, otherwise Excluded.

C.4: Optional if one of 21/5, 21/6, 21/8 or 21/9 (Core Spec 2.1 – 4.0) and 21/10 is supported, otherwise Excluded.

C.5: Optional if one of 21/5 or 21/6 or 21/8 or (21/9 and 21/11) (Core Spec 2.1- 3.0 or 4.0 with CSA3) is supported, otherwise Excluded.

C.6: Optional IF (((21/9 (Core 4.0)) AND 21/11 (CSA3)) OR 21/13 (Core 4.1) OR 21/14 (Core 4.2)) is supported, otherwise Excluded.

Table 24: BR/EDR Controller Electrical Interfaces

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	UART Transport Layer	Vol. 4, Part A	O	X
2	USB Transport Layer	Vol. 4, Part B	O	X
3	Secure Digital (SD) Transport Layer	Vol. 4, Part C	O	X
4	Three-wire UART Transport Layer (3-Wire)	Vol 4, Part D	O	X
5	Core Spec Addendum 2 (CSA2), Audio Architecture USB Changes	Vol. 4, Part B	C.1	X
6	Core Spec Addendum 3 (CSA3), Wireless Coexistence Interface (WCI-1) Transport	Vol.7, Part B*	C.2	X
7	Core Spec Addendum 3 (CSA3), Wireless Coexistence Interface 2 (WCI-2) Transport	Vol.7, Part C*	C.2	X

C.1: Optional if 21/10 and 24/2 are supported, otherwise Excluded.

C.2: Optional if 21/11 and 24/1 are supported, otherwise Excluded.

**Table 31: Host Configuration Specification Version**

Select the Specification Version used for the Host Core Configuration

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
2	<i>(Intentionally left blank)</i>			X
3	<i>(Intentionally left blank)</i>			X
4	Core Specification 2.0/2.0 + EDR	Core 2.0 +EDR	C.1	X
5	<i>(Intentionally left blank)</i>			X
6	Core Specification 2.1/2.1 + EDR	Core 2.1 +EDR	C.1	X
7	Core Spec Addendum (CSA) 1, Volume 3, Part A Adopted June 26 2008	Core 2.1 with CSA1	C.2	X
8	Core Specification 3.0	Core 3.0	C.1	X
9	Core Specification 3.0 + HS	Core 3.0 + HS	C.1	X
10	Core Spec Version 4.0	Core 4.0	C.1	X
11	Core Specification 4.0 + HS	Core 4.0 + HS (See 10a in published SUM ICS)	C.1	X
12	Core Specification Addendum 2 (CSA2), Adopted 27 Dec 2011	Core 4.0 with CSA2 (See 11 in published SUM ICS)	C.3	X
13	Core Specification Addendum 3 (CSA3), Adopted 24 July 2012	Core 4.0 with CSA3 (See 12 in published SUM ICS)	C.4	X
14	Core Specification Addendum 4 (CSA4), Adopted 19 February 2013	Core 4.0 with CSA4 (See 13 in published SUM ICS)	C.5	X
15	Core Spec Version 4.1, Adopted 03 December 2013	Core 4.1 (See 14 in published SUM ICS)	C.1	X
16	Core Spec Version 4.1 + HS, Adopted 03 December 2013	Core 4.1 + HS (See 15 in published SUM ICS)	C.1	X
17	Core Spec Version 4.2, Adopted 02 December 2014	Core 4.2 (see 16 in published SUM ICS)	C.1	X
18	Core Spec Version 4.2 + HS, Adopted 02 December 2014	Core 4.2+HS (see 17 in published SUM ICS)	C.1	X
19	Core Specification Version 5.0. Adopted 06 December 2016 (see 18 in published SUM ICS)	Core 5.0	C.1	X

C.1: Mandatory to support only one Host Core Specification Version.

C.2: Optional if one of 31/4 or 31/6 (Core Spec 2.0+EDR – 2.1+EDR) is supported, otherwise Excluded.

C.3: Optional if (31/10 or 31/10a) (Core Spec Version 4.0) is supported, otherwise Excluded.

C.4: Optional if (31/10 or 31/11) and 31/13 are supported, otherwise Excluded.

C.5: Optional if 31/6 OR 31/8 OR 31/9 or ((31/10 or 31/11) and 31/13) (Core Spec 2.1 -3.0 or 4.0 with CSA3) is supported, otherwise Excluded.

**Table 33: Core Host Electrical Interfaces**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	UART Transport Layer	Vol 4, Part A	O	X
2	USB Transport Layer	Vol 4, Part B	O	X
3	Secure Digital (SD) Transport Layer	Vol 4, Part C	O	X
4	Three-wire UART Transport Layer (3-Wire)	Vol 4, Part D	O	X
5	Core Spec Addendum 2 (CSA2), Audio Architecture USB Changes	Vol. 4, Part D	C.1	X
6	Core Spec Addendum 3 (CSA3), Wireless Coexistence Interface (WCI-1) Transport	Vol.7, Part B*	C.2	X
7	Core Spec Addendum 3 (CSA3), Wireless Coexistence Interface 2 (WCI-2) Transport	Vol.7, Part C*	C.2	X

No PICS/ profile ICS exists for this part.

C.1: Optional if 31/11 AND 33/2 are supported, otherwise Excluded.

C.2: *Optional if 31/12 and 33/1 are supported, otherwise Excluded.*

**Table 34: LE Host Specification Parts**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	No Longer Used	-	-	X
11	Core Specification Supplement 7 (CSSv7), Adopted 6 December 2016	CSSv7	C.4	X

C.4: *Optional IF ((31/10 (Core 4.0) OR 31/10a ((Core 4.0+HS)) AND 31/11 (CSA2)) OR 31/14 (Core 4.1) OR 41/15 (Core 4.1+HS) OR 31/16 (Core 4.2) OR 31/17 (Core 4.2+HS)) OR 21/18 (Core 5.0) is supported, otherwise Excluded*

**Table 41: AMP Controller Specification Version**

*Prerequisite: 21/5 or 21/6 or 21/8 or 21/9 or 21/13*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Core Spec Version 3.0 + HS or later	Core 3.0+HS Core 4.0	C.1	X
2	Core Spec Addendum 2 (CSA2), 802.11 Protocol Adaptation Layer (802.11 PAL), Adopted 27 Dec 2012	CSA2	C.1	X

C.1: *Mandatory to support only one if PROD 2/3 or 2/6 is supported, otherwise Excluded.*

**Table 42: AMP Controller Specification Parts**

*Prerequisite: 41/1 or 41/2*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	802.11 Protocol Adaptation Layer (802.11 PAL)	Vol. 5, Part A	C.1	X
2	802.11 MAC/PHY	IEEE 802.11-2007	C.2	X
3	Core Spec Addendum 2 (CSA2), 802.11 Protocol Adaptation Layer (802.11 PAL)	CSA2	C.3	X
4	802.11 MAC/PHY	IEEE 802.11-2007 Amendment 1	C.4	X

C.1: *Mandatory if 41/1 is supported, otherwise Excluded.*

C.2: *Mandatory if 41/1 or 41/2 is supported, otherwise Optional.*

C.3: *Mandatory if 41/2 is supported, otherwise Excluded.*

C.4: *Mandatory if 42/3 is supported, otherwise Optional.*

**Table 43: AMP Controller Electrical Interfaces**

*Prerequisite: 41/1 or 41/2*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	UART Transport Layer	Vol. 4, Part A		X
2	USB Transport Layer	Vol. 4, Part B		X
3	Secure Digital (SD) Transport Layer	Vol 4, Part C		X
4	Three-wire UART Transport Layer (3-Wire)	Vol 4, Part D		X

*No PICS/profile ICS exists for this part.*

**Table 51: Low Energy Controller Configuration**

*Prerequisite: Core Specification 4.0 or later*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Low Energy Controller	Core 4.0	C.1	X

C.1: *Mandatory if PROD 2/4 or 2/5 or 2/6 is supported, otherwise Excluded.*

**Table 52: Low Energy Host Core Specification**

*Prerequisite: Core Specification 4.0 or later*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Low Energy Host	Core 4.0	C.1	X

C.1: *Mandatory if PROD 3/3 or 3/4 or 3/5 is supported, otherwise Excluded.*

**EDR Features****Table 22: EDR Features**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	EDR for asynchronous transports (single slot)	Core 2.0+EDR and later	C.1	X
2	EDR for asynchronous transports (multi-slot)	Core 2.0+EDR and later	C.1	X
3	EDR for synchronous transports (Core 2.x)	Core 2.0+EDR and 2.1+EDR	C.1, C.3	X
4	EDR for synchronous transports (Core 3.0 or later)	CSA1 and 3.0+HS or later	C.1, C.2	X

C.1: Mandatory to support at least one if +EDR (21/4 or 21/6) is supported; Mandatory to support at least one if +HS (41/1 or 41/2) is supported, otherwise Optional

C.2: Optional if CSA1 or later is supported, otherwise Excluded.

C.3: Optional if (21/3 or 21/4 or 21/5 or 21/6) is supported, otherwise Excluded.

<b>Product Type</b> External to All Layers
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**Table 1: Product Types**

Please confirm the Product Type that was selected when Creating New Project

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	End Product	N/A	C.1	X
2	Component (Tested)	N/A	C.1	X
3	Component (Non-Tested)	N/A	C.1	X
4	Host Subsystem	N/A	C.1	X
5	Controller Subsystem	N/A	C.1	X
6	Profile Subsystem	N/A	C.1	X
7	Test Equipment	N/A	C.1	X
8	Development Tool	N/A	C.1	X

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

**Table 2: Controller Core Configuration**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	BR Controller	Vol. 0 Part B	C.1	X
2	BR/EDR Controller	Vol. 0 Part B	C.1	X
3	BR/EDR/HS Controller	Vol. 0 Part B	C.1	X
4	LE Controller	Vol. 0 Part B	C.1	X
5	BR/EDR/LE Combined Controller	Vol. 0 Part B	C.1	X
6	BR/EDR/HS/LE Combined Controller	Vol. 0 Part B	C.1	X

C.1: Mandatory to support only one Controller Configuration. Optional if 1/2 or 1/3 is Supported.

**Table 3: Host Core Configuration**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
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1	BR Host	Vol. 0 Part B	C.1	X
2	BR/HS Host	Vol. 0 Part B	C.1	X
3	LE Host	Vol. 0 Part B	C.1	X
4	BR/LE Host	Vol. 0 Part B	C.1	X
5	BR/HS/LE Host	Vol. 0 Part B	C.1	X

C.1: Mandatory to support only one Host Configuration. Optional if 1/2 or 1/3 is Supported.

**Logical Link Control and Adaptation Protocol**  
Vol 3, Part A

### 1.3.1 Roles

**Table 0: L2CAP Transport Configuration**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	BR/EDR (includes possible support of GAP LE Broadcaster or LE Observer roles)	1.1, [1] [2]	C.1	X
2	Bluetooth low energy only	1.1, [2]	C.2	X
3	BR/EDR/Bluetooth low energy	1.1, [2]	C.3	X

C.1 Mandatory if (PROD 1/1 or 1/4) and ( PROD 3/1 or 3/2) are Supported (End Product or Host Subsystem with BR or BR/HS Host CC), otherwise Excluded. Optional for PROD 1/2 or 1/3 (Components).

C.2 Mandatory if (PROD 1/1 or 1/4) and (PROD 3/3) are Supported (End Product or Host Subsystem with LE Host CC), otherwise excluded. Optional for PROD 1/2 or 1/3 (Components).

C.3 Mandatory if (PROD 1/1 or 1/4) and (PROD 3/4 or 3/5) are Supported (End Product or Host Subsystem with BR/LE or BR/HS/LE Host CC), otherwise excluded. Optional for PROD 1/2 or 1/3 (Components).

Note - Only one transport shall be supported.

**Table 1: Roles**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Data Channel Initiator	L2CAP	C.3	X
2	Data Channel Acceptor	L2CAP	C.1	X
3	LE Master	L2CAP	C.2	X
4	LE Slave	L2CAP	C.2	X
5	LE Data Channel Initiator	[1] 3.4	C.4	X
6	LE Data Channel Acceptor	[1] 3.4	C.5	X

C.1: Mandatory if (0/1 or 0/3) is supported, otherwise Excluded.

C.2: Mandatory to support at least one of (1/3 or 1/4) if (0/2 OR 0/3) is supported, otherwise Excluded.

C.3: Optional if (L2CAP 0/1 OR L2CAP 0/3) is claimed, ELSE Excluded.

C.4: Optional IF (L2CAP 0/2 (LE) OR L2CAP 0/3 (BR/EDR/LE)) AND SUM ICS 21/13 (v4.1) AND L2CAP 2/46 (LE Credit Based Flow Control Mode) is supported, otherwise Excluded.

C.5: Mandatory IF (L2CAP 0/2 (LE) OR L2CAP 0/3 (BR/EDR/LE)) AND SUM ICS 21/13 (v4.1) AND L2CAP 2/46 (LE Credit Based Flow Control Mode) is supported, otherwise Excluded.

### 1.3.2 General Operation

**Table 2: General Operation**

"L2CAP" Reference applies to either [1] Core Specification v3.0+HS or [2] Core Specification v4.0.

