



Project Details

Project Name	Bluetooth Module
Product Type	Controller Subsystem
TCRL Version:	TCRL 2018-2
Referenced Qualified Design(s)	
Previously Qualified Design Used in this Qualification(s)	124871
Listing Date	2019-03-22
Declaration ID	D044134

Product Listing(s)

Name	Website	Category	Publish Date	Model Number	Description
Bluetooth Module		Unique Products	3/22/2019 12:00:00 AM	ESP32-SOLO-1C	ESP32-SOLO-1C is a powerful, generic WiFi-BT-BLE MCU module that targets a wide variety of applications ranging from low power sensor networks to the most demanding tasks such as voice encoding, music streaming and MP3 decoding.

Member Company	Espressif Systems (Shanghai) Co., Ltd.												
Declaring Member Contact / Listing Contact Person	<table><tr><td>Name</td><td>Espressif Espressif</td></tr><tr><td>Address</td><td>690 Bibo Road, Block 2, Suite 204, Zhangjiang High-tech Park,</td></tr><tr><td>City</td><td>Shanghai</td></tr><tr><td>State</td><td>Shanghai</td></tr><tr><td>Country</td><td>China</td></tr><tr><td>Postal Code</td><td>201203</td></tr></table>	Name	Espressif Espressif	Address	690 Bibo Road, Block 2, Suite 204, Zhangjiang High-tech Park,	City	Shanghai	State	Shanghai	Country	China	Postal Code	201203
Name	Espressif Espressif												
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Complete the Project and Submit Product(s) for Qualification

By typing my name or other symbol of my signature into the "Signature" field below, I agree on behalf of Espressif Systems (Shanghai) Co., Ltd. ("Company") to [Bluetooth Launch Studio Terms of Use](#), and I make the following representations and warranties personally and on behalf of Company. The following representations and warranties, together with all project information and the [Bluetooth Launch Studio Terms of Use](#), are the Supplier Declaration of Conformity and Declaration of Compliance described in the [Program Reference Document \(PRD\)](#) and [Declaration Process Document \(DPD\)](#).

- I am authorized by Company to submit all of the information included in this project and all information is complete and accurate.
- Company does not, by its governing documents or other applicable law, require more than one signatory, a stamp or seal, or a witnessed signature to be legally bound.
- I agree on behalf of Company to contract in English and electronically, and adopt the characters and symbols input in the signature field below as my signature, with the same effect as an ink signature.
- The products included in this project are owned and distributed by Company under a Product name that identifies Company as the source of the Product. Company has the right to use and reference all Qualified Designs referenced in the project, and the products and referenced Qualified Designs comply with the version of the Bluetooth Specification identified in the project submission.
- The product(s) included in this project and the corresponding Qualified Designs comply with the [Bluetooth Launch Studio Terms of Use](#).

If any of the foregoing is not correct or you do not agree, you must exit this form without signing.

Signature:

Chunhua.Lin

BLUETOOTH[®] LAUNCH STUDIO TERMS OF USE

Effective Date: November 10th, 2017.

These Bluetooth Launch Studio Terms of Use (“**Launch Studio Terms**”) are a supplement to the [Bluetooth SIG Website Terms of Use](#) (“**WTOU**”) and together the Launch Studio Terms and WTOU are a legal agreement (collectively the “**Bluetooth Terms**”) between you and Bluetooth SIG, Inc., a Delaware corporation (“**Bluetooth SIG**”) that governs your access to and use of the Bluetooth Launch Studio (the “**Launch Studio Tool**”).

The Launch Studio Tool is a Service (as defined in the WTOU) offered by Bluetooth SIG. Terms used but not defined in these Launch Studio Terms have the meanings ascribed to them in the WTOU. In the event of a conflict between these Launch Studio Terms and the WTOU, these Launch Studio Terms will govern.

PLEASE READ THE BLUETOOTH TERMS CAREFULLY. BY ACCESSING OR USING THE LAUNCH STUDIO TOOL AND/OR CLICKING TO INDICATE THAT YOU AGREE TO THE LAUNCH STUDIO TERMS, YOU REPRESENT THAT YOU ARE AUTHORIZED TO BIND THE ENTITY UNDER WHOSE BLUETOOTH SIG MEMBERSHIP YOU OBTAINED A USER ACCOUNT AND THAT YOU AND THAT MEMBER AGREE TO BE BOUND BY THE BLUETOOTH TERMS. IF YOU ARE NOT AUTHORIZED OR DO NOT AGREE TO THE BLUETOOTH TERMS, DO NOT ACCESS OR USE THE LAUNCH STUDIO TOOL OR CLICK TO INDICATE THAT YOU AGREE TO THESE LAUNCH STUDIO TERMS.

1. MEMBERSHIP ACCOUNT REQUIREMENT.

To access and use the Launch Studio Tool, you must have an Account (as defined in the WTOU) issued under the membership account of a current Bluetooth SIG member and log into the Launch Studio Tool with that Account. You acknowledge and agree that when you access the Launch Studio Tool that you are doing so on behalf of the member your Account is associated with (“**Member**”) and you represent and warrant that you are authorized by Member to access and use the Launch Studio Tool and provide Submissions (defined below) on Member’s behalf.

2. BLUETOOTH QUALIFICATION PROCESS.

The “**Bluetooth Qualification Process**” is the process created by Bluetooth SIG for qualifying Products. The Launch Studio Tool is the Bluetooth SIG tool designed to implement the Bluetooth Qualification Process. A “**Product**” means a product that:

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- (b) contains one or more Portions; and
- (c) if marketed, is marketed under a name and/or trademark that uniquely identifies Member as the source of the product. A “**Portion**” means hardware, software, or a combination of hardware and software that implements a Bluetooth Specification. If the hardware, software, or combination contains or consists of more than an implementation of the Bluetooth specification, the “**Portion**” is only the implementation of the Bluetooth Specification. “**Bluetooth Specification**” is defined in the Bylaws of Bluetooth SIG.

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- (a) You represent and warrant that you have permission to submit to Bluetooth SIG all information and materials (including design information, product information, test reports, and test results) that you provide through the Launch Studio Tool (“**Submissions**”) and that all Submissions are true, complete, and accurate.
- (b) You represent and warrant that you and Member will comply with the SIG Member Terms (as defined in the WTOU).
- (c) You represent and warrant that all Submissions that you make through the Launch Studio Tool and all Products listed in your Submissions comply with the SIG Member Terms (as defined in the WTOU) and the Bluetooth Specification(s) referenced in your Submission.

(d) You represent and warrant that the products referenced in your Submissions that you submit to the Bluetooth Qualification Process via the Launch Studio Tool will only be Products that, if marketed or distributed, are done so by Member under a name or trademark that uniquely identifies Member as the source of the Product.

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(b) If you receive a discount on any fees based on your Member's level of membership and your Member's membership level changes (e.g., the Member moves from an associate to an adopter level), you will no longer be entitled to receive the discount and any fees owed and any outstanding invoices from Bluetooth SIG as of the date of the membership level change will be increased to reflect the amount owed without the discount. Further, if you purchased any declaration IDs at a discount and you have not used them as of the date of the membership level change, you may not use the previously purchased declaration IDs unless you pay the difference between the then-current standard fee and the discounted fee previously paid.

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5. CONFIDENTIALITY OF SUBMISSIONS.

You and the Bluetooth SIG agree that Submissions are Confidential Information subject to the Bluetooth SIG Confidentiality Policy even if you do not label the Submission "Confidential." Notwithstanding anything in the Bluetooth SIG Confidentiality Policy and except as described in the following sentence, you agree that Bluetooth SIG will treat your Submissions as confidential, including by not making them available through the searchable database on Bluetooth SIG's web site until the date that you have selected as the "listing date" within the Launch Studio Tool when you click to submit your Submission. Bluetooth SIG further agrees that

(a) if, when you submit a Submission, the "publish date" in your Submission is after the listing date, the following information will be treated as Member Confidential Information and not included in the searchable database on Bluetooth SIG's web site until the "publish date": product name, product number, category, subset ID (if applicable), publish date, and product description and

(b) the test plan and test evidence provided as part of your Submission will continue to be treated as Member Confidential Information for the period of time required under the Bluetooth SIG Confidentiality Policy regardless of any listing date or publish date in the Submission. To the extent that this Section conflicts with the Bluetooth SIG Confidentiality Policy, this Section supersedes the Bluetooth SIG Confidentiality Policy with respect to Bluetooth SIG's obligations of confidentiality of Submissions.

6. RECORD KEEPING AND AUDIT.

You agree to maintain a complete copy of your Submissions as well as all supporting information and documentation related to each Product you submit for qualification through the Launch Studio Tool (“**Records**”) in order to document your compliance with the SIG Member Terms and Bluetooth Specifications. You agree that Bluetooth SIG may request copies of Records relating to or pertaining to your Submissions and all Products referenced therein and you will provide copies of Records and permit Bluetooth SIG and its representatives to audit, examine, and make copies of or extracts from all Records (in whatever form they may be kept, whether written, electronic, or other) in order to verify the truth, accuracy, and completeness of your Submissions as well as compliance with the SIG Member Terms and Bluetooth Specifications. Bluetooth SIG will be responsible for the cost of any audit, unless the audit reveals that any Submission is incomplete or inaccurate or that you, Member, any of your Submissions, or any Product fails to comply with the SIG Member Terms or Bluetooth Specifications, in which case Member will reimburse Bluetooth SIG for the costs of the audit within 30 days after receiving Bluetooth SIG’s request for reimbursement.

7. ADDITIONAL DISCLAIMERS.

The Launch Studio Tool is not a record-keeping or storage tool. You are responsible for backing up all of Your Content (as defined in the WTOU) submitted to the Launch Studio Tool. In addition to the disclaimers in the WTOU, Bluetooth SIG does not guarantee that Your Content will not be removed, damaged, corrupted, or lost.

Appendix A

Summary ICS

Table 21: Controller Configuration Specification Version

Item	Capability	Reference	Support	Status	Comment
21/14	Core Specification Version 4.2, Adopted 02 December 2014	Core 4.2	C.1	☑	C.1: Mandatory to support only one Controller Core Specification Version.
21/17	Core Erratum 10734 Pairing Updates	Erratum 10734	C.7	☑	C.7: Mandatory IF SUMICS 21/14 OR 21/16 OR 21/18 are supported, otherwise Excluded

Table 22: EDR Features

Item	Capability	Reference	Support	Status	Comment
22/1	EDR for asynchronous transports (single slot)	Core 2.0+EDR and later	C.1	☑	C1: Mandatory to support at least one IF an AMP Controller Core supporting + HS (41/1 "Core 3.0 + HS") is supported, otherwise Optional.
22/2	EDR for asynchronous transports (multi-slot)	Core 2.0+EDR and later	C.1	☑	C1: Mandatory to support at least one IF an AMP Controller Core supporting + HS (41/1 "Core 3.0 + HS") is supported, otherwise Optional.
22/4	EDR for synchronous transports (Core 3.0 or later)	CSA1 and 3.0+HS or later	C.1/C.2	☑	C1: Mandatory to support at least one IF an AMP Controller Core supporting + HS (41/1 "Core 3.0 + HS") is supported, otherwise Optional. C2: Optional IF (21/14 "Core 4.2" OR 21/16 "Core 5.0" OR 21/18 "Core 5.1") is supported, otherwise Excluded

Table 24: BR/EDR Controller Electrical Interfaces

Item	Capability	Reference	Support	Status	Comment
24/1	UART Transport Layer	Vol. 4, Part A	O	☑	

Table 31: Host Configuration Specification Version

Item	Capability	Reference	Support	Status	Comment
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Table 33: Core Host Electrical Interfaces

Item	Capability	Reference	Support	Status	Comment
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Table 34: LE Host Specification Parts

Item	Capability	Reference	Support	Status	Comment
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Table 41: AMP Controller Specification Version

Item	Capability	Reference	Support	Status	Comment
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Table 42: AMP Controller Specification Parts

Item	Capability	Reference	Support	Status	Comment
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Table 43: AMP Controller Electrical Interfaces

Item	Capability	Reference	Support	Status	Comment
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Table 51: Low Energy Controller Configuration

Item	Capability	Reference	Support	Status	Comment
51/1	Low Energy Controller	Core 4.0	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if PROD 2/4 or 2/5 or 2/6 is supported, otherwise Excluded.

