

# Link Manager Protocol (LMP)

## **Bluetooth® Implementation Conformance Statement (ICS) Proforma**

---

- **Revision:** LMP.ICS.p38
- **Revision Date:** 2024-09-04
- **Prepared By:** BTI
- **Published during TCRL:** TCRL.2024-2



This document, regardless of its title or content, is not a Bluetooth Specification as defined in the Bluetooth Patent/Copyright License Agreement (“PCLA”) and Bluetooth Trademark License Agreement. Use of this document by members of Bluetooth SIG is governed by the membership and other related agreements between Bluetooth SIG Inc. (“Bluetooth SIG”) and its members, including the PCLA and other agreements posted on Bluetooth SIG’s website located at [www.bluetooth.com](http://www.bluetooth.com).

THIS DOCUMENT IS PROVIDED “AS IS” AND BLUETOOTH SIG, ITS MEMBERS, AND THEIR AFFILIATES MAKE NO REPRESENTATIONS OR WARRANTIES AND DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, TITLE, NON-INFRINGEMENT, FITNESS FOR ANY PARTICULAR PURPOSE, THAT THE CONTENT OF THIS DOCUMENT IS FREE OF ERRORS.

TO THE EXTENT NOT PROHIBITED BY LAW, BLUETOOTH SIG, ITS MEMBERS, AND THEIR AFFILIATES DISCLAIM ALL LIABILITY ARISING OUT OF OR RELATING TO USE OF THIS DOCUMENT AND ANY INFORMATION CONTAINED IN THIS DOCUMENT, INCLUDING LOST REVENUE, PROFITS, DATA OR PROGRAMS, OR BUSINESS INTERRUPTION, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, AND EVEN IF BLUETOOTH SIG, ITS MEMBERS, OR THEIR AFFILIATES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This document is proprietary to Bluetooth SIG. This document may contain or cover subject matter that is intellectual property of Bluetooth SIG and its members. The furnishing of this document does not grant any license to any intellectual property of Bluetooth SIG or its members.

This document is subject to change without notice.

Copyright © 2003–2024 by Bluetooth SIG, Inc. The Bluetooth word mark and logos are owned by Bluetooth SIG, Inc. Other third-party brands and names are the property of their respective owners.

# Contents

<b>1</b>	<b>Identification of the implementation .....</b>	<b>4</b>
1.1	Implementation Under Test (IUT) identification .....	4
1.2	Capability Statement.....	5
1.2.1	General Response Messages.....	5
1.2.2	Supported Features (General Statement).....	5
1.2.3	Authentication .....	8
1.2.4	Pairing.....	9
1.2.5	Link Keys .....	9
1.2.6	Encryption.....	9
1.2.7	Information Requests.....	10
1.2.8	Link Handling .....	11
1.2.9	Quality of Service.....	13
1.2.10	Multi-Slot Packets .....	13
1.2.11	Paging Scheme .....	13
1.2.12	Connection Establishment .....	14
1.2.13	Test Mode.....	14
1.2.14	Ping.....	15
1.2.15	Piconet Clock Adjust.....	15
1.2.16	Slot Availability Mask .....	15
1.2.17	Inter-layer Requirements .....	15
<b>2</b>	<b>References .....</b>	<b>18</b>
<b>3</b>	<b>Mapping of LMP feature bits to ICS items .....</b>	<b>19</b>
<b>4</b>	<b>Bridge mapping between the SUM ICS and the LMP ICS.....</b>	<b>22</b>
<b>5</b>	<b>Revision history and acknowledgments .....</b>	<b>23</b>

# 1 Identification of the implementation

---

## 1.1 Implementation Under Test (IUT) identification

Identification of the Implementation Under Test (IUT) is to be filled in to provide as much detail as possible regarding version numbers and configuration options.

An ICS contact person to respond to queries regarding information supplied in this ICS proforma is named in the Declaration of Compliance: Summary of Selected Specifications in Implementation.