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Support of L2CAP signalling channel	L2CAP, 2.2	C.20	X
2	Support of configuration process	L2CAP, 7.1	C.20	X
3	Support of connection oriented data channel	L2CAP, 2.2	C.20	X
4	Support of command echo request	L2CAP, 4.8	C.21	X

5	Support of command echo response	L2CAP, 4.9	C.20	X
6	Support of command information request	L2CAP, 4.10	C.21	X
7	Support of command information response	L2CAP, 4.11	C.20	X
8	Support of a channel group	L2CAP, 2.2	C.21	X
9	Support of packet for connectionless channel	L2CAP, 3.2	C.21	X
10	Support retransmission mode	L2CAP, 8.5	C.21	X
11	Support flow control mode	L2CAP, 8.5	C.21	X
12	Enhanced Retransmission Mode	L2CAP, 8.6	C.1, C.13	X
13	Streaming Mode	L2CAP, 8.7	C.1, C.14	X
14	FCS Option	L2CAP, 5.5	C.2	X
15	Generate Local Busy Condition	L2CAP, 8.6.4.3	C.3	X
16	Send Reject	L2CAP 8.6.1.2	C.3	X
17	Send Selective Reject	L2CAP 8.6.1.3	C.3	X
18	Mandatory use of ERTM	L2CAP, 8.6	C.4	X
19	Mandatory use of Streaming Mode	L2CAP, 8.7	C.5	X
20	Optional use of ERTM	L2CAP, 8.6	C.4	X
21	Optional use of Streaming Mode	L2CAP, 8.7	C.5	X
22	Send data using SAR in ERTM	L2CAP, 3.3.2	C.6	X
23	Send data using SAR in Streaming Mode	L2CAP, 3.3.2	C.7	X
24	Actively request Basic Mode for a PSM that supports the use of ERTM or Streaming Mode	L2CAP, 5.4	C.8	X
25	Supports performing L2CAP channel mode configuration fallback from SM to ERTM	L2CAP, 5.4	C.9	X
26	Supports sending more than one unacknowledged I-Frame when operating in ERTM	L2CAP, 8.6.5	C.10	X
27	Supports sending more than three unacknowledged I-Frame when operating in ERTM	L2CAP, 8.6.5	C.10	X
28	Supports configuring the peer TxWindow greater than 1.	L2CAP, 5.4	C.11	X
29	AMP Support	L2CAP, 9	C.12	X
30	Fixed Channel Support	L2CAP, 2.1	C.12	X
31	AMP Manager Support	L2CAP 2.1	C.12	X
32	ERTM over AMP	L2CAP, 9	C.12	X
33	Streaming Mode Source over AMP Support	L2CAP, 3.3, 8.7	C.15	X
34	Streaming Mode Sink over AMP Support	L2CAP, 3.3, 8.7	C.15	X
35	Unicast Connectionless Data, Reception	L2CAP, 3.3, L2CAP, 7.6	C.1, C.16	X
36	Ability to transmit an unencrypted packet over a unicast connectionless L2CAP channel	L2CAP, 7.6	C.16	X
37	Ability to transmit an encrypted packet over a unicast connectionless L2CAP channel.	L2CAP, 7.6, GAP, 5.2.2	C.16	X
38	Extended Flow Specification for BR/EDR	L2CAP, 7.10	C.8	X
39	Extended Window Size	L2CAP, 5.7	C.8	X
40	Support of Low Energy signaling channel	[2], 2.1, 2.2	C.17	X
41	Support of command reject	[2], 4.10	C.17	X
42	Send Connection Parameter Update Request	[2], 4.20	C.18	X
43	Send Connection Parameter Update Response	[2], 4.21	C.19	X
44	Extended Flow Specification for AMP	[1], 5.6	C.22	X
45	Send Disconnect Request Command	[1] or [2] 4.6	C.25	X
46	Support LE Credit Based Flow Control Mode	[1] 3.4	C.23	X
47	Support for LE Data Channel	[1] 3.4	C.24	X

C.1: Mandatory to support at least one of (2/12 or 2/13 or 2/35) if (0/1 or 0/3) and (CSA 1 or Core Spec 3.0 or 3.0+HS or 4.0 or 4.0+HS) are supported, otherwise Optional.

C.2: Optional if (2/12 or 2/13) is supported, otherwise Excluded.

C.3: Optional if 2/12 and 2/28 are supported, otherwise Excluded.

- C.4: If 2/12 is supported then at least one of (2/18 or 2/20) is Mandatory, otherwise Excluded.  
 C.5: If 2/13 is supported then at least one of (2/19 or 2/21) is Mandatory, otherwise Excluded.  
 C.6: Optional if 2/12 is supported, otherwise Excluded.  
 C.7: Optional if 2/13 is supported, otherwise Excluded.  
 C.8: Optional if (2/12 or 2/13) is supported, otherwise Excluded.  
 C.9: Mandatory if (2/12 and 2/13 and 2/21) are supported, otherwise Excluded.  
 C.10: Optional if 2/12 is supported, otherwise Excluded.  
 C.11: Optional if 2/12 is supported, otherwise Excluded.  
 C.12: Mandatory if (SUM ICS 31/9) is supported, otherwise Optional.  
 C.13: Mandatory if (SUM ICS 31/9) is supported, otherwise Optional.  
 C.14: Optional if (Core Spec 3.0 or later) is supported, otherwise Excluded.  
 C.15: Optional if 2/29 is supported, otherwise Excluded.  
 C.16: Optional if (Core Spec 3.0 or later) is supported, otherwise Excluded.  
 C.17: Mandatory (0/2 OR 0/3) is supported, otherwise Excluded.  
 C.18: Optional if (Core Spec 4.0) and 1/4 is supported, otherwise Excluded.  
 C.19 : Mandatory if (Core Spec 4.0) and 1/3 is supported, otherwise Excluded.  
 C.20: Mandatory if (0/1 or 0/3) is supported, otherwise Excluded.  
 C.21: Optional if (0/1 or 0/3) is supported, otherwise Excluded.  
 C.22: Mandatory if 2/29 is supported, otherwise Excluded.  
 C.23: Optional IF (L2CAP 0/2 (LE) or L2CAP 0/3 (BR/EDR/LE)) and SUM ICS 21/13 (v4.1) are supported, otherwise Excluded.  
 C.24: Mandatory IF L2CAP 2/46 (Support LE Credit Based Flow Control Mode) is supported, otherwise Excluded.  
 C.25: Optional IF (L2CAP 2/1 (L2CAP signaling channel)) OR (L2CAP 2/40 (Low Energy L2CAP signaling channel) AND L2CAP 2/46 (LE Credit Based Flow Control Mode)) is supported, otherwise Excluded.

### 1.3.3 Configurable Parameters

**Table 3: Configurable Parameters**

"L2CAP" Reference applies to either [1] Core Specification v3.0+HS or [2] Core Specification v4.0.

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Support of RTX timer	L2CAP, 6.2.1	M	X
2	Support of ERTX timer	L2CAP, 6.2.2	C.4	X
3	Support minimum MTU size 48 octets	L2CAP, 5.1	C.4	X
4	Support MTU size larger than 48 octets	L2CAP, 5.1	C.5	X
5	Support of flush timeout value for reliable channel	L2CAP, 5.2	C.4	X
6	Support of flush timeout value for unreliable channel	L2CAP, 5.2	C.5	X
7	Support of bi-directional quality of service (QoS) option field	L2CAP, 5.3	C.1	X
8	Negotiate QoS service type	L2CAP, 5.3	C.5	X
9	Negotiate and support service type 'No Traffic'	L2CAP, 5.3	C.2	X
10	Negotiate and support service type 'Best effort'	L2CAP, 5.3	C.3	X
11	Negotiate and support service type 'Gauranteed'	L2CAP, 5.3	C.2	X
12	Support minimum MTU size 23 octets	[2], 5.1	C.6	X
13	Negotiate and support service type 'No traffic' for Extended Flow Specification	[1], 5.6	C.7	X
14	Negotiate and support service type 'Best Effort' for Extended Flow Specification	[1], 5.6	C.8	X
15	Negotiate and support service type 'Guaranteed' for Extended Flow Specification.	[1], 5.6	C.9	X
16	Support Multiple Simultaneous LE Data Channels	[1] 3.4	C.10	X

- C.1: Mandatory if 3/8 is supported, otherwise Optional.  
 C.2: Optional if 3/8 is supported, otherwise Excluded.  
 C.3: Mandatory if 3/8 is supported, otherwise Excluded.  
 C.4: Mandatory if (0/1 or 0/3) is supported, otherwise Excluded.  
 C.5: Optional if (0/1 or 0/3) is supported, otherwise Excluded.  
 C.6: Mandatory if (0/2 or 0/3) is supported, otherwise Excluded.  
 C.7: Optional if (2/44 or 2/38) is supported, otherwise Excluded.  
 C.8: Mandatory if (2/44 or 2/38) is supported, otherwise Excluded.  
 C.9: Optional if (2/44 or 2/38) is supported, otherwise Excluded.  
 C.10: Optional IF L2CAP 2/47 (Support LE Data Channel) AND SUM ICS 21/13 (v4.1) is supported, otherwise Excluded.

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**Modes****Table 0: Device Configuration**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	BR/EDR	[1] or [2] or [3] or [7] 1.1	C.1	X
2	LE	[3] or [7] 1.1	C.2	X
3	BR/EDR/LE	[3] or [7] 1.1	C.3	X

C.1: Mandatory if (PROD 3/1 or 3/2) is Supported, otherwise excluded.

C.2: Mandatory if (PROD 3/3) is Supported, otherwise excluded.

C.3: Mandatory if (PROD 3/4 or 3/5) is Supported, otherwise excluded.

Note - Only one transport shall be supported.

**Table 0a: Version Configuration**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Core Specification Addendum 3 (CSA3), Adopted 24 July 2012	[5] CSA3	C.1	X
2	Core Specification Addendum 4 (CSA4)	[6] CSA4	C.2	X
3	Core Spec version 4.1 (Core v4.1), Adopted 03 December 2013	[7] 3.2.1.1, 9.2.3.2, 9.2.4.2, 9.2.5.2, 9.2.6.2, 9.3.3.2, 9.3.4.2, 9.3.5.2, 9.3.6.2, 9.3.7.2, 9.3.8.2, 9.3.11, 9.3.12, 10.3, 0.4.2, 10.8, 15	C.3	X
4	Core Spec version 4.2 (Core v4.2), Adopted 02 December 2014	[8] Core v4.2	C.4	X
5	Core Spec version 5.0 (Core v5.0), Adopted 06 December 2016	Core v5.0	C.5	X

C.1: Mandatory IF SUM ICS 31/13 (CSA3) is supported, otherwise Excluded.

C.2: Mandatory if SUM ICS 31/14 (CSA4) is supported, otherwise Excluded.

C.3: Mandatory if SUM ICS 31/15 or 31/16 (Core Spec 4.1 or 4.1+HS) is supported, otherwise Excluded.

C.4: Mandatory if SUM ICS 31/17 or 31/18 (Core Spec 4.2 or 4.2+HS) is supported, otherwise Excluded.

C.5: Mandatory IF SUM ICS 31/18 "(Core Spec Version 5.0)" is supported, otherwise Excluded.

**Table 1: Modes**

Prerequisite: 0/1 or 0/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Non-discoverable mode	[1] or [2] or [3] or [7] 4.1.1	C.1	X
2	Limited-discoverable mode	[1] or [2] or [3] or [7] 4.1.2	O	X
3	General-discoverable mode	[1] or [2] or [3] or [7] 4.1.3	O	X
4	Non-connectable mode	[1] or [2] or [3] or [7] 4.2.1	O	X
5	Connectable mode	[1] or [2] or [3] or [7] 4.2.2	M	X
6	Non-bondable mode	[1] or [2] or [3] or [7] 4.3.1	O	X
7	Bondable mode	[1] or [2] or [3] or [7] 4.3.2	C.2	X
8	Non-Synchronizable Mode	[6] or [7] 4.4.1	C.3	X
9	Synchronizable Mode	[6] or [7] 4.4.2	C.4	X

C.1: Mandatory if 1/2 is supported, otherwise Optional.

C.2: Mandatory if 3/5 is supported, otherwise Optional.

C.3: Mandatory IF (0a/2 ("CSA4") OR (SUM ICS 31/14 ("Core Spec Version 4.1") OR SUM ICS 31/15 ("Core Spec Version 4.1+HS") OR SUM ICS 31/16 ("Core Spec Version 4.2") OR SUM ICS 31/17 ("Core Spec Version 4.2+HS") OR SUM ICS 31/18 ("Core Spec Version 5.0"))) AND BB 3a/1 ("Connectionless Slave Broadcast Transmitter") is supported, otherwise Excluded.

C.4: Optional IF (0a/2 ("CSA4") or later is supported; Mandatory IF ((0a/2 "CSA4" or later) AND BB 3a/1 "Connectionless Slave Broadcast Transmitter") is supported, otherwise Excluded.

**Table 2: Security Aspects**

Prerequisite: 0/1 or 0/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Authentication procedure	[1] or [2] or [3] or [7] 5.1	C.1	X
2	Support of LMP-Authentication	[1] or [2] or [3] or [7] 5.1	M	X
3	Initiate LMP-Authentication	[1] or [2] or [3] or [7] 5.1	C.5	X
4	Security mode 1	[1] or [2] or [3] or [7] 5.2.1.1	C.2	X
5	Security mode 2	[1] or [2] or [3] or [7] 5.2.1.2	O	X
6	Security mode 3	[1] or [2] or [3] or [7] 5.2.1.3	C.7	X
7	Security mode 4	[2] or [3] or [7] 5.2.2	C.4	X
8	Support of Authenticated link key	[2] or [3] or [7] 5.2.2	C.6	X
9	Support of Unauthenticated link key	[2] or [3] or [7] 5.2.2	C.6	X
10	Security Optional	[2] or [3] or [7] 5.2.2	C.6	X
11	Secure Connections Only Mode	[7] 5.2.2	C.8	X

C.1: Mandatory If (2/5 or 2/6) is supported, otherwise Optional.

Note 1: The Authentication Procedure in item GAP, 2/1 is the one described in Fig. 5.1 on page 198 in the GAP Profile Specification and not the LMP-Authenticaiton.

C.2: Excluded if 2/7 is supported, otherwise Optional.

C.5: Mandatory If (2/5 or 2/6 or 2/7) is supported, otherwise Optional.

C.4: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.

Note 2: If a Core 2.0 and earlier design claims to support secure communication it should support either Security mode 2 or 3.

Note 3: A Core 2.1 or later device shall always support secure communication in Security Mode 4, and shall use that mode to connect with another Core 2.1 or later device. It shall use Security Mode 2 only for backward compatibility purposes with Core 2.0 and earlier devices. Security Mode 1 is excluded for Core 2.1 or later devices based on condition C.2.