Table 52: Low Energy Host Core Specification

Item	Capability	Reference	Support	Status	Comment
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Product Type

Table 1: Product Types

Item	Capability	Reference	Support	Status	Comment
1/5	Controller Subsystem	N/A	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory to support one and only one Product Type.

Table 2: Controller Core Configuration

Prerequisite: PROD 1/1 or PROD 1/2 or PROD 1/3 or PROD 1/5

Item	Capability	Reference	Support	Status	Comment
2/5	BR/EDR/LE Combined Controller	Vol. 0 Part B	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory to support only one Controller Configuration. Optional if 1/2 or 1/3 is Supported.

Table 3: Host Core Configuration

Prerequisite: PROD 1/1 or PROD 1/2 or PROD 1/3 or PROD 1/4

Item	Capability	Reference	Support	Status	Comment
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Radio

Table 1: RF Capabilities

Item	Capability	Reference	Support	Status	Comment
1/2	Power Class = 2	RF, 3	C.5	<input checked="" type="checkbox"/>	C.5: At least one of 1/1 (Power Class 1) OR 1/2 (Power Class 2) OR 1/3 (Power Class 3) shall be supported.
1/4	Power Control	RF, 3	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if 1/1 is supported, otherwise Optional.
1/5	1-slot packets supported	BB, 6.5	M	<input checked="" type="checkbox"/>	
1/6	3-slot packets supported	BB, 6.5	O	<input checked="" type="checkbox"/>	
1/7	5-slot packets supported	BB, 6.5	O	<input checked="" type="checkbox"/>	
1/8	79 Channels	RF, 2	M	<input checked="" type="checkbox"/>	
1/9	Support for GFSK modulation	RF, 3.1	M	<input checked="" type="checkbox"/>	
1/10	Support for pi/4-DQPSK modulation	RF, 3.2	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if (SUMICS 22/1 or 22/2 or 22/3 or 22/4) is supported, otherwise Excluded.
1/11	Support for 8DPSK modulation	RF, 3.3	C.3	<input checked="" type="checkbox"/>	C.3: Mandatory if (SUMICS 22/1 or 22/2 or 22/3) is supported; Optional if (SUMICS 22/4) is supported, otherwise Excluded.
1/12	Enhanced Power Control	RF, 3	C.4	<input checked="" type="checkbox"/>	C.4: Optional if Core Specification 3.0 or later and 1/4 is supported, otherwise Excluded.

Baseband Conformance

Table 1: Physical Channel

Item	Capability	Reference	Support	Status	Comment
1/1	Frequency band and 79 RF channels	BB, 2.1	M	<input checked="" type="checkbox"/>	
1/2	Adaptive Frequency Hopping Kernel	BB, 2.6	M	<input checked="" type="checkbox"/>	

Table 1a: Modulation Schemes

Item	Capability	Reference	Support	Status	Comment
1a/1	Basic Data Rate, 1 Mbps payload data rate	RF, 3.1	M	☑	
1a/2	Enhanced Data Rate, 2 Mbps payload data rate	RF, 3.2	C.1	☑	C.1: Mandatory IF (SUMICS 22/1 "EDR for asynchronous transports (single slot)" OR SUMICS 22/2 "EDR for asynchronous transports (multi-slot)" OR SUMICS 22/3 "EDR for synchronous transports" OR SUMICS 22/4 "EDR for synchronous transports, CSA1 and 3.0+HS or later") is supported, otherwise Optional.
1a/3	Enhanced Data Rate, 3 Mbps payload data rate	RF, 3.2	C.2	☑	C.2: Mandatory IF (SUMICS 22/1 ("EDR for asynchronous transports (single slot)") OR SUMICS 22/2 ("EDR for asynchronous transports (multi-slot)") OR SUMICS 22/3 ("EDR for synchronous transports")) is supported; Optional IF BB 1a/2 "Enhanced Data Rate, 2 Mbps payload data rate" is supported, otherwise Excluded.

Table 2: Link Types

Item	Capability	Reference	Support	Status	Comment
2/1	ACL link	BB, 5.2	M	☑	
2/2	SCO link	BB, 5.4	O	☑	
2/3	eSCO link	BB, 4.3	O	☑	
2/4	Enhanced Data Rate ACL links	BB, 6.5.4	C.1	☑	C.1: Mandatory if (SUMICS 22/1 or 22/2) is supported, otherwise Optional.
2/5	Enhanced Data Rate eSCO links	BB, 6.5.3	C.2	☑	C.2: Mandatory if (SUMICS 22/3 or 22/4) is supported otherwise Excluded.

Table 3: SCO Link Support

Item	Capability	Reference	Support	Status	Comment	Value
3/1	SCO links to same Slave	BB, 4.3	C.1	☑	C.1: Mandatory to support at least one SCO link type if BB 2/2 is supported.	
3/2	SCO links to different Slaves	BB, 4.3	C.3	☑	C.3: Optional if BB 2/2 is supported, otherwise Excluded.	
3/3	SCO links from same Master	BB, 4.3	C.1	☑	C.1: Mandatory to support at least one SCO link type if BB 2/2 is supported.	
3/5	eSCO links to same Slave	BB, 4.2	C.2	☑	C.2: Mandatory to support at least one eSCO link type if BB 2/3 is supported.	
3/6	eSCO links to different Slaves	BB, 4.2	C.4	☑	C.4: Optional if BB 2/3 is supported, otherwise Excluded.	
3/7	eSCO links from same Master	BB, 4.2	C.2	☑	C.2: Mandatory to support at least one eSCO link type if BB 2/3 is supported.	
3/8	eSCO links from different Masters	BB, 4.2	C.4	☑	C.4: Optional if BB 2/3 is supported, otherwise Excluded.	

Table 3a: Profile Broadcast Data Link Support

Prerequisite: BB 2/6

Item	Capability	Reference	Support	Status	Comment
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Table 4: Common Packet Types

Item	Capability	Reference	Support	Status	Comment
4/1	ID packet type	BB, 6.5.1 BB,6.5.1.1	M	☑	
4/2	NULL packet type	BB, 6.5.1 BB, 6.5.1.2	M	☑	
4/3	POLL packet type	BB, 6.5.1 BB, 6.5.1.3	M	☑	
4/4	FHS packet type	BB, 6.5.1 BB,6.5.1.4	M	☑	
4/5	DM1 packet type	BB, 6.5.1 BB, 6.5.1.5 BB, 6.5.4 BB, 6.5.4.1	M	☑	

Table 5: ACL Packet Types

Item	Capability	Reference	Support	Status	Comment
5/1	DH1 packet type	BB, 6.5.4 BB,6.5.4.2	M	☑	
5/2	DM3 packet type	BB, 6.5.4 BB,6.5.4.3	C.1	☑	C.1: Mandatory if (9c/1 or 9c/2) is supported, otherwise Optional.

5/3	DH3 packet type	BB, 6.5.4 BB,6.5.4.4	O	☑
5/4	DM5 packet type	BB, 6.5.4 BB,6.5.4.5	O	☑
5/5	DH5 packet type	BB, 6.5.4 BB,6.5.4.6	O	☑
5/6	AUX1 packet type	BB, 6.5.4 BB,6.5.4.7	O	☑

Table 5a: Enhanced Data Rate ACL Packet Types

Prerequisite: BB 2/4

Item	Capability	Reference	Support	Status	Comment
5a/1	2-DH1 packet type	BB, 6.5.4.8	C.1	☑	C.1: Mandatory if (SUMICS 22/1 or 22/2) is supported, otherwise Optional if (BB 1a/2) is supported.
5a/2	2-DH3 packet type	BB, 6.5.4.9	C.2	☑	C.2: Mandatory if (SUMICS 22/2) is supported, otherwise Optional if (BB 1a/2) is supported.
5a/3	2-DH5 packet type	BB, 6.5.4.10	C.2	☑	C.2: Mandatory if (SUMICS 22/2) is supported, otherwise Optional if (BB 1a/2) is supported.
5a/4	3-DH1 packet type	BB, 6.5.4.11	C.3	☑	C.3: Mandatory if (SUMICS 22/1 or 22/2) is supported, otherwise Optional if (BB 1a/3) is Supported.
5a/5	3-DH3 packet type	BB, 6.5.4.12	C.4	☑	C.4: Mandatory if (SUMICS 22/2) is supported, otherwise Optional if (BB 5a/2 and 5a/4) are supported.
5a/6	3-DH5 packet type	BB, 6.5.4.13	C.5	☑	C.5: Mandatory if (SUMICS 22/2) is supported, otherwise Optional if (BB 5a/3 and 5a/4) are supported.

Table 6: SCO and eSCO Packet Types

Item	Capability	Reference	Support	Status	Comment
6/1	HV1 packet type	BB, 6.5.2 BB,6.5.2.1	C.1	☑	C.1: Mandatory if BB 2/2 is supported, otherwise Excluded.
6/3	HV3 packet type	BB, 6.5.2 BB,6.5.2.3	C.2	☑	C.2: Optional if BB 2/2 is supported, otherwise Excluded.
6/4	DV packet type	BB, 6.5.2 BB,6.5.2.4	C.1	☑	C.1: Mandatory if BB 2/2 is supported, otherwise Excluded.
6/5	EV3 packet type	BB, 6.5.3 BB,6.5.3.1	C.3	☑	C.3: Mandatory if BB 2/3 is supported, otherwise Excluded.
6/6	EV4 packet type	BB, 6.5.3 BB,6.5.3.2	C.4	☑	C.4: Optional if BB 2/3 is supported, otherwise Excluded.
6/7	EV5 packet type	BB, 6.5.3 BB,6.5.3.3	C.4	☑	C.4: Optional if BB 2/3 is supported, otherwise Excluded.

Table 6a: Enhanced Data Rate eSCO Packet Types

Item	Capability	Reference	Support	Status	Comment
6a/1	2-EV3 packet type	BB, 6.5.3.4	C.1	☑	C.1: Mandatory if (SUMICS 22/3) is supported, otherwise Optional if (BB 1a/2) is supported.
6a/2	2-EV5 packet type	BB, 6.5.3.5	C.2	☑	C.2: Optional if 1a/2 is supported.
6a/3	3-EV3 packet type	BB, 6.5.3.6	C.3	☑	C.3: Mandatory if (SUMICS 22/3) is supported and (SUMICS 22/4) is Not Supported, otherwise Optional if (BB 1a/3) is supported.
6a/4	3-EV5 packet type	BB, 6.5.3.7	C.4	☑	C.4: Optional if 1a/3 is supported.