## 1.2 Capability Statement

### 1.2.1 General Response Messages

Table 1: Response Messages

Item	Capability	Reference	Status
1	Accept message	[1] 2.7	M
2	Reject message	[1] 2.7	M

### 1.2.2 Supported Features (General Statement)

Table 2: Supported Features

Item	Capability	Reference	Status
1	3-slot packets	[1] 3.3, 4.1.10	O
2	5-slot packets	[1] 3.3, 4.1.10	O
3	Encryption	[1] 3.3, 4.2.5	M
4	Slot offset	[1] 3.3, 4.4.1	O
5	Timing accuracy	[1] 3.3, 4.3.1	O
6	Role switch	[1] 3.3, 4.4.2 [3] 8.6.5	C.5
7	Hold mode	[1] 3.3, 4.5.1	O
8	Sniff mode	[1] 3.3, 4.5.3	O
9	Park mode	[1] 3.3, 4.5.3	C.21
10	Power Control	[1] 3.3, 4.1.3 [2] 3	C.1
11	Channel quality driven data rate	[1] 3.3, 4.1.7	O
12	SCO link	[1] 3.3, 4.6.1 [3] 4.3, 6.5.2.1, 6.5.2.4	O
13	RSSI with inquiry results	[1] 3.3 [3] 8.4.2	O
13a	Power Control Requests	[1] 3.3, 4.1.3	O
14	Broadcast encryption	[1] 3.3, 4.2.4, 4.2.6	C.18
15	eSCO link	[1] 3.3, 4.6.2 [3] 5.5, 6.5.3.1	O
16	No longer used	N/A	N/A
17	Enhanced Data Rate ACL (2 Mb/s mode)	[1] 3.3 [3] 6.5.4	O
17a	Enhanced Data Rate ACL (3 Mb/s mode)	[1] 3.3 [3] 6.5.4	C.19
18	Enhanced Data Rate eSCO (2 Mb/s mode)	[1] 3.3 [3] 6.5.3	O
18a	Enhanced Data Rate eSCO (3 Mb/s mode)	[1] 3.3 [3] 6.5.3	C.20

Item	Capability	Reference	Status
19	No longer used	N/A	N/A
19a	Simple Pairing Updates	[4] [5] 3.3, 4.2.7.4	M
19b	Secure Simple Pairing (Controller Support)	[1] 3.3, 4.2.7	M
20	Enhanced Power Control	[1] 3.3, 4.1.3.1	C.6
21	No longer used	N/A	N/A
22	LE Supported (Controller)	[1] 3.3	C.4
23	LE and BR/EDR to same device capable (Controller)	[1] 3.3	C.12
24–25	No longer used	N/A	N/A
26	Secure Connections (Controller Support)	[1] 3.3, 4.2.7	C.9
26a	No longer used	N/A	N/A
27	Ping	[1] 3.3, 4.1.13	O
28	Coarse Clock Adjustment	[1] 3.3, 4.1.14	C.15
29	Slot Availability Mask	[1] 3.3, 4.1.15	O
30	Paging Parameter Negotiation	[1] 3.3, 4.1.9	O

C.1: Mandatory IF RF 1/1 “Power Class 1”, otherwise Optional.

C.2–C.3: No longer used.

C.4: Mandatory IF CORE 10/12 “Link Layer (LL)”, otherwise Excluded.

C.5: Optional IF LMP 2/4 “Slot offset”, otherwise Excluded.

C.6: Optional IF LMP 2/10 “Power Control” AND LMP 2/13a “Power Control Requests”, otherwise Excluded.

C.7–C.8: No longer used.

C.9: Optional IF LMP 2/3 “Encryption” AND LMP 2/27 “Ping” AND LMP 6/10 “Encryption Pause/Resume”, otherwise Excluded.

C.10–C.11: No longer used.

C.12: Optional IF LMP 2/22 “LE Supported (Controller)”, otherwise Excluded.

C.13–C.14: No longer used.

C.15: Optional IF LMP 26/1 “Support of AFH switch as Central” AND LMP 26/2 “Support of AFH switch as Peripheral” AND LMP 2a/130 “Synchronization Train” AND LMP 2a/131 “Synchronization Scan” AND NOT LMP 2/14 “Broadcast encryption”, otherwise Excluded.

C.16–C.17: No longer used.

C.18: Excluded IF LMP 2/28 “Coarse Clock Adjustment”, otherwise Optional IF LMP 2/3 “Encryption”, otherwise Excluded.