C.6: If 2/7 is supported then at least one of (2/8 or 2/9 or 2/10) is Mandatory, otherwise Excluded.

C.7: Excluded if 2/7 is supported, otherwise Optional.

C.8: Optional IF (LMP 2/26 (Secure Connections) AND GAP 2/7 (Security Mode 4)) is supported, otherwise Excluded.

**Table 3: Idle Mode Procedures**

Prerequisite: 0/1 or 0/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Initiation of general inquiry	[1] or [2] or [3] or [7] 6.1	C.1	X
2	Initiation of limited inquiry	[1] or [2] or [3] or [7] 6.2	C.1	X
3	Initiation of name discovery	[1] or [2] or [3] or [7] 6.3	O	X
4	Initiation of device discovery	[1] or [2] or [3] or [7] 6.4	O	X
5	Initiation of general bonding	[1] or [2] or [3] or [7] 6.5	O	X
6	Initiation of dedicated bonding	[1] or [2] or [3] or [7] 6.5	O	X

C.1: Mandatory to support at least one of GAP 3/1 (Initiation of general inquiry) or GAP 3/2 (Initiation of limited inquiry) if GAP 3/5 (Initiation of general bonding) is supported, otherwise Optional.

**Table 4: Establishment Procedures***Prerequisite: 0/1 or 0/3*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Support link establishment as initiator	[1] or [2] or [3] or [7] 7.1	M	X
2	Support link establishment as acceptor	[1] or [2] or [3] or [7] 7.1	M	X
3	Support channel establishment as initiator	[1] or [2] or [3] or [7] 7.2	O	X
4	Support channel establishment as acceptor	[1] or [2] or [3] or [7] 7.2	M	X
5	Support connection establishment as initiator	[1] or [2] or [3] or [7] 7.3	O	X
6	Support connection establishment as acceptor	[1] or [2] or [3] or [7] 7.3	O	X
7	Support synchronization establishment as receiver	[3] or [7] 7.5	C.1	X

*C.1: Optional if 0a/2 (CSA4) or later is supported; Mandatory if 0a/2 (CSA4) or later and BB 3a/2 (Connectionless Slave Broadcast Receiver) are supported, otherwise Excluded.*

**Table 5: LE Roles***Prerequisite: 0/2*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Broadcaster	[3] or [7] 2.2.2	C.1	X
2	Observer	[3] or [7] 2.2.2	C.1	X
3	Peripheral	[3] or [7] 2.2.2	C.1	X
4	Central	[3] or [7] 2.2.2	C.1	X

*C.1: It is mandatory to support at least one of the defined roles.*

*Note: Table 5 is applicable for LE-only configurations. For BR/EDR/LE configurations, see Table 38 for role declarations.*

**Table 6: Broadcaster Physical Layer***Prerequisite: 5/1 or 38/1*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Transmitter	[3] or [7] 2.2.2	M	X
2	Receiver	[3] or [7] 2.2.2	O	X

**Table 7: Broadcaster Link Layer States***Prerequisite: 5/1 or 38/1*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Standby	[3] or [7] 2.2.2	M	X
2	Advertising	[3] or [7] 2.2.2	M	X

**Table 8: Broadcaster Link Layer Advertising Event Types***Prerequisite: 5/1 or 38/1*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
0	<i>(Intentionally left blank)</i>			X
1	Non-Connectable Undirected Event	[3] or [7] 2.2.2	M	X
2	Scannable Undirected Event	[3] or [7] 2.2.2	O	X
3	Non-Connectable and Non-Scannable Directed Event	2.2.2	C.1	X
4	Scannable Directed Event	2.2.2	C.1	X

**Table 8a: Broadcaster Link Layer Advertising Data Types**

Prerequisite: 5/1 or 38/1

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	AD Type – Service UUID	[3] 11.1.1, [4] 1.1	O	X
2	AD Type – Local Name	[3] 11.1.2, [4] 1.2	O	X
3	AD Type – Flags	[3] 11.1.3, [4] 1.3	C.2	X
4	AD Type – Manufacturer Specific	[3] 11.1.4, [4] 1.4	O	X
5	AD Type – TX Power Level	[3] 11.1.5, [4] 1.5	O	X
6	AD Type – Security Manager Out of Band (OOB)	[3] 11.1.6, [4] 1.6	C.1	X
7	AD Type – Security Manager TK	[3] 11.1.7, [4] 1.7	O	X
8	AD Type – Slave Connection	[3] 11.1.8, [4] 1.8	O	X
9	AD Type - Service Solicitation	[3] 11.1.9, [4] 1.9	O	X
10	AD Type – Service Data	[3] 11.1.10, [4] 1.10	O	X
11	AD Type – Appearance	[4] 1.1.12	O	X
12	AD Type - Public Target Address	[4] 1.1.13	O	X
13	AD Type – Random Target Address	[4] 1.1.14	O	X
14	AD Type – Advertising Interval	[4] 1.1.15	O	X
15	AD Type – LE Bluetooth Device Address	[4] 1.1.16	O	X
16	AD Type – LE Role	[4] 1.1.17	O	X
17	AD Type - URI	[4] 1.1.18	C.3	X

C.1: Optional if SM 2/4 (OOB supported) is supported, otherwise Excluded.

C.2: Mandatory if 5/1 is supported, otherwise Optional.

C.3: Optional IF CSS v7 LE Host is supported, otherwise Excluded.

**Table 9: Broadcaster Connection Modes and Procedures**

Prerequisite: 5/1 or 38/1

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Non-Connectable Mode	[3] or [7] 9.3.2	M	X

**Table 10: Broadcaster Broadcasting and Observing Features**

Prerequisite: 5/1 or 38/1

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Broadcast Mode	[3] or [7] 9.1.1	M	X

**Table 11: Broadcaster Privacy Feature**

Prerequisite: 5/1 or 38/1

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Privacy Feature	[3] 10.7	O	X
1a	(Intentionally left blank)			X
1b	(Intentionally left blank)			X
2	Resolvable Private Address Generation Procedure	[3] or [7] 10.8.2.2 or 1.3.2.2	C.1	X
3	Non-Resolvable Private Address Generation Procedure	[3] or [7] 10.8.2.1 or [9] 1.3.2.2	C.2	X

C.1: Mandatory IF (SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 11/1 (Privacy Feature) is supported; Mandatory IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) AND (11/1 (Privacy Feature) AND NOT 11/3 (Non-Resolvable Private Address Generation Procedure)) is supported;

C.1: (cont.) Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded.

C.2: Mandatory IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) AND (11/1 (Privacy Feature) AND NOT 11/2 (Resolvable Private Address Generation Procedure)) is supported; Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded.

**Table 11a: Periodic Advertising Modes and Procedures**

Prerequisite: GAP 5/1 "Broadcaster LE-Only" OR GAP 38/1 "Broadcaster BR/EDR/LE"

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Periodic Advertising Synchronizability mode	9.5.1	C.1	X
2	Periodic Advertising mode	9.5.2	C.2	X

C.1: Optional IF (GAP 0a/5 "Core Spec version 5.0" AND LL 3/10 "Periodic Advertising") are supported, otherwise Excluded.

C.2: Mandatory IF GAP 11a/1 "Periodic Advertising Synchronizability mode" is supported, otherwise Excluded.

**Table 12: Observer Physical Layer**

Prerequisite: 5/2 or 38/2

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Receiver	[3] or [7] 2.2.2	M	X
2	Transmitter	[3], 2.2.2	O	X

**Table 13: Observer Link Layer States**

Prerequisite: 5/2 or 38/2

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Standby	[3] or [7] 2.2.2	M	X
2	Scanning	[3] or [7] 2.2.2	M	X

**Table 14: Observer Link Layer Scanning Types**

Prerequisite: 5/2 or 38/2

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Passive Scanning	[3] or [7] 2.2.2	M	X
2	Active Scanning	[3] or [7] 2.2.2	O	X

**Table 15: Observer Connection Modes and Procedures**

Prerequisite: 5/2 or 38/2

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Non-Connectable Modes	[3] or [7] 9.3.2	M	X

**Table 16: Observer Broadcasting and Observing Features**

Prerequisite: 5/2 or 38/2

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Observation Procedure	[3] or [7] 9.1.2	M	X

**Table 17: Observer Privacy Feature**

Prerequisite: 5/2 or 38/2

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Privacy Feature	[3] 10.7	O	X
1a	(Intentionally left blank)			X
1b	(Intentionally left blank)			X
2	Non-Resolvable Private Address Generation Procedure	[3] or [7] 10.8.2.1 [9] 1.3.2.2	C.1	X
3	Resolvable Private Address Resolution Procedure	[3] or [7] 10.8.2.3 [5] 10.8 [9] 1.3.2.2	C.2	X
4	Resolvable Private Address Generation Procedure	[3] or [7] 10.8.2.2 [5] 10.8 [9] 1.3.2.3	C.3	X

C.1: Mandatory IF (17/1 (Privacy Feature) AND 14/2 (Active Scanning) AND (SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a

(Core Spec Version 4.0+HS)) AND NOT GAP 0a/1 (CSA3)) is supported;

C.1: (cont.) Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND GAP 0a/1 (CSA3)) AND (17/1 (Privacy Feature) AND 14/2 (Active Scanning) AND NOT 17/4 (Resolvable Private Address Generation Procedure)) is supported;

C.1: (cont.) Mandatory IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) AND (17/1 (Privacy Feature) AND 14/2 (Active Scanning) AND NOT 17/4 (Resolvable Private Address Generation Procedure)) is supported;

C.1: (cont.) Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded.

C.2: Optional IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 17/1 (Privacy Feature) is supported; Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded

C.3: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND GAP 0a/1 (CSA3)) OR (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) AND (17/1 (Privacy Feature) AND 14/2 (Active Scanning) AND NOT 17/2 (Non-Resolvable Private Address Generation Procedure)) is supported;

C.3: (cont.) Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded.

**Table 17a: Periodic Advertising Modes and Procedures**

Prerequisite: GAP 5/2 "Observer LE-Only" OR GAP 38/2 "Observer BR/EDR/LE"

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Periodic Advertising Synchronization Establishment procedure without listening for periodic advertising	9.5.3	C.1	X
2	Periodic Advertising Synchronization Establishment procedure with listening for periodic advertising	9.5.3	C.1	X

C.1: Optional IF (GAP 0a/5 "Core Spec version 5.0" AND LL 4/8 "Periodic Scanning") are supported, otherwise Excluded.

**Table 18: Peripheral Physical Layer**

Prerequisite: 5/3 or 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Transmitter	[3] or [7] 2.2.2	M	X
2	Receiver	[3] 2.2.2	M	X

**Table 19: Peripheral Link Layer States**

Prerequisite: 5/3 or 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Standby	[3] or [7] 2.2.2	M	X
2	Advertising	[3] or [7] 2.2.2	M	X
3	Connection, Slave Role	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	C.1	X

C.1: Mandatory IF (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported; Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 5/3 (LE Roles – Peripheral Role)) is supported, otherwise Excluded.

**Table 20: Peripheral Link Layer Advertising Event Types**

Prerequisite: 5/3 or 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Connectable and Scannable Undirected Event	[3] 2.2.2, 13.1.1.2 [7] 2.2.2	C.1	X
2	Connectable Directed Event	[3] 2.2.2, 13.1.1.2 [7] 2.2.2	C.2	X
2a	(Intentionally left blank)			X
3	Non-Connectable and Non-Scannable Undirected Event	[3] 2.2.2, 9.2.2.2, 9.3.1, 9.3.2 [7] 2.2.2	O	X
4	Scannable Undirected Event	[3] 2.2.2, 9.2.2.2, 9.3.1, 9.3.2 [7] 2.2.2	O	X
5	Connectable Undirected Event	2.2.2	C.3	X
6	Non-Connectable and Non-Scannable Directed Event	2.2.2	C.3	X
7	Scannable Directed Event	2.2.2	C.3	X

C.1: Mandatory IF (SUM ICS 31/14 (Core Spec v4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec

Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported; Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 5/3 (LE Roles – Peripheral Role))) is supported, otherwise Excluded.  
 C.2: Optional IF (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported; Optional IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 5/3 (LE Roles – Peripheral Role))) is supported, otherwise Excluded.  
 C.3: Optional IF SUM ICS 31/18 “Core Spec Version 5.0” is supported, otherwise Excluded.

**Table 20A: Peripheral Link Layer Advertising Data Types**

Prerequisite: 5/3 or 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	AD Type – Service UUID	[3] 11.1.1 [4] 1.1	C.1	X
2	AD Type – Local Name	[3] 11.1.2 [4] 1.2	C.1	X
3	AD Type – Flags	[3] 11.1.3 [4] 1.3	C.2	X
4	AD Type – Manufacturer Specific Data	[3] 11.1.4 [4] 1.4	C.1	X
5	AD Type – TX Power Level	[3] 11.1.5 [4] 1.5	C.1	X
6	AD Type – Security Manager Out of Band (OOB)	[3] 11.1.5 [4] 1.7	C.3	X
7	AD Type – Security Manager TK Value	[3] 11.1.7 [4] 1.8	C.1	X
8	AD Type – Slave Connection Interval Range	[3] 11.1.8 [4] 1.9	C.1	X
9	AD Type - Service Solicitation	[3] 11.1.9 [4] 1.10	C.1	X
10	AD Type – Service Data	[3] 11.1.10 [4] 1.11	C.1	X
11	AD Type – Appearance	[4] 1.1.12	C.1	X
12	AD Type - Public Target Address	[4] 1.1.13	C.1	X
13	AD Type – Random Target Address	[4] 1.1.14	C.1	X
14	AD Type – Advertising Interval	[4] 1.1.15	C.1	X
15	AD Type – LE Bluetooth Device Address	[4] 1.1.16	C.1	X
16	AD Type – LE Role	[4] 1.1.17	C.1	X
17	AD Type – URI	[10] 1.1.18	C.4	X

C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.

