

## Member Declarations Bluetooth®

### Supplier Declaration of Conformity

Declarer: Marta Czarniewska, Other, Cambridge Executive Limited

Compliant Portion: 63331, Controller Subsystem

I, the declarer named above, am authorized to make this Declaration of Compliance for the above-listed Compliant Portion on behalf of Cambridge Executive Limited and as such bind Cambridge Executive Limited 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] \_\_\_\_\_  
 \_\_\_\_\_  
 [Duly Authorized Officer of Member Company] \_\_\_\_\_ [Date] \_\_\_\_\_

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

Declarer: Marta Czarniewska, Other, Cambridge Executive Limited

Compliant Portion: 63331

I, the declarer named above, am authorized to make this Declaration of Compliance for the above-listed Compliant Portion on behalf of Cambridge Executive Limited and as such bind Cambridge Executive Limited 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

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#### Combined QD ID(s) Claimed

Combined QD ID(s): [ B021858 ]

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#### Core ICS Information

<b>Summary ICS</b> External to all Layers
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**Controller 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

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.

**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	(Intentionally left blank)			X
3	(Intentionally left blank)			X
4	Core Specification 2.0/2.0 + EDR	Core 2.0 +EDR	C.1	X
5	(Intentionally left blank)			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

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 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: 21/9 or 21/13

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: 31/10 (4.0) or 31/11 (4.0 + HS) or 31/15 (4.1) or 31/16 (4.1 + HS)

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	C.1	X

		later		
2	EDR for asynchronous transports (multi-slot)	Core 2.0+EDR and later	C.1	X
3	EDR for synchronous transports	Core 2.0+EDR and 2.1+EDR	C.1, C.3	X
4	EDR for synchronous transports	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 (21/7 or 21/8 or 21/9 or 21/10 or 21/13) is supported, otherwise Excluded.

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

**Product Type**  
External to All Layers

## Product Types

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

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.

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

C.1: Mandatory if (2/1 or 2/2) is supported.

Note: Condition C.1 means that an observer device only does not need a device address, any other does but the type selection is not constrained.

**Table 3: Protocol Advertising Features**

Prerequisite: 1/1

(This section shall only be completed if 1/1 is supported)

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	C.3	X
4a	Low Duty Cycle Direct Advertising	[1] 4.4.2.4	C.5	X
5	Scannable Undirected Events	[1]: 4.4.2.5	C.4	X
6	Sending Scan Responses	[1]: 4.4.2.3, 4.4.2.5	M	X
7	Accepting Connection Requests	[1]: 4.4.2.3, 4.4.2.4	M	X
8	Filtering Policies	[1]: 4.3.2	O	X

The following conditionals define the requirements imposed on a design's GAP role support. If you are qualifying a Controller Subsystem or Component product type, these conditionals may not be applicable to your design, but should be considered before implementation.

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.3: Optional if GAP 5/3 (Peripheral), otherwise Not Defined.

C.4: Optional if GAP 5/1 (Broadcaster) or GAP 5/3 (Peripheral) is supported, otherwise Not Defined.

C.5: Optional IF SUMICS 21/13 (v4.1) is supported, otherwise Excluded.

**Table 4: Protocol Scanning Features**

Prerequisite: 1/2

(This section shall only be completed if 1/2 is supported)

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

The following conditionals define the requirements imposed on a design's GAP role support. If you are qualifying a Controller Subsystem or Component product type, these conditionals may not be applicable to your design, but should be considered before implementation.

C.1: Mandatory if GAP 5/2 (Observer) is supported; Optional if GAP 5/4 (Central), otherwise Not Defined.

C.2: Mandatory IF (GAP 5/4 (Central) AND NOT LL 4/1 (Passive Scanning)) is supported; Optional if (GAP 5/4 (Central) AND NOT LL 4/1 (Passive Scanning)) OR GAP 5/2 (Observer) is supported; Mandatory if (GAP 5/4 and NOT LL4/7) is supported; otherwise Excluded.

