



Project Details

Project Name	Bluetooth Low Energy Data Transmission Module (HM-BT2204)
Product Type	End Product
TCRL Version:	TCRL 2019-2
Referenced Qualified Design(s)	
Previously Qualified Design Used in this Qualification(s)	146950 147971
Listing Date	2020-09-09
Declaration ID	D051598

Product Listing(s)

Name	Website	Category	Publish Date	Model Number	Description
HOPERF Bluetooth Low Energy Data Transmission Module		Unique Products	9/9/2020 12:00:00 AM	HM-BT2204	Bluetooth Low Energy Data Transmission Module
HOPERF Bluetooth Low Energy Data Transmission Module		Unique Products	9/9/2020 12:00:00 AM	HM-BT2201	Bluetooth Low Energy Data Transmission Module
HOPERF Bluetooth Low Energy Data Transmission Module		Unique Products	9/9/2020 12:00:00 AM	HM-BT2202	Bluetooth Low Energy Data Transmission Module
HOPERF Bluetooth Low Energy Data Transmission Module		Unique Products	9/9/2020 12:00:00 AM	HM-BT2206	Bluetooth Low Energy Data Transmission Module
HOPERF Bluetooth Low Energy Data Transmission Module		Unique Products	9/9/2020 12:00:00 AM	HM-BT2208	Bluetooth Low Energy Data Transmission Module
HOPERF Bluetooth Low Energy Data Transmission Module		Unique Products	9/9/2020 12:00:00 AM	HM-BT2210	Bluetooth Low Energy Data Transmission Module

Member Company	WUXI HOPE SENSOR TECHNOLOGY CO., LTD	
Declaring Member Contact / Listing Contact Person	Name	Xiaojian M
	Address	No.5, Guanshan Road, Xin 'an Street, Xinwu District, Wuxi, Jiangsu, China
	City	
	State	
	Country	China
	Postal Code	

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 WUXI HOPE SENSOR TECHNOLOGY 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:

Xiaojian Mi

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:

- (a) if sold, is sold as a single item (consisting of software, firmware, drivers, applications, hardware, or a combination of some or all of the foregoing);
- (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.

3. REPRESENTATIONS AND ACKNOWLEDGEMENTS.

- (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.

(e) You acknowledge and agree that a product is not a Bluetooth Product under the Bluetooth Trademark License Agreement and you and Member will not market or distribute any product that uses any Bluetooth® trademark on it or in connection with any related marketing, promotion, or advertising unless you or Member have been notified by Bluetooth SIG that it has completed the Bluetooth Qualification Process (e.g., via a confirmation screen or email from Bluetooth SIG expressly stating that the Product has completed the Bluetooth Qualification Process).

4. FEES AND PAYMENT TERMS.

(a) Bluetooth SIG may charge you fees in connection with your use of the Launch Studio Tool and Submissions (e.g., for declaration IDs, etc.). The type and amount of fees may change at any time. You agree that Member will pay all fees required by Bluetooth SIG in accordance with the instructions provided within the Launch Studio Tool. Bluetooth SIG may accept credit card payments or, if offered within the Launch Studio Tool, may permit you to pay fees offline. If you choose to pay offline, you will pay the invoice issued to you by Bluetooth SIG, according to the terms stated in the invoice. If you provide credit card payment information, you agree that Bluetooth SIG or its third party payment processor may charge your credit card immediately. You acknowledge that, until Bluetooth SIG has processed your payment and received the funds: you will not be entitled to receive or be permitted to use any item purchased (e.g., declaration ID). Except as set forth in Section 4(c) below, all sales are final and all payments are non-refundable.

(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.

(c) If you have purchased declaration IDs and have not used them and you would like to request a refund, you may click this [contact us](#) link and submit a request to return the declaration IDs. All refunds processed by Bluetooth SIG will be made less a 10% processing fee. Declaration IDs purchased from Bluetooth SIG are non-transferable and may not be transferred to another member.

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.

Summary ICS

Table 21: Controller Core Configuration

Item	Capability	Reference	Support	Status	Comment
21/20	Core Specification Version 5.2. Adopted 31 December 2019	Core 5.2	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory to support only one Controller Core Specification Version. IF 11/1 “End Product” OR 11/3 “Controller Subsystem” is Supported, Mandatory to Support only one Controller Core Spec version IF (11/4 “Component tested” OR 11/5 “Component non-tested”) AND (BB OR LL OR LMP OR RF OR RF-PHY) is Supported, otherwise Excluded.

Table 22: EDR Features

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 31: Host Core Specification

Item	Capability	Reference	Support	Status	Comment
31/21	Core Specification Version 5.2. Adopted 31 December 2019	Core 5.2	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory to support one and only one Host Core Specification Version. IF 11/1 “End Product” OR 11/2 “Host Subsystem” is Supported, Mandatory to Support only one Host Core Spec version IF (11/4 “Component tested” OR 11/5 “Component non-tested”) AND (ATT OR GAP OR GATT OR L2CAP OR SDP OR SM) is Supported, otherwise Excluded.

Table 34: LE Host Specification Parts

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 41: AMP Controller Core Specification

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 42: AMP Controller Specification Parts

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 51: Low Energy Controller Configuration

Item	Capability	Reference	Support	Status	Comment
51/1	Low Energy Controller	Core 4.0 or Later	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
52/1	Low Energy Host	Core 4.0 or Later	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory if PROD 3/3 or 3/4 or 3/5 is supported, otherwise Excluded.

Product Type

Table 1: Product Types

Item	Capability	Reference	Support	Status	Comment
1/1	End Product	Vol. 0 Part B	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory to support one and only one Product Type.

Table 2: Controller Core Configuration

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Item	Capability	Reference	Support	Status	Comment
2/4	LE Controller	Vol. 0 Part B	C.1	☑	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	Reference	Support	Status	Comment
3/3	LE Host	Vol. 0 Part B	C.1	☑	C.1: Mandatory to support only one Host Configuration. Optional if 1/2 or 1/3 is Supported.

Attribute Protocol

Table 1: Role

Item	Capability	Reference	Support	Status	Comment
1/1	Attribute Protocol Client	[1] ATT 1.1; [2] GAP 12	O	☑	
1/2	Attribute Protocol Server	[1] ATT 1.1, [2] GAP 12	M	☑	

Table 2: Transport Requirements

Item	Capability	Reference	Support	Status	Comment
2/2	Attribute Protocol Supported over LE	[1] ATT 1.3	C.2	☑	C.2: Mandatory IF (SUMICS 12/7 “Bluetooth Low Energy Core Host Configuration” OR SUMICS 12/9 “Bluetooth Basic Rate and Low Energy Combined Core Host Configuration”), otherwise Excluded.

Table 3: Attribute Protocol Client Messages

Prerequisite: 1/1 “Attribute Protocol Client”

Item	Capability	Reference	Support	Status	Comment
3/1	Attribute Error Response	[1] ATT, 3.4.1.1	M	☑	
3/2	Exchange MTU Request	[1] ATT, 3.4.2.1	C.11	☑	C.11: Excluded IF (ATT 2/1 “Attribute Protocol Supported over BR/EDR (L2CAP fixed channel support)” OR ATT 2/3 “Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)”) is supported, Mandatory IF GATT 3/1 “Exchange MTU” is supported, otherwise Optional.
3/3	Exchange MTU Response	[1] ATT, 3.4.2.2	C.1	☑	C.1: Excluded IF (ATT 2/1 “Attribute Protocol Supported over BR/EDR (L2CAP fixed channel support)” OR ATT 2/3 “Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)”) is supported, Mandatory IF ATT 3/2 “Exchange MTU Request” is supported, otherwise Excluded.
3/4	Find Information Request	[1] ATT, 3.4.3.1	C.13	☑	C.13: Mandatory IF GATT 3/7 “Discover All Characteristic Descriptors” is supported, otherwise Optional.
3/5	Find Information Response	[1] ATT, 3.4.3.2	C.9	☑	C.9: Mandatory IF ATT 3/4 “Find Information Request” is supported, otherwise Excluded.
3/6	Find by Type Value Request	[1] ATT, 3.4.4.3	C.12	☑	C.12: Mandatory IF GATT 3/3 “Discover Primary Services by Service UUID” is supported, otherwise Optional.
3/7	Find by Type Value Response	[1] ATT, 3.4.4.4	C.2	☑	C.2: Mandatory IF ATT 3/6 “Find by Type Value Request” is supported, otherwise Excluded.
3/8	Read by Type Request	[1] ATT, 3.4.4.1	C.15	☑	C.15: Mandatory IF GATT 3/9 “Read Using Characteristic UUID” is supported, otherwise Optional.
3/9	Read by Type Response	[1] ATT, 3.4.4.2	C.3	☑	C.3: Mandatory IF ATT 3/8 “Read by Type Request” is supported, otherwise Excluded.
3/10	Read Request	[1] ATT, 3.4.4.3	C.14	☑	C.14: Mandatory IF GATT 3/8 “Read Characteristic Value” OR GATT 3/19 “Read Characteristic Descriptors” is supported, otherwise Optional.
3/11	Read Response	[1] ATT, 3.4.4.4	C.10	☑	C.10: Mandatory IF ATT 3/10 “Read Request” is supported, otherwise Excluded.
3/12	Read Blob Request	[1] ATT, 3.4.4.5	C.16	☑	C.16: Mandatory IF GATT 3/10 “Read Long Characteristic Values” OR GATT 3/20 “Read Long Characteristic Descriptors” is supported, otherwise Optional.
3/13	Read Blob	[1] ATT,	C.4	☑	C.4: Mandatory IF ATT 3/12 “Read Blob Request” is supported, otherwise Excluded.