C.2: Mandatory if 22/2 (Limited Discoverable Mode) or 22/3 (General Discoverable Mode) is supported, otherwise Optional.

C.3: Optional if (20/1 (Connectable Undirected Event) or 20/3 (Non-Connectable Undirected Event) or 20/4 (Scannable Undirected Event)) and SM 2/4 (OOB supported) are supported, otherwise Excluded.

C.4: Optional IF SUM.ICS 34/11 “CSS v7 LE Host” is supported, otherwise Excluded.

**Table 21: Peripheral Link Layer Control Procedures**

Prerequisite: 5/3 or 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Connection Update Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	C.1	X
2	Channel Map Update Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	C.1	X
3	Encryption Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	C.2	X
4	Feature Exchange Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	C.1	X
5	Version Exchange Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	C.1	X
6	Termination Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	C.1	X
7	LE Ping Procedure	[7] 2.2.2	C.3	X
8	Slave Initiated Feature Exchange Procedure	[7] 2.2.2	C.4	X
9	Connection Parameter Request Procedure	[7] 2.2.2	C.5	X

C.1: Mandatory if ((SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported; Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 5/3 (LE Roles – Peripheral Role))) is supported, otherwise Excluded.

C.2: Optional IF (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported; Optional IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR

*SUM ICS 31/10a (Core Spec Version 4.0+HS) AND 5/3 (LE Roles – Peripheral Role) is supported, otherwise Excluded.*

*C.3: Optional IF (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.*

*C.4: Mandatory IF ((SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) AND GAP 21/9 (Connection Parameter Request Procedure)) is supported; Optional IF (Core Spec 4.1 or later) is supported, otherwise Excluded.*

*C.5: Optional IF (SUM ICS 31/14 (Core Spec Version v4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.*

**Table 22: Peripheral Discovery Modes and Procedures**

*Prerequisite: 5/3 or 38/3*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Non-Discoverable Mode	[3] 9.2.2, 13.1.1.1 [7] 9.2.2, 13.1	C.1	X
2	Limited Discoverable Mode	[3] 9.2.3, 13.1.1.2 [7] 9.2.3, 13.1	C.2	X
3	General Discoverable Mode	[3] 9.2.4, 13.1.1.2 [7] 9.2.4, 13.1	C.3	X
4	Name Discovery Procedure	[3] or [7] 9.2.7	C.4	X

*C.1: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) ) AND (5/3 (LE Roles – Peripheral role) OR 42/1 (BR/EDR/LE – Non-Discoverable Mode))) is supported; Mandatory IF (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.*

*C.2: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 1/2 (BR/EDR/LE – Limited Discoverable Mode)) is supported; Optional IF (Core Spec 4.1 or later) is supported, otherwise Excluded.*

*C.3: Mandatory IF ((SUM ICS 31/10 (4.0) OR SUM ICS 31/11 (4.0+HS)) AND 1/3 (BR/EDR/LE – General Discoverable Mode)) is supported; Mandatory IF (5/3 (LE Roles – Peripheral role) AND (NOT 22/2 (Limited Discoverable Mode))) is supported; Optional IF (5/3 (LE Roles – Peripheral role) AND 22/2 (Limited Discoverable Mode)) is supported;*

*(cont.) C.3: Mandatory IF ((SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) AND 38/3 (BR/EDR/LE Roles – Peripheral Role) AND (NOT 22/2 (Limited Discoverable Mode))) is supported;*

*C.4: Optional IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 5/3 (LE Roles – Peripheral Role)) is supported; Optional IF (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.*

*(cont.2) C.3: Optional IF ((SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) AND 38/3 (BR/EDR/LE Roles – Peripheral Role) AND 22/2 (Limited Discoverable Mode)) is supported, otherwise Excluded.*

**Table 23: Peripheral Connection Modes and Procedures**

*Prerequisite: 5/3 or 38/3*

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Non-Connectable Mode	[3] 9.3.2, 13.1.2.1 [7] 9.3.2	M	X
2	Directed Connectable Mode	[3] 9.3.3, 13.1.2.2 [7] 9.3.3	C.1	X
3	Undirected Connectable Mode	[3] 9.3.4, 13.1.2.2 [7] 9.3.4	C.2	X
4	Connection Parameter Update Procedure	[3] 9.3.9, 13.1.2.1 [7] 9.3.9	C.1	X
5	Terminate Connection Procedure	[3] 9.3.10, 13.1.2.1 [7] 9.3.10	C.2	X

*C.1: Optional IF (5/3 (LE Roles – Peripheral Role) OR ((31/14 (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) AND 38/3 (BR/EDR/LE Roles – Peripheral Role))) is supported, otherwise Excluded.*

*C.2: Mandatory IF (5/3 (LE Roles – Peripheral Role) OR ((31/14 (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) AND 38/3 (BR/EDR/LE Roles – Peripheral Role))) is supported, otherwise Excluded.*

**Table 24: Peripheral Bonding Modes and Procedures**

*Prerequisite: 5/3 or 38/3*

Item	Capability	System Spec	Status	Support
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		Reference		[Yes] or [No]
1	Non-Bondable Mode	[3], 9.4.2	M	X
2	Bondable Mode	[3] 9.4.3, 13.1.4.2 [7] 9.4.3, 13.2	C.1	X
3	Bonding Procedure	[3] 9.4.4, 13.1.4.2 [7] 9.4.4, 13.2	C.1	X
4	Multiple Bonds	[3] 9.4, 13.1.4.2 [7] 9.4	C.2	X

C.1: Optional IF 5/3 (LE Only – Peripheral role) is supported; Optional IF ((SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) AND 38/3 (BR/EDR/LE Roles – Peripheral Role) AND (NOT 26/1a (Privacy Feature 1.1))) is supported; Mandatory IF (26/1a (Privacy Feature v1.1) is supported otherwise Excluded.

C.2: Optional if 24/2 (Bondable Mode) is supported, otherwise Excluded.

**Table 25: Peripheral Security Aspects Features**

Prerequisite: 5/3 or 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Security Mode 1	[3] 10.2.1, 13.1.2.2, [7] 10.2.1	C.2	X
2	Security Mode 2	[3] 10.2.2, 13.1.2.2, [7] 10.2.2	C.2	X
3	Authentication Procedure	[3] 10.2.3, 13.1.2.2, [7] 10.2.3	C.2	X
4	Authorization Procedure	[3] 10.2.5, 13.1.2.2, [7] 10.2.5	C.2	X
5	Connection Data Signing Procedure	[3] 10.4.1, 13.1.2.2 [7] 10.4.1	C.2	X
6	Authenticate Signed Data Procedure	[3] 10.4.3, 13.1.2.2 [7] 10.4.3	C.2	X
7	Authenticated Pairing (LE security mode 1 level 3)	[3] 10.3, 13.1.2.2 [7] 10.3	C.1	X
8	Unauthenticated Pairing (LE security mode 1 level 2)	[3] 10.3, 13.1.2.2 [7] 10.3	C.1	X
9	LE Security Mode 1 Level 4	[8] 10.3	C.3	X
10	Secure Connections Only Mode	[8] 10.2.4	C.4	X

C.1: Optional if 25/1 is supported, otherwise Excluded.

C.2: Optional IF 5/3 (LE Roles – Peripheral Role) is supported; Optional IF ((SUM ICS 31/14 (Core Spec Version 4.1) OR (SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) AND 38/3 (BR/EDR/LE Roles – Peripheral Role)) is supported, otherwise Excluded.

C.3: Mandatory IF SM 2/5 (LE Secure Connections) is supported, otherwise Excluded.

C.4 Optional IF 25/9 (LE Security Mode 1 Level 4) is supported, otherwise Excluded.

**Table 26: Peripheral Privacy Feature**

Prerequisite: 5/3 or 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Privacy Feature	[3], 10.7	O	X
1a	(Intentionally left blank)			X
1b	(Intentionally left blank)			X
2	Non-Resolvable Private Address Generation Procedure	[3] or [7] 10.7, 10.8.2.1 [9] 1.3.2.2	C.1	X
3	Resolvable Private Address Generation Procedure	[3] or [7] 10.7, 10.8.2.2 [9] 1.3.2.2	C.2	X
4	Resolvable Private Address Resolution Procedure	[3] or [7] 10.7, 10.8.2.3 [9] 1.3.2.2	C.3	X

C.1: Optional IF (SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 26/1 (Privacy Feature) is supported; Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded.

C.2: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) OR GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) AND 26/1 (Privacy Feature)) is supported; Optional IF (GAP 0a/3 (Core Spec version

4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded.

C.3: Mandatory IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) AND 26/1 (Privacy Feature) is supported; Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded.

**Table 27: Peripheral GAP Characteristics**

Prerequisite: 5/3 or 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Device Name	[3] or [7] 12.1	M	X
2	Appearance	[3] or [7] 12.2	M	X
3	Peripheral Privacy Flag	[3], 12.3	C.1	X
4	Reconnection Address	[3] 12.4 [5] 12.4	C.2	X
5	Peripheral Preferred Connection Parameters	[3] or [7] 12.5	C.3	X
6	Writeable Device Name	[3] or [7] 12.1	C.3	X
7	Writeable Appearance	[3] or [7] 12.2	C.3	X
8	Writeable Peripheral Privacy Flag	[3] or [7] 12.3, 10.7.1	C.4	X
9	Central Address Resolution	[8] 12	C.5	X

C.1: Mandatory IF (SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND (26/1 (Privacy Feature) AND 5/3 (LE Roles – Peripheral Role)) is supported, otherwise Excluded.

C.2: Optional IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 26/1 (Privacy Feature) AND 27/3 (Peripheral Privacy Flag Characteristic)) are supported; Mandatory IF (0a/1 (CSA3) AND 5/3 (LE Roles – Peripheral Role)) is supported; otherwise Excluded.

C.3: Optional IF 5/3 “LE Roles – Peripheral Role” OR ((GAP 0a/3 “Core Spec version 4.1” OR GAP 0a/4 “Core Spec version 4.2” OR GAP 0a/5 “Core Spec version 5.0”) AND 38/3 “BR/EDR/LE Roles – Peripheral Role”) is supported, otherwise Excluded.

C.4: Optional IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 5/3 (LE Roles – Peripheral Role)) is supported; otherwise Excluded.

C.5: Optional if LL 2/5 (Resolution of Private Addresses) is supported, otherwise Excluded.

**Table 28: Central Physical Layer**

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Transmitter	[3] or [7] 2.2.2	M	X
2	Receiver	[3] or [7] 2.2.2	M	X

**Table 29: Central Link Layer States**

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Standby	[3] or [7] 2.2.2	M	X
2	Scanning	[3] or [7] 2.2.2	M	X
3	Initiating	[3] or [7] 2.2.2	M	X
4	Connection, Master Role	[3] or [7] 2.2.2	M	X

**Table 30: Central Link Layer Scanning Types**

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Passive Scanning	[3] or [7] 2.2.2	O	X
2	Active Scanning	[3] or [7] 2.2.2	C.1	X

C.1: Mandatory if (5/4 or 38/4) is supported. Optional if 30/1 and (5/4 OR 38/4) is supported, otherwise Excluded.

**Table 31: Central Link Layer Control Procedures**

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Connection Update Procedure	[3] or [7] 2.2.2	M	X

2	Channel Map Update Procedure	[3] or [7] 2.2.2	M	X
3	Encryption Procedure	[3] or [7] 2.2.2	O	X
4	Feature Exchange Procedure	[3] or [7] 2.2.2	M	X
5	Version Exchange Procedure	[3] or [7] 2.2.2	M	X
6	Termination Procedure	[3] or [7] 2.2.2	M	X
7	LE Ping Procedure	[7] 2.2.2	C.1	X
8	Slave Initiated Feature Exchange Procedure	[7] 2.2.2	C.2	X
9	Connection Parameter Request Procedure	[7] 2.2.2	C.1	X

C.1: Optional IF ((SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.

C.2: Mandatory IF GAP 31/9 (Connection Parameter Request Procedure) is supported, Optional IF ((SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) AND (NOT GAP 31/9 (Connection Parameter Request Procedure))) is supported, otherwise Excluded.

**Table 32: Central Discovery Modes and Procedures**

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Limited Discovery Procedure	[3] 9.2.5, 13.2 [7] 9.2.5	C.2	X
2	General Discovery Procedure	[3] 9.2.6, 13.2 [7] 9.2.6	C.1	X
3	Name Discovery Procedure	[3] 9.2.7, 13.2 [7] 9.2.7	C.3	X

C.1: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND (5/4 (LE Only – Central role) OR 40/1 (BR/EDR/LE – General Discovery))) is supported; Mandatory IF (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.

C.2: Optional IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND (5/4 (LE Only – Central role) OR 40/2 (BR/EDR/LE – Limited Discovery))) is supported, Optional IF (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.

C.3: Optional IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND (5/4 (LE Only – Central role) OR 40/4 (BR/EDR/LE – Name Discovery))) is supported, otherwise Optional IF (SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.

**Table 33: Central Connection Modes and Procedures**

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Auto Connection Establishment Procedure	[3] or [7] 9.3.5	C.3	X
2	General Connection Establishment	[3] 9.3.6, 13.3.1 [7] 9.3.6	C.1	X
3	Selective Connection Establishment	[3] or [7] 9.3.7	C.3	X
4	Direct Connection Establishment	[3] or [7] 9.3.8	C.2	X
5	Connection Parameter Update Procedure	[3] or [7] 9.3.9	C.2	X
6	Terminate Connection Procedure	[3] or [7] 9.3.10	C.2	X

(1 of 3) C.1: Mandatory IF ((SUM ICS 31/10 (4.0) OR SUM ICS 31/11 (4.0+HS)) AND (5/4 (LE Only – Central role) OR 40/5 (BR/EDR/LE – Link Establishment)) AND 36/1 (Privacy Feature v1.0)) is supported;

C.2: Mandatory IF ((SUM ICS 31/10 (4.0) OR SUM ICS 31/11 (4.0+HS)) AND (5/4 (LE Only – Central role) OR 40/5 (BR/EDR/LE – Link Establishment))) is supported; Mandatory IF (Core Spec 4.1 or later) is supported, otherwise Excluded.