C.19: Optional IF LMP 2/17 “Enhanced Data Rate ACL (2 Mb/s mode)”, otherwise Excluded.

C.20: Optional IF LMP 2/18 “Enhanced Data Rate eSCO (2 Mb/s mode)”, otherwise Excluded.

C.21: Optional IF CORE 1/42 “Controller Core v4.2”, otherwise Excluded.

Table 2a: Additional Features

Item	Capability	Reference	Status
12	HV2 packets	[1] 3.3 [3] 6.5.2.2	C.12
13	HV3 packets	[1] 3.3 [3] 6.5.2.3	C.12
14	μ-law log synchronous data	[1] 3.3 [3] 9.1	C.14
15	A-law log synchronous data	[1] 3.3 [3] 9.1	C.14
16	CVSD synchronous data	[1] 3.3 [3] 9.2	C.14
19	Transparent synchronous data	[1] 3.3 [3] 6.4.3	C.14
28	Interlaced inquiry scan	[1] 3.3 [3] 8.4.1	O
29	Interlaced page scan	[1] 3.3 [3] 8.3.1	O
32	EV4 packets	[1] 3.3 [3] 6.5.3.2	C.32
33	EV5 packets	[1] 3.3 [3] 6.5.3.3	C.32
39	3-slot Enhanced Data Rate ACL packets	[1] 3.3 [3] 4.1.10	C.39
40	5-slot Enhanced Data Rate ACL packets	[1] 3.3 [3] 4.1.10	C.39
47	3-slot Enhanced Data Rate eSCO packets	[1] 3.3 [3] 4.1.10	C.47
48	Extended Inquiry Response	[1] 3.3	C.48
52	Encapsulated PDU	[1] 3.3, 4.1.12.1	M
53	Erroneous Data Reporting	[1] 3.3	C.53
54	Non-flushable Packet Boundary Flag	[1] 3.3	O
56	Link Supervision Timeout Changed event	[1] 3.3 [7] 7.7.46	C.56
57	Variable Inquiry TX Power Level	[1] 3.3	O
128	Connectionless Peripheral Broadcast - Central Operation	[1] 3.3	C.128
129	Connectionless Peripheral Broadcast - Peripheral Operation	[1] 3.3	C.129
130	Synchronization Train	[1] 3.3	O
131	Synchronization Scan	[1] 3.3	O
132	Inquiry Response Notification event	[1] 3.3 [7] 7.7.74	C.132

Item	Capability	Reference	Status
133	Generalized interlaced scan	[1] 3.3 [3] 8.3.1, 8.4.1	C.133
139	Train nudging	[1] 3.3 [3] 8.3.2, 8.4.1	O

- C.12: Optional IF LMP 2/12 “SCO link”, otherwise Excluded.
- C.14: Optional IF LMP 2/12 “SCO link” OR LMP 2/15 “eSCO link”, otherwise Excluded.
- C.32: Optional IF LMP 2/15 “eSCO link”, otherwise Excluded.
- C.39: Optional IF LMP 2/17 “Enhanced Data Rate ACL (2 Mb/s mode)”, otherwise Excluded.
- C.47: Optional IF LMP 2/18 “Enhanced Data Rate eSCO (2 Mb/s mode)”, otherwise Excluded.
- C.48: Optional IF LMP 2/13 “RSSI with inquiry results”, otherwise Excluded.
- C.53: Mandatory IF (LMP 2/12 “SCO link” OR LMP 2/15 “eSCO link”) AND HCI 9/8 “Write Default Erroneous Data Reporting command”, otherwise Excluded.
- C.56: Mandatory IF HCI 13/7 “Link Supervision Timeout Changed event”, otherwise Excluded.
- C.128: Optional IF LMP 2a/130 “Synchronization Train”, otherwise Excluded.
- C.129: Optional IF LMP 2a/131 “Synchronization Scan”, otherwise Excluded.
- C.132: Mandatory IF HCI 6/23 “Inquiry Response Notification event”, otherwise Excluded.
- C.133: Optional IF (LMP 2a/28 “Interlaced inquiry scan” OR LMP 2a/29 “Interlaced page scan”), otherwise Excluded.