	Response	3.4.4.6			
3/14	Read Multiple Request	[1] ATT, 3.4.4.7	C.17	☑	C.17: Mandatory IF GATT 3/11 "Read Multiple Characteristic Values" is supported, otherwise Optional.
3/15	Read Multiple Response	[1] ATT, 3.4.4.8	C.5	☑	C.5: Mandatory IF ATT 3/14 "Read Multiple Request" is supported, otherwise Excluded.
3/16	Read by Group Type Request	[1] ATT, 3.4.4.9	O	☑	
3/17	Read by Group Type Response	[1] ATT, 3.4.4.10	C.6	☑	C.6: Mandatory IF ATT 3/16 "Read by Group Type Request" is supported, otherwise Excluded.
3/18	Write Request	[1] ATT, 3.4.5.1	C.20	☑	C.20: Mandatory IF GATT 3/14 "Write Characteristic Value" OR GATT 3/21 "Write Characteristic Descriptors" is supported, otherwise Optional.
3/19	Write Response	[1] ATT, 3.4.5.2	C.7	☑	C.7: Mandatory IF ATT 3/18 "Write Request" is supported, otherwise Excluded.
3/20	Write Command	[1] ATT, 3.4.5.3	C.18	☑	C.18: Mandatory IF GATT 3/12 "Write without Response" is supported, otherwise Optional.
3/22	Prepare Write Request	[1] ATT, 3.4.6.1	C.21	☑	C.21: Mandatory IF GATT 3/15 "Write Long Characteristic Values" OR GATT 3/16 "Characteristic Value Reliable Writes" OR GATT 3/22 "Write Long Characteristic Descriptors" is supported, otherwise Optional.
3/23	Prepare Write Response	[1] ATT, 3.4.6.2	C.8	☑	C.8: Mandatory IF ATT 3/22 "Prepare Write Request" is supported, otherwise Excluded.
3/24	Execute Write Request	[1] ATT, 3.4.6.3	C.8	☑	C.8: Mandatory IF ATT 3/22 "Prepare Write Request" is supported, otherwise Excluded.
3/25	Execute Write Response	[1] ATT, 3.4.6.4	C.8	☑	C.8: Mandatory IF ATT 3/22 "Prepare Write Request" is supported, otherwise Excluded.
3/26	Handle Value Notification	[1] ATT, 3.4.7.1	C.22	☑	C.22: Mandatory IF GATT 3/17 "Notifications" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSM supported)" is supported, otherwise Optional.
3/27	Handle-Value Indication	[1] ATT, 3.4.7.2	C.23	☑	C.23: Mandatory IF GATT 3/18 "Indications" is supported, otherwise Optional.
3/28	Handle Value Confirmation	[1] ATT, 3.4.7.3	C.24	☑	C.24: Mandatory IF 3/27 "Handle-Value Indication" is supported, otherwise Excluded.
3/29	Client Timeout	[1] ATT, 3.3.3	C.24	☑	C.24: Mandatory IF 3/27 "Handle-Value Indication" is supported, otherwise Excluded.

Table 4: Attribute Protocol Server Messages

Prerequisite: 1/2 "Attribute Protocol Server"

Item	Capability	Reference	Support	Status	Comment
4/1	Attribute Error Response	ATT, 3.4.1.1	M	☑	
4/2	Exchange MTU Request	ATT, 3.4.2.1	C.18	☑	C.18: Excluded IF (ATT 2/1 "Attribute Protocol Supported over BR/EDR (L2CAP fixed channel support)" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSM supported)"), otherwise Mandatory.
4/3	Exchange MTU Response	ATT, 3.4.2.2	C.18	☑	C.18: Excluded IF (ATT 2/1 "Attribute Protocol Supported over BR/EDR (L2CAP fixed channel support)" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSM supported)"), otherwise Mandatory.
4/4	Find Information Request	ATT, 3.4.3.1	M	☑	
4/5	Find Information Response	ATT, 3.4.3.2	M	☑	
4/6	Find by Type Value Request	ATT, 3.4.4.3	M	☑	
4/7	Find by Type Value Response	ATT, 3.4.4.4	M	☑	
4/8	Read by Type Request	ATT,	M		

		3.4.4.1		✓	
4/9	Read by Type Response	ATT, 3.4.4.2	M	✓	
4/10	Read Request	ATT, 3.4.4.3	M	✓	
4/11	Read Response	ATT, 3.4.4.4	M	✓	
4/12	Read Blob Request	ATT, 3.4.4.5	C.6	✓	C.6: Mandatory IF (GATT 4/10 "Read Long Characteristic Values" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)") is supported, otherwise Optional.
4/13	Read Blob Response	ATT, 3.4.4.6	C.1	✓	C.1: Mandatory IF 4/12 "Read Blob Request" is supported, otherwise Excluded.
4/14	Read Multiple Request	ATT, 3.4.4.7	C.7	✓	C.7: Mandatory IF GATT 4/11 "Read Multiple Characteristic Values" is supported, otherwise Optional.
4/15	Read Multiple Response	ATT, 3.4.4.8	C.2	✓	C.2: Mandatory IF 4/14 "Read Multiple Request" is supported, otherwise Excluded.
4/16	Read by Group Type Request	ATT, 3.4.4.9	M	✓	
4/17	Read by Group Type Response	ATT, 3.4.4.10	M	✓	
4/18	Write Request	ATT, 3.4.5.1	C.10	✓	C.10: Mandatory IF (GATT 4/14 "Write Characteristic Value" OR GATT 4/21 "Write Characteristic Descriptors" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)") is supported, otherwise Optional.
4/19	Write Response	ATT, 3.4.5.2	C.3	✓	C.3: Mandatory IF 4/18 "Write Request" is supported, otherwise Excluded.
4/20	Write Command	ATT, 3.4.5.3	C.8	✓	C.8: Mandatory IF (GATT 4/12 "Write Without Response" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)") is supported, otherwise Optional.
4/22	Prepare Write Request	ATT, 3.4.6.1	C.11	✓	C.11: Mandatory IF (GATT 4/15 "Write Long Characteristic Values" OR GATT 4/16 "Characteristic Value Reliable Writes" OR GATT 4/22 "Write Long Characteristic Descriptors" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)") is supported, otherwise Optional.
4/23	Prepare Write Response	ATT, 3.4.6.2	C.4	✓	C.4: Mandatory IF 4/22 "Prepare Write Request" is supported, otherwise Excluded.
4/24	Execute Write Request	ATT, 3.4.6.3	C.4	✓	C.4: Mandatory IF 4/22 "Prepare Write Request" is supported, otherwise Excluded.
4/25	Execute Write Response	ATT, 3.4.6.4	C.4	✓	C.4: Mandatory IF 4/22 "Prepare Write Request" is supported, otherwise Excluded.
4/26	Handle Value Notification	ATT, 3.4.7.1	C.12	✓	C.12: Mandatory IF (GATT 4/17 "GATT Server Notifications" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)") is supported, otherwise Optional.
4/27	Handle-Value Indication	ATT, 3.4.7.2	C.13	✓	C.13: Mandatory IF GATT 4/18 "Indications" is supported, otherwise Optional.
4/28	Handle Value Confirmation	ATT, 3.4.7.3	C.5	✓	C.5: Mandatory IF 4/27 "Handle-Value Indication" is supported, otherwise Excluded.
4/29	Server Timeout	ATT, 3.3.3	C.5	✓	C.5: Mandatory IF 4/27 "Handle-Value Indication" is supported, otherwise Excluded.
4/30	Execute Write Request with no pending prepared write values	ATT, 3.4.6.3	C.14	✓	C.14: Mandatory IF (GATT 4/25 "Execute Write Request with empty queue" OR 4/22 "Prepare Write Request") AND (SUMICS 31/19 "Core Spec Version 5.0") is supported, otherwise Optional.

Table 5: Attribute Protocol Transport Security

Item	Capability	Reference	Support	Status	Comment
5/2	LE Security Mode 1	[2] GAP 10.2.1	C.2	✓	C.2: Optional to support if 2/2 "Attribute Protocol Server", otherwise Excluded.
5/4	LE Authentication Procedure	[2] GAP 10.3	C.2	✓	C.2: Optional to support if 2/2 "Attribute Protocol Server", otherwise Excluded.
5/7	LE Authorization Procedure	[2] GAP 10.5	C.2	✓	C.2: Optional to support if 2/2 "Attribute Protocol Server", otherwise Excluded.