C.3: Optional IF ((SUM ICS 31/10 (4.0) OR SUM ICS 31/11 (4.0+HS)) AND (5/4 (LE Only – Central role) OR 40/5 (BR/EDR/LE – Link Establishment))) is supported; Optional IF (Core Spec 4.1 or later) is supported, otherwise Excluded.

(2 of 3) C.1: Optional IF ((SUM ICS 31/10 “Core Spec Version 4.0” OR SUM ICS 31/10a “Core Spec Version 4.0+HS”) AND (5/4 “LE Only – Central role” OR 40/5 “BR/EDR/LE – Link Establishment” AND (NOT 36/1 “Privacy Feature”))) is supported;

(3 of 3) C.1: Optional IF ((SUM ICS 31/14 “Core Spec Version 4.1” OR SUM ICS 31/15 “Core Spec Version 4.1+HS” OR (SUM ICS 31/16 “Core Spec Version 4.2” OR SUM ICS 31/17 “Core Spec Version 4.2+HS” OR SUM ICS 31/18 “Core Spec version 5.0”) is supported, otherwise Excluded.

**Table 34: Central Bonding Modes and Procedures**

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Non-Bondable Mode	[3] 9.4.2, 13.1.3 [7] 9.4.2, 13.2	C.1	X
2	Bondable Mode	[3] 9.4.3, 13.1.3 [7] 9.4.3, 13.2	C.2	X
3	Bonding Procedure	[3] 9.4.4, 13.1.3 [7] 9.4.4, 13.2	C.2	X

C.1: Mandatory IF ((SUM ICS 31/10 (4.0) OR SUM ICS 31/11 (4.0+HS)) AND (5/4 (LE Only – Central role) OR 39/5 (BR/EDR/LE – Non-Bondable Mode))) is supported; Mandatory IF (Core Spec 4.1 or later) is supported, otherwise Excluded.

C.2: Optional IF ((SUM ICS 31/10 “Core Spec Version 4.0” OR SUM ICS 31/10a “Core Spec Version 4.0+HS”) AND (5/4 “LE Only – Central role” OR 39/6 “BR/EDR/LE – Bondable Mode”)) is supported; Optional IF (SUM ICS 31/14 “Core Spec Version 4.1” OR SUM ICS 31/15 “Core Spec Version 4.1+HS” OR SUM ICS 31/16 “Core Spec Version 4.2” OR SUM ICS 31/17 “Core Spec Version 4.2+HS” OR SUM ICS 31/18 “Core Spec version 5.0”) is supported, otherwise Excluded.

Table 35: Central Security Features

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Security Mode 1	[3] or [7] 10.2.1	O	X
2	Security Mode 2	[3] or [7] 10.2.2	O	X
3	Authentication Procedure	[3] or [7] 10.3	O	X
4	Authorization Procedure	[3] or [7] 10.5	O	X
5	Connection Data Signing Procedure	[3] or [7] 10.4.1	O	X
6	Authenticate Signed Data Procedure	[3] or [7] 10.4.3	O	X
7	Authenticated Pairing (LE security mode 1 level 3)	[3] or [7] 10.3	C.1	X
8	Unauthenticated Pairing (LE security mode1 level2)	[3] or [7] 10.3	C.1	X
9	LE Security Mode 1 Level 4	[8] 10.3	C.2	X
10	Secure Connections Only Mode	[8] 10.2.4	C.3	X

C.1: Optional if 35/1 is supported, otherwise Excluded.

C.2: Mandatory IF SM 2/5 (LE Secure Connections) is supported, otherwise Excluded.

C.3: Optional IF 35/9 (LE Security Mode 1 Level 4) is supported, otherwise Excluded.

Table 36: Central Privacy Feature

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Privacy Feature	[7] 10.7	O	X
1a	(Intentionally left blank)			X
1b	(Intentionally left blank)			X
2	Non-Resolvable Private Address Generation Procedure	[3] or [7] 10.7, 10.8.2.1 [5] 10.7 [9] 1.3.2.2	C.1	X
3	Resolvable Private Address Resolution Procedure	[3] or [7] 10.7, 10.8.2.3 [9] 1.3.2.2	C.2	X
4	Write to Privacy Characteristic (Enable/Disable Privacy)	[3] 10.7.1, 10.7.2	C.3	X
5	Resolvable Private Address Generation Procedure	[3] or [7] 10.7, 10.8.2.3 [5] 10.7 [9] 1.3.2.3	C.4	X

C.1: Mandatory IF (SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 36/1 (Privacy Feature) is supported; Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported

C.2: Mandatory IF (SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) OR GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) AND 36/1 (Privacy Feature) is supported; Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded.

C.3: Optional IF (SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS)) AND 36/1 (Privacy Feature) is supported, otherwise Excluded.

C.4: Mandatory IF (SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND 0a/1 (CSA3)) AND (36/1 (Privacy Feature) AND 14/2 (Active Scanning) AND NOT 36/2 (Non-Resolvable Private Address Generation Procedure)) is supported;

C.4: (cont.) Mandatory IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) AND 36/1 (Privacy Feature) is

supported; Optional IF (GAP 0a/3 (Core Spec version 4.1) OR GAP 0a/4 (Core Spec version 4.2)) is supported, otherwise Excluded.

**Table 37: Central GAP Characteristics**

Prerequisite: 5/4 or 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Device Name	[3] or [7] 12.1	M	X
2	Appearance	[3] or [7] 12.2	M	X
3	Central Address Resolution	[8] 12.4	C.1	X

C.1: Mandatory IF LL 2/5 (Resolution of Private Addresses) is supported, otherwise Excluded.

**Table 38: BR/EDR/LE Roles**

Prerequisite: 0/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Broadcaster	[3] or [7] 13	C.1	X
2	Observer	[3] or [7] 13	C.1	X
3	Peripheral	[3] or [7] 13	C.1	X
4	Central	[3] or [7] 13	C.1	X

C.1: It is mandatory to support at least one of the defined roles.

Note: Table 38 is applicable for BR/EDR/LE configurations. For LE-only configurations, see Table 5 for role declarations.

**Table 39: Central BR/EDR/LE Modes**

Prerequisite: GAP 38/4 "Central BR/EDR/LE" AND (SUM ICS 31/10 "Core Spec Version 4.0 OR SUM ICS 31/10a "Core Spec Version 4.0+HS")

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Non-Discoverable Mode	[3], 13.1.1.1	C.1	X
2	Discoverable Mode	[3], 13.1.1.2	C.2	X
3	Non-Connectable Mode	[3], 13.1.2.1	C.3	X
4	Connectable Mode	[3], 13.1.2.2	M	X
5	Non-Bondable Mode	[3], 13.1.3.1	C.4	X
6	Bondable Mode	[3], 13.1.3.2	C.5	X

C.1: Mandatory 1/1 "Non-Discoverable Mode" is supported over BR/EDR, otherwise Excluded.

C.2: Mandatory IF (1/2 "Limited Discoverable Mode" OR 1/3 "General Discoverable Mode") is supported over BR/EDR, otherwise Excluded.

C.3: Mandatory IF 1/4 "Non-Connectable Mode" is supported over BR/EDR, otherwise Excluded.

C.4: Mandatory IF 1/6 "Non-Bondable Mode" is supported over BR/EDR, otherwise Excluded.

C.5: Mandatory IF 1/7 "Bondable Mode" is supported over BR/EDR, otherwise Excluded.

**Table 40: Central BR/EDR/LE Idle Mode Procedures**

Prerequisite: GAP 38/4 "Central BR/EDR/LE" AND (SUM ICS 31/10 "Core Spec Version 4.0 OR SUM ICS 31/10a "Core Spec Version 4.0+HS")

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	General Discovery	[3], 13.2.1	C.1	X
2	Limited Discovery	[3], 13.2.2	C.2	X
3	Device Type Discovery	[3], 13.2.3.1	C.3	X
4	Name Discovery	[3], 13.2.4	C.4	X
5	Link Establishment	[3], 13.3	C.5	X

C.1: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND 3/1 (Initiation of general inquiry)) is supported over BR/EDR, otherwise Optional.

C.2: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND 3/2 (Initiation of limited inquiry)) is supported over BR/EDR, otherwise Optional.

C.3: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND (3/1 (Initiation of general inquiry) OR 3/2 (Initiation of limited inquiry))) is supported over BR/EDR, otherwise Optional.

C.4: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND 3/3 (Initiation of name discovery)) is supported over BR/EDR, otherwise Optional.

C.5: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND (4/1 (Support link establishment as initiator) OR 4/2 (Support link establishment as acceptor))) is supported over BR/EDR, otherwise Optional.

**Table 41: Central BR/EDR/LE Security Aspects**

Prerequisite: 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Security Aspects	[3] 14	M	X
2	(Intentionally left blank)			X
2a	Derivation of BR/EDR Link Key from LE LTK	[8] 14.1	C.1	X
2b	Derivation of LE LTK from BR/EDR Link Key	[8] 14.1	C.1	X

C.1: Optional IF (SUM ICS 31/16 "Core Spec Version 4.2" OR SUM ICS 31/17 "Core Spec Version 4.2+HS" OR SUM ICS 31/18 "Core Spec Version 5.0") is supported, otherwise Excluded.

**Table 42: Peripheral BR/EDR/LE Modes**

Prerequisite: SUM ICS 31/10 "Core Spec Version 4.0 AND AND (SUM ICS 31/10 "Core Spec Version 4.0 OR SUM ICS 31/10a "Core Spec Version 4.0+HS")

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Non-Discoverable Mode	[3] 13.1.1.1	C.1	X
2	Discoverable Mode	[3] 13.1.1.2	C.2	X
3	Non-Connectable Mode	[3] 13.1.2.1	C.3	X
4	Connectable Mode	[3] 13.1.2.2	M	X
5	Non-Bondable Mode	[3] 13.1.3.1	C.4	X
6	Bondable Mode	[3] 13.1.3.2	C.5	X

C.1: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND 1/1 (Non-Discoverable Mode)) is supported over BR/EDR, otherwise Optional.

C.2: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND (1/2 (Limited Discoverable Mode) OR 1/3 (General Discoverable Mode))) is supported over BR/EDR, otherwise Optional.

C.3: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND 1/4 (Non-Connectable Mode)) is supported over BR/EDR, otherwise Optional.

C.4: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND 1/6 (Non-Bondable Mode)) is supported over BR/EDR, otherwise Optional.

C.5: Mandatory IF ((SUM ICS 31/10 (Core Spec Version 4.0) OR SUM ICS 31/10a (Core Spec Version 4.0+HS) AND 1/7 (Bondable Mode)) is supported over BR/EDR, otherwise Optional.

**Table 43: Peripheral BR/EDR/LE Security Aspects**

Prerequisite: 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Security Aspects	[3] or [7] 14	M	X
2	(Intentionally left blank)			X
2a	Derivation of BR/EDR Link Key from LE LTK	[8] 14.1	C.1	X
2b	Derivation of LE LTK from BR/EDR Link Key	[8] 14.1	C.1	X

C.1 Optional IF (SUM ICS 31/16 "Core Spec Version 4.2" OR SUM ICS 31/17 "Core Spec Version 4.2+HS" OR SUM ICS 31/18 "Core Spec Version 5.0") is supported, otherwise Excluded.

**Table 44: Central Simultaneous BR/EDR and LE Transports**

Prerequisite: GAP 38/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Simultaneous BR/EDR and LE Transports – BR/EDR Slave to the same device	[3] or [7] 13.1.1	C.1	X
2	Simultaneous BR/EDR and LE Transports – BR/EDR Master to the same device	[3] or [7] 13.1.1	C.1	X

C.1 Optional IF ((SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.

**Table 45: Peripheral Simultaneous BR/EDR and LE Transports**

Prerequisite: GAP 38/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Simultaneous BR/EDR and LE Transports – BR/EDR Slave to the same device	[3] or [7] 13.1.1	C.1	X
2	Simultaneous BR/EDR and LE Transports – BR/EDR Master to the same device	[3] or [7] 13.1.1	C.1	X

C.1: Optional IF ((SUM ICS 31/14 (Core Spec Version 4.1) OR SUM ICS 31/15 (Core Spec Version 4.1+HS) OR SUM ICS 31/16 (Core Spec Version 4.2) OR SUM ICS 31/17 (Core Spec Version 4.2+HS)) is supported, otherwise Excluded.

**Link Layer**  
Vol 6, Part B

### Controller States/Roles

**Table 1: Controller States/Roles**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Advertising State	[1]: 4.4.2	C.1	X
2	Scanning State	[1]: 4.4.3	C.1	X
3	Initiating State	[1]: 4.4.4	C.1	X
4	Slave Role	[1]: 4.5.5	C.3	X
5	Master Role	[1]: 4.5.4	C.2	X

C.1: Mandatory to support at least one of (1/1 or 1/2 or 1/3).

C.2: Mandatory if 1/3 is supported, otherwise Excluded

C.3: Optional if 1/1 is supported, otherwise Excluded.

**Table 2: Device Addresses Types**

Prerequisite: 1/1 or 1/2 or 1/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Public Address	[1]: 1.3	C.1	X
2	Random Address	[1]: 1.3	C.1	X
3	Static Address	[4] 1.3.2.1	C.1	X
4	Generation of private addresses	[4] 1.3.2.2	C.3	X
5	Resolution of private addresses	[4] 1.3.2.3	C.2	X
6	Network Privacy Mode – Ignore Identity Address when IRK is present in resolving list	4.7	C.4	X
7	Device Privacy Mode	4.7	C.4	X
7a	Not used	-	-	X

C.1: Mandatory to support (2/1 OR 2/3) if Core Spec 4.2 is supported; otherwise Mandatory to support one of (2/1 OR 2/2).

C.2: Mandatory if 2/4 (Generation of private address) is supported, otherwise Excluded.