**Table 5: Protocol Initiating Features**

Prerequisite: 1/3

(This section shall only be completed if 1/3 is supported)

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
10a	Initiating Connection Parameter Request	[1] 5.1	C.3	X

**Table 6: Protocol Slave Role Features**

Prerequisite: 1/4

(This section shall only be completed if 1/4 is supported)

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	HCI Fragmentation flags carried in LL packets	[2]: 5	O	X
9	LL Defragmentation (Controller may recombine LL packets into HCI data packets)	[2]: 5	O	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.1	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 SUMICS 21/13 (v4.1) AND (LL 1/4 (Slave Role) OR LL 1/5 (Master Role)) is supported, otherwise Excluded.

C.2: Mandatory IF SUMICS 21/13 (v4.1) AND LL 6/10a (Initiating Connection Parameter Request)

C.3: Optional IF SUMICS 21/13 (4.1) is supported, otherwise Excluded.

C.3: Optional IF SUMICS 21/13 (v4.1) is supported, otherwise Excluded.

**Table 7: Protocol Master Role Features**

Prerequisite: 1/5

(This section shall only be completed if 1/5 is supported)

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	HCI Fragmentation	[2]: 5	O	X
9	LL Defragmentation	[2]: 5	O	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	Master Non-Connectable Events	[1]: 4.4.2.6	O	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 Timer	[3] 5.4	C.1	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 SUMICS 21/13 (v4.1) AND (LL 1/4 (Slave Role) OR LL 1/5 (Master Role)) is supported, otherwise Excluded.

C.2: Mandatory IF SUMICS 21/13 (v4.1) AND LL 7/10b (Accepting Connection Parameter Request) 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	M	X
2	Advertising channels (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.2	X
3	Connection Parameter Request Procedure	[1] 4.6.2	C.3	X
4	Extended Reject Indication	[1] 4.6.3	C.4	X
5	Slave-initiated Features Exchange	[1] 4.6.4	C.5	X

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

C.2: Mandatory IF SUMICS 21/13 (v4.1) AND 6/21 (LL Authentication Payload Timeout Timer) OR 7/21 (LL Authentication Payload Timeout)) are supported, otherwise Excluded.

C.3: Mandatory if SUMICS 21/13 (v4.1) and (6/10a (Initiating Connection Parameter Request) or 7/10b (Accepting Connection Parameter Request) are supported, otherwise Excluded.

C.4: Mandatory IF SUMICS 21/13 (v4.1) AND 9/3 (Connection Parameter Request Procedure); Optional if SUMICS 21/13 (v4.1) AND NOT 9/3 (Connection Parameter Request Procedure) is supported, otherwise Excluded.

C.5: Optional if SUMICS 21/13 (v4.1) is supported, otherwise Excluded.

**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

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

**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.

#### 4.0 Host Controller Interface Vol 3, Part E

### HCI Conformance Declaration

**Table 1: Generic Events**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Command Complete	7.7.14	M	X
1a	<i>(Intentionally left blank)</i>			X
1d	Support all LE controller commands	3.3, 7.7	O	X
2	Command Status Event	7.7.15	M	X
3	Hardware Error Event	7.7.15	O	X

**Table 1a: Roles**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	See HCI (BR/EDR)			X
2	Host	1	C.1	X
3	See HCI (BR/EDR)			X
4	LE Controller	1	C.1	X

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

**Table 2: Device Setup**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Reset Command	7.3.2	M	X

**Table 3: Controller Flow Control**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
0	<i>(Intentionally left blank)</i>			X
1	Read Buffer Size Command	7.4.5	O	X
5	LE Read Buffer Size Command	7.8.2	M	X

**Table 4: Controller Information**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Read Local Version Information Command	7.4.1	M	X
2	Read Local Supported Commands Command	7.4.2	M	X
3	Read Local Supported Features Command	7.4.3	M	X
5	Read BD_ADDR Command	7.4.6	M	X
8	LE Read Local Supported Features Command	7.8.3	M	X
9	LE Read Support States	[1] 7.8.27	C.2	X
10	See HCI (BR/EDR)			X

C.2: Mandatory IF SUMICS 21/13 (v4.1) is supported; Optional IF SUMICS 21/9 OR 21/10 is supported.