Generic Access Profile

Table 0: Device Configuration

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

0/2	LE	[3] or [7] 1.1	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory if (PROD 3/3) is Supported, otherwise Excluded.
-----	----	----------------	-----	-------------------------------------	--

Table 1: Modes

Prerequisite: GAP 0/1 “BR/EDR” OR GAP 0/3 “BR/EDR/LE”

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 2: Security Aspects

Prerequisite: GAP 0/1 “BR/EDR” OR GAP 0/3 “BR/EDR/LE”

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 3: Idle Mode Procedures

Prerequisite: GAP 0/1 “BR/EDR” OR GAP 0/3 “BR/EDR/LE”

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 4: Establishment Procedures

Prerequisite: GAP 0/1 “BR/EDR” OR GAP 0/3 “BR/EDR/LE”

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 5: LE Roles

Prerequisite: GAP 0/2

Item	Capability	Reference	Support	Status	Comment
5/1	Broadcaster	[3] or [7] 2.2.2	C.1	<input checked="" type="checkbox"/>	C.1: It is Mandatory to support at least one of the defined roles.
5/2	Observer	[3] or [7] 2.2.2	C.1	<input checked="" type="checkbox"/>	C.1: It is Mandatory to support at least one of the defined roles.
5/3	Peripheral	[3] or [7] 2.2.2	C.1	<input checked="" type="checkbox"/>	C.1: It is Mandatory to support at least one of the defined roles.
5/4	Central	[3] or [7] 2.2.2	C.1	<input checked="" type="checkbox"/>	C.1: It is Mandatory to support at least one of the defined roles.

Table 6: Broadcaster Physical Layer

Prerequisite: GAP 38/1 or GAP 5/1

Item	Capability	Reference	Support	Status	Comment
6/1	Transmitter	[3] or [7] 2.2.2	M	<input checked="" type="checkbox"/>	
6/2	Receiver	[3] or [7] 2.2.2	O	<input checked="" type="checkbox"/>	

Table 7: Broadcaster Link Layer States

Prerequisite: GAP 38/1 or GAP 5/1

Item	Capability	Reference	Support	Status	Comment
7/1	Standby	[3] or [7] 2.2.2	M	<input checked="" type="checkbox"/>	
7/2	Advertising	[3] or [7] 2.2.2	M	<input checked="" type="checkbox"/>	

Table 8: Broadcaster Link Layer Advertising Event Types

Prerequisite: GAP 38/1 or GAP 5/1

Item	Capability	Reference	Support	Status	Comment
8/1	Non-Connectable Undirected Event	[3] or [7] 2.2.2	M	<input checked="" type="checkbox"/>	
8/2	Scannable Undirected Event	[3] or [7] 2.2.2	O	<input checked="" type="checkbox"/>	

Table 8a: Broadcaster Link Layer Advertising Data Types

Prerequisite: GAP 38/1 or GAP 5/1

Item	Capability	Reference	Support	Status	Comment
8a/1	AD Type – Service UUID	[3] 11.1.1, [4] 1.1	O	<input checked="" type="checkbox"/>	
8a/2	AD Type – Local Name	[3] 11.1.2, [4] 1.2	O	<input checked="" type="checkbox"/>	
8a/3	AD Type – Flags	[3] 11.1.3, [4] 1.3	O	<input checked="" type="checkbox"/>	

8a/4	AD Type – Manufacturer Specific	[3] 11.1.4, [4] 1.4	O	✓	
8a/5	AD Type – TXPower Level	[3] 11.1.5, [4] 1.5	O	✓	
8a/6	AD Type – Security Manager Out of Band (OOB)	[3] 11.1.6, [4] 1.6	C.1	✓	C.1: Optional IF SM2/4 “OOB supported” is supported, otherwise Excluded.
8a/7	AD Type – Security Manager TK	[3] 11.1.7, [4] 1.7	O	✓	
8a/8	AD Type – Slave Connection	[3] 11.1.8, [4] 1.8	O	✓	
8a/9	AD Type - Service Solicitation	[3] 11.1.9, [4] 1.9	O	✓	
8a/10	AD Type – Service Data	[3] 11.1.10, [4] 1.10	O	✓	
8a/11	AD Type – Appearance	[4] 1.1.12	O	✓	
8a/12	AD Type – Public Target Address	[4] 1.1.13	O	✓	
8a/13	AD Type – Random Target Address	[4] 1.1.14	O	✓	
8a/14	AD Type – Advertising Interval	[4] 1.1.15	O	✓	
8a/15	AD Type – LE Bluetooth Device Address	[4] 1.1.16	O	✓	
8a/16	AD Type – LE Role	[4] 1.1.17	O	✓	

Table 9: Broadcaster Connection Modes and Procedures

Prerequisite: GAP 38/1 or GAP 5/1

Item	Capability	Reference	Support	Status	Comment
9/1	Non-Connectable Mode	[3] or [7] 9.3.2	M	✓	

Table 10: Broadcaster Broadcasting and Observing Features

Prerequisite: GAP 38/1 or GAP 5/1

Item	Capability	Reference	Support	Status	Comment
10/1	Broadcast Mode	[3] or [7] 9.1.1	M	✓	

Table 11: Broadcaster Privacy Feature

Prerequisite: GAP 38/1 or GAP 5/1

Item	Capability	Reference	Support	Status	Comment
11/1	Privacy Feature	[3] 10.7	O	✓	
11/2	Resolvable Private Address Generation Procedure	[3] or [7] 10.8.2.2 or 1.3.2.2	C.1	✓	C.1: Mandatory IF GAP 11/1 “Privacy Feature” AND NOT GAP 11/3 “Non-Resolvable Private Address Generation Procedure” is supported, otherwise Optional.
11/3	Non-Resolvable Private Address Generation Procedure	[3] or [7] 10.8.2.1 or [9] 1.3.2.2	C.2	✓	C.2: Mandatory IF GAP 11/1 “Privacy Feature” AND NOT GAP 11/2 “Resolvable Private Address Generation Procedure” is supported, otherwise Optional.

Table 11a: Periodic Advertising Modes and Procedures

Prerequisite: GAP 38/1 or GAP 5/1

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 11b: Broadcaster Security Aspects Features

Prerequisite: GAP 38/1 or GAP 5/1

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 12: Observer Physical Layer

Prerequisite: GAP 38/2 or GAP 5/2

Item	Capability	Reference	Support	Status	Comment
12/1	Receiver	[3] or [7] 2.2.2	M	✓	
12/2	Transmitter	[3], 2.2.2	O	✓	

Table 13: Observer Link Layer States

Prerequisite: GAP 38/2 or GAP 5/2

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

13/1	Standby	[3] or [7] 2.2.2	M	☑
13/2	Scanning	[3] or [7] 2.2.2	M	☑

Table 14: Observer Link Layer Scanning Types

Prerequisite: GAP 38/2 or GAP 5/2

Item	Capability	Reference	Support	Status	Comment
14/1	Passive Scanning	[3] or [7] 2.2.2	M	☑	
14/2	Active Scanning	[3] or [7] 2.2.2	O	☑	

Table 15: Observer Connection Modes and Procedures

Prerequisite: GAP 38/2 or GAP 5/2

Item	Capability	Reference	Support	Status	Comment
15/1	Non-Connectable Modes	[3] or [7] 9.3.2	M	☑	

Table 16: Observer Broadcasting and Observing Features

Prerequisite: GAP 38/2 or GAP 5/2

Item	Capability	Reference	Support	Status	Comment
16/1	Observation Procedure	[3] or [7] 9.1.2	M	☑	

Table 17: Observer Privacy Feature

Prerequisite: GAP 38/2 or GAP 5/2

Item	Capability	Reference	Support	Status	Comment
17/1	Privacy Feature	[3] 10.7	O	☑	
17/2	Non-Resolvable Private Address Generation Procedure	[3] or [7] 10.8.2.1 [9] 1.3.2.2	C.1	☑	C.1: Mandatory IF GAP 17/1 “Privacy Feature” AND GAP 14/2 “Active Scanning” AND NOT GAP 17/4 “Resolvable Private Address Generation Procedure” is supported, otherwise Optional.
17/3	Resolvable Private Address Resolution Procedure	[3] or [7] 10.8.2.3 [5] 10.8 [9] 1.3.2.2	O	☑	
17/4	Resolvable Private Address Generation Procedure	[3] or [7] 10.8.2.2 [5] 10.8 [9] 1.3.2.3	C.2	☑	C.2: Mandatory IF GAP 17/1 “Privacy Feature” AND GAP 14/2 “Active Scanning” AND NOT GAP 17/2 “Non-Resolvable Private Address Generation Procedure” is supported, otherwise Optional.