C.3: Excluded IF SUM ICS 21/9 "Core v4.0" OR SUM ICS 21/13 "Core v4.1" is supported, otherwise Optional.

C.4: Optional IF LL 2/5 "(Resolution of private addresses)" is supported, otherwise Excluded.

**Table 3: Protocol Advertising Features**

Prerequisite: 1/1

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Non-Connectable Undirected Events	[1]: 4.4.2.6	C.1	X
2	Connectable Undirected Events	[1]: 4.4.2.3	C.2	X
3	Advertising Data	[1]: 4.4.2.3, 4.4.2.5, 4.4.2.6	M	X

4	Connectable Directed Events	[1]: 4.4.2.4	O	X
4a	Low Duty Cycle Direct Advertising	[1] 4.4.2.4	C.5	X
5	Scannable Undirected Events	[1]: 4.4.2.5	O	X
6	Sending Scan Responses	[1]: 4.4.2.3, 4.4.2.5	C.2	X
7	Accepting Connection Requests	[1]: 4.4.2.3, 4.4.2.4	C.2	X
8	Filtering Policies	[1]: 4.3.2	O	X
9	Extended Advertising	4.6.12	C.6	X
10	Periodic Advertising	4.4.2.12	C.7	X
11	Multiple Advertising Sets	4.4.2.10	C.7	X
12	Sending Tx Power in Advertisements	2.3.4.7	C.7	X

If the design being qualified is a Controller Subsystem or Component product type not supporting GAP, these features shall be supported based on the intended GAP role support of the combined Host.

C.1: Mandatory if GAP 5/1 (Broadcaster) is supported; Optional if GAP 5/3 (Peripheral), otherwise Not Defined.

C.2: Mandatory if GAP 5/3 (Peripheral) is supported, otherwise Not Defined.

C.5: Optional if (Core Spec 4.1 or later) is supported, otherwise Excluded.

C.6: Mandatory IF LL 9/9 "LE Coded PHY" AND LL 1/1 "Advertising State" are supported; Excluded IF SUM ICS 21/9 "Core v4.0" OR SUM ICS 21/13 "Core v4.1" OR SUM ICS 21/14 "Core v4.2" is supported, otherwise Optional.

C.7: Optional IF LL 3/9 "Extended Advertising" is supported, otherwise Excluded.

**Table 4: Protocol Scanning Features**

Prerequisite: 1/2

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Passive Scanning	[1]: 4.4.3.1	C.1	X
2	Receiving Advertising Data	[1]: 4.4.3.1, 4.4.3.2	M	X
3	Active Scanning	[1]: 4.4.3.2	C.2	X
4	Backoff Procedure	[1]: 4.4.3.2	M	X
5	Filtering Policies	[1]: 4.3.3	O	X
6	Extended Scanner filter policies	[4] 4.4.3	C.3	X
7	Extended Scanning	4.6.12	C.4	X
8	Periodic Scanning	4.4.3.4	C.5	X

C.1: Mandatory if GAP 5/2 (Observer) is supported; otherwise Optional

C.2: Mandatory IF (GAP 5/4 (Central) AND NOT LL 4/1 (Passive Scanning)) is supported; otherwise Optional

C.3: Excluded IF SUM ICS 21/9 "Core v4.0" OR SUM ICS 21/13 "Core v4.1" is supported, otherwise Optional.

C.4: Mandatory IF LL 9/9 "LE Coded PHY" AND LL 1/2 "Scanning State" are supported, Excluded IF SUM ICS 21/9 "Core v4.0" OR SUM ICS 21/13 "Core v4.1" OR SUM ICS 21/14 "Core v4.2" is supported, otherwise Optional.

C.5: Optional IF LL 4/7 "Extended Scanning" is supported, otherwise Excluded.

If the design being qualified is a Controller Subsystem or Component product type not supporting GAP, these features shall be supported based on the intended GAP role support of the combined Host.

**Table 5: Protocol Initiating Features**

Prerequisite: 1/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Requesting Connections	[1]: 4.4.4	M	X
2	Requesting to Directed Advertising	[1]: 4.4.4	M	X
3	Initiator Filtering	[1]: 4.3.4	M	X
88	Intentionally left blank			X

**Table 6: Protocol Slave Role Features**

Prerequisite: 1/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Slave Transmissions	[1]: 4.5.1, 4.5.5, 4.5.6	M	X
2	Acknowledgement Scheme	[1]: 4.5.9	M	X
3	Unknown Response	[1]: 5.1.4, 2.4.2	M	X

4	Responding in Feature Setup	[1]: 5.1.4	M	X
4a	Requesting Feature Setup	[1] 5.1.4.2	C.2	X
5	Sending Data (Device supports data output from a Host)	[1]: 4.5.1, 4.5.6	M	X
6	Receiving Data (Device supports data input to a Host)	[1]: 4.5.1, 4.5.6	M	X
7	More Data	[1]: 4.5.6	O	X
8	No Longer Used	-	-	X
9	No Longer Used	-	-	X
10	Accepting Parameter Update	[1]: 5.1.1	M	X
10a	Initiating Connection Parameter Request	[1] 5.1	C.3	X
10b	Accepting Connection Parameter Request	[1] 5.1	C.2	X
11	Accepting Channel Map Update	[1]: 5.1.2	M	X
12	Encryption Start	[1]: 5.1.3	O	X
13	Connection Control Timer	[1]: 5.2	M	X
14	Sending Termination	[1]: 5.1.6	M	X
15	Accepting Termination	[1]: 5.1.6	M	X
16	Connection Supervision Timer	[1]: 4.5.2	M	X
17	<i>(Intentionally left blank)</i>			X
18	Slave Pause Encryption	[1]: 5.1.3	O	X
19	Slave Version Exchange	[1]: 5.1.5	M	X
20	Slave listens to multiple packets per connection event	4.5.7	O	X
21	LE Authenticated Payload Timeout	[3] 5.4	C.5	X
22	Data Length Update Procedure	[4] 5.1.9	C.4	X
23	Minimum Number Of Used Channels Procedure	4.6.16	C.5	X

LL 6/5 indicates whether a device in the slave role supports data output from a Host.

LL 6/6 indicates whether the device supports data input to a Host.

LL 6/9 expresses if a Controller may recombine LL packets into HCI data packets.

Carrying HCI fragmentation flags in LL packets is indicated by LL 6/8.

C.1: Optional IF ((Core Spec 4.1 or later) AND (LL 1/4 (Slave Role) OR LL 1/5 (Master Role)) is supported, otherwise Excluded.

C.2: Mandatory IF ((Core Spec 4.1 or later) AND LL 6/10a (Initiating Connection Parameter Request)) are supported.

C.3: Optional IF (Core Spec 4.1 or later) is supported, otherwise Excluded.

C.4: Mandatory IF LL 9/6 (LE Data Packet Length Extension) is supported, otherwise Excluded.

C.5: Mandatory IF LL 9/2 "LE Ping" is supported, otherwise Excluded.

**Table 7: Protocol Master Role Features**

Prerequisite: 1/5

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Master Transmissions	[1]: 4.5.1, 4.5.4, 4.5.6	M	X
2	Acknowledgement Scheme	[1]: 4.5.9	M	X
3	Unknown Responses	[1]: 5.1.4, 2.4.2	M	X
4	Requesting Feature Setup	[1]: 5.1.4	M	X
4a	Responding in Feature Setup	[1] 5.1.4.2	C.2	X
5	Sending Data (Device supports data output from a Host)	[1]: 4.5.1, 4.5.6	M	X
6	Receiving Data (Device supports data input to a Host)	[1]: 4.5.1, 4.5.6	M	X
7	More Data	[1]: 4.5.6	O	X
8	No Longer Used	-	-	X
9	No Longer Used	-	-	X
10	Requesting Parameter Update	[1]: 5.1.1	M	X
10a	Initiating Connection Parameter Request	[1] 5.1	C.2	X
10b	Accepting Connection Parameter Request	[1] 5.1	C.3	X
11	Requesting Channel Map Update	[1]: 5.1.2	M	X
12	Encryption Start	[1]: 5.1.3	O	X
13	Connection Control Timer	[1]: 5.2	M	X

14	Sending Termination	[1]: 5.1.6	M	X
15	Accepting Termination	[1]: 5.1.6	M	X
16	Connection Supervision Timer	[1]: 4.5.2	M	X
18	<i>(Intentionally left blank)</i>			X
19	Master Pause Encryption	[1]: 5.1.3	O	X
20	Master Version Exchange	[1]: 5.1.5	M	X
21	LE Authenticated Payload Timeout	[3] 5.4	C.5	X
22	Data Length Update Procedure	[4] 5.1.9	C.4	X
23	Minimum Number Of Used Channels Procedure	4.6.16	C.5	X

LL 7/5 indicates whether a device in the master role supports data output from a Host.

LL 7/6 indicates whether the device supports data input to a Host.

LL 7/18 indicates whether a device supports combining the advertising procedure to the master role.

C.1: Optional IF ((Core Spec 4.1 or later) AND (LL 1/4 (Slave Role) OR LL 1/5 (Master Role)) is supported, otherwise Excluded.

C.2: Mandatory IF ((Core Spec 4.1 or later) AND LL 7/10b (Accepting Connection Parameter Request) is supported, otherwise Excluded.

C.3: Optional if IF (Core Spec 4.1 or later) is supported, otherwise Excluded.

C.4: Mandatory IF LL 9/6 (LE Data Packet Length Extension) is supported, otherwise Excluded.

C.5: Mandatory IF LL 9/2 "LE Ping" is supported, otherwise Excluded.

**Table 8: Physical Channels**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Data channels (channel index 0 to 36)	[1]:1.4	C.1	X
2	Advertising channels (at least one of channel index 37, 38, 39)	[1]:1.4.1	M	X
3	Support Data channel selection algorithm	[1]: 4.5.8	C.1	X

C.1: Mandatory if (1/4 or 1/5) is supported, otherwise Excluded.

**Table 9: Supported Features**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	LL Encryption	[1]: 4.6.1	C.1	X
2	LE Ping Procedure	[3] 4.6.5	C.4	X
3	Connection Parameter Request Procedure	[1] 4.6.2	C.2	X
4	Extended Reject Indication	[1] 4.6.3	C.3	X
5	Slave-initiated Features Exchange	[1] 4.6.4	C.4	X
6	LE Data Packet Length Extension	[4] 4.6.6	C.5	X
7	LE 2M PHY	2.1	C.6	X
8	Asymmetric PHY	4.6.9.1	C.7	X
9	LE Coded PHY	2.5	C.6	X
10	Channel Selection Algorithm #2	4.6.14	C.8	X
11	LE Power Class 1	4.6.15	C.7	X

C.1: Mandatory if (6/12 and 6/18) or (7/12 and 7/19) are supported.

C.2: Excluded IF SUM ICS 21/9 "Core v4.0" is supported, otherwise Mandatory IF (LL 6/10a "Initiating Connection Parameter Request" OR LL 7/10b "Accepting Connection Parameter Request") are supported, otherwise Excluded.

C.3: Excluded IF SUM ICS 21/9 "Core v4.0" is supported, otherwise Mandatory IF LL 9/3 "Connection Parameter Request Procedure"; otherwise Optional.

C.4: Excluded IF SUM ICS 21/9 "Core v4.0" is supported, otherwise Optional.

C.5: Excluded IF SUM ICS 21/9 "Core v4.0" OR SUM ICS 21/13 "Core v4.1" is supported, otherwise Optional.

C.6: Excluded IF SUM ICS 21/9 "Core v4.0" OR SUM ICS 21/13 "Core v4.1" OR SUM ICS 21/14 "Core v4.2" is supported, otherwise Optional.

C.7: Optional IF LL 9/7 "LE 2M PHY" OR LL 9/9 "LE Coded PHY" is supported, otherwise Excluded.

C.8: Excluded IF SUM ICS 21/9 "Core v4.0" OR SUM ICS 21/13 "Core v4.1" OR SUM ICS 21/14 "Core v4.2" is supported, otherwise Mandatory IF (LL 3/9 "Extended Advertising" OR LL 4/7 "Extended Scanning" OR LL 9/11 "LE Power Class 1" is supported, otherwise Optional.

**Table 10: Scatternet Capabilities**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Act as LE Master and LE Slave at the same time	[3] 1.1.1	O	X
2	Act as LE Slave to more than one LE Master at the same time.	[3] 1.1.1	O	X

**RF PHY**  
Vol 6, Part A

### Capability Statement

**Table 1: Bluetooth LE RF Capabilities**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	LE Transmitter (Non-connectable, Broadcaster)	[2], 3	C.1	X
2	LE Receiver (Non-connectable, Observer)	[2], 4	C.1	X
3	LE Transceiver (Connectable, Peripheral/Central)	[2], 3, 4	C.1	X
4	LE 2M PHY	3, 4	C.2	X
5	Stable Modulation Index - Transmitter	3.1.1	C.3	X
6	Stable Modulation Index - Receiver	3.1.1	C.4	X
7	LE Coded PHY	3, 4	C.2	X

C.1: Mandatory to support at least one of these capabilities.

C.2: Optional IF SUM ICS 21/16 "Core 5.0" AND RF PHY 1/3 "LE Transceiver" are supported, otherwise Excluded.

C.3: Optional IF SUM ICS 21/16 "Core 5.0" AND (RF PHY 1/1 "LE Transmitter" OR RF PHY 1/3 "LE Transceiver") are supported, otherwise Excluded.

C.4: Optional IF SUM ICS 21/16 "Core 5.0" AND (RF PHY 1/2 "LE Receiver" OR RF PHY 1/3 "LE Transceiver") are supported, otherwise Excluded.

**Table 2: Bluetooth LE Test Interface Capabilities**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	HCI Test Interface	[3], 2	C.1	X
2	UART Test Interface	[3], 3	C.1	X

C.1: At least one of the capabilities shall be supported.