**Table 5: Controller Configuration**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
13	LE Set Random Address Command	7.8.5	C.1	X
14	LE Read White List Size Command	7.8.15	M	X
15	LE Add Device to White List Command	7.8.17	M	X
16	LE Clear White List Command	7.8.16	M	X
17	LE Remove Device From White List Command	7.8.18	M	X
18	Set MWS Channel Configuration	7.3.80	O	X
19	Set External Frame Configuration	7.3.81	O	X
20	Set MWS Signaling	7.3.82	O	X
21	Set MWS Transport Layer	7.3.83	O	X
22	Set MWS Scan Frequency Table	7.3.84	O	X
23	Set MWS PATTERN Configuration	7.3.85	O	X
24	Get MWS Transport Layer Configuration	7.5.11	O	X
25	See HCI (BR/EDR)			X
26	See HCI (BR/EDR)			X

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

C.2: Optional if SUMICS 21/12 (CSA4) or later is supported, otherwise Excluded.

C.3: Mandatory if 5/25 is supported, otherwise Excluded.

**Table 6: Device Discovery**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
0	<i>(Intentionally left blank)</i>			X
15	LE Set Advertise Enable Command	7.8.10	C.4	X
16	LE Set Advertising Parameters Command	7.8.6	C.4	X
17	LE Set Scan Response Data Command	7.8.9	C.5	X
18	LE Set Advertising Data Command	7.8.8	C.7	X
19	LE Advertising Report Event	7.7.65.2	C.6	X
20	LE Set Scan Enable Command	7.8.12	C.6	X
21	LE Set Scan Parameters Command	7.8.11	C.6	X
22	LE Read Advertising Channel TX Power Command	7.8.7	C.4	X
23	See HCI (BR/EDR)	7.7.73	C.8	X
24	See HCI (BR/EDR)			X
25	See HCI (BR/EDR)			X

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

C.5: Mandatory if (LL 3/2 or 3/5) is supported, otherwise Optional.

C.6: Mandatory if (LL 1/2) is supported, otherwise Optional.

C.7: Mandatory if (LL 3/3) is supported, otherwise Optional.

C.8: Optional if SUMICS 21/12 (CSA4) or later is supported, otherwise Excluded.

**Table 7: Connection Setup**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
5	Disconnect Command	7.1.6	C.2	X
23	LE Create Connection Command	7.8.13	C.1	X
24	LE Create Connection Cancel Command	7.8.14	C.1	X
25	LE Connection Complete Event	7.7.65.1	C.2	X
26	Disconnection Complete Event	7.7.5	C.2	X

27	LE Connection Update Command	7.8.19	C.8	X
28	LE Connection Update Complete Event	7.7.65.3	C.2	X
29	See HCI (BR/EDR)	7.1.47	C.3	X
30	Truncated Page Cancel Command	7.1.48	C.3	X
31	See HCI (BR/EDR)			X
32	See HCI (BR/EDR)			X
33	See HCI (BR/EDR)			X
34	See HCI (BR/EDR)			X
35	LE Remote Connection Parameter Request Reply Command	[1] 7.8.32	C.7	X
36	LE Remote Connection Parameter Request Negative Reply Command	[1] 7.8.33	C.7	X
37	LE Remote Connection Parameter Request Event	[1] 7.7.65.6	C.7	X

C.1: Mandatory if LL 1/5 and LL 3/3 are supported, otherwise Excluded.

C.2: Mandatory if (LL 3/4 or 3/5) is supported, otherwise Optional.

C.3: Mandatory if BB 7/6 is supported, otherwise Excluded.

C.4: Mandatory if BB 7/7 is supported, otherwise Excluded.

C.7: Mandatory IF (LL 6/10b (Accepting Connection Parameter Request) OR LL 7/10b (Accepting Connection Parameter Request)) is supported, otherwise Excluded.

C.8: Mandatory IF (LL 1/5 (Master Role) AND LL 1/3 (Initiating State)) OR LL 6/10a (Initiating Connection Parameter Request) OR LL 7/10a (Initiating Connection Parameter Request) is supported, otherwise Excluded.