Table 7: Page Procedures

Item	Capability	Reference	Support	Status	Comment
7/1	Paging	BB, 8.3.2	M	☑	
7/2	Page scan	BB, 8.3.1	M	☑	
7/5	Interlaced Scan during page scan	BB, 2.4	O	☑	

Table 8: Paging Schemes

Item	Capability	Reference	Support	Status	Comment
8/1	Mandatory scan mode	BB, 8.3 BB, table 6.5	M	☑	

Table 9: Paging Modes

Item	Capability	Reference	Support	Status	Comment
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Item	Capability	Reference	Support	Status	Comment
9/1	Paging mode R0	BB, 8.3.1 BB, table 8.1	C.1	☑	C.1: At least one of 9/1-3 is Mandatory.
9/2	Paging mode R1	BB, 8.3.1 BB, table 8.1	C.1	☑	C.1: At least one of 9/1-3 is Mandatory.
9/3	Paging mode R2	BB, 8.3.1 BB, table 8.1	C.1	☑	C.1: At least one of 9/1-3 is Mandatory.

Table 9b: Paging Train Repetition

Item	Capability	Reference	Support	Status	Comment
9b/1	Npage >= 1	BB, 8.3.2 BB, table 8.2	O	☑	
9b/2	Npage >= 128	BB, 8.3.2 BB, table 8.2	O	☑	
9b/3	Npage >= 256	BB, 8.3.2 BB, table 8.2	M	☑	

Table 9c: Synchronization Modes Support

Item	Capability	Reference	Support	Status	Comment
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Table 10: Inquiry Procedures

Item	Capability	Reference	Support	Status	Comment
10/1	Inquiry	BB, 8.4.2	O	☑	
10/2	Inquiry scan with first FHS	BB, 8.4.2	O	☑	
10/5	Dedicated inquiry access code	BB, 6.3.1	O	☑	
10/6	Interlaced Scan during inquiry scan	BB, 2.5	O	☑	
10/7	Extended Inquiry Response	BB, 8.4.2, BB 8.4.3	C.1	☑	C.1: Excluded IF SUMICS 21/3 ?2.0?OR SUMICS 21/4 ?2.0+EDR?is supported, otherwise Mandatory IF GAP 1/3 ?nitiate LMP-Authentication?is supported, otherwise Optional.

Table 11: Piconet Capabilities

Item	Capability	Reference	Support	Status	Comment	Value
11/1	Broadcast messages	BB, 7.6.1 BB, 7.6.5	O	☑		
11/2	Point-to-multipoint connections	BB, 1	O	☑		

Table 12: Scatternet Capabilities

Item	Capability	Reference	Support	Status	Comment
12/1	Act as Master in one piconet and Slave in another piconet	BB, 1	O	☑	
12/2	Act as Slave in more than one piconet	BB, 1	O	☑	

Table 13: Synchronous Coding Schemes

Prerequisite: BB 2/2

Item	Capability	Reference	Support	Status	Comment
13/1	A-law	BB, 9.1	O	☑	
13/2	u-law	BB, 9.1	O	☑	
13/3	CVSD	BB, 9.2	O	☑	
13/4	Transparent Synchronous Data	BB, 5.4 BB, 5.5	O	☑	

Table 14: Erroneous Data Reporting

Item	Capability	Reference	Support	Status	Comment
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14/1	Erroneous Data Reporting for SCO	BB 7.7	C.1	<input checked="" type="checkbox"/>	C.1: Excluded IF SUMICS 21/3 "v2.0" OR SUMICS 21/4 "v2.0+EDR" is supported, otherwise Optional IF HCI 9/6 "SCO data via HCI" is supported, otherwise Excluded
14/2	Erroneous Data Reporting for eSCO	BB 7.7	C.2	<input checked="" type="checkbox"/>	C.2: Excluded IF SUMICS 21/3 "v2.0" OR SUMICS 21/4 "v2.0+EDR" is supported, otherwise Optional IF HCI 9/7 "eSCO data via HCI" is supported, otherwise Excluded

Table 15: This table is intentionally left blank: DO NOT USE

Item	Capability	Reference	Support	Status	Comment
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Table 16: Non-flushable Packet Boundary Flag

Item	Capability	Reference	Support	Status	Comment
16/1	Non-flushable Packet Boundary Flag	[1] 7.6.3	C.1	<input checked="" type="checkbox"/>	C.1: Excluded IF SUMICS 21/3 "v2.0" OR SUMICS 21/4 "v2.0+EDR" is supported, otherwise Mandatory IF (HCI 12/10 "Enhanced Flush Command") is supported; otherwise Optional.

Table 17: Connection States

Item	Capability	Reference	Support	Status	Comment
17/1	Sniff Subrating Mode	[3] 4.5.3.3	C.1	<input checked="" type="checkbox"/>	C.1: Excluded IF SUMICS 21/3 "v2.0" OR SUMICS 21/4 "v2.0+EDR" is supported, otherwise Mandatory IF LMP 2/8 "Sniff Mode" is supported; otherwise Optional

Table 18: Coarse Clock Adjust

Item	Capability	Reference	Support	Status	Comment
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Table 19: Slot Availability Mask

Item	Capability	Reference	Support	Status	Comment
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Link Manager

Table 1: Response Messages

Item	Capability	Reference	Support	Status	Comment
1/1	Accept message	LMP, 2.7	M	<input checked="" type="checkbox"/>	
1/2	Reject message	LMP, 2.7	M	<input checked="" type="checkbox"/>	

Table 2: Supported Features

Item	Capability	Reference	Support	Status	Comment
2/1	3-slot packets	LMP, 4.1.10, LMP, 3.3	C.11	<input checked="" type="checkbox"/>	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/2	5-slot packets	LMP, 4.1.10, LMP, 3.3	C.11	<input checked="" type="checkbox"/>	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/3	Encryption	LMP, 4.2.5, LMP, 3.3	C.5	<input checked="" type="checkbox"/>	C.5: Optional IF (SUMICS 21/1 OR SUMICS 21/2 OR SUMICS 21/3 "(Core Specification 2.0)" OR SUMICS 21/4 "(2.0+EDR)") is supported; Excluded IF LMP 2/21 "(BR/EDR Not Supported)" is supported, otherwise Mandatory.
2/4	Slot offset	LMP, 4.4.1, LMP, 3.3	C.11	<input checked="" type="checkbox"/>	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/5	Timing accuracy	LMP, 4.3.1, LMP, 3.3	C.11	<input checked="" type="checkbox"/>	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/6	Role switch (Master/Slave)	LMP, 4.4.2, LMP, 3.3	C.11	<input checked="" type="checkbox"/>	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.

2/8	Sniff mode	LMP,4.5.3, LMP, 3.3	C.11	☑	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/10	Power Control	RF, 3 LMP, 4.1.3, LMP, 3.3	C.1	☑	C.1: Mandatory IF Power Class 1 is supported (RF, 1/1=1); Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/11	Channel quality driven data rate	LMP, 4.1.7, LMP, 3.3	C.11	☑	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/12	SCO link	LMP, 4.6.1, LMP, 3.3	C.11	☑	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/13	RSSI	LMP, 3.3	C.11	☑	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/14	Broadcast encryption	LMP, 4.2.5, LMP, 3.3	C.11	☑	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/15	eSCO link	LMP, 4.6.2	C.11	☑	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/16	Adaptive frequency hopping	LMP, 4.1.4	C.11	☑	C.11: Excluded IF LMP 2/21 (BR/EDR Not Supported) is supported, otherwise Optional.
2/17	Enhanced Data Rate ACL	BB, 6.5.4 LMP, 3.3	C.2	☑	C.2: Mandatory IF (SUMICS 22/1 "EDR for asynchronous transports (single slot)" OR SUMICS 22/2 "EDR for asynchronous transports (multi-slot)") is supported AND LMP 2/21 "BR/EDR Not Supported" is NOT supported; Excluded IF LMP 2/21 "BR/EDR Not Supported" is supported, otherwise Optional.
2/18	Enhanced Data Rate eSCO	BB, 6.5.3 LMP, 3.3	C.3	☑	C.3: Mandatory IF (SUMICS 22/3 (EDR for synchronous transports) OR SUMICS 22/4 (EDR for synchronous transports, CSA1 and 3.0 + HS or later)) is supported, otherwise Excluded.
2/19	Simple Pairing	LMP 4.2.7	C.4	☑	C.4: Excluded IF SUMICS 21/3 "Core Specification 2.0" OR SUMICS 21/4 "2.0+EDR" is supported; otherwise Mandatory IF LMP 2/21 "BR/EDR Not Supported" is NOT supported, otherwise Excluded.
2/20	Enhanced Power Control	LMP, 4.1.3.1, LMP, 3.3	C.6	☑	C.6: Excluded IF SUMICS 21/3 "Core Specification 2.0" OR SUMICS 21/4 "2.0+EDR" OR SUMICS 21/5 "Core Specification 2.1" OR SUMICS 21/6 "2.1+EDR" is supported, otherwise Excluded if LMP 2/21 "BR/EDR Not Supported" is supported, otherwise Optional IF LMP 2/10 "Power Control" AND LMP 2/13 "RSSI" are supported.

Table 3: Authentication

Item	Capability	Reference	Support	Status	Comment
3/1	Initiate authentication before connection completed	LMP, 4.2.1	O	☑	
3/2	Initiate authentication after connection completed	LMP, 4.2.1	O	☑	
3/3	Respond to authentication request	LMP, 4.2.1	M	☑	

Table 4: Pairing

Item	Capability	Reference	Support	Status	Comment
4/1	Initiate pairing before connection completed	LMP, 4.2.2	O	☑	
4/2	Initiate pairing after connection completed	LMP, 4.2.2	O	☑	
4/3	Respond to pairing request	LMP, 4.2.2.1, LMP, 4.2.2.3	M	☑	
4/4	Use fixed PIN and request responder to initiator switch	LMP, 4.2.2.2	C.1	☑	C.1: Mandatory to support at least one of 4/4 or 4/5.
4/5	Use variable PIN	LMP, 4.2.2.2	C.1	☑	C.1: Mandatory to support at least one of 4/4 or 4/5.
4/6	Accept initiator to responder switch	LMP, 4.2.2.2	C.2	☑	C.2: Mandatory if 4/5 and (4/1 or 4/2) are supported.
4/7	TSPC_Change_of_IO_Capabilities	LMP, 4.2.7.3.4	C.3	☑	C.3: Mandatory if ESR05 is supported, otherwise Optional.