**Generic Attribute Profile**  
Vol 3, Part G

### Generic Attribute Profile Role

**Table 1: Generic Attribute Profile Support**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Generic Attribute Profile Client	GATT 2.2	C.1	X
2	Generic Attribute Profile Server	GATT 2.2	C.2	X
3	Complete GATT Client layer	GATT	C.3	X
4	Complete GATT Server layer	GATT	C.4	X

C.1: Optional to support IF 2/2 (Attribute Protocol Supported over LE); else IF 2/1 (Attribute Protocol Supported over BR/EDR) it is Mandatory to support at least one of 1/1 (GATT Client) OR 1/2 (GATT Server).

C.2: Mandatory to support IF 2/2 (Attribute Protocol Supported over LE); else IF 2/1 (Attribute Protocol Supported over BR/EDR) it is Mandatory to support at least one of 1/1 (GATT Client) or 1/2 (GATT Server).

C.3: Optional if 1/1 is supported, otherwise Excluded.

C.4: Optional if 1/2 is supported, otherwise Excluded.

NOTE: Support of a complete GATT Client or Server indicates the implementation is designed to support all defined Generic Profile Attributes in Vol. 3, Part G, Section 3 of Core Specification 4.0 and later. Support for these features is recommended for designs intending to have GATT based Profiles and Services added after the design is distributed.

**ATT Bearer Transport****Table 2: Attribute Protocol Transport**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Attribute Protocol Supported over BR/EDR (L2CAP fixed channel support)	GATT 2.2	C.1	X
2	Attribute Protocol Supported over LE	GATT 2.2	C.2	X

C.1: Mandatory if (PROD 3/1 or 3/2 or 3/4 or 3/5) is supported, otherwise Excluded. (Mandatory if Host CC contains BR)

C.2: Mandatory if (PROD 3/3 or 3/4 or 3/5) is supported, otherwise Excluded. (Mandatory if Host CC contains LE).

**Generic Attribute Profile Support****Table 3: Generic Attribute Profile Feature Support, by client**

Prerequisite: 1/1

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Exchange MTU	4.3.1	C.2	X
2	Discover All Primary Services	4.4.1	C.1	X
3	Discover Primary Services by Service UUID	4.4.2	C.4	X
4	Find Included Services	4.5.1	C.1	X
5	Discover All characteristics of a Service	4.6.1	C.1	X
6	Discover Characteristics by UUID	4.6.2	C.1	X
7	Discover All Characteristic Descriptors	4.7.1	C.1	X
8	Read Characteristic Value	4.8.1	C.1	X
9	Read Using Characteristic UUID	4.8.2	C.1	X
10	Read Long Characteristic Values	4.8.3	C.1	X
11	Read Multiple Characteristic Values	4.8.4	C.1	X
12	Write without Response	4.9.1	C.1	X
13	Signed Write Without Response	4.9.2	C.1	X
14	Write Characteristic Value	4.9.3	C.1	X
15	Write Long Characteristic Values	4.9.4	C.1	X
16	Characteristic Value Reliable Writes	4.9.5	C.1	X
17	Notifications	4.10.1	C.1	X
18	Indications	4.11.1	M	X
19	Read Characteristic Descriptors	4.12.1	C.1	X
20	Read Long Characteristic Descriptors	4.12.2	C.1	X
21	Write Characteristic Descriptors	4.12.3	C.1	X
22	Write Long Characteristic Descriptors	4.12.4	C.1	X
23	Service Changed Characteristic	7.1	M	X
24	Configured Broadcast	2.7	C.3	X

C.1: Mandatory if 1/3 is supported, otherwise Optional.

C.3: Optional if 3/14 is supported, otherwise Excluded.

C.2: Mandatory IF GATT 1/3 (Complete GATT Client) AND GATT 2/2 (LE) AND ATT 3/2 (Exchange MTU Request) is supported, otherwise Optional.

C.4: Mandatory IF GATT 1/3 (Complete GATT Client) is supported OR ATT 3/6 (Find by Type Value Request), otherwise Optional.

**Table 3B: Profile Attribute Types and Formats, by client**

Prerequisite: 1/3

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Primary Service Declaration	3.1	M	X
2	Secondary Service Declaration	3.1	M	X

3	Include Declaration	3.2	M	X
4	Characteristic Declaration	3.3.1	M	X
5	Characteristic Value Declaration	3.3.2	M	X
6	Characteristic Extended Properties	3.3.3.1	M	X
7	Characteristic User Description Descriptor	3.3.3.2	M	X
8	Client Characteristic Configuration Descriptor	3.3.3.3	M	X
9	Server Characteristic Configuration Descriptor	3.3.3.4	M	X
10	Characteristic Format Descriptor	3.3.3.5	M	X
11	Characteristic Aggregate Format Descriptor	3.3.3.6	M	X
12	Characteristic Format: Boolean	3.3.3.5.2	M	X
13	Characteristic Format: 2Bit	3.3.3.5.2	M	X
14	Characteristic Format: nibble	3.3.3.5.2	M	X
15	Characteristic Format: UInt8	3.3.3.5.2	M	X
16	Characteristic Format: UInt12	3.3.3.5.2	M	X
17	Characteristic Format: UInt16	3.3.3.5.2	M	X
18	Characteristic Format: UInt24	3.3.3.5.2	M	X
19	Characteristic Format: UInt32	3.3.3.5.2	M	X
20	Characteristic Format: UInt48	3.3.3.5.2	M	X
21	Characteristic Format: UInt64	3.3.3.5.2	M	X
22	Characteristic Format: UInt128	3.3.3.5.2	M	X
23	Characteristic Format: Sint8	3.3.3.5.2	M	X
24	Characteristic Format: Sint12	3.3.3.5.2	M	X
25	Characteristic Format: Sint16	3.3.3.5.2	M	X
26	Characteristic Format: Sint24	3.3.3.5.2	M	X
27	Characteristic Format: Sint32	3.3.3.5.2	M	X
28	Characteristic Format: Sint48	3.3.3.5.2	M	X
29	Characteristic Format: Sint64	3.3.3.5.2	M	X
30	Characteristic Format: Sint128	3.3.3.5.2	M	X
31	Characteristic Format: Float32	3.3.3.5.2	M	X
32	Characteristic Format: Float64	3.3.3.5.2	M	X
33	Characteristic Format: SFLOAT	3.3.3.5.2	M	X
34	Characteristic Format: FLOAT	3.3.3.5.2	M	X
35	Characteristic Format: Duint16	3.3.3.5.2	M	X
36	Characteristic Format: utf8s	3.3.3.5.2	M	X
37	Characteristic Format: utf16s	3.3.3.5.2	M	X
38	Characteristic Format: struct	3.3.3.5.2	M	X

Table 4: Attribute Profile Support, by server

Prerequisite: 1/2

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Exchange MTU	4.3.1	C.6	X
2	Discover All Primary Services	4.4.1	M	X
3	Discover Primary Services by Service UUID	4.4.2	M	X
4	Find Included Services	4.5.1	M	X
5	Discover All characteristics of a Service	4.6.1	M	X
6	Discover Characteristics by UUID	4.6.2	M	X
7	Discover All Characteristic Descriptors	4.7.1	M	X
8	Read Characteristic Value	4.8.1	M	X
9	Read Using Characteristic UUID	4.8.2	M	X
10	Read Long Characteristic Values	4.8.3	C.4	X

11	Read Multiple Characteristic Values	4.8.4	C.4	X
12	Write without Response	4.9.1	C.2	X
13	Signed Write Without Response	4.9.2	C.4	X
14	Write Characteristic Value	4.9.3	C.3	X
15	Write Long Characteristic Values	4.9.4	C.4	X
16	Characteristic Value Reliable Writes	4.9.5	C.4	X
17	Notifications	4.10.1	C.4	X
18	Indications	4.11.1	C.1	X
19	Read Characteristic Descriptors	4.12.1	C.4	X
20	Read Long Characteristic Descriptors	4.12.2	C.4	X
21	Write Characteristic Descriptors	4.12.3	C.4	X
22	Write Long Characteristic Descriptors	4.12.4	C.4	X
23	Service Changed Characteristic	7.1	C.1	X
24	Configured Broadcast	7.2	C.5	X
25	Execute Write Request with empty queue	4.9.4, 4.9.5, 4.12.4	C.7	X

C.1: Mandatory if service definitions on the server can be added, changed, or removed, otherwise Optional.

C.2: Mandatory if 4/13 is supported, otherwise Optional.

C.3: Mandatory if 4/15 is supported, otherwise Optional.

C.4: Mandatory if 1/4 is supported, otherwise Optional.

C.5: Optional if 4/14 is supported, otherwise Excluded.

C.6: Mandatory IF GATT 1/4 (Complete GATT Server) OR ATT 4/3 (Exchange MTU Response) is supported, otherwise Optional.

C.7 (1 of 2): Mandatory IF (SUM ICS 31/18 "Core Spec Version 5.0") AND (GATT 4/15 "Write Long Characteristic Values" OR GATT 4/16 "Characteristic Value Reliable Writes" OR GATT 4/22 "Write Long Characteristic Descriptors") is supported;

C.7 (2 of 2): Optional IF (NOT SUM ICS 31/18 "Core Spec Version 5.0") AND (GATT 4/15 "Write Long Characteristic Values" OR GATT 4/16 "Characteristic Value Reliable Writes" OR GATT 4/22 "Write Long Characteristic Descriptors") is supported, otherwise Excluded.

**Table 4B: Profile Attribute Types and Characteristic Formats, by server**

Prerequisite: 1/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Primary Service Declaration	3.1	M	X
2	Secondary Service Declaration	3.1	M	X
3	Include Declaration	3.2	M	X
4	Characteristic Declaration	3.3.1	M	X
5	Characteristic Value Declaration	3.3.2	M	X
6	Characteristic Extended Properties	3.3.3.1	M	X
7	Characteristic User Description Descriptor	3.3.3.2	M	X
8	Client Characteristic Configuration Descriptor	3.3.3.3	M	X
9	Server Characteristic Configuration Descriptor	3.3.3.4	M	X
10	Characteristic Format Descriptor	3.3.3.5	M	X
11	Characteristic Aggregate Format Descriptor	3.3.3.6	M	X
12	Characteristic Format: Boolean	3.3.3.5.2	M	X
13	Characteristic Format: 2Bit	3.3.3.5.2	M	X
14	Characteristic Format: nibble	3.3.3.5.2	M	X
15	Characteristic Format: Uint8	3.3.3.5.2	M	X
16	Characteristic Format: Uint12	3.3.3.5.2	M	X
17	Characteristic Format: Uint16	3.3.3.5.2	M	X
18	Characteristic Format: Uint24	3.3.3.5.2	M	X
19	Characteristic Format: Uint32	3.3.3.5.2	M	X
20	Characteristic Format: Uint48	3.3.3.5.2	M	X
21	Characteristic Format: Uint64	3.3.3.5.2	M	X
22	Characteristic Format: Uint128	3.3.3.5.2	M	X
23	Characteristic Format: Sint8	3.3.3.5.2	M	X
24	Characteristic Format: Sint12	3.3.3.5.2	M	X

25	Characteristic Format: Sint16	3.3.3.5.2	M	X
26	Characteristic Format: Sint24	3.3.3.5.2	M	X
27	Characteristic Format: Sint32	3.3.3.5.2	M	X
28	Characteristic Format: Sint48	3.3.3.5.2	M	X
29	Characteristic Format: Sint64	3.3.3.5.2	M	X
30	Characteristic Format: Sint128	3.3.3.5.2	M	X
31	Characteristic Format: Float32	3.3.3.5.2	M	X
32	Characteristic Format: Float64	3.3.3.5.2	M	X
33	Characteristic Format: SFLOAT	3.3.3.5.2	M	X
34	Characteristic Format: FLOAT	3.3.3.5.2	M	X
35	Characteristic Format: Duint16	3.3.3.5.2	M	X
36	Characteristic Format: utf8s	3.3.3.5.2	M	X
37	Characteristic Format: utf16s	3.3.3.5.2	M	X
38	Characteristic Format: struct	3.3.3.5.2	M	X

### Generic Attribute Profile Service

Table 5: Deleted

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	<i>(Intentionally left blank)</i>			X

### Generic Attribute Profile Service

Table 6: SDP Interoperability

Prerequisite: 2/1

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
2	Discover GATT Services using Service Discovery Profile	GATT 4.4	C.1	X
3	Publish SDP record for GATT services support via BR/EDR	GATT 9	C.2	X

C.1: Mandatory if 1/1 and 2/1 are supported.

C.2: Mandatory if 1/2 and 2/1 are supported.

Table 7: Attribute Protocol Transport

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Security Mode 4	GAP 5	C.1	X
2	LE Security Mode 1	GAP 10.2.1	C.5	X
3	LE Security Mode 2	GAP 10.2.2	C.6	X
4	LE Authentication Procedure	GAP 10.3	C.4	X
5	LE connection data signing procedure	GAP 10.4.1	C.2	X
6	LE Authenticate signed data procedure	GAP 10.4.2	C.2	X
7	LE Authorization Procedure	GAP 10.5	C.3	X

C.1: Mandatory if 2/1 is supported, otherwise Excluded.

C.2: Optional if 2/2 is supported, otherwise Excluded.

C.3: Mandatory IF ATT 5/7 (LE Authorization Procedure) is supported, Optional IF GATT 2/2 (Attribute Protocol Supported over LE) is supported, otherwise Excluded.

C.4: Mandatory IF ATT 5/4 (LE Authentication Procedure) is supported, Optional IF GATT 2/2 (Attribute Protocol Supported over LE) is supported, otherwise Excluded.

C.5: Mandatory IF ATT 5/2 (LE Security Mode 1) is supported, Optional IF GATT 2/2 (Attribute Protocol Supported over LE) is supported, otherwise Excluded.

C.6: Mandatory IF ATT 5/3 "LE Security Mode 2" is supported, Optional IF GATT 2/2 "Attribute Protocol Supported over LE" is supported,

otherwise Excluded.