**Table 2b: EDR Features**

Item	Capability	Reference	Status
1	EDR for asynchronous transports (single slot)	[2] 3.2	C.1, C.4
2	EDR for asynchronous transports (multi-slot)	[2] 3.2	C.2, C.4
3	EDR for synchronous transports (Core 3.0 or later)	[2] 3.2	C.3, C.4

- C.1: Mandatory IF LMP 2/17 “Enhanced Data Rate ACL (2 Mb/s mode)”, otherwise Excluded.
- C.2: Mandatory IF LMP 2a/39 “3-slot Enhanced Data Rate ACL packets”, otherwise Excluded.
- C.3: Mandatory IF LMP 2/18 “Enhanced Data Rate eSCO (2 Mb/s mode)”, otherwise Excluded.
- C.4: Mandatory to support at least one IF CORE 30/4 “HS Core-Controller Configuration” OR CORE 30/5 “HS/LE Core-Controller Configuration”, otherwise Optional.

### 1.2.3 Authentication

**Table 3: Authentication**

Item	Capability	Reference	Status
1	Initiate authentication before connection completed	[1] 4.2.1	O
2	Initiate authentication after connection completed	[1] 4.2.1	O
3	Respond to authentication request	[1] 4.2.1	M



## 1.2.4 Pairing

**Table 4: Pairing**

Item	Capability	Reference	Status
1	Initiate pairing before connection completed	[1] 4.4.2	O
2	Initiate pairing after connection completed	[1] 4.4.2	O
3	Respond to pairing request	[1] 4.2.2.1, 4.2.2.3	M
4	Use fixed PIN and request responder to initiator switch	[1] 4.2.2.2	C.1
5	Use variable PIN	[1] 4.2.2.2	C.1
6	Accept initiator to responder switch	[1] 4.2.2.2	C.2
7	TSPC_Change_of_IO_Capabilities	[1] 4.2.7.3.4	M

C.1: Mandatory to support at least one.

C.2: Mandatory IF LMP 4/5 “Use variable PIN” AND (LMP 4/1 “Initiate pairing before connection completed” OR LMP 4/2 “Initiate pairing after connection completed”), otherwise Optional.

C.3: No longer used.

## 1.2.5 Link Keys

**Table 5: Link Keys**

Item	Capability	Reference	Status
1	No longer used	N/A	N/A
2	Creation of link key - Combination Key	[1] 4.2.2.4	M
3	Initiate change of link key	[1] 4.2.3	O
4	Accept change of link key	[1] 4.2.3	M
5–7	No longer used	N/A	N/A
8	Support for 7 bytes or longer encryption key size	[1] 4.2.5.2	M

## 1.2.6 Encryption

**Table 6: Encryption**

*Prerequisite: LMP 2/3 “Encryption”*

Item	Capability	Reference	Status
1	Initiate encryption	[1] 4.2.5.1	M
2	Accept encryption requests	[1] 4.2.5.1	M
3–4	No longer used	N/A	N/A
5	Key size negotiation	[1] 4.2.5.2	M
6	Start encryption, as Central	[1] 4.2.5.3	M
7	Accept start of encryption	[1] 4.2.5.3	M
8	Stop encryption, as Central	[1] 4.2.5.4	M
9	Accept stop of encryption	[1] 4.2.5.4	M

Item	Capability	Reference	Status
10	Encryption Pause/Resume	[1] 4.2.5.3	M
11	AES CCM Encryption	[1] 4.2.5	C.3

C.1–C.2: No longer used.

C.3: Mandatory IF LMP 2/26 “Secure Connections (Controller Support)”, otherwise Excluded.

## 1.2.7 Information Requests

**Table 7: Clock Offset Information**

Item	Capability	Reference	Status
1	Request clock offset information	[1] 4.3.2	M
2	Respond to clock offset requests	[1] 4.3.2	M

**Table 8: Slot Offset Information**

*Prerequisite: LMP 2/4 “Slot offset”*

Item	Capability	Reference	Status
1	Send slot offset information	[1] 4.4.1	C.1

C.1: Mandatory IF LMP 13/1 “Request role switch”, otherwise Optional.