Table 17a: Periodic Advertising Modes and Procedures

Prerequisite: GAP 38/2 or GAP 5/2

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 17b: Observer Security Aspects Features

Prerequisite: GAP 38/2 or GAP 5/2

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 18: Peripheral Physical Layer

Prerequisite: GAP 38/3 or GAP 5/3

Item	Capability	Reference	Support	Status	Comment
18/1	Transmitter	[3] or [7] 2.2.2	M	☑	
18/2	Receiver	[3] 2.2.2	M	☑	

Table 19: Peripheral Link Layer States

Prerequisite: GAP 38/3 or GAP 5/3

Item	Capability	Reference	Support	Status	Comment
19/1	Standby	[3] or [7] 2.2.2	M	☑	
19/2	Advertising	[3] or [7] 2.2.2	M	☑	
19/3	Connection, Slave Role	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	M	☑	

Table 20: Peripheral Link Layer Advertising Event Types

Prerequisite: GAP 38/3 or GAP 5/3

Item	Capability	Reference	Support	Status	Comment
20/1	Connectable and Scannable Undirected Event	[3] 2.2.2, 13.1.1.2 [7] 2.2.2	M	☑	
20/3	Non-Connectable and Non-Scannable Undirected Event	[3] 2.2.2, 9.2.2.2, 9.3.1, 9.3.2 [7] 2.2.2	O	☑	
20/4	Scannable Undirected Event	[3] 2.2.2, 9.2.2.2, 9.3.1, 9.3.2 [7] 2.2.2	O	☑	
20/5	Connectable Undirected Event	[10] 2.2.2	C.1	☑	C.1: Excluded IF (SUMICS 31/17 “Core Spec Version 4.2” OR SUMICS 31/18 “Core Spec Version 4.2+HS”) is supported, otherwise Optional.

Table 20A: Peripheral Link Layer Advertising Data Types

Prerequisite: GAP 38/3 or GAP 5/3

Item	Capability	Reference	Support	Status	Comment
20A/1	AD Type – Service UUID	[3] 11.1.1 [4] 1.1	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/2	AD Type – Local Name	[3] 11.1.2 [4] 1.2	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/3	AD Type – Flags	[3] 11.1.3 [4] 1.3	C.2	☑	C.2: Mandatory if 22/2 (Limited Discoverable Mode) or 22/3 (General Discoverable Mode) is supported, otherwise Optional.
20A/4	AD Type – Manufacturer Specific Data	[3] 11.1.4 [4] 1.4	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/5	AD Type – TX Power Level	[3] 11.1.5 [4] 1.5	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/6	AD Type – Security Manager Out of Band (OOB)	[3] 11.1.5 [4] 1.7	C.3	☑	C.3: Optional if (20/1 (Connectable Undirected Event) or 20/3 (Non-Connectable Undirected Event) or 20/4 (Scannable Undirected Event)) and SM 2/4 (OOB supported) are supported, otherwise Excluded.
20A/7	AD Type – Security Manager TK Value	[3] 11.1.7 [4] 1.8	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/8	AD Type – Slave Connection Interval Range	[3] 11.1.8 [4] 1.9	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/9	AD Type – Service Solicitation	[3] 11.1.9 [4] 1.10	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/10	AD Type – Service Data	[3] 11.1.10 [4] 1.11	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/11	AD Type – Appearance	[4] 1.1.12	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/12	AD Type – Public Target Address	[4] 1.1.13	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/13	AD Type – Random Target Address	[4] 1.1.14	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/14	AD Type – Advertising Interval	[4] 1.1.15	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/15	AD Type – LE Bluetooth Device Address	[4] 1.1.16	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.
20A/16	AD Type – LE Role	[4] 1.1.17	C.1	☑	C.1: Optional if (20/1 or 20/3 or 20/4) is supported, otherwise Excluded.

Table 21: Peripheral Link Layer Control Procedures

Prerequisite: GAP 5/3 “Peripheral LE-Only” OR GAP 38/3 “Peripheral BR/EDR/LE”

Item	Capability	Reference	Support	Status	Comment
21/1	Connection Update Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	M	☑	
21/2	Channel Map Update Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	M	☑	
21/3	Encryption Procedure	[3] 2.2.2,	O		

		13.1.2.2		☑	
21/4	Master Initiated Feature Exchange Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	M	☑	
21/5	Version Exchange Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	M	☑	
21/6	Termination Procedure	[3] 2.2.2, 13.1.2.2 [7] 2.2.2	M	☑	
21/8	Slave Initiated Feature Exchange Procedure	[7] 2.2.2	C.1	☑	C.1: Mandatory IF GAP 21/9 “Connection Parameter Request Procedure” is supported, otherwise Optional.
21/9	Connection Parameter Request Procedure	[7] 2.2.2	O	☑	
21/10	Data Length Update Procedure	[7] 2.2.2	O	☑	
21/11	PHY Update Procedure	[7] 2.2.2	C.2	☑	C.2: Excluded IF (SUMICS 31/17 “Core Spec Version 4.2” OR SUMICS 31/18 “Core Spec Version 4.2+HS”) is supported, otherwise Optional.

Table 22: Peripheral Discovery Modes and Procedures

Prerequisite: GAP 38/3 or GAP 5/3

Item	Capability	Reference	Support	Status	Comment
22/1	Non-Discoverable Mode	[3] 9.2.2, 13.1.1.1 [7] 9.2.2, 13.1	M	☑	
22/2	Limited Discoverable Mode	[3] 9.2.3, 13.1.1.2 [7] 9.2.3, 13.1	O	☑	
22/3	General Discoverable Mode	[3] 9.2.4, 13.1.1.2 [7] 9.2.4, 13.1	C.1	☑	C.1: Mandatory IF (GAP 5/3 “LE Roles – Peripheral role” AND (NOT GAP 22/2 “Limited Discoverable Mode”)) is supported; Optional IF (GAP 5/3 “LE Roles – Peripheral role” AND GAP 22/2 “Limited Discoverable Mode”) is supported; Mandatory IF (GAP 38/3 “BR/EDR/LE Roles – Peripheral Role” AND NOT GAP 22/2 “Limited Discoverable Mode”) is supported; Optional IF (GAP 38/3 “BR/EDR/LE Roles – Peripheral Role” AND GAP 22/2 “Limited Discoverable Mode”) is supported, otherwise Excluded.
22/4	Name Discovery Procedure	[3] or [7] 9.2.7	O	☑	

Table 23: Peripheral Connection Modes and Procedures

Prerequisite: GAP 38/3 or GAP 5/3

Item	Capability	Reference	Support	Status	Comment
23/1	Non-Connectable Mode	[3] 9.3.2, 13.1.2.1 [7] 9.3.2	M	☑	
23/3	Undirected Connectable Mode	[3] 9.3.4, 13.1.2.2 [7] 9.3.4	M	☑	
23/4	Connection Parameter Update Procedure	[3] 9.3.9, 13.1.2.1 [7] 9.3.9	O	☑	
23/5	Terminate Connection Procedure	[3] 9.3.10, 13.1.2.1 [7] 9.3.10	M	☑	

Table 24: Peripheral Bonding Modes and Procedures

Prerequisite: GAP 38/3 or GAP 5/3

Item	Capability	Reference	Support	Status	Comment
24/1	Non-Bondable Mode	[3], 9.4.2	M	☑	
24/2	Bondable Mode	[3] 9.4.3, 13.1.4.2 [7] 9.4.3, 13.2	O	☑	
24/3	Bonding Procedure	[3] 9.4.4, 13.1.4.2 [7] 9.4.4, 13.2	O	☑	
24/4	Multiple Bonds	[3] 9.4, 13.1.4.2 [7] 9.4	C.1	☑	C.1: Optional IF GAP 24/2 “Bondable Mode” is supported, otherwise Excluded.

Table 25: Peripheral Security Aspects Features

Prerequisite: GAP 38/3 or GAP 5/3

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

25/1	Security Mode 1	[3] 10.2.1, 13.1.2.2 [7] 10.2.1	O	☑	
25/3	Authentication Procedure	[3] 10.3, 13.1.2.2 [7] 10.3	O	☑	
25/4	Authorization Procedure	[3] 10.5, 13.1.2.2 [7] 10.5	O	☑	
25/7	Authenticated Pairing (LE security mode 1 level 3)	[3] 10.3, 13.1.2.2 [7] 10.3	C.1	☑	C.1: Optional IF GAP 25/1 “LE Security Mode 1” is supported, otherwise Excluded.
25/8	Unauthenticated Pairing (LE security mode 1 level 2)	[3] 10.3, 13.1.2.2 [7] 10.3	C.1	☑	C.1: Optional IF GAP 25/1 “LE Security Mode 1” is supported, otherwise Excluded.