Table 5: Link Keys

Item	Capability	Reference	Support	Status	Comment
5/2	Creation of link key - Combination Key	LMP, 4.2.2.4	M	☑	Mandatory

5/3	Initiate change of link key	LMP, 4.2.3	O	☑	
5/4	Accept change of link key	LMP, 4.2.3	M	☑	

Table 6: Encryption

Item	Capability	Reference	Support	Status	Comment
6/1	Initiate encryption	LMP, 4.2.5.1	C.1	☑	C.1: Optional IF (SUMICS 21/3 "Core Specification 2.0" OR SUMICS 21/4 "2.0+EDR") is supported, otherwise Mandatory.
6/2	Accept encryption requests	LMP, 4.2.5.1	M	☑	
6/5	Key size negotiation	LMP, 4.2.5.2	M	☑	
6/6	Start encryption, as master	LMP, 4.2.5.3	M	☑	
6/7	Accept start of encryption	LMP, 4.2.5.3	M	☑	
6/8	Stop encryption, as master	LMP, 4.2.5.4	M	☑	
6/9	Accept stop of encryption	LMP, 4.2.5.4	M	☑	
6/10	Encryption Pause/Resume	LMP, 4.2.5.3	C.2	☑	C.2: Excluded IF (SUMICS 21/3 "Core Specification 2.0" OR SUMICS 21/4 "2.0+EDR") is supported, otherwise Mandatory.

Table 7: Clock Offset Information

Item	Capability	Reference	Support	Status	Comment
7/1	Request clock offset information	LMP, 4.3.2	O	☑	
7/2	Respond to clock offset requests	LMP, 4.3.2	M	☑	

Table 8: Slot Offset Information

Prerequisite: LMP 2/4

Item	Capability	Reference	Support	Status	Comment
8/1	Send slot offset information	LMP, 4.4.1	C.1	☑	C.1: Mandatory if 13/1 is supported, otherwise Optional.

Table 9: Timing Accuracy Information

Prerequisite: LMP 2/5

Item	Capability	Reference	Support	Status	Comment
9/1	Request timing accuracy information	LMP, 4.3.1	O	☑	
9/2	Respond to timing accuracy information requests	LMP, 4.3.1	M	☑	

Table 10: LM Version Information

Item	Capability	Reference	Support	Status	Comment
10/1	Request LM version information	LMP, 4.3.3	O	☑	
10/2	Respond to LM version information requests	LMP, 4.3.3	M	☑	

Table 11: Feature Support

Item	Capability	Reference	Support	Status	Comment
11/1	Request supported features	LMP, 4.3.4	C.1	☑	C.1: Mandatory if any of the "Optional" features in Table 2 is supported, otherwise Optional. (LMP:2/1-3), (LMP:2/5), (LMP:2/7-12), (LMP:2/14-16), (LMP:26/1) is requested by the IUT, ELSE Optional.
11/2	Respond to supported features requests	LMP, 4.3.4	M	☑	

11/3	Request extended features mask	LMP, 4.3.4	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if a feature requiring another features page is supported, otherwise Optional.
11/4	Respond to extended features Request	LMP, 4.3.4	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if a feature requiring another features page is supported, otherwise Optional.

Table 12: Name Information

Item	Capability	Reference	Support	Status	Comment
12/1	Request name information	LMP, 4.3.5	O	<input checked="" type="checkbox"/>	
12/2	Respond to name requests	LMP, 4.3.5	M	<input checked="" type="checkbox"/>	

Table 13: Role Switch

Item	Capability	Reference	Support	Status	Comment
13/1	Request Master Slave switch	LMP, 4.4.2	O	<input checked="" type="checkbox"/>	
13/2	Accept Master Slave switch requests	LMP, 4.4.2	M	<input checked="" type="checkbox"/>	

Table 14: Detach

Item	Capability	Reference	Support	Status	Comment
14/1	Detach connection	LMP, 4.1.2	M	<input checked="" type="checkbox"/>	

Table 14a: Setting Up and Removing Enhanced Data Rate ACL Connection

Prerequisite: LMP 2/17

Item	Capability	Reference	Support	Status	Comment
14a/1	Enter Enhanced Data Rate	LMP, 4.1.11	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if 2/17 is supported, otherwise Excluded.
14a/2	Exit Enhanced Data Rate	LMP, 4.1.11	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if 2/17 is supported, otherwise Excluded.

Table 14b: Setting Up and Removing Enhanced Data Rate eSCO Connection

Prerequisite: LMP 2/18

Item	Capability	Reference	Support	Status	Comment
14b/1	Enter and Exit eSCO Using Enhanced Data Rate Packets	LMP, 4.6.2	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if 2/18 is supported, otherwise Excluded.

Table 15: Hold Mode

Prerequisite: LMP 2/7

Item	Capability	Reference	Support	Status	Comment
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Table 16: Sniff Mode

Item	Capability	Reference	Support	Status	Comment
16/2	Request sniff mode	LMP, 4.5.3, LMP, 4.5.3.2	O	<input checked="" type="checkbox"/>	
16/3	Respond to sniff mode requests (renegotiate or reject)	LMP, 4.5.3.2	M	<input checked="" type="checkbox"/>	
16/5	Request un-sniff	LMP, 4.5.3.2	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if 16/2 is supported, otherwise Optional.
16/6	Accept un-sniff requests	LMP, 4.5.3.2	M	<input checked="" type="checkbox"/>	
16/7	Sniff Subrating Mode	LMP, 4.5.3.3	C.2	<input checked="" type="checkbox"/>	C.2: Excluded IF (SUMICS 21/3 "Core Specification 2.0" OR SUMICS 21/4 "2.0+EDR") is supported, otherwise Mandatory.

Table 17: Park Mode

Prerequisite: LMP 2/9

Item	Capability	Reference	Support	Status	Comment
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Table 18: Power Control

Item	Capability	Reference	Support	Status	Comment
18/1	Request to increase power	LMP, 4.1.3	M1	☑	M1: Mandatory if 2/13 is supported.
18/2	Request to decrease power	LMP, 4.1.3	M1	☑	M1: Mandatory if 2/13 is supported.
18/3	Respond when max power reached	LMP, 4.1.3	M2	☑	M2: Mandatory if 2/10 is supported.
18/4	Respond when min power reached	LMP, 4.1.3	M2	☑	M2: Mandatory if 2/10 is supported.
18/5	Request to increment power a single step	LMP, 4.1.3.1.1	M3	☑	M3: Mandatory if 2/20 is supported.
18/6	Request to decrease power a single step	LMP, 4.1.3.1.1	M3	☑	M3: Mandatory if 2/20 is supported.
18/7	Request to go to max power	LMP, 4.1.3.1.1	O	☑	
18/8	Respond to increment power a single step	LMP, 4.1.3.1.2	M3	☑	M3: Mandatory if 2/20 is supported.
18/9	Respond to decrease power a single step	LMP, 4.1.3.1.2	M3	☑	M3: Mandatory if 2/20 is supported.
18/10	Respond to go to max power	LMP, 4.1.3.1.2	M3	☑	M3: Mandatory if 2/20 is supported.

Table 19: Link Supervision Timeout

Item	Capability	Reference	Support	Status	Comment
19/1	Set link supervision timeout value	LMP, 4.1.6	O	☑	
19/2	Accept link supervision timeout setting	LMP, 4.1.6	M	☑	

Table 20: Quality of Service

Item	Capability	Reference	Support	Status	Comment
20/1	Channel quality driven change between DM and DH packet type	LMP, 4.1.7	C.1	☑	C.1: Mandatory if 2/11 is supported (stated in the feature request), otherwise Optional.
20/2	Force/Request change of Quality of Service	LMP, 4.1.8, LMP, 4.1.8.1	M	☑	
20/3	Request Change of Quality of Service	LMP, 4.1.8, LMP, 4.1.8.2	M	☑	

Table 21: SCO Links

Prerequisite: LMP 2/12

Item	Capability	Reference	Support	Status	Comment
21/1	Initiate SCO links, as Master	LMP, 4.6.1, LMP, 4.6.1.1	O	☑	
21/2	Initiate SCO links, as Slave	LMP, 4.6.1, LMP, 4.6.1.2	O	☑	
21/3	Accept SCO links	LMP, 4.6.1, LMP, 4.6.1.1, LMP, 4.6.1.2	O	☑	
21/4	Remove SCO links, as Master	LMP, 4.6.1, LMP, 4.6.1.5	C.1	☑	C.1: Mandatory if 21/1 is supported, otherwise Optional.
21/5	Remove SCO links, as Slave	LMP, 4.6.1, LMP, 4.6.1.5	C.2	☑	C.2: Mandatory if 21/2 is supported, otherwise Optional.
21/6	Negotiate SCO link parameters, as Master	LMP, 4.6.1, LMP, 4.6.1.3	C.3	☑	C.3: Mandatory if (21/1 or 21/3) is supported, otherwise Optional.
21/7	Negotiate SCO link parameters, as Slave	LMP, 4.6.1, LMP, 4.6.1.4	C.4	☑	C.4: Mandatory if (21/2 or 21/3) is supported, otherwise Optional.

Table 22: Multi-Slot Packets

Item	Capability	Reference	Support	Status	Comment
22/1	Accept maximum allowed number of slots to be used	LMP, 4.1.10	C.1	☑	C.1: Mandatory if (2/1 and/or 2/2) is supported, otherwise Optional.
22/2	Request maximum number of slots to be used	LMP, 4.1.10	C.1	☑	C.1: Mandatory if (2/1 and/or 2/2) is supported, otherwise Optional.
22/3	Accept request of maximum number of slots to be	LMP,	C.1	☑	C.1: Mandatory if (2/1 and/or 2/2) is supported, otherwise Optional.

Table 23: Paging Scheme

Item	Capability	Reference	Support	Status	Comment
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Table 24: Connection Establishment

Item	Capability	Reference	Support	Status	Comment
24/1	Create connection for higher layers	LMP, 4.1.1	M	<input checked="" type="checkbox"/>	
24/2	Respond to requests to establish connections for higher layers	LMP, 4.1.1	M	<input checked="" type="checkbox"/>	
24/3	Indicate that link set-up is complete	LMP, 4.1.1	M	<input checked="" type="checkbox"/>	

Table 25: Test Mode

Item	Capability	Reference	Support	Status	Comment
25/1	Activate test mode	LMP, 4.7.1	O	<input checked="" type="checkbox"/>	
25/2	Ability to reject activation of test mode if test mode is disabled	LMP, 4.7.1	M	<input checked="" type="checkbox"/>	
25/3	Control test mode	LMP, 4.7.2	O	<input checked="" type="checkbox"/>	
25/4	Ability to reject est mode control commands if test mode is disabled.	LMP, 4.7.2	M	<input checked="" type="checkbox"/>	

Table 26: Adaptive Frequency Hopping

Item	Capability	Reference	Support	Status	Comment
26/1	Support of AFH switch as master	LMP, 4.1.4	O	<input checked="" type="checkbox"/>	
26/2	Support of AFH switch as slave	LMP, 4.1.4	M	<input checked="" type="checkbox"/>	
26/3	Support of Channel Classification reporting - post Role Switch (as Slave)	LMP, 4.1.5	C.1	<input checked="" type="checkbox"/>	C.1: Optional if 26/6 is supported, otherwise Excluded.
26/4	Support of Channel Classification reporting as slave	LMP, 4.1.5	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if 26/6 is supported, otherwise Excluded.
26/5	Support channel classification from host	LMP, 4.1.5	C.3	<input checked="" type="checkbox"/>	C.3: Mandatory if 26/1 or 26/4 is supported, otherwise Optional.
26/6	Support of Channel Classification	LMP, 4.1.5	O	<input checked="" type="checkbox"/>	

Table 27: Ping

Item	Capability	Reference	Support	Status	Comment
27/1	Initiate LMP Ping	[4] 4.1.13	O	<input checked="" type="checkbox"/>	
27/2	Respond to LMP Ping	[4] 4.1.13	M	<input checked="" type="checkbox"/>	

Table 28: Coarse Clock Adjustment

Item	Capability	Reference	Support	Status	Comment
28/1	Receive Request for Coarse Clock Adjustment	[1] 4.1.14.1	O	<input checked="" type="checkbox"/>	
28/2	Send Request for Coarse Clock Adjustment	[1] 4.1.14.1	O	<input checked="" type="checkbox"/>	

Table 29: Slot Availability Mask

Item	Capability	Reference	Support	Status	Comment
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Host Controller Interface

Host Controller Interface

Table 1: Generic Events

Item	Capability	Reference	Support	Status	Comment
1/1	Command Complete Event	7.7.14	M	<input checked="" type="checkbox"/>	
1/2	Command Status Event	7.7.15	M	<input checked="" type="checkbox"/>	

Table 1a: Roles

Item	Capability	Reference	Support	Status	Comment
1a/1	BR/EDR Controller	2.0	O.1	<input checked="" type="checkbox"/>	O.1: It is mandatory to support at least one of the defined roles.