**Table 8: Attribute Protocol Transport**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Support for Multiple ATT bearers from same device.	[2] 3.3.3.3	O	X

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### Attribute Protocol Role

**Table 1: Attribute Protocol Support**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Attribute Protocol Client	ATT 1.1, GAP 12	O	X
2	Attribute Protocol Server	ATT 1.1, GAP 12	M	X

### Attribute Protocol Transport

**Table 2: Attribute Protocol Transport**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Attribute Protocol Supported over BR/EDR (L2CAP fixed channel support)	ATT 1.3	C.1	X
2	Attribute Protocol Supported over LE	ATT 1.3	C.1	X

C.1: Mandatory to support at least one of 2/1 or 2/2.

### Attribute Protocol Messages

**Table 3: Attribute Protocol Client Messages**

Prerequisite: 1/1

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Attribute Error Response	ATT, 3.4.1.1	M	X
2	Exchange MTU Request	ATT, 3.4.2.1	C.11	X
3	Exchange MTU Response	ATT, 3.4.2.2	C.1	X
4	Find Information Request	ATT, 3.4.3.1	C.13	X
5	Find Information Response	ATT, 3.4.3.2	C.9	X
6	Find by Type Value Request	ATT, 3.4.4.3	C.12	X
7	Find by Type Value Response	ATT, 3.4.4.4	C.2	X
8	Read by Type Request	ATT, 3.4.4.1	C.15	X
9	Read by Type Response	ATT, 3.4.4.2	C.3	X
10	Read Request	ATT, 3.4.4.3	C.14	X
11	Read Response	ATT, 3.4.4.4	C.10	X
12	Read Blob Request	ATT, 3.4.4.5	C.16	X
13	Read Blob Response	ATT, 3.4.4.6	C.4	X
14	Read Multiple Request	ATT, 3.4.4.7	C.17	X
15	Read Multiple Response	ATT, 3.4.4.8	C.5	X

16	Read by Group Type Request	ATT, 3.4.4.9	O	X
17	Read by Group Type Response	ATT, 3.4.4.10	C.6	X
18	Write Request	ATT, 3.4.5.1	C.20	X
19	Write Response	ATT, 3.4.5.2	C.7	X
20	Write Command	ATT, 3.4.5.3	C.18	X
21	Signed Write Command	ATT, 3.4.5.3	C.19	X
22	Prepare Write Request	ATT, 3.4.6.1	C.21	X
23	Prepare Write Response	ATT, 3.4.6.2	C.8	X
24	Execute Write Request	ATT, 3.4.6.3	C.8	X
25	Execute Write Response	ATT, 3.4.6.4	C.8	X
26	Handle Value Notification	ATT, 3.4.7.1	C.22	X
27	Handle-Value Indication	ATT, 3.4.7.2	C.23	X
28	Handle Value Confirmation	ATT, 3.4.7.3	C.24	X
29	Client Timeout	ATT, 3.3.3	C.24	X

C.1: Mandatory if 3/2 is supported, otherwise Excluded.

C.2: Mandatory if 3/6 is supported, otherwise Excluded.

C.3: Mandatory if 3/8 is supported, otherwise Excluded.

C.4: Mandatory if 3/12 is supported, otherwise Excluded.

C.5: Mandatory if 3/14 is supported, otherwise Excluded.

C.6: Mandatory if 3/16 is supported, otherwise Excluded.

C.7: Mandatory if 3/18 is supported, otherwise Excluded.

C.8: Mandatory if 3/22 is supported, otherwise Excluded.

C.9: Mandatory if 3/4 is supported, otherwise Excluded.

C.10: Mandatory if 3/10 is supported, otherwise Excluded.

C.11: Mandatory IF GATT 3/1 (GATT Client Exchange MTU) is supported, otherwise Optional.

C.12: Mandatory IF GATT 3/3 (GATT Client Discover Primary Services by Service UUID) is supported, otherwise Optional.

C.13: Mandatory IF GATT 3/7 (GATT Client Discover All Characteristic Descriptors) is supported, otherwise Optional.

C.14: Mandatory IF GATT 3/8 (GATT Client Read Characteristic Value) OR GATT 3/19 (GATT Client Read Characteristic Descriptors) is supported, otherwise Optional.

C.15: Mandatory IF GATT 3/9 (GATT Client Read Using Characteristic UUID) is supported, otherwise Optional.

C.16: Mandatory IF GATT 3/10 (GATT Client Read Long Characteristic Values) OR GATT 3/20 (GATT Client Read Long Characteristic Descriptors) is supported, otherwise Optional.

C.17: Mandatory IF GATT 3/11 (GATT Client Read Multiple Characteristic Values) is supported, otherwise Optional.

C.18: Mandatory IF GATT 3/12 (GATT Client Write without Response) is supported, otherwise Optional.

C.19: Mandatory IF GATT 3/13 (GATT Client Signed Write without Response) is supported, otherwise Optional.

C.20: Mandatory IF GATT 3/14 (GATT Client Write Characteristic Value) OR GATT 3/21 (GATT Client Write Characteristic Descriptors) is supported, otherwise Optional.

C.21: Mandatory IF GATT 3/15 (GATT Client Write Long Characteristic Values) OR GATT 3/16 (GATT Client Characteristic Value Reliable Writes) OR GATT 3/22 (GATT Client Write Long Characteristic Descriptors) is supported, otherwise Optional.

C.22: Mandatory IF GATT 3/17 (GATT Client Notifications) is supported, otherwise Optional.

C.23: Mandatory IF GATT 3/18 (GATT Client Indications) is supported, otherwise Optional.

C.24: Mandatory IF 3/27 (Handle-Value Indication) is supported, otherwise Excluded.

## Attribute Protocol Messages

**Table 4: Attribute Protocol Server Messages**

Prerequisite: 1/2

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Attribute Error Response	ATT, 3.4.1.1	M	X
2	Exchange MTU Request	ATT, 3.4.2.1	M	X
3	Exchange MTU Response	ATT, 3.4.2.2	M	X
4	Find Information Request	ATT, 3.4.3.1	M	X
5	Find Information Response	ATT, 3.4.3.2	M	X
6	Find by Type Value Request	ATT, 3.4.4.3	M	X
7	Find by Type Value Response	ATT, 3.4.4.4	M	X
8	Read by Type Request	ATT, 3.4.4.1	M	X

9	Read by Type Response	ATT, 3.4.4.2	M	X
10	Read Request	ATT, 3.4.4.3	M	X
11	Read Response	ATT, 3.4.4.4	M	X
12	Read Blob Request	ATT, 3.4.4.5	C.6	X
13	Read Blob Response	ATT, 3.4.4.6	C.1	X
14	Read Multiple Request	ATT, 3.4.4.7	C.7	X
15	Read Multiple Response	ATT, 3.4.4.8	C.2	X
16	Read by Group Type Request	ATT, 3.4.4.9	M	X
17	Read by Group Type Response	ATT, 3.4.4.10	M	X
18	Write Request	ATT, 3.4.5.1	C.10	X
19	Write Response	ATT, 3.4.5.2	C.3	X
20	Write Command	ATT, 3.4.5.3	C.8	X
21	Signed Write Command	ATT, 3.4.5.3	C.9	X
22	Prepare Write Request	ATT, 3.4.6.1	C.11	X
23	Prepare Write Response	ATT, 3.4.6.2	C.4	X
24	Execute Write Request	ATT, 3.4.6.3	C.4	X
25	Execute Write Response	ATT, 3.4.6.4	C.4	X
26	Handle Value Notification	ATT, 3.4.7.1	C.12	X
27	Handle-Value Indication	ATT, 3.4.7.2	C.13	X
28	Handle Value Confirmation	ATT, 3.4.7.3	C.5	X
29	Server Timeout	ATT, 3.3.3	C.5	X
30	Execute Write Request with no pending prepared write values	ATT, 3.4.6.3	C.14	X

C.1: Mandatory if 4/12 is supported, otherwise Excluded.

C.2: Mandatory if 4/14 is supported, otherwise Excluded.

C.3: Mandatory if 4/18 is supported, otherwise Excluded.

C.4: Mandatory if 4/22 is supported, otherwise Excluded.

C.5: Mandatory if 4/27 is supported, otherwise Excluded.

C.6: Mandatory IF GATT 4/10 (GATT Server Read Long Characteristic Values) is supported, otherwise Optional.

C.7: Mandatory IF GATT 4/11 (GATT Server Read Multiple Characteristic Values) is supported, otherwise Optional.

C.8: Mandatory IF GATT 4/12 (GATT Server Write Without Response) is supported, otherwise Optional.

C.9: Mandatory IF GATT 4/13 (GATT Server Signed Write Without Response) is supported, otherwise Optional.

C.10: Mandatory IF GATT 4/14 (GATT Server Write Characteristic Value) OR GATT 4/21 (GATT Server Write Characteristic Descriptors) is supported, otherwise Optional.

C.11: Mandatory IF GATT 4/15 (GATT Server Write Long Characteristic Values) OR GATT 4/16 (GATT Server Characteristic Value Reliable Writes) OR GATT 4/22 (GATT Server Write Long Characteristic Descriptors) is supported, otherwise Optional.

C.12: Mandatory IF GATT 4/17 (GATT Server Notifications) is supported, otherwise Optional.

C.13: Mandatory IF GATT 4/18 (GATT Server Indications) is supported, otherwise Optional.

C.14: Mandatory IF (GATT 4/25 "Execute Write Request with empty queue" OR 4/22 "Prepare Write Request") AND (SUM ICS 31/18 "Core Spec Version 5.0") is supported, otherwise Optional.

**Table 5: Attribute Protocol Transport**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Security Mode 4	GAP 5	C.1	X
2	LE Security Mode 1	GAP 10.2.1	C.2	X
3	LE Security Mode 2	GAP 10.2.2	C.2	X
4	LE Authentication Procedure	GAP 10.3	C.2	X
5	LE connection data signing procedure	GAP 10.4.1	C.2	X
6	LE Authenticate signed data procedure	GAP 10.4.2	C.2	X
7	LE Authorization Procedure	GAP 10.5	C.2	X

C.1: Mandatory if 2/1 is supported, otherwise Excluded.

C.2: Optional if 2/2 is supported, otherwise Excluded.

**Connection Roles****Table 1: Roles**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Master Role (Initiator)	[1] 2.4	C.1	X
2	Slave Role (Responder)	[1] 2.4	C.2	X

C.1: Mandatory to support if 1/2 (Slave Role (Responder)) is NOT supported, otherwise Optional

C.2: Optional IF (((SUM ICS 31/10 (4.0) OR SUM ICS 31/10a (4.0+HS)) AND (GAP 5/3 (LE Roles – Peripheral Role)) OR ((SUM ICS 31/14 (4.1) OR SUM ICS 31/15 (4.1+HS) OR SUM ICS 31/16 (4.2) OR SUM ICS 31/17 (4.2+HS)) AND (GAP 5/3 (LE Roles – Peripheral Role) OR GAP 38/3 (BR/EDR/LE Roles – Peripheral Role))))

**Security Properties****Table 2: Security Properties**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Authenticated MITM protection	[1] 2.3.1	O	X
2	Unauthenticated no MITM protection	[1] 2.3.1	C.1	X
3	No security requirements	[1] 2.3.1	M	X
4	OOB supported	[1] 2.3.1	O	X
5	LE Secure Connections	[3] 2.3.1	C.2	X

C.1: Mandatory if 2/1 is supported, otherwise Optional.

C.2: Optional if (Core Spec 4.2 or later) is supported, otherwise Excluded.

**Encryption Key Size****Table 3: Encryption Key Size**

Prerequisite: 2/1 or 2/2 or 2/4

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Encryption Key Size Negotiation	[1] 2.3.4	M	X

**Pairing Method****Table 4: Pairing Method**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Just Works	[1] 2.3.5	O	X
2	Passkey Entry	[1] 2.3.5	C.1	X
3	Out of Band	[1] 2.3.5	C.1	X

C.1: If 2/1 is supported, at least one of these features shall be supported.

**Key Distribution and Usage****Table 5: Security Initiation**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Encryption Setup using STK	[1] 2.4	C.3	X
2	Encryption Setup using LTK	[1] 2.4	O	X
3	Slave Initiated Security	[1] 2.4.6	C.1	X
4	Slave Initiated Security – Master response	[1] 2.4.6	C.2	X
5	Link Key Conversion Function h7	2.2.11	C.4	X

C.1: Optional if 1/2 is supported, otherwise Excluded.

C.2: Mandatory if 1/1 is supported, otherwise Excluded.

C.3: Mandatory if (2/1 or 2/2 or 2/4) is supported, otherwise Excluded.

C.4 (1 of 2): Mandatory IF SUM ICS 31/18 "(Core 5.0)" AND (GAP 41/2a "(Derivation of BR/EDR Link Key from LE LTK)" OR GAP 41/2b "(Derivation of LE LTK from BR/EDR Link Key)" OR GAP 43/2a "(Derivation of BR/EDR Link Key from LE LTK)" OR GAP 43/2b "(Derivation of LE LTK from BR/EDR Link Key)") is supported;

C.4 (2 of 2): Optional IF (GAP 41/2a "(Derivation of BR/EDR Link Key from LE LTK)" OR GAP 41/2b "(Derivation of LE LTK from BR/EDR Link Key)" OR GAP 43/2a "(Derivation of BR/EDR Link Key from LE LTK)" OR GAP 43/2b "(Derivation of LE LTK from BR/EDR Link Key)") is supported, otherwise Excluded.

## Signing Algorithm

**Table 6: Signing Algorithm**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Signing Algorithm - Generation	[1] 2.4	O	X
2	Signing Algorithm - Resolving	[1] 2.4	O	X

**Table 7: Key Distribution**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Encryption Key	GAP 9.4.3	C.1	X
2	Identity Key	GAP 10.7	C.2	X
3	Signing Key	GAP 10.4	C.3	X

C.1: Mandatory if (GAP 24/2 or 42/6) is supported, otherwise Optional.

C.2: Mandatory if (GAP 26/3) is supported, otherwise Optional.

C.3: Mandatory if (GAP 25/6 or 35/6) is supported, otherwise Optional.

## Profile ICS Information

**No PROFILE ICS details could be found.**