Table 26: Peripheral Privacy Feature

Prerequisite: GAP 5/3 “Peripheral LE-Only” OR GAP 38/3 “Peripheral BR/EDR/LE”

Item	Capability	Reference	Support	Status	Comment
26/1	Privacy Feature	[3], 10.7	O	☑	
26/2	Non-Resolvable Private Address Generation Procedure	[3] [7] [8] 10.7, 10.8.2.1 [9] 1.3.2.2	O	☑	
26/3	Resolvable Private Address Generation Procedure	[3] [7] [8] 10.7, 10.8.2.2 [9] 1.3.2.2	C.1	☑	C.1: Mandatory IF GAP 26/1 “Privacy Feature” is supported, otherwise Optional.
26/4	Resolvable Private Address Resolution Procedure	[3] [7] [8] 10.7, 10.8.2.3 [9] 1.3.2.2	C.1	☑	C.1: Mandatory IF GAP 26/1 “Privacy Feature” is supported, otherwise Optional.

Table 27: Peripheral GAP Characteristics

Prerequisite: GAP 38/3 or GAP 5/3

Item	Capability	Reference	Support	Status	Comment
27/1	Device Name	[3] or [7] 12.1	M	☑	
27/2	Appearance	[3] or [7] 12.2	M	☑	
27/5	Peripheral Preferred Connection Parameters	[3] [7] 12.5	O	☑	
27/6	Writeable Device Name	[3] [7] 12.1	O	☑	
27/7	Writeable Device Name	[3] [7]12.2	O	☑	

Table 27a: Periodic Advertising Modes and Procedures

Prerequisite: (GAP 5/3 “Peripheral LE-Only” OR GAP 38/3 “Peripheral BR/EDR/LE”) AND NOT (SUM ICS 31/17 “Core Spec Version 4.2” OR SUM ICS 31/18 “Core Spec Version 4.2+HS” OR SUM ICS 31/19 “Core Spec Version 5.0”)

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 28: Central Physical Layer

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
28/1	Transmitter	[3] or [7] 2.2.2	M	☑	
28/2	Receiver	[3] or [7] 2.2.2	M	☑	

Table 29: Central Link Layer States

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
29/1	Standby	[3] or [7] 2.2.2	M	☑	
29/2	Scanning	[3] or [7] 2.2.2	M	☑	
29/3	Initiating	[3] or [7] 2.2.2	M	☑	
29/4	Connection, Master Role	[3] or [7] 2.2.2	M	☑	

Table 30: Central Link Layer Scanning Types

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

30/1	Passive Scanning	[3] or [7] 2.2.2	O	☑	
30/2	Active Scanning	[3] or [7] 2.2.2	C.1	☑	C.1: Mandatory IF (NOT GAP 30/1 "Passive Scanning") is supported; otherwise Optional.

Table 31: Central Link Layer Control Procedures

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
31/1	Connection Update Procedure	[3] or [7] 2.2.2	M	☑	
31/2	Channel Map Update Procedure	[3] or [7] 2.2.2	M	☑	
31/3	Encryption Procedure	[3] or [7] 2.2.2	O	☑	
31/4	Feature Exchange Procedure	[3] or [7] 2.2.2	M	☑	
31/5	Version Exchange Procedure	[3] or [7] 2.2.2	M	☑	
31/6	Termination Procedure	[3] or [7] 2.2.2	M	☑	
31/8	Slave Initiated Feature Exchange Procedure	[7] 2.2.2	C.1	☑	C.1: Mandatory IF GAP 31/9 "Connection Parameter Request Procedure" is supported, otherwise Optional.
31/9	Connection Parameter Request Procedure	[7] 2.2.2	O	☑	
31/10	Data Length Update Procedure	[7] 2.2.2	O	☑	
31/11	PHY Update Procedure	[7] 2.2.2	C.2	☑	C.2: Excluded IF (SUMICS 31/17 "Core Spec Version 4.2" OR SUMICS 31/18 "Core Spec Version 4.2+HS") is supported, otherwise Optional.

Table 32: Central Discovery Modes and Procedures

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
32/1	Limited Discovery Procedure	[3] 9.2.5, 13.2 [7] 9.2.5	O	☑	
32/2	General Discovery Procedure	[3] 9.2.6, 13.2 [7] 9.2.6	M	☑	
32/3	Name Discovery Procedure	[3] 9.2.7, 13.2 [7] 9.2.7	O	☑	

Table 33: Central Connection Modes and Procedures

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
33/4	Selective Connection Establishment Procedure	[3] or [7] 9.3.8	M	☑	
33/5	Connection Parameter Update Procedure	[3] or [7] 9.3.9	M	☑	
33/6	Terminate Connection Procedure	[3] or [7] 9.3.10	M	☑	

Table 34: Central Bonding Modes and Procedures

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
34/1	Non-Bondable Mode	[3] 9.4.2, 13.1.3 [7] 9.4.2, 13.2	M	☑	
34/2	Bondable Mode	[3] 9.4.3, 13.1.3 [7] 9.4.3, 13.2	O	☑	
34/3	Bonding Procedure	[3] 9.4.4, 13.1.3 [7] 9.4.4, 13.2	O	☑	

Table 35: Central Security Features

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
35/1	Security Mode 1	[3] or [7] 10.2.1	O	☑	
35/3	Authentication Procedure	[3] or [7] 10.3	O	☑	

35/4	Authorization Procedure	[3] or [7] 10.5	O	☑	
35/7	Authenticated Pairing (LE security mode 1 level 3)	[3] or [7] 10.3	C.1	☑	C.1: Optional IF GAP 35/1 “LE Security Mode 1” is supported, otherwise Excluded.
35/8	Unauthenticated Pairing (LE security mode 1 level 2)	[3] or [7] 10.3	C.1	☑	C.1: Optional IF GAP 35/1 “LE Security Mode 1” is supported, otherwise Excluded.

Table 36: Central Privacy Feature

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
36/1	Privacy Feature	[7] 10.7	O	☑	
36/2	Non-Resolvable Private Address Generation Procedure	[3] [7] [8] 10.7, 10.8.2.1 [9] 1.3.2.2	O	☑	
36/3	Resolvable Private Address Resolution Procedure	[3] [7] [8] 10.7, 10.8.2.3 [9] 1.3.2.2	C.1	☑	C.1: Mandatory IF GAP 36/1 “Privacy Feature” is supported, otherwise Optional.
36/5	Resolvable Private Address Generation Procedure	[3] [7] [8] 10.7, 10.8.2.2 [5] 2.2.5 [9] 1.3.2.3	C.1	☑	C.1: Mandatory IF GAP 36/1 “Privacy Feature” is supported, otherwise Optional.

Table 37: Central GAP Characteristics

Prerequisite: GAP 38/4 or GAP 5/4

Item	Capability	Reference	Support	Status	Comment
37/1	Device Name	[3] or [7] 12.1	M	☑	
37/2	Appearance	[3] or [7] 12.2	M	☑	

Table 37a: Periodic Advertising Modes and Procedures

Prerequisite: (GAP 5/4 “Central LE-Only” OR GAP 38/4 “Central BR/EDR/LE”) AND NOT (SUM ICS 31/17 “Core Spec Version 4.2” OR SUM ICS 31/18 “Core Spec Version 4.2+HS” OR SUM ICS 31/19 “Core Spec Version 5.0”)

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 38: BR/EDR/LE Roles

Prerequisite: GAP 0/3

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 41: Central BR/EDR/LE Security Aspects

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 43: Peripheral BR/EDR/LE Security Aspects

Prerequisite: GAP 38/3

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 44: Central Simultaneous BR/EDR and LE Transports

Prerequisite: GAP 38/4

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 45: Peripheral Simultaneous BR/EDR and LE Transports

Prerequisite: GAP 38/3

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Generic Attribute Profile

Table 1: Generic Attribute Profile Support

Item	Capability	Reference	Support	Status	Comment
1/1	Generic Attribute Profile (GATT) Client	[1] 2.2, [2] 12	C.1	☑	C.1: Mandatory IF GATT 1a/1 “GATT Client over LE” OR GATT 1a/2 “GATT Client over BR/EDR” is supported, otherwise Excluded.

1/2	Generic Attribute Profile (GATT) Server	[1] 2.2, [2] 12	C.2	☑	C.2: Mandatory IF GATT 1a/3 "GATT Server over LE" OR GATT 1a/4 "GATT Server over BR/EDR" is supported, otherwise Excluded.
-----	---	-----------------	-----	---	--

Table 1a: GATT role configuration

Item	Capability	Reference	Support	Status	Comment
1a/1	GATT Client over LE	[1] 2.2, [2] 12	C.1	☑	C.1: Optional to support IF GATT 2/2 "Attribute Protocol Supported over LE" is supported, otherwise Excluded.
1a/3	GATT Server over LE	[1] 2.2, [2] 12	C.3	☑	C.3: Mandatory to support IF GATT 2/2 "Attribute Protocol Supported over LE" is supported, otherwise Excluded.

Table 2: Attribute Protocol Transport

Item	Capability	Reference	Support	Status	Comment
2/2	Attribute Protocol Supported over LE	[1] 2.4	C.2	☑	C.2: Mandatory IF ATT 2/2 "Attribute Protocol Supported over LE" is supported, otherwise Excluded.