**Table 8: Remote Information**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
5	Read Remote Version Information Command	7.1.23	C.4	X
6	LE Read Remote Used Features Command	7.8.22	C.3	X
7	LE Read Remote Used Features Complete Event	7.7.65.4	C.3	X
8	Read Remote Version Information Complete Event	7.7.12	C.4	X

C.3: Mandatory if (LL 1/5) is supported, otherwise Optional.

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

**Table 13: Physical Links**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	(Intentionally left blank)			X
8	LE Set Host Channel Classification Command	7.8.19	C.5	X

C.5: Mandatory if (LL 1/5) is supported, otherwise Optional.

**Table 14: Host Flow Control**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
1	Host Buffer Size Command	7.3.39	O	X
2	Set Event Mask Command	7.3.1	M	X
4	Set Controller To Host Flow Control Command	7.3.38	O	X
5	Host Number Of Completed Packets Command	7.3.40	O	X
8	Set Event Mask Page 2 Command	7.3.69	C.3	X
12	Number of Completed Packets Event	7.7.26	C.1	X
13	Data Buffer Overflow Event	7.7.26	O	X
14	LE Set Event Mask Command	7.8.1	M	X
15	Read LE Host Support Command	7.3.38	C.2	X
16	Write LE Host Support Command	7.3.39	C.2	X

C.1: Mandatory if (LL 1/4 OR LL 1/5) is supported otherwise Optional

C.2: Mandatory if 1a/1 (BR/EDR Controller) is supported, otherwise Excluded.

C.3: Mandatory IF SUMICS 31/14 (v4.1) AND (LL 6/21 (LL Authenticated Payload Timeout Timer - Slave) OR LL 7/21 (LL

Authenticated Payload Timeout Timer - Master) are supported; Optional if SUMICS 31/14 (v4.1), otherwise Excluded.

**Table 15: Link Information**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
2	Read Transmit Power Level Command	7.3.35	C.4	X
4	Read RSSI Command	7.5.4	C.4	X
8	LE Read Channel Map Command	7.8.20	C.4	X

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

**Table 16: Authentication and Encryption**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
32	LE Encrypt Command	7.8.22	C.10	X
33	LE Rand Command	7.8.23	C.10	X
34	LE Long Term Key Requested Reply Command	7.8.25	C.10	X
35	LE Start Encryption Command	7.8.24	C.10	X
36	LE Long Term Key Requested Event	7.7.65.5	C.10	X
37	Encryption Change Event	7.7.8	C.10	X
38	Encryption Key Refresh Complete Event	7.7.39	C.10	X
39	LE Long Term Key Requested Negative Reply Command	7.8.26	C.10	X
40	See HCI (BR/EDR)			X
41	See HCI (BR/EDR)			X
42	See HCI (BR/EDR)			X
43	See HCI (BR/EDR)			X
44	See HCI (BR/EDR)			X
45	See HCI (BR/EDR)			X
46	See HCI (BR/EDR)			X
47	Read Authenticated Payload Timeout	[3] 7.3.93	C.12	X
48	Write Authenticated Payload Timeout	[3] 7.3.92	C.12	X
49	Authenticated Payload Timeout Expired	[3] 7.7.75	C.12	X

C.10: Mandatory if (LL 9/1) is supported, otherwise Optional.

C.12: Mandatory IF (SUMICS 31/14 OR SUMICS 31/15 AND ((LL 1/4 (Slave Role) AND LL 6/21 (LL Authenticated Payload Timeout) OR (LL 1/5 (Master Role) AND LL 7/21 (LL Authenticated Payload Timeout))) is supported, otherwise Excluded.

**Table 17: Testing**

Item	Capability	System Spec Reference	Status	Support [Yes] or [No]
7	LE Receiver Test Command	7.8.28	C.2	X
8	LE Transmitter Test Command	7.8.29	C.3	X
9	LE Test End Command	7.8.30	M	X

C.2: Mandatory if (LL 1/2 or 1/3 or 3/2 or 3/4 or 3/5) is supported, otherwise Optional.

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

## Profile ICS Information

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