**Table 9: Timing Accuracy Information**

*Prerequisite: LMP 2/5 “Timing accuracy”*

Item	Capability	Reference	Status
1	Request timing accuracy information	[1] 4.3.1	O
2	Respond to timing accuracy information requests	[1] 4.3.1	M

**Table 10: LM Version Information**

Item	Capability	Reference	Status
1	Request LM version information	[1] 4.3.3	O
2	Respond to LM version information requests	[1] 4.3.3	M

**Table 11: Feature Support**

Item	Capability	Reference	Status
1	Request supported features	[1] 4.3.4	M
2	Respond to supported features requests	[1] 4.3.4	M

Item	Capability	Reference	Status
3	Request extended features mask	[1] 4.3.4	C.2
4	Respond to extended features request	[1] 4.3.4	C.2

C.1: No longer used.

C.2: Mandatory IF LMP 2a/128 “Connectionless Peripheral Broadcast - Central Operation” OR LMP 2a/129 “Connectionless Peripheral Broadcast - Peripheral Operation” OR LMP 2a/130 “Synchronization Train” OR LMP 2a/131 “Synchronization Scan” OR LMP 2a/132 “Inquiry Response Notification event” OR LMP 2a/133 “Generalized interlaced scan” OR LMP 2/28 “Coarse Clock Adjustment” OR LMP 2/26 “Secure Connections (Controller Support)” OR LMP 2/27 “Ping” OR LMP 2/29 “Slot Availability Mask” OR LMP 2a/139 “Train nudging”, otherwise Optional. Note: Mandatory IF a feature requiring another features page (a feature with an LMP feature number greater than 63 in Table 3.1: Mapping of LMP Feature Bits to ICS Items), other than Host features, is supported, otherwise Optional.

**Table 12: Name Information**

Item	Capability	Reference	Status
1	Request name information	[1] 4.3.5	M
2	Respond to name requests	[1] 4.3.5	M

## 1.2.8 Link Handling

**Table 13: Role Switch**

*Prerequisite: LMP 2/6 “Role switch”*

Item	Capability	Reference	Status
1	Request role switch	[1] 4.4.2	O
2	Accept role switch requests	[1] 4.4.2	M

**Table 14: Detach**

Item	Capability	Reference	Status
1	Detach connection	[1] 4.1.2	M

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

Item	Capability	Reference	Status
1	Enter Enhanced Data Rate	[1] 4.1.11	C.1
2	Exit Enhanced Data Rate	[1] 4.1.11	C.1

C.1: Mandatory IF LMP 2/17 “Enhanced Data Rate ACL (2 Mb/s mode)”, otherwise Excluded.

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

Item	Capability	Reference	Status
1	Enter and exit eSCO using Enhanced Data Rate Packets	[1] 4.6.2	C.1

C.1: Mandatory IF LMP 2/18 “Enhanced Data Rate eSCO (2 Mb/s mode)”, otherwise Excluded.

**Table 15: Hold Mode**

*Prerequisite: LMP 2/7 “Hold mode”*

Item	Capability	Reference	Status
1	Force hold mode	[1] 4.5.1, 4.5.1.2	O
2	Request hold mode	[1] 4.5.1, 4.5.1.3	C.1
3	Respond to hold mode requests	[1] 4.5.1, 4.5.1.3	M
4	Accept forced hold mode	[1] 4.5.1, 4.5.1.2	M

C.1: Mandatory IF LMP 15/1 “Force hold mode”, otherwise Optional.

**Table 16: Sniff Mode**

*Prerequisite: LMP 2/8 “Sniff mode”*

Item	Capability	Reference	Status
1	No longer used	N/A	N/A
2	Request sniff mode	[1] 4.5.3, 4.5.3.2	O
3	Respond to sniff mode requests (renegotiate or reject)	[1] 4.5.3.2	M
4	No longer used	N/A	N/A
5	Request un-sniff	[1] 4.5.3.2	C.1
6	Accept un-sniff requests	[1] 4.5.3.2	M
7	Sniff Subrating Mode	[1] 4.5.3.2	M

C.1: Mandatory IF LMP 16/2 “Request sniff mode”, otherwise Optional.