Table 3: Generic Attribute Profile Feature Support, by Client

Prerequisite: GATT 1/1 "Generic Attribute Profile Client" AND (GATT 1a/1 "GATT Client over LE" OR GATT 1a/2 "GATT Client over BR/EDR")

Item	Capability	Reference	Support	Status	Comment
3/1	Exchange MTU	[1] 4.3.1	C.11	☑	C.11: Optional IF GATT 1a/1 "GATT Client over LE" is supported, otherwise Excluded.
3/2	Discover All Primary Services	[1] 4.4.1	O	☑	
3/3	Discover Primary Services by Service UUID	[1] 4.4.2	O	☑	
3/4	Find Included Services	[1] 4.5.1	O	☑	
3/5	Discover All characteristics of a Service	[1] 4.6.1	O	☑	
3/6	Discover Characteristics by UUID	[1] 4.6.2	O	☑	
3/7	Discover All Characteristic Descriptors	[1] 4.7.1	O	☑	
3/8	Read Characteristic Value	[1] 4.8.1	O	☑	
3/9	Read Using Characteristic UUID	[1] 4.8.2	O	☑	
3/10	Read Long Characteristic Values	[1] 4.8.3	O	☑	
3/11	Read Multiple Characteristic Values	[1] 4.8.4	O	☑	
3/12	Write without Response	[1] 4.9.1	O	☑	
3/14	Write Characteristic Value	[1] 4.9.3	O	☑	
3/15	Write Long Characteristic Values	[1] 4.9.4	O	☑	
3/16	Characteristic Value Reliable Writes	[1] 4.9.5	O	☑	
3/17	Notifications	[1] 4.10.1	C.7	☑	C.7: Mandatory IF ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSM supported)" is supported, otherwise Optional.
3/18	Indications	[1] 4.11.1	M	☑	
3/19	Read Characteristic Descriptors	[1] 4.12.1	O	☑	
3/20	Read Long Characteristic Descriptors	[1] 4.12.2	O	☑	
3/21	Write Characteristic Descriptors	[1] 4.12.3	O	☑	
3/22	Write Long Characteristic Descriptors	[1] 4.12.4	O	☑	

3/23	Service Changed Characteristic	[1] 7.1	M	✓	
3/24	Configured Broadcast	[1] 2.7	C.2	✓	C.2: Optional IF GATT 3/14 "Write Characteristic Value" is supported, otherwise Excluded.
3/25	Client Supported Features Characteristic	[1] 7.2	C.4	✓	C.4: Excluded IF SUMICS 31/17 "Core v4.2" OR SUMICS 31/18 "Core v4.2+HS" OR SUMICS 31/19 "Core v5.0" is supported, otherwise Optional.
3/26	Database Hash Characteristic	[1] 7.3	C.4	✓	C.4: Excluded IF SUMICS 31/17 "Core v4.2" OR SUMICS 31/18 "Core v4.2+HS" OR SUMICS 31/19 "Core v5.0" is supported, otherwise Optional.

Table 4: Generic Attribute Profile Support, by Server

Prerequisite: GATT 1/2 "Generic Attribute Server" AND (GATT 1a/3 "GATT Server over LE" OR GATT 1a/4 "GATT Server over BR/EDR")

Item	Capability	Reference	Support	Status	Comment
4/1	Exchange MTU	[1] 4.3.1	C.6	✓	C.6: Optional IF GATT 1a/3 "GATT Server over LE" is supported, otherwise Excluded.
4/2	Discover All Primary Services	[1] 4.4.1	M	✓	
4/3	Discover Primary Services by Service UUID	[1] 4.4.2	M	✓	
4/4	Find Included Services	[1] 4.5.1	M	✓	
4/5	Discover All characteristics of a Service	[1] 4.6.1	M	✓	
4/6	Discover Characteristics by UUID	[1] 4.6.2	M	✓	
4/7	Discover All Characteristic Descriptors	[1] 4.7.1	M	✓	
4/8	Read Characteristic Value	[1] 4.8.1	M	✓	
4/9	Read Using Characteristic UUID	[1] 4.8.2	M	✓	
4/10	Read Long Characteristic Values	[1] 4.8.3	C.12	✓	C.12: Mandatory IF ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)" is supported, otherwise Optional.
4/11	Read Multiple Characteristic Values	[1] 4.8.4	O	✓	
4/12	Write without Response	[1] 4.9.1	C.2	✓	C.2: Mandatory IF (GATT 4/13 "Signed Write Without Response" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)") is supported, otherwise Optional.
4/14	Write Characteristic Value	[1] 4.9.3	C.3	✓	C.3: Mandatory IF (GATT 4/15 "Write Long Characteristic Values" OR ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)") is supported, otherwise Optional.
4/15	Write Long Characteristic Values	[1] 4.9.4	C.12	✓	C.12: Mandatory IF ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)" is supported, otherwise Optional.
4/16	Characteristic Value Reliable Writes	[1] 4.9.5	O	✓	C.4: Mandatory IF GATT 1a/7 "Complete GATT Server layer over LE" OR GATT 1a/8 "Complete GATT Server layer over BR/EDR" is supported, otherwise Optional.
4/17	Notifications	[1] 4.10.1	O	✓	C.4: Mandatory IF GATT 1a/7 "Complete GATT Server layer over LE" OR GATT 1a/8 "Complete GATT Server layer over BR/EDR" is supported, otherwise Optional.
4/18	Indications	[1] 4.11.1	C.1	✓	C.1: Mandatory IF service definitions on the server can be added, changed, or removed, otherwise Optional.
4/19	Read Characteristic Descriptors	[1] 4.12.1	C.12	✓	C.12: Mandatory IF ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)" is supported, otherwise Optional.
4/20	Read Long Characteristic Descriptors	[1] 4.12.2	C.12	✓	C.12: Mandatory IF ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)" is supported, otherwise Optional.
4/21	Write	[1] 4.12.3	C.12	✓	C.12: Mandatory IF ATT 2/3 "Attribute Protocol Supported (L2CAP fixed EATT PSMsupported)" is supported, otherwise Optional.

	Characteristic Descriptors				supported, otherwise Optional.
4/22	Write Long Characteristic Descriptors	[1] 4.12.4	O	☑	
4/23	Service Changed Characteristic	[1] 7.1	C.1	☑	C.1: Mandatory if service definitions on the server can be added, changed, or removed, otherwise Optional.
4/24	Configured Broadcast	[1] 2.7	C.5	☑	C.5: Optional IF GATT 4/14 "Write Characteristic Value" is supported, otherwise Excluded.
4/25	Execute Write Request with empty queue	[1] 4.9.4, 4.9.5, 4.12.4	C.7	☑	C.7: Mandatory IF (SUMICS 31/19 "Core Spec Version 5.0") AND (GATT 4/15 "Write Long Characteristic Values" OR GATT 4/16 "Characteristic Value Reliable Writes" OR GATT 4/22 "Write Long Characteristic Descriptors") is supported, Optional IF (NOT SUMICS 31/19 "Core Spec Version 5.0") AND (GATT 4/15 "Write Long Characteristic Values" OR GATT 4/16 "Characteristic Value Reliable Writes" OR GATT 4/22 "Write Long Characteristic Descriptors") is supported, otherwise Excluded.
4/26	Client Supported Features Characteristic	[1] 7.2	C.9	☑	C.9: Excluded IF SUMICS 31/17 "Core v4.2" OR SUMICS 31/18 "Core v4.2+HS" OR SUMICS 31/19 "Core v5.0" is supported, otherwise Mandatory if GATT 4/23 "Service Changed Characteristic" AND GATT 4/27 "Database Hash Characteristic" are supported, otherwise Excluded.
4/27	Database Hash Characteristic	[1] 7.3	C.8	☑	C.8: Excluded IF SUMICS 31/17 "Core v4.2" OR SUMICS 31/18 "Core v4.2+HS" OR SUMICS 31/19 "Core v5.0" is supported, otherwise Optional.
4/28	Report Characteristic Value: Characteristic Presentation Format	[1] 3.3.3.5	O	☑	
4/29	Report aggregate Characteristic Value: Characteristic Aggregate Format	[1] 3.3.3.6	C.10	☑	C.10: Optional IF GATT 4/28 "Report Characteristic Value: Characteristic Presentation Format" is supported, otherwise Excluded.

Table 6: SDP Interoperability

Prerequisite: GATT 2/1 "Attribute Protocol Supported over BR/EDR"

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 7: Attribute Protocol Transport

Item	Capability	Reference	Support	Status	Comment
7/2	LE Security Mode 1	[2] 10.2.1	C.5	☑	C.5: Mandatory IF ATT 5/2 (LE Security Mode 1) is supported, Optional IF GATT 2/2 (Attribute Protocol Supported over LE) is supported, otherwise Excluded.
7/4	LE Authentication Procedure	[2] 10.3	C.4	☑	C.4: Mandatory IF ATT 5/4 (LE Authentication Procedure) is supported, Optional IF GATT 2/2 (Attribute Protocol Supported over LE) is supported, otherwise Excluded.
7/7	LE Authorization Procedure	[2] 10.5	C.3	☑	C.3: Mandatory IF ATT 5/7 (LE Authorization Procedure) is supported, Optional IF GATT 2/2 (Attribute Protocol Supported over LE) is supported, otherwise Excluded.