Table 2: Device Setup

Item	Capability	Reference	Support	Status	Comment
2/1	Reset Command	7.3.2	M	<input checked="" type="checkbox"/>	

Table 3: Controller Flow Control

Item	Capability	Reference	Support	Status	Comment
3/1	Read Buffer Size Command	7.4.5	M	<input checked="" type="checkbox"/>	
3/2	Read Data Block Size Command	7.4.7	O	<input checked="" type="checkbox"/>	
3/3	Read Flow Control Mode Command	7.3.72	O	<input checked="" type="checkbox"/>	
3/4	Write Flow Control Mode	7.3.73	O	<input checked="" type="checkbox"/>	

Table 4: Controller Information

Item	Capability	Reference	Support	Status	Comment
4/1	Read Local Version Information	7.4.1	M	<input checked="" type="checkbox"/>	
4/2	Read Local Supported Commands Command	7.4.2	M	<input checked="" type="checkbox"/>	
4/3	Read Local Supported Features Command	7.4.3	M	<input checked="" type="checkbox"/>	
4/4	Read Local Extended Features Command	7.4.4	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if a feature requiring another features page is supported, otherwise optional.
4/5	Read BD_ADDR Command	7.4.6	M	<input checked="" type="checkbox"/>	

Table 5: Controller Configuration

Item	Capability	Reference	Support	Status	Comment
5/1	Read Local Name Command	7.3.12	M	<input checked="" type="checkbox"/>	
5/2	Write Local Name Command	7.3.11	M	<input checked="" type="checkbox"/>	
5/3	Read Class of Device Command	7.3.27	M	<input checked="" type="checkbox"/>	
5/4	Write Class of Device Command	7.3.28	M	<input checked="" type="checkbox"/>	
5/5	Read Number Of Supported IAC Command	7.3.45	O	<input checked="" type="checkbox"/>	
5/6	Read Current IAC LAP Command	7.3.46	O	<input checked="" type="checkbox"/>	
5/7	Write Current IAC LAP Command	7.3.47	O	<input checked="" type="checkbox"/>	
5/8	Read Scan Enable Command	7.3.17	O	<input checked="" type="checkbox"/>	
5/9	Write Scan Enable Command	7.3.18	M	<input checked="" type="checkbox"/>	

Table 6: Device Discovery

Item	Capability	Reference	Support	Status	Comment
6/1	Inquiry Command	7.1.1	C.1	☑	C.1: Mandatory if (BB 10/1) is supported, otherwise Optional.
6/2	Inquiry Cancel Command	7.1.2	O	☑	
6/3	Periodic Inquiry Mode Command	7.1.3	O	☑	
6/4	Exit Periodic Inquiry Mode Command	7.1.4	O	☑	
6/5	Read Inquiry Scan Activity Command	7.3.21	O	☑	
6/6	Write Inquiry Scan Activity Command	7.3.22	O	☑	
6/7	Read Inquiry Scan Type Command	7.3.51	O	☑	
6/8	Write Inquiry Scan Type Command	7.3.52	O	☑	
6/9	Read Inquiry Mode Command	7.3.53	O	☑	
6/10	Write Inquiry Mode Command	7.3.54	O	☑	
6/11	Read Inquiry Response Transmit Power Level Command	7.3.57	C.2	☑	C.2: Mandatory if (Core Spec 2.1 or later) is supported.
6/12	Write Inquiry Transmit Power Level Command	7.3.58	C.2	☑	C.2: Mandatory if (Core Spec 2.1 or later) is supported.
6/13	Read Extended Inquiry Response Command	7.3.51	C.3	☑	C.3: Mandatory if (Core Spec 2.1 or later) and (GAP 1/3) are supported, otherwise Excluded.
6/14	Write Extended Inquiry Response Command	7.3.52	C.3	☑	C.3: Mandatory if (Core Spec 2.1 or later) and (GAP 1/3) are supported, otherwise Excluded.
6/23	Inquiry Response Notification Event	7.7.73	O	☑	C.8: Excluded IF SUMICS 21/3 "2.0" OR SUMICS 21/4 "2.0+EDR" OR SUMICS 21/5 "2.1" OR SUMICS 21/6 "2.1+EDR" OR SUMICS 21/8 "3.0" OR (SUMICS 21/9 "4.0" AND NOT SUMICS 21/12 "CSA4") is supported, otherwise Optional.
6/24	Read Extended Inquiry Length Command	[1] 7.3.96	O	☑	C.9: Excluded IF SUMICS 21/3 "2.0" OR SUMICS 21/4 "2.0+EDR" OR SUMICS 21/5 "2.1" OR SUMICS 21/6 "2.1+EDR" OR SUMICS 21/8 "3.0" OR SUMICS 21/9 "4.0" is supported, otherwise Optional.
6/25	Write Extended Inquiry Length Command	[1] 7.3.96	C.10	☑	C.10: Mandatory IF 6/24 (Read Extended Inquiry Length Command) is supported, otherwise Excluded.

Table 7: Connection Setup

Item	Capability	Reference	Support	Status	Comment
7/1	Create Connection Command	7.1.5	M	☑	
7/2	Accept Connection Request Command	7.1.8	M	☑	
7/3	Reject Connection Request Command	7.1.9	M	☑	
7/4	Create Connection Cancel Command	7.1.7	O	☑	
7/5	Disconnect Command	7.1.6	M	☑	
7/6	Read Page Timeout Command	7.3.15	M	☑	
7/7	Write Page Timeout Command	7.3.16	M	☑	
7/8	Read Page Scan Activity Command	7.3.19	M	☑	
7/9	Write Page Scan Activity Command	7.3.20	M	☑	
7/10	Read Page Scan Type Command	7.3.55	O	☑	
7/11	Write Page Scan Type Command	7.3.56	O	☑	
7/12	Read Connection Accept Timeout Command	7.3.13	M	☑	
7/13	Write Connection Accept Timeout Command	7.3.14	M	☑	

Table 8: Remote Information

Item	Capability	Reference	Support	Status	Comment
8/1	Remote Name Request	7.1.19	O	☑	
8/2	Remote Name Request Cancel	7.1.20	O	☑	
8/3	Read Remote Supported Features Command	7.1.21	M	☑	
8/4	Read Remote Extended Features Command	7.1.22	C.2	☑	C.2: Mandatory if (LMP 11/3) is supported, otherwise Optional.
8/5	Read Remote Version Information Command	7.1.23	O	☑	

Table 9: Synchronous Connections

Item	Capability	Reference	Support	Status	Comment
9/1	Setup Synchronous Connection Command	7.1.26	C.1	☑	C.1: Mandatory if (LMP 21/1 or 21/2) is supported, otherwise Optional.
9/2	Accept Synchronous Connection Request Command	7.1.27	C.2	☑	C.2: Mandatory if (LMP 21/3) is supported, otherwise Optional.
9/3	Reject Synchronous Connection Request Command	7.1.28	C.3	☑	C.3: Mandatory if (LMP 21/3) is NOT supported, otherwise Optional.
9/4	Read Voice Setting Command	7.1.29	C.4	☑	C.4: Mandatory if (LMP 21/1 or 21/2 or 21/3) is supported, otherwise Optional.
9/5	Write Voice Setting Command	7.1.30	C.4	☑	C.4: Mandatory if (LMP 21/1 or 21/2 or 21/3) is supported, otherwise Optional.
9/6	SCO data via HCI	HCI, 5.4.3	O	☑	
9/7	eSCO data via HCI	HCI, 5.4.3	O	☑	
9/8	Write default Erroneous Data Reporting commands	HCI, 7.3.62	C.5	☑	C.5: Optional if (Core Spec 2.1 or later) is supported, otherwise Excluded.
9/9	Read Default Erroneous Data Reporting command	HCI, 7.3.61	C.5	☑	C.5: Optional if (Core Spec 2.1 or later) is supported, otherwise Excluded.
9/10	Enhanced Setup Synchronous Connection Command	[1] 7.1.45	C.6	☑	C.6: Optional IF 9/1 (Setup Synchronous Connection Command) is supported, otherwise Excluded.
9/11	Enhanced Accept Synchronous Connection Request Command	[1] 7.1.46	C.7	☑	C.7: Optional IF 9/2 (Accept Synchronous Connection Request Command) is supported, otherwise Excluded.

Table 10: Connection State

Item	Capability	Reference	Support	Status	Comment
10/2	Sniff Mode Command	7.2.2	C.2	☑	C.2: Mandatory if (LMP 16/2) is supported, otherwise Optional.
10/3	Exit Sniff Mode Command	7.2.3	C.2	☑	C.2: Mandatory if (LMP 16/2) is supported, otherwise Optional.
10/6	Read Link Policy Settings Command	7.2.9	M	☑	
10/7	Write Link Policy Settings Command	7.2.10	M	☑	
10/8	Read Default Link Policy Settings Command	7.2.11	M	☑	
10/9	Write Default Link Policy Settings Command	7.2.12	M	☑	

Table 11: Piconet Structure

Item	Capability	Reference	Support	Status	Comment
11/1	Role Discovery Command	7.2.7	O	☑	
11/2	Switch Role Command	7.2.8	C.1	☑	C.1: Mandatory if (LMP 13/1) is supported, otherwise Optional.

Table 12: Quality of Service

Item	Capability	Reference	Support	Status	Comment
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12/1	Flow Specification Command	7.2.13	M	✓	
12/2	QoS Setup Command	7.2.6	M	✓	
12/3	Flush Command	7.3.4	M	✓	
12/4	Read Automatic Flush Timeout Command	7.3.31	M	✓	
12/5	Write Automatic Flush Timeout Command	7.3.32	M	✓	
12/6	Read Failed Contact Counter Command	7.5.1	M	✓	
12/7	Reset Failed Contact Counter Command	7.5.2	M	✓	
12/8	Read Num Broadcast Retransmissions Command	7.3.33	C.4	✓	C.4: Mandatory if (BB 11/1) is supported, otherwise Optional.
12/9	Write Num Broadcast Retransmissions Command	7.3.34	C.4	✓	C.4: Mandatory if (BB 11/1) is supported, otherwise Optional.
12/10	Enhanced Flush Command	7.3.62	C.3	✓	C.3: Mandatory if (Core Spec 2.1 or later) is supported.
12/17	Sniff Subrating Command	7.2.12	C.2	✓	C.2: Mandatory if (BB 17/1) and (LMP 16/7) are supported.
12/18	Sniff Subrating Event	7.7.37	C.2	✓	C.2: Mandatory if (BB 17/1) and (LMP 16/7) are supported.