**Table 17: No longer used****Table 18: Power Control**

Item	Capability	Reference	Status
1	Request to Increase Power	[1] 4.1.3	C.1
2	Request to Decrease Power	[1] 4.1.3	C.1
3	Respond when max power reached	[1] 4.1.3	C.2
4	Respond when min power reached	[1] 4.1.3	C.2
5	Request to increment power a single step	[1] 4.1.3.1.1	C.3
6	Request to decrease power a single step	[1] 4.1.3.1.1	C.3
7	Request to go to max power	[1] 4.1.3.1.1	C.3
8	Respond to increment power a single step	[1] 4.1.3.1.2	C.3

Item	Capability	Reference	Status
9	Respond to decrease power a single step	[1] 4.1.3.1.2	C.3
10	Respond to go to max power	[1] 4.1.3.1.2	C.3

C.1: Mandatory IF LMP 2/13a “Power Control Requests”, otherwise Excluded.

C.2: Mandatory IF LMP 2/10 “Power Control”, otherwise Excluded.

C.3: Mandatory IF LMP 2/20 “Enhanced Power Control”, otherwise Excluded.

**Table 19: Link Supervision Timeout**

Item	Capability	Reference	Status
1	Set link supervision timeout value	[1] 4.1.6	O
2	Accept link supervision timeout setting	[1] 4.1.6	M

### 1.2.9 Quality of Service

**Table 20: Quality of Service**

Item	Capability	Reference	Status
1	Channel quality driven change between DM and DH packet types	[1] 4.1.7	C.1
2	Force/Request change of Quality of Service	[1] 4.1.8, 4.1.8.1	M
3	Request change of Quality of Service	[1] 4.1.8, 4.1.8.2	M

C.1: Mandatory IF LMP 2/11 “Channel quality driven data rate”, otherwise Optional.

**Table 21: No longer used**

### 1.2.10 Multi-Slot Packets

**Table 22: Multi-Slot Packets**

Item	Capability	Reference	Status
1	Accept maximum allowed number of slots to be used	[1] 4.1.10	C.1
2	Request maximum number of slots to be used	[1] 4.1.10	C.1
3	Accept request of maximum number of slots to be used	[1] 4.1.10	C.1

C.1: Mandatory IF LMP 2/1 “3-slot packets” OR LMP 2/2 “5-slot packets”, otherwise Optional.

### 1.2.11 Paging Scheme

**Table 23: Paging Scheme**

*Prerequisite: LMP 2/30 “Paging Parameter Negotiation”*

Item	Capability	Reference	Status
1	Request page mode to use	[1] 4.1.9, 4.1.9.1	M
2	Accept suggested page mode	[1] 4.1.9, 4.1.9.1	M

Item	Capability	Reference	Status
3	Request page scan mode to use	[1] 4.1.9, 4.1.9.2	M
4	Accept suggested page scan mode	[1] 4.1.9, 4.1.9.2	M

### 1.2.12 Connection Establishment

**Table 24: Connection Establishment**

Item	Capability	Reference	Status
1	Create connection for higher layers	[1] 4.1.1	M
2	Respond to requests to establish connections for higher layers	[1] 4.1.1	M
3	Indicate that link set-up is completed	[1] 4.1.1	M

### 1.2.13 Test Mode

**Table 25: Test Mode**

Item	Capability	Reference	Status
1	Activate test mode	[1] 4.7.1	O
2	Ability to reject activation of test mode if test mode is disabled	[1] 4.7.1	M
3	Control test mode	[1] 4.7.2	O
4	Ability to reject test mode control commands if test mode is disabled	[1] 4.7.2	M

**Table 26: Adaptive Frequency Hopping**

Item	Capability	Reference	Status
1	Support of AFH switch as Central	[1] 4.1.4	O
2	Support of AFH switch as Peripheral	[1] 4.1.4	O
3	No longer used	N/A	N/A
4	Support of Channel Classification reporting as Peripheral	[1] 4.1.5	C.2
4a	Support of Channel Classification reporting as Central	[1] 4.1.5	C.4
5	Support channel classification from host	[1] 4.1.5	C.3
6	Support of Channel Classification	[1] 4.1.5	O

C.1: No longer used.

C.2: Optional IF LMP 26/2 “Support of AFH switch as Peripheral”, otherwise Excluded.

C.3: Mandatory IF LMP 26/1 “Support of AFH switch as Central” OR LMP 26/4 “Support of Channel Classification reporting as Peripheral”, otherwise Optional.