Table 8: Attribute Protocol Transport

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Interoperability Test Specification

Table 1: Interoperability Test Specification

Item	Capability	Reference	Support	Status	Comment
1/1	Interoperability	IOP	M	☑	

Table 2: Design Configuration

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Logical Link Control and Adaption Protocol

Table 0: L2CAP Transport Configuration

Item	Capability	Reference	Support	Status	Comment
0/2	LE	[6] 1.1	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory IF SUMICS 34/1 "LE Host Specification Part: Logical Link Control and Adaptation Protocol (L2CAP)" is supported, otherwise Excluded.

Table 1: Roles

Item	Capability	Reference	Support	Status	Comment
1/3	LE Master	[4] 2	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory to support (at least one of L2CAP 1/3 "LE Master" OR L2CAP 1/4 "LE Slave") IF (L2CAP 0/2 "LE" OR L2CAP 0/3 "BR/EDR/LE") is supported, otherwise Excluded.
1/4	LE Slave	[4] 2	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory to support (at least one of L2CAP 1/3 "LE Master" OR L2CAP 1/4 "LE Slave") IF (L2CAP 0/2 "LE" OR L2CAP 0/3 "BR/EDR/LE") is supported, otherwise Excluded.
1/5	LE Data Channel Initiator	[5] 3.4	C.4	<input checked="" type="checkbox"/>	C.4: Optional IF (L2CAP 0/2 "LE" OR L2CAP 0/3 "BR/EDR/LE") AND L2CAP 2/46 "LE Credit Based Flow Control Mode" is supported, otherwise Excluded.
1/6	LE Data Channel Acceptor	[5] 3.4	C.5	<input checked="" type="checkbox"/>	C.5: Mandatory IF (L2CAP 0/2 "LE" OR L2CAP 0/3 "BR/EDR/LE") AND L2CAP 2/46 "LE Credit Based Flow Control Mode" is supported, otherwise Excluded.

Table 2: General Operation

Item	Capability	Reference	Support	Status	Comment
2/40	Support of Low Energy signaling channel	[4] 2.1, 2.2	C.13	<input checked="" type="checkbox"/>	C.13: Mandatory IF L2CAP 0/2 "LE" OR L2CAP 0/3 "BR/EDR/LE" is supported, otherwise Excluded.
2/41	Support of command reject	[4] 4.10	C.13	<input checked="" type="checkbox"/>	C.13: Mandatory IF L2CAP 0/2 "LE" OR L2CAP 0/3 "BR/EDR/LE" is supported, otherwise Excluded.
2/42	Send Connection Parameter Update Request	[4] 4.20	C.14	<input checked="" type="checkbox"/>	C.14: Optional IF L2CAP 1/4 "LE Slave" is supported, otherwise Excluded.
2/43	Send Connection Parameter Update Response	[4] 4.21	C.15	<input checked="" type="checkbox"/>	C.15: Mandatory IF L2CAP 1/3 "LE Master" is supported, otherwise Excluded.
2/45a	Send Disconnect Request Command – LE	[5] 4.6	C.22	<input checked="" type="checkbox"/>	C.22: Optional IF (L2CAP 2/40 "Low Energy L2CAP signaling channel" AND L2CAP 2/46 "LE Credit Based Flow Control Mode") is supported, otherwise Excluded.
2/46	Support LE Credit Based Flow Control Mode	[5] 3.4	C.19	<input checked="" type="checkbox"/>	C.19: Optional IF (L2CAP 0/2 "LE" OR L2CAP 0/3 "BR/EDR/LE") is supported, otherwise Excluded.
2/47	Support for LE Data Channel	[1] 3.4	C.20	<input checked="" type="checkbox"/>	C.20: Mandatory IF L2CAP 2/46 "Support LE Credit Based Flow Control Mode" is supported, otherwise Excluded.

Table 3: Configurable Parameters

Item	Capability	Reference	Support	Status	Comment
3/1	Support of RTX timer	[1] 6.2.1	M	<input checked="" type="checkbox"/>	
3/12	Support minimum MTU size 23 octets	[4] 5.1	C.6	<input checked="" type="checkbox"/>	C.6: Mandatory IF L2CAP 0/2 "LE" OR L2CAP 0/3 "BR/EDR/LE" is supported, otherwise Excluded.
3/16	Support Multiple Simultaneous LE Data Channels	[5] 3.4	C.10	<input checked="" type="checkbox"/>	C.10: Optional IF L2CAP 2/47 (Support LE Data Channel) AND SUMICS 21/13 (v4.1) is supported, otherwise Excluded.

Low Energy Link Layer

Table 9: Supported Features

Item	Capability	Reference	Support	Status	Comment
9/1	LE Encryption	[1] 4.6.1	O	<input checked="" type="checkbox"/>	
9/4	Extended Reject	[1] 4.6.3	C.3	<input checked="" type="checkbox"/>	C.3: IF LL 9/3 "Connection Parameter Request Procedure" OR LL 9/14 "Connection CTE Request" OR LL

	Indication				9/15 "Connection CTE Response" is supported; otherwise Optional.
9/5	Slave-initiated Features Exchange	[1] 4.6.4	O	☑	
9/6	LE Data Packet Length Extension	[4] 4.6.6	O	☑	
9/6a	Multiple PHYs	[5] 4.6.9	C.6	☑	C.6: Mandatory IF LL 9/7 "LE 2MPHY" OR LL 9/9 "LE Coded PHY" is supported, otherwise Excluded.
9/7	LE 2MPHY	[4] 2.1	C.5	☑	C.5: Excluded IF SUMICS 21/14 "Core v4.2" is supported, otherwise Optional.
9/9	LE Coded PHY	[5] 2.2	C.5	☑	C.5: Excluded IF SUMICS 21/14 "Core v4.2" is supported, otherwise Optional.
9/9a	LE Extended Advertising	[5] 4.6.12	C.25	☑	C.25: Excluded IF SUMICS 21/14 "Core v4.2" is supported, otherwise Mandatory IF LL 9/9 "LE Coded PHY" is supported, otherwise Optional.
9/9b	LE Periodic Advertising	[5] 4.6.13	C.26	☑	C.26: Optional IF LL 9/9a "LE Extended Advertising" is supported, otherwise Excluded.
9/10	Channel Selection Algorithm #2	[5] 4.6.14	C.8	☑	C.8: Excluded IF SUMICS 21/14 "Core v4.2" is supported, otherwise Mandatory IF (LL 9/9a "LE Extended Advertising" AND (LL 1/4 "Slave Role" OR LL 1/5 "Master Role")) OR LL 9/9b "LE Periodic Advertising" is supported, otherwise Optional.
9/11	LE Power Class 1	[5] 4.6	C.9	☑	C.9: Excluded IF NOT SUMICS 21/15 "CSA5" AND (SUMICS 21/14 "Core 4.2") is supported, otherwise Optional if RF-PHY 1/1 "LE Transmitter" OR RF-PHY 1/3 "LE Transceiver" is supported, otherwise Excluded.

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
------	------------	-----------	---------	--------	---------

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 12: Protocol Isochronous Broadcasting Features

Prerequisite: LL 1/6 "Isochronous Broadcasting State"

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 2: Device Addresses Types

Prerequisite: LL 1/1 "Advertising State" OR LL 1/2 "Scanning State" OR LL 1/3 "Initiating State"

Item	Capability	Reference	Support	Status	Comment
2/1	Public Address	[1] 1.3	C.1	☑	C.1: 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: 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: Mandatory to support at least one of (LL 2/1 "Public Address" OR LL 2/3 "Static Address").

Table 3: Protocol Advertising Features

Prerequisite: LL 1/1 "Advertising State"

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

3/1	Non-Connectable and Non-Scannable 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 and Scannable 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	☑	
3/4a	Low Duty Cycle Direct Advertising	[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 Optional.
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 Optional.
3/8	Filtering Policies	[1] 4.3.2	O	☑	

Table 4: Protocol Scanning Features

Prerequisite: LL 1/2 “Scanning State”

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; Optional IF GAP 5/4 “Central” is supported, otherwise Optional.
4/2	Receiving Advertising Data	[1] 4.4.3.1, 4.4.3.2	M	☑	
4/3	Active Scanning	[1] 4.4.3.2	C.2	☑	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; otherwise Optional.
4/4	Backoff Procedure	[1] 4.4.3.2	M	☑	
4/5	Filtering Policies	[1] 4.3.3	M	☑	

Table 5: Protocol Initiating Features

Prerequisite: LL 1/3 “Initiating State”

Item	Capability	Reference	Support	Status	Comment
5/1	Requesting Connections	[1] 4.4.4	M	☑	
5/2	Requesting to Directed Advertising	[1] 4.4.4	M	☑	
5/3	Initiator Filtering	[1] 4.3.4	M	☑	
5/4	Requesting connections using extended advertising	[5] 4.6.12	C.1	☑	C.1: Mandatory IF LL 9/9a “LE Extended Advertising” is supported, otherwise Excluded.