Table 13: Physical Links

Item	Capability	Reference	Support	Status	Comment
13/1	Read Link Supervision Timeout Command	7.3.43	O	✓	
13/2	Write Link Supervision Timeout Command	7.3.44	C.1	✓	C.1: Mandatory if (LMP 19/1) is supported, otherwise Optional.
13/3	Read AFH Channel Assessment Mode Command	7.3.57	C.2	✓	C.2: Mandatory if (LMP 26/6) is supported, otherwise Optional.
13/4	Write AFH Channel Assessment Mode Command	7.3.58	C.2	✓	C.2: Mandatory if (LMP 26/6) is supported, otherwise Optional.
13/5	Set AFH Host Channel Classification Command	7.3.50	C.2	✓	C.2: Mandatory if (LMP 26/6) is supported, otherwise Optional.
13/6	Change Connection Packet Type Command	7.1.14	C.3	✓	C.3: Mandatory if (LMP 2/1 and/or 2/2) is supported, otherwise Optional.
13/7	Link Supervision Timeout Changed Event	7.7.46	C.4	✓	C.4: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.

Table 14: Host Flow Control

Item	Capability	Reference	Support	Status	Comment
14/1	Host Buffer Size Command	7.3.41	O	✓	
14/2	Set Event Mask Command	7.3.1	O	✓	
14/4	Set Controller To Host Flow Control Command	7.3.40	O	✓	
14/5	Host Number Of Completed Packets Command	7.3.42	O	✓	
14/6	Read Synchronous Flow Control Enable Command	7.3.38	O	✓	
14/7	Write Synchronous Flow Control Enable Command	7.3.39	O	✓	
14/8	Set Event Mask Page 2	[1] 7.3.69	C.4	✓	C.4: Mandatory IF (SUMICS 21/14 "v4.2" OR SUMICS 21/16 "v5.0" OR SUMICS 21/18 "v5.1") AND (HCI 5/26 "Triggered Clock Capture Event" OR HCI 18/10 "Synchronization Train Complete Event" OR HCI 18/11

Item	Capability	Reference	Support	Status	Comment
	Command	"Synchronization Train Received Event" OR HCI 18/12 "Connectionless Slave Broadcast Receive Event" OR HCI 18/13 "Connectionless Slave Broadcast Timeout Event" OR HCI 7/31 "Truncated Page Complete Event" OR HCI 7/32 "Slave Page Response Timeout Event" OR HCI 18/14 "Connectionless Slave Broadcast Channel Map Change Event" OR HCI 6/23 "Inquiry Response Notification Event" OR HCI 16/46 "Authenticated Payload Timeout Expired Event" OR HCI 5/53 "SAM Status Change Event"); Optional IF SUM ICS 21/14 "v4.2" OR SUM ICS 21/16 "v5.0" OR SUM ICS 21/18 "v5.1") is supported, otherwise Excluded.			
14/9	No Longer Used	-	Excluded	<input checked="" type="checkbox"/>	
14/10	No Longer Used	-	Excluded	<input checked="" type="checkbox"/>	
14/11	No Longer Used	-	Excluded	<input checked="" type="checkbox"/>	
14/12	Number of Completed Packets Event	7.7.19	O	<input checked="" type="checkbox"/>	
14/13	Data Buffer Overflow Event	7.7.26	O	<input checked="" type="checkbox"/>	
14/15	Read LE Host Support Command	7.3.38	O	<input checked="" type="checkbox"/>	
14/16	Write LE Host Support Command	7.3.39	O	<input checked="" type="checkbox"/>	

Table 15: Link Information

Item	Capability	Reference	Support	Status	Comment
15/1	Read LMP Handle Command	7.1.25	M	<input checked="" type="checkbox"/>	
15/2	Read Transmit Power Level Command	7.3.37	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if (LMP 2/10) is supported, otherwise Optional.
15/2a	Read Enhanced Transmit Power Level Command	7.3.35	C.5	<input checked="" type="checkbox"/>	C.5: Mandatory IF LMP 2/20 "Enhanced Power Control" is supported, otherwise Optional
15/3	Read Link Quality Command	7.5.3	O	<input checked="" type="checkbox"/>	
15/4	Read RSSI Command	7.5.4	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if (LMP 2/13) is supported, otherwise Optional.
15/5	Read Clock Offset Command	7.1.24	O	<input checked="" type="checkbox"/>	
15/6	Read Clock Command	7.5.6	O	<input checked="" type="checkbox"/>	
15/7	Read AFH Channel Map Command	7.5.5	C.3	<input checked="" type="checkbox"/>	C.3: Mandatory if (LMP 26/6) is supported, otherwise Optional.

Table 16: Authentication and Encryption

Item	Capability	Reference	Support	Status	Comment
16/1	Read Authentication Enable Command	7.3.23	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if (LMP 3/1) is supported, otherwise Optional.
16/2	Write Authentication Enable Command	7.3.24	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if (LMP 3/1) is supported, otherwise Optional.
16/5	Link Key Request Reply Command	7.1.10	M	<input checked="" type="checkbox"/>	
16/6	Link Key Request Negative Reply Command	7.1.11	M	<input checked="" type="checkbox"/>	
16/7	PIN Code Request Reply Command	7.1.12	M	<input checked="" type="checkbox"/>	
16/8	PIN Code Request Negative Reply Command	7.1.13	M	<input checked="" type="checkbox"/>	
16/9	Authentication Requested Command	7.1.15	O	<input checked="" type="checkbox"/>	
16/10	Set Connection Encryption Command	7.1.16	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if (LMP 6/1) is supported, otherwise Optional.
16/11	Change Connection Link Key Command	7.1.17	O	<input checked="" type="checkbox"/>	
16/12	Master Link Key Command	7.1.18	C.3	<input checked="" type="checkbox"/>	C.3: Mandatory if (LMP 2/14 and 6/6) are supported, otherwise Optional.
16/13	Read PIN Type Command	7.3.5	C.4	<input checked="" type="checkbox"/>	C.4: Mandatory if (LMP 4/5) is supported, otherwise Optional.
16/14	Write PIN Type Command	7.3.6	C.4	<input checked="" type="checkbox"/>	C.4: Mandatory if (LMP 4/5) is supported, otherwise Optional.
16/15	Read Stored Link Key Command	7.3.8	O		

Item	Capability	Reference	Support	Status	Comment
				☑	
16/16	Write Stored Link Key Command	7.3.9	O	☑	
16/17	Delete Stored Link Key Command	7.3.10	O	☑	
16/18	Create New Unit Key Command	7.3.7	C.5	☑	C.5: Mandatory if (LMP 5/1) is supported, otherwise Optional.
16/19	User Confirmation Request Reply Command	7.1.30	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/20	User Confirmation Request Negative Reply Command	7.1.31	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/21	User Passkey Request Reply Command	7.1.32	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/22	User Passkey Request Negative Reply Command	7.1.33	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/23	IO Capability Response Command	7.1.29	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/24a	Remote OOB Data Request Reply Command	7.1.34	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/25	Remote OOB Data Request Negative Reply Command	7.1.35	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/26	Read Local OOB Data Command	7.3.56	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/27	Write Simple Pairing Mode Command	7.3.55	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/28	Read Simple Pairing Mode Command	7.3.54	C.6	☑	C.6: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/29	Refresh Encryption Key Command	7.3.53	C.7	☑	C.7: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Optional.
16/30	Read Encryption Key Size Command	7.5.7	C.8	☑	C.8: Optional if (Core Spec 3.0 or later) is supported, otherwise Excluded.
16/31	Send Keypress Notification Command	7.3.63	C.9	☑	C.9: Optional if (Core Spec 2.1 or later) is supported, otherwise Excluded.
16/37	Encryption Change Event	7.7.8	C.2	☑	C.2: Mandatory if (LMP 6/1) is supported, otherwise Optional.
16/38	Encryption Key Refresh Complete Event	7.7.39	C.2	☑	C.2: Mandatory if (LMP 6/1) is supported, otherwise Optional.
16/40	Link Key Notification Event	[3] 7.7.24	M	☑	
16/41	Read Secure Connections Host Support	[3] 7.3.91	C.11	☑	C.11: Mandatory IF (SUMICS 31/14 OR SUMICS 31/15 AND LMP 2/26 (Secure Connections)) is
16/42	Write Secure Connections Host Support	[3] 7.3.92	C.11	☑	C.11: Mandatory IF (SUMICS 31/14 OR SUMICS 31/15 AND LMP 2/26 (Secure Connections)) is
16/43	Remote OOB Extended Data Request Reply Command	[3] 7.1.53	C.11	☑	C.11: Mandatory IF (SUMICS 31/14 OR SUMICS 31/15 AND LMP 2/26 (Secure Connections)) is
16/45	Write Secure Connections Test Mode	[3] 7.3.93	C.11	☑	C.11: Mandatory IF (SUMICS 31/14 OR SUMICS 31/15 AND LMP 2/26 (Secure Connections)) is
16/46	Authenticated Payload Timeout Expired Event	[3] 7.7.75	C.11	☑	C.11: Mandatory IF (SUMICS 31/14 OR SUMICS 31/15 AND LMP 2/26 (Secure Connections)) is
16/47	Read Authenticated Payload Timeout	[3] 7.3.93	C.11	☑	C.11: Mandatory IF (SUMICS 31/14 OR SUMICS 31/15 AND LMP 2/26 (Secure Connections)) is
16/48	Write Authenticated Payload Timeout	[3] 7.3.92	C.11	☑	C.11: Mandatory IF (SUMICS 31/14 OR SUMICS 31/15 AND LMP 2/26 (Secure Connections)) is
16/49	Authenticated Payload Timeout Expired	[3] 7.7.75	C.11	☑	C.11: Mandatory IF (SUMICS 31/14 OR SUMICS 31/15 AND LMP 2/26 (Secure Connections)) is

Table 17: Testing

Item	Capability	Reference	Support	Status	Comment
17/1	Read Loopback Mode Command	7.6.1	O	☑	
17/2	Write Loopback Mode Command	7.6.2	O	☑	
17/3	Enable Device Under Test Mode Command	7.6.3	O	☑	
17/4	Write Simple Pairing Debug Mode Command	7.6.4	C.1	☑	C.1: Mandatory if (Core Spec 2.1 or later) is supported, otherwise Excluded.