C.4: Optional IF LMP 26/1 “Support of AFH switch as Central”, otherwise Excluded.

### 1.2.14 Ping

**Table 27: Ping**

*Prerequisite: LMP 2/27 “Ping”*

Item	Capability	Reference	Status
1	Initiate LMP Ping	[1] 4.1.13	O
2	Respond to LMP Ping	[1] 4.1.13	M

### 1.2.15 Piconet Clock Adjust

**Table 28: Coarse Clock Adjustment**

*Prerequisite: LMP 2/28 “Coarse Clock Adjustment”*

Item	Capability	Reference	Status
1	Receive Request for Coarse Clock Adjustment	[1] 4.1.14.1	O
2	Send Request for Coarse Clock Adjustment	[1] 4.1.14.1	O

### 1.2.16 Slot Availability Mask

**Table 29: Slot Availability Mask**

*Prerequisite: LMP 2/29 “Slot Availability Mask”*

Item	Capability	Reference	Status
1	Initiate SAM negotiations	[1] 4.1.15	O
2	Respond to SAM negotiations	[1] 4.1.15	M

### 1.2.17 Inter-layer Requirements

**Table 30: BB Requirements**

Item	Capability	Reference	Status	Inter-Layer Dependency
0a	DM3 packet type	[3] 6.5.4.3	C.0	[6] BB 5/2
0b	DH3 packet type	[3] 6.5.4.4	C.0	[6] BB 5/3
1a	DM5 packet type	[3] 6.5.4.5	C.1	[6] BB 5/4
1b	DH5 packet type	[3] 6.5.4.6	C.1	[6] BB 5/5
11	SCO link	[3] 4.5.1.2, 8.6.2	C.11	[6] BB 2/2
12	HV2 packet type	[3] 6.5.2.2	C.12	[6] BB 6/2
13	HV3 packet type	[3] 6.5.2.3	C.13	[6] BB 6/3
14	μ-law	[3] 9.1	C.14	[6] BB 13/2
15	A-law	[3] 9.1	C.15	[6] BB 13/1
16	CVSD	[3] 9.2	C.16	[6] BB 13/3
19	Transparent Synchronous Data	[3] 6.4.3	C.19	[6] BB 13/4
25	2-DH1 packet type	[3] 6.5.4.8	C.25	[6] BB 5a/1

Item	Capability	Reference	Status	Inter-Layer Dependency
26	3-DH1 packet type	[3] 6.5.4.11	C.26	[6] BB 5a/4
28	Interlaced Scan during Inquiry Scan	[3] 8.4.1	C.28	[6] BB 10/6
29	Interlaced Scan during Page Scan	[3] 8.3.1	C.29	[6] BB 7/5
31	eSCO link	[3] 4.5.1.4, 8.6.3	C.31	[6] BB 2/3
32	EV4 packet type	[3] 6.5.3.2	C.32	[6] BB 6/6
33	EV5 packet type	[3] 6.5.3.3	C.33	[6] BB 6/7
39	2-DH3 packet type	[3] 6.5.4.9	C.39	[6] BB 5a/2
40	2-DH5 packet type	[3] 6.5.4.13	C.40	[6] BB 5a/3
45	2-EV3 packet type	[3] 6.5.3.4	C.45	[6] BB 6a/1
46	3-EV3 packet type	[3] 6.5.3.6	C.46	[6] BB 6a/3
47a	2-EV5 packet type	[3] 6.5.3.5	C.47	[6] BB 6a/2
47b	3-EV5 packet type	[3] 6.5.3.7	C.47	[6] BB 6a/4
48	Extended Inquiry Response	[3] 8.4.3	C.48	[6] BB 10/7
54	Non-flushable Packet Boundary Flag	[3] 7.6.3	C.54	[6] BB 16/1
128	Connectionless Peripheral Broadcast Transmitter	[3] 8.10.1	C.128	[6] BB 3a/1
129	Connectionless Peripheral Broadcast Receiver	[3] 8.10.2	C.129	[6] BB 3a/2
130	Synchronization Train	[3] 8.3.5	C.130	[6] BB 9c/1
131	Synchronization Scan	[3] 8.3.4	C.131	[6] BB 9c/2
133a	Generalized Interlaced Page Scan	[3] 8.3.1	C.133	[6] BB 7/9
133b	Generalized Interlaced Inquiry Scan	[3] 8.4.1	C.133	[6] BB 10/9
134	Coarse Clock Adjustment	[3] 8.6.10.1	C.134	[6] BB 18/1
138	Slot Availability Mask	[3] 8.6.11	C.138	[6] BB 19/1
139a	Train Nudging During Page	[3] 8.3.2	C.139	[6] BB 7/8
139b	Train Nudging During Inquiry	[3] 8.4.2	C.139	[6] BB 10/8