Table 6: Protocol Slave Role Features

Prerequisite: LL 1/4 “Slave Role”

Item	Capability	Reference	Support	Status	Comment
6/1	Slave Transmissions	[1] 4.5.1, 4.5.5, 4.5.6	M	☑	
6/2	Acknowledgement Scheme	[1] 4.5.9	M	☑	
6/3	Unknown Response	[1] 5.1.4, 2.4.2	M	☑	
6/4	Responding in Feature Setup	[1] 5.1.4	M	☑	
6/5	Sending Data (Device supports data output from a Host)	[1] 4.5.1, 4.5.6	M	☑	
6/6	Receiving Data (Device supports data input to a Host)	[1] 4.5.1, 4.5.6	M	☑	
6/7	More Data	[1] 4.5.6	O	☑	
6/10	Accepting Parameter Update	[1] 5.1.1	M	☑	
6/11	Accepting Channel Map Update	[1] 5.1.2	M	☑	
6/12	Encryption Start	[1] 5.1.3	C.17	☑	C.17: Mandatory if LL 9/1 “LE Encryption” is supported, otherwise Excluded.

6/13	Connection Control Timer	[1] 5.2	M	✓	
6/14	Sending Termination	[1] 5.1.6	M	✓	
6/15	Accepting Termination	[1] 5.1.6	M	✓	
6/16	Connection Supervision Timer	[1] 4.5.2	M	✓	
6/18	Slave Pause Encryption	[1] 5.1.3	C.17	✓	C.17: Mandatory if LL 9/1 "LE Encryption" is supported, otherwise Excluded.
6/19	Slave Version Exchange	[1] 5.1.5	M	✓	
6/20	Slave listens to multiple packets per connection event	4.5.7	O	✓	
6/22	Data Length Update Procedure	[4] 5.1.9	C.4	✓	C.4: Mandatory IF LL 9/6 (LE Data Packet Length Extension) is supported, otherwise Excluded.
6/23a	PHY Update procedure	[5] 5.1.10	C.9	✓	C.9: Excluded IF SUMICS 21/14 "Core v4.2" is supported; otherwise Mandatory IF LL 9/6a "Multiple PHYs" is supported; otherwise Optional.

Table 7: Protocol Master Role Features

Prerequisite: LL 1/5 "Master Role"

Item	Capability	Reference	Support	Status	Comment
7/1	Master Transmissions	[1] 4.5.1, 4.5.4, 4.5.6	M	✓	
7/2	Acknowledgement Scheme	[1] 4.5.9	M	✓	
7/3	Unknown Responses	[1] 5.1.4, 2.4.2	M	✓	
7/4	Requesting Feature Setup	[1] 5.1.4	M	✓	
7/5	Sending Data (Device supports data output from a Host)	[1] 4.5.1, 4.5.6	M	✓	
7/6	Receiving Data (Device supports data input to a Host)	[1] 4.5.1, 4.5.6	M	✓	
7/7	More Data	[1] 4.5.6	O	✓	
7/10	Requesting Parameter Update	[1] 5.1.1	M	✓	
7/11	Requesting Channel Map Update	[1] 5.1.2	M	✓	
7/12	Encryption Start	[1] 5.1.3	C.17	✓	C.17: Mandatory if LL 9/1 "LE Encryption", otherwise Excluded.
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	✓	
7/19	Master Pause Encryption	[1] 5.1.3	C.17	✓	C.17: Mandatory if LL 9/1 "LE Encryption", otherwise Excluded.
7/20	Master Version Exchange	[1] 5.1.5	M	✓	
7/22	Data Length Update Procedure	[4] 5.1.9	C.4	✓	C.4: Mandatory IF LL 9/6 (LE Data Packet Length Extension) is supported, otherwise Excluded.
7/23a	PHY Update procedure	[5] 5.1.10	C.9	✓	C.9: Excluded IF SUMICS 21/14 "Core v4.2" is supported, otherwise Mandatory IF LL 9/6a "Multiple PHYs" is supported, otherwise Optional.

Table 8: Physical Channels

Item	Capability	Reference	Support	Status	Comment
8/1	Data channels (channel index0 to 36)	[1] 1.4	C.1	✓	C.1: Mandatory IF LL 1/4 "Slave Role" OR LL 1/5 "Master Role" is supported, otherwise Excluded.
8/2	Advertising channels (at least one of channel index37, 38, 39)	[1] 1.4.1	M	✓	
8/3	Support Data channel selection algorithm	[1] 4.5.8	C.1	✓	C.1: Mandatory IF LL 1/4 "Slave Role" OR LL 1/5 "Master Role" is supported, otherwise Excluded.

Low Energy RF PHY

Table 1: Bluetooth LE RF Capabilities

Item	Capability	Reference	Support	Status	Comment
1/3	LE Transceiver	[1] 3, 4	C.1	☑	C.1: Mandatory to support at least one of these capabilities. Note that selecting both RF PHY 1/1 "LE Transmitter" and RF PHY 1/2 "LE Receiver" is equivalent to selecting RF PHY 1/3 "LE Transceiver" and vice versa.
1/4	LE 2MPHY	[3] 3, 4	C.2	☑	C.2: Excluded IF SUMICS 21/14 "Core v4.2" is supported, otherwise Optional.
1/7	LE Coded PHY	[3] 3.4	C.2	☑	C.2: Excluded IF SUMICS 21/14 "Core v4.2" is supported, otherwise Optional.

Table 2: Bluetooth LE Test Interface Capabilities

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

Security Manager Protocol

Table 4: Pairing Method

Item	Capability	Reference	Support	Status	Comment
4/1	Just Works	[1] 2.3.5	O	☑	
4/2	Passkey Entry	[1] 2.3.5	C.1	☑	C.1: Mandatory to support at least one of the defined methods IF 2/1 "Authentication MITM protection" is supported, otherwise Excluded.
4/3	Out of Band	[1] 2.3.5	C.1	☑	C.1: Mandatory to support at least one of the defined methods IF 2/1 "Authentication MITM protection" is supported, otherwise Excluded.

Table 1: Role

Item	Capability	Reference	Support	Status	Comment
1/1	Master Role (Initiator)	[1] 2.4	C.1	☑	C.1: Mandatory to support IF 1/2 "Slave Role (Responder)" is NOT supported, otherwise Optional.
1/2	Slave Role (Responder)	[1] 2.4	C.2	☑	C.2: Optional IF GAP 5/3 "LE Roles – Peripheral Role" OR GAP 38/3 "BR/EDR/LE Roles – Peripheral Role" are supported, otherwise Excluded.

Table 2: Security Properties

Item	Capability	Reference	Support	Status	Comment
2/1	Authenticated MITM protection	[1] 2.3.1	O	☑	
2/2	Unauthenticated no MITM protection	[1] 2.3.1	C.1	☑	C.1: Mandatory IF 2/1 "Authenticated MITM protection" is supported, otherwise Optional.
2/3	No security requirements	[1] 2.3.1	M	☑	
2/4	OOB supported	[1] 2.3.1	O	☑	

Table 3: Encryption Key Size

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

Item	Capability	Reference	Support	Status	Comment
3/1	Encryption Key Size	[1] 2.3.4	M	☑	

Table 5: Security Initiation

Item	Capability	Reference	Support	Status	Comment
5/1	Encryption Setup using STK	[1] 2.4	C.3	☑	C.3: Mandatory IF 2/1 "Authenticated MITM protection" OR 2/2 "Unauthenticated no MITM protection" OR 2/4 "OOB supported" is supported, otherwise Excluded.
5/2	Encryption Setup using LTK	[1] 2.4	O	☑	
5/3	Slave Initiated Security	[1] 2.4.6	C.1	☑	C.1: Optional IF 1/2 "Slave Role" is supported, otherwise Excluded.

5/4	Slave Initiated Security – Master response	[1] 2.4.6	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory IF 1/1 “Master Role” is supported, otherwise Excluded.
-----	--	-----------	-----	-------------------------------------	---

Table 6: Signing Algorithm

Item	Capability	Reference	Support	Status	Comment
------	------------	-----------	---------	--------	---------

Table 7: Key Distribution

Item	Capability	Reference	Support	Status	Comment
7/1	Encryption Key	[2] 9.4.3	C.1	<input checked="" type="checkbox"/>	C.1: Mandatory IF GAP 24/2 “Bondable Mode” OR GAP 42/6 “Bondable Mode” is supported, otherwise Optional.
7/2	IdentityKey	[2] 10.7	C.2	<input checked="" type="checkbox"/>	C.2: Mandatory IF GAP 26/3 “Resolvable Private Address Generation Procedure” is supported, otherwise Optional.