Table 18: Connectionless Slave Broadcast

Item	Capability	Reference	Support	Status	Comment
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Table 19: Alignment with External Timing Source

Item	Capability	Reference	Support	Status	Comment
19/1	No Longer Used	-	Excluded	☑	

Low Energy Link Layer

Table 1: Controller States/Roles

Item	Capability	Reference	Support	Status	Comment
1/1	Advertising State	[1]: 4.4.2	C.1	☑	C.1: Mandatory to support at least one of (1/1 or 1/2 or 1/3).
1/2	Scanning State	[1]: 4.4.3	C.1	☑	C.1: Mandatory to support at least one of (1/1 or 1/2 or 1/3).
1/3	Initiating State	[1]: 4.4.4	C.1	☑	C.1: Mandatory to support at least one of (1/1 or 1/2 or 1/3).
1/4	Slave Role	[1]: 4.5.5	C.3	☑	C.3: Optional if 1/1 is supported, otherwise Excluded.
1/5	Master Role	[1]: 4.5.4	C.2	☑	C.2: Mandatory if 1/3 is supported, otherwise Excluded

Table 2: Device Addresses Types

Item	Capability	Reference	Support	Status	Comment
2/1	Public Address	[1]: 1.3	C.1	☑	C.1: IF SUMICS 21/9 "Core v4.0" OR SUMICS 21/13 "Core v4.1" is supported it is Mandatory to support at least one of (LL 2/1 "Public Address" OR LL 2/2 "Random Address"), otherwise it is Mandatory to support at least one of (LL 2/1 "Public Address" OR LL 2/3 "Static Address").
2/2	Random Address	[1]: 1.3	C.1	☑	C.1: IF SUMICS 21/9 "Core v4.0" OR SUMICS 21/13 "Core v4.1" is supported it is Mandatory to support at least one of (LL 2/1 "Public Address" OR LL 2/2 "Random Address"), otherwise it is Mandatory to support at least one of (LL 2/1 "Public Address" OR LL 2/3 "Static Address").
2/3	Static Address	[4] 1.3.2.1	C.1	☑	C.1: IF SUMICS 21/9 "Core v4.0" OR SUMICS 21/13 "Core v4.1" is supported it is Mandatory to support at least one of (LL 2/1 "Public Address" OR LL 2/2 "Random Address"), otherwise it is Mandatory to support at least one of (LL 2/1 "Public Address" OR LL 2/3 "Static Address").

Table 3: Protocol Advertising Features

Item	Capability	Reference	Support	Status	Comment
3/1	Non-Connectable Undirected Events	[1]: 4.4.2.6	C.1	☑	C.1: Mandatory if GAP 5/1 (Broadcaster) is supported; Optional if GAP 5/3 (Peripheral), otherwise Not Defined.
3/2	Connectable Undirected Events	[1]: 4.4.2.3	C.2	☑	C.2: Mandatory if GAP 5/3 (Peripheral) is supported, otherwise Not Defined.
3/3	Advertising Data	[1]: 4.4.2.3, 4.4.2.5, 4.4.2.6	M	☑	
3/4	Connectable Directed Events	[1]: 4.4.2.4	O	☑	
3/5	Scannable Undirected Events	[1]: 4.4.2.5	O	☑	
3/6	Sending Scan Responses	[1]: 4.4.2.3, 4.4.2.5	C.2	☑	C.2: Mandatory if GAP 5/3 (Peripheral) is supported, otherwise Not Defined.
3/7	Accepting Connection Requests	[1]: 4.4.2.3, 4.4.2.4	C.2	☑	C.2: Mandatory if GAP 5/3 (Peripheral) is supported, otherwise Not Defined.
3/8	Filtering Policies	[1]: 4.3.2	O	☑	

Table 4: Protocol Scanning Features

Prerequisite: LL 1/2

Item	Capability	Reference	Support	Status	Comment
4/1	Passive Scanning	[1]: 4.4.3.1	C.1	☑	C.1: Mandatory if GAP 5/2 (Observer) is supported; otherwise Optional

4/2	Receiving Advertising Data	[1]: 4.4.3.1, 4.4.3.2	M	<input checked="" type="checkbox"/>	
4/3	Active Scanning	[1]: 4.4.3.2	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory IF (GAP 5/4 (Central) AND NOT LL 4/1 (Passive Scanning)) is supported; otherwise Optional
4/4	Backoff Procedure	[1]: 4.4.3.2	M	<input checked="" type="checkbox"/>	
4/5	Filtering Policies	[1]: 4.3.3	M	<input checked="" type="checkbox"/>	

Table 5: Protocol Initiating Features

Prerequisite: LL 1/3

Item	Capability	Reference	Support	Status	Comment
5/1	Requesting Connections	[1]: 4.4.4	M	<input checked="" type="checkbox"/>	
5/2	Requesting to Directed Advertising	[1]: 4.4.4	M	<input checked="" type="checkbox"/>	
5/3	Initiator Filtering	[1]: 4.3.4	M	<input checked="" type="checkbox"/>	

Table 6: Protocol Slave Role Features

Prerequisite: LL 1/4

Item	Capability	Reference	Support	Status	Comment
6/1	Slave Transmissions	[1]: 4.5.1, 4.5.5, 4.5.6	M	<input checked="" type="checkbox"/>	
6/2	Acknowledgement Scheme	[1]: 4.5.9	M	<input checked="" type="checkbox"/>	
6/3	Unknown Response	[1]: 5.1.4, 2.4.2	M	<input checked="" type="checkbox"/>	
6/4	Responding in Feature Setup	[1]: 5.1.4	M	<input checked="" type="checkbox"/>	
6/5	Sending Data (Device supports data output from a Host)	[1]: 4.5.1, 4.5.6	M	<input checked="" type="checkbox"/>	
6/6	Receiving Data (Device supports data input to a Host)	[1]: 4.5.1, 4.5.6	M	<input checked="" type="checkbox"/>	
6/7	More Data	[1]: 4.5.6	O	<input checked="" type="checkbox"/>	
6/8	No Longer Used	-	-	<input checked="" type="checkbox"/>	
6/9	No Longer Used	-	-	<input checked="" type="checkbox"/>	
6/10	Accepting Parameter Update	[1]: 5.1.1	M	<input checked="" type="checkbox"/>	
6/11	Accepting Channel Map Update	[1]: 5.1.2	M	<input checked="" type="checkbox"/>	
6/13	Connection Control Timer	[1]: 5.2	M	<input checked="" type="checkbox"/>	
6/14	Sending Termination	[1]: 5.1.6	M	<input checked="" type="checkbox"/>	
6/15	Accepting Termination	[1]: 5.1.6	M	<input checked="" type="checkbox"/>	
6/16	Connection Supervision Timer	[1]: 4.5.2	M	<input checked="" type="checkbox"/>	
6/17				<input checked="" type="checkbox"/>	
6/18	Slave Pause Encryption	[1]: 5.1.3	O	<input checked="" type="checkbox"/>	
6/19	Slave Version Exchange	[1]: 5.1.5	M	<input checked="" type="checkbox"/>	
6/20	Slave listens to multiple packets per connection event	4.5.7	O	<input checked="" type="checkbox"/>	

Table 7: Protocol Master Role Features

Item	Capability	Reference	Support	Status	Comment
7/1	Master Transmissions	[1]: 4.5.1, 4.5.4, 4.5.6	M	<input checked="" type="checkbox"/>	
7/2	Acknowledgement Scheme	[1]: 4.5.9	M	<input checked="" type="checkbox"/>	
7/3	Unknown Responses	[1]: 5.1.4, 2.4.2	M	<input checked="" type="checkbox"/>	
7/4	Requesting Feature Setup	[1]: 5.1.4	M	<input checked="" type="checkbox"/>	
7/5	Sending Data (Device supports data output from a Host)	[1]: 4.5.1, 4.5.6	M	<input checked="" type="checkbox"/>	
7/6	Receiving Data (Device supports data input to a Host)	[1]: 4.5.1, 4.5.6	M	<input checked="" type="checkbox"/>	
7/7	More Data	[1]: 4.5.6	O	<input checked="" type="checkbox"/>	
7/8	No Longer Used	-	-	<input checked="" type="checkbox"/>	

7/9	No Longer Used	-	-	✓
7/10	Requesting Parameter Update	[1]: 5.1.1	M	✓
7/11	Requesting Channel Map Update	[1]: 5.1.2	M	✓
7/13	Connection Control Timer	[1]: 5.2	M	✓
7/14	Sending Termination	[1]: 5.1.6	M	✓
7/15	Accepting Termination	[1]: 5.1.6	M	✓
7/16	Connection Supervision Timer	[1]: 4.5.2	M	✓
7/18				✓
7/19	Master Pause Encryption	[1]: 5.1.3	O	✓
7/20	Master Version Exchange	[1]: 5.1.5	M	✓

Table 8: Physical Channels

Item	Capability	Reference	Support	Status	Comment
8/1	Data channels (channel index 0 to 36)	[1]:1.4	C.1	✓	C.1: Mandatory if (1/4 or 1/5) is supported, otherwise Excluded.
8/2	Advertising channels (at least one of channel index 37, 38, 39)	[1]:1.4.1	M	✓	
8/3	Support Data channel selection algorithm	[1]: 4.5.8	C.1	✓	C.1: Mandatory if (1/4 or 1/5) is supported, otherwise Excluded.

Table 9: Supported Features

Item	Capability	Reference	Support	Status	Comment
9/1	LE Encryption	[1] 4.6.1	C.1	✓	C.1: Mandatory if (6/12 and 6/18) or (7/12 and 7/19) are supported, otherwise Excluded.
9/3	Connection Parameter Request Procedure	[1] 4.6.2	C.2	✓	C.2: Excluded IF SUMICS 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.
9/4	Extended Reject Indication	[1] 4.6.3	C.3	✓	C.3: Excluded IF SUMICS 21/9 "Core v4.0" is supported, otherwise Mandatory IF LL 9/3 "Connection Parameter Request Procedure" OR LL 9/14 "Connection CTE Request" OR LL 9/15 "Connection CTE Response" is supported, otherwise Optional.
9/5	Slave-initiated Features Exchange	[1] 4.6.4	C.4	✓	C.4: Excluded IF SUMICS 21/9 "Core v4.0" is supported, otherwise Optional.

Table 10: Scatternet Capabilities

Item	Capability	Reference	Support	Status	Comment
10/1	Act as LE Master and LE Slave at the same time	[3] 1.1.1	O	✓	
10/2	Act as LE Slave to more than one LE Master at the same time.	[3] 1.1.1	O	✓	

Table 11: Protocol Synchronizing Features

Prerequisite: LL 1/3a "Synchronized State"

Item	Capability	Reference	Support	Status	Comment
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Low Energy RF PHY

Table 1: Bluetooth LE RF Capabilities

Item	Capability	Reference	Support	Status	Comment
1/1	LE Transmitter (Non-connectable, Broadcaster)	[2], 3	C.1	✓	C.1: Mandatory to support at least one of these capabilities.
1/2	LE Receiver (Non-connectable, Observer)	[2], 4	C.1	✓	C.1: Mandatory to support at least one of these capabilities.
1/3	LE Transceiver (Connectable, Peripheral/Central)	[2], 3, 4	C.1	✓	C.1: Mandatory to support at least one of these capabilities.

Table 2: Bluetooth LE Test Interface Capabilities

Item	Capability	Reference	Support	Status	Comment
2/1	HCI Test Interface	[3], 2	C.1	☑	C.1: At least one of the capabilities shall be supported.
2/2	UART Test Interface	[3], 3	C.1	☑	C.1: At least one of the capabilities shall be supported.

4.0 Host Controller Interface

Table 1: Generic Events

Item	Capability	Reference	Support	Status	Comment
1/1	Command Complete Event	7.7.14	M	☑	
1/1d	Support all LE controller commands	3.3, 7.7	O	☑	
1/2	Command Status Event	7.7.15	M	☑	
1/3	Hardware Error Event	7.7.15	O	☑	

Table 1a: Roles

Item	Capability	Reference	Support	Status	Comment
1a/4	LE Controller	1	C.1	☑	C.1: It is mandatory to support at least one of the defined roles.

Table 2: Device Setup

Item	Capability	Reference	Support	Status	Comment
2/1	Reset Command	7.3.2	M	☑	

Table 3: Controller Flow Control

Item	Capability	Reference	Support	Status	Comment
3/5	LE Read Buffer Size Command	7.8.2	M	☑	

Table 4: Controller Information

Item	Capability	Reference	Support	Status	Comment
4/1	Read Local Version Information Command	7.4.1	M	☑	
4/2	Read Local Supported Commands Command	7.4.2	M	☑	
4/3	Read Local Supported Features Command	7.4.3	M	☑	
4/5	Read BD_ADDR Command	7.4.6	M	☑	
4/8	LE Read Local Supported Features Command	7.8.3	M	☑	
4/9	LE Read Support States	[1] 7.8.27	C.2	☑	C.2: Mandatory IF SUMICS 21/13 (Core 4.1) OR SUMICS 21/14 (Core 4.2) is supported; Optional IF SUMICS 21/9 (Core 4.0) is supported.

Table 5: Controller Configuration

Item	Capability	Reference	Support	Status	Comment
5/13	LE Set Random Address Command	7.8.5	C.1	☑	C.1: Mandatory if (LL 1/1 or 1/3 or 4/3) is supported, otherwise Optional.
5/14	LE Read White List Size Command	7.8.15	M	☑	
5/15	LE Add Device to White List Command	7.8.17	M	☑	
5/16	LE Clear White List Command	7.8.16	M	☑	

Table 6: Device Discovery

Item	Capability	Reference	Support	Status	Comment
6/15	LE Set Advertise Enable Command	7.8.10	C.4	<input checked="" type="checkbox"/>	C.4: Mandatory if (LL 1/1) is supported, otherwise Optional.
6/16	LE Set Advertising Parameters Command	7.8.6	C.4	<input checked="" type="checkbox"/>	C.4: Mandatory if (LL 1/1) is supported, otherwise Optional.
6/17	LE Set Scan Response Data Command	7.8.9	C.5	<input checked="" type="checkbox"/>	C.5: Mandatory if (LL 3/2 or 3/5) is supported, otherwise Optional.
6/18	LE Set Advertising Data Command	7.8.8	C.7	<input checked="" type="checkbox"/>	C.7: Mandatory if (LL 3/3) is supported, otherwise Optional.
6/19	LE Advertising Report Event	7.7.65.2	C.6	<input checked="" type="checkbox"/>	C.6: Mandatory if (LL 1/2) is supported, otherwise Optional.
6/20	LE Set Scan Enable Command	7.8.12	C.6	<input checked="" type="checkbox"/>	C.6: Mandatory if (LL 1/2) is supported, otherwise Optional.
6/21	LE Set Scan Parameters Command	7.8.11	C.6	<input checked="" type="checkbox"/>	C.6: Mandatory if (LL 1/2) is supported, otherwise Optional.
6/22	LE Read Advertising Channel TXPower Command	7.8.7	C.4	<input checked="" type="checkbox"/>	C.4: Mandatory if (LL 1/1) is supported, otherwise Optional.

Table 7: Connection Setup

Item	Capability	Reference	Support	Status	Comment
7/5	Disconnect Command	7.1.6	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if (LL 3/4 or 3/5) is supported, otherwise Optional.
7/23	LE Create Connection Command	7.8.13	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if LL 1/5 and LL 3/3 are supported, otherwise Excluded.
7/24	LE Create Connection Cancel Command	7.8.14	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if LL 1/5 and LL 3/3 are supported, otherwise Excluded.
7/25	LE Connection Complete Event	7.7.65.1	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if (LL 3/4 or 3/5) is supported, otherwise Optional.
7/26	Disconnection Complete Event	7.7.5	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if (LL 3/4 or 3/5) is supported, otherwise Optional.
7/27	LE Connection Update Command	7.8.19	C.8	<input checked="" type="checkbox"/>	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.
7/28	LE Connection Update Complete Event	7.7.65.3	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if (LL 3/4 or 3/5) is supported, otherwise Optional.
7/35	LE Remote Connection Parameter Request Reply Command	[1] 7.8.32	C.7	<input checked="" type="checkbox"/>	C.7: Mandatory IF (LL 6/10b (Accepting Connection Parameter Request) OR LL 7/10b (Accepting Connection Parameter Request)) is supported, otherwise Excluded.
7/36	LE Remote Connection Parameter Request Negative Reply Command	[1] 7.8.33	C.7	<input checked="" type="checkbox"/>	C.7: Mandatory IF (LL 6/10b (Accepting Connection Parameter Request) OR LL 7/10b (Accepting Connection Parameter Request)) is supported, otherwise Excluded.
7/37	LE Remote Connection Parameter Request Event	[1] 7.7.65.6	C.7	<input checked="" type="checkbox"/>	C.7: Mandatory IF (LL 6/10b (Accepting Connection Parameter Request) OR LL 7/10b (Accepting Connection Parameter Request)) is supported, otherwise Excluded.

Table 8: Remote Information

Item	Capability	Reference	Support	Status	Comment
8/5	Read Remote Version Information Command	7.1.23	C.4	<input checked="" type="checkbox"/>	C.4: Mandatory if (LL 1/4 or 1/5) is supported, otherwise Optional.
8/6	LE Read Remote Features Command	7.8.22	C.3	<input checked="" type="checkbox"/>	C.3: Mandatory if (LL 1/5) is supported, otherwise Optional.
8/7	LE Read Remote Features Complete Event	7.7.65.4	C.3	<input checked="" type="checkbox"/>	C.3: Mandatory if (LL 1/5) is supported, otherwise Optional.
8/8	Read Remote Version Information Complete Event	7.7.12	C.4	<input checked="" type="checkbox"/>	C.4: Mandatory if (LL 1/4 or 1/5) is supported, otherwise Optional.

Table 10: Connection State

Prerequisite: LL 9/6

Item	Capability	Reference	Support	Status	Comment
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Table 13: Physical Links

Item	Capability	Reference	Support	Status	Comment
13/8	LE Set Host Channel Classification Command	7.8.19	C.5	<input checked="" type="checkbox"/>	C.5: Mandatory if (LL 1/5) is supported, otherwise Optional.

Table 14: Host Flow Control

Item	Capability	Reference	Support	Status	Comment
14/1	Host Buffer Size Command	7.3.39	O	☑	
14/2	Set Event Mask Command	7.3.1	M	☑	
14/4	Set Controller To Host Flow Control Command	7.3.38	O	☑	
14/5	Host Number Of Completed Packets Command	7.3.40	O	☑	
14/8	Set Event Mask Page 2 Command	[1] 7.3.69	C.3	☑	C.3: Mandatory IF (SUMICS 21/13 "v4.1" OR SUMICS 21/14 "v4.2" OR SUMICS 21/16 "v5.0" OR SUMICS 21/18 "v5.1") AND (LL 6/21 "LL Authenticated Payload Timeout Timer – Slave" OR LL 7/21 "LL Authenticated Payload Timeout Timer – Master") are supported, otherwise Optional IF SUMICS 21/13 "v4.1" OR SUMICS 21/14 "v4.2" OR SUMICS 21/16 "v5.0" OR SUMICS 21/18 "v5.1") is supported, otherwise Excluded.
14/12	Number of Completed Packets Event	7.7.26	C.1	☑	C.1: Mandatory if (LL 1/4 OR LL 1/5) is supported otherwise Optional
14/13	Data Buffer Overflow Event	7.7.26	O	☑	
14/14	LE Set Event Mask Command	7.8.1	M	☑	

Table 15: Link Information

Item	Capability	Reference	Support	Status	Comment
15/2	Read Transmit Power Level Command	7.3.35	C.4	☑	C.4: Mandatory if (LL 1/4 or 1/5) is supported, otherwise Optional.
15/4	Read RSSI Command	7.5.4	C.4	☑	C.4: Mandatory if (LL 1/4 or 1/5) is supported, otherwise Optional.
15/8	LE Read Channel Map Command	7.8.20	C.4	☑	C.4: Mandatory if (LL 1/4 or 1/5) is supported, otherwise Optional.

Table 16: Authentication and Encryption

Item	Capability	Reference	Support	Status	Comment
16/32	LE Encrypt Command	7.8.22	C.10	☑	C.10: Mandatory if (LL 9/1) is supported, otherwise Optional.
16/33	LE Rand Command	7.8.23	C.10	☑	C.10: Mandatory if (LL 9/1) is supported, otherwise Optional.
16/34	LE Long Term Key Request Reply Command	[1] 7.8.25	C.18	☑	C.18: Mandatory IF LL 9/1 "LL Encryption" AND LL 1/4 "Slave Role" are supported, otherwise Excluded.
16/35	LE Start Encryption Command	[1] 7.8.24	C.18	☑	C.18: Mandatory IF LL 9/1 "LL Encryption" AND LL 1/4 "Slave Role" are supported, otherwise Excluded.
16/36	LE Long Term Key Request Event	[1] 7.7.65.5	C.18	☑	C.18: Mandatory IF LL 9/1 "LL Encryption" AND LL 1/4 "Slave Role" are supported, otherwise Excluded.
16/37	Encryption Change Event	7.7.8	C.10	☑	C.10: Mandatory if (LL 9/1) is supported, otherwise Optional.
16/38	Encryption Key Refresh Complete Event	7.7.39	C.10	☑	C.10: Mandatory if (LL 9/1) is supported, otherwise Optional.
16/39	LE Long Term Key Request Negative Reply Command	[1] 7.8.26	C.18	☑	C.18: Mandatory IF LL 9/1 "LL Encryption" AND LL 1/4 "Slave Role" are supported, otherwise Excluded.
16/47	Read Authenticated	[3] 7.3.93	C.12	☑	C.12: Mandatory IF (SUMICS 31/14-19 AND ((LL 1/4 (Slave Role) AND LL 6/21 (LL

	Payload Timeout				Authenticated Payload Timeout) OR (LL 1/5 (Master Role) AND LL 7/21 (LL Authenticated Payload Timeout)) is supported, otherwise Excluded.
16/48	Write Authenticated Payload Timeout	[3] 7.3.92	C.12	<input checked="" type="checkbox"/>	C.12: Mandatory IF (SUMICS 31/14-19 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.
16/49	Item No Longer Used	N/A	N/A	<input checked="" type="checkbox"/>	

Table 17: Testing

Item	Capability	Reference	Support	Status	Comment
17/7	LE Receiver Test Command	7.8.28	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if (LL 1/2 or 1/3 or 3/2 or 3/4 or 3/5) is supported, otherwise Optional.
17/8	LE Transmitter Test Command	7.8.29	C.3	<input checked="" type="checkbox"/>	C.3: Mandatory if (LL 1/1 or 1/3 or 4/3) is supported, otherwise Optional.
17/9	LE Test End Command	7.8.30	M	<input checked="" type="checkbox"/>	