- C.0: Mandatory IF LMP 2/1 “3-slot packets”, otherwise not defined.
- C.1: Mandatory IF LMP 2/2 “5-slot packets”, otherwise not defined.
- C.11: Mandatory IF LMP 2/12 “SCO link”, otherwise not defined.
- C.12: Mandatory IF LMP 2a/12 “HV2 packets”, otherwise not defined.
- C.13: Mandatory IF LMP 2a/13 “HV3 packets”, otherwise not defined.
- C.14: Mandatory IF LMP 2a/14 “μ-law log synchronous data”, otherwise not defined.
- C.15: Mandatory IF LMP 2a/15 “A-law log synchronous data”, otherwise not defined.
- C.16: Mandatory IF LMP 2a/16 “CVSD synchronous data”, otherwise not defined.
- C.19: Mandatory IF LMP 2a/19 “Transparent synchronous data”, otherwise not defined.
- C.25: Mandatory IF LMP 2/17 “Enhanced Data Rate ACL (2 Mb/s mode)”, otherwise not defined.
- C.26: Mandatory IF LMP 2/17a “Enhanced Data Rate ACL (3 Mb/s mode)”, otherwise not defined.
- C.28: Mandatory IF LMP 2a/28 “Interlaced inquiry scan”, otherwise not defined.
- C.29: Mandatory IF LMP 2a/29 “Interlaced page scan”, otherwise not defined.
- C.31: Mandatory IF LMP 2/15 “eSCO link”, otherwise not defined.
- C.32: Mandatory IF LMP 2a/32 “EV4 packets”, otherwise not defined.
- C.33: Mandatory IF LMP 2a/33 “EV5 packets”, otherwise not defined.



- C.39: Mandatory IF LMP 2a/39 “3-slot Enhanced Data Rate ACL packets”, otherwise not defined.
- C.40: Mandatory IF LMP 2a/40 “5-slot Enhanced Data Rate ACL packets”, otherwise not defined.
- C.45: Mandatory IF LMP 2/18 “Enhanced Data Rate eSCO (2 Mb/s mode)”, otherwise not defined.
- C.46: Mandatory IF LMP 2/18a “Enhanced Data Rate eSCO (3 Mb/s mode)”, otherwise not defined.
- C.47: Mandatory to support at least one IF LMP 2a/47 “3-slot Enhanced Data Rate eSCO packets”, otherwise not defined.
- C.48: Mandatory IF LMP 2a/48 “Extended Inquiry Response”, otherwise not defined.
- C.54: Mandatory IF LMP 2a/54 “Non-flushable Packet Boundary Flag”, otherwise not defined.
- C.128: Mandatory IF LMP 2a/128 “Connectionless Peripheral Broadcast - Central Operation”, otherwise not defined.
- C.129: Mandatory IF LMP 2a/129 “Connectionless Peripheral Broadcast - Peripheral Operation”, otherwise not defined.
- C.130: Mandatory IF LMP 2a/130 “Synchronization Train”, otherwise not defined.
- C.131: Mandatory IF LMP 2a/131 “Synchronization Scan”, otherwise not defined.
- C.133: Mandatory to support at least one IF LMP 2a/133 “Generalized interlaced scan”, otherwise not defined.
- C.134: Mandatory IF LMP 2/28 “Coarse Clock Adjustment”, otherwise not defined.
- C.138: Mandatory IF LMP 2/29 “Slot Availability Mask”, otherwise not defined.
- C.139: Mandatory to support at least one IF LMP 2a/139 “Train nudging”, otherwise not defined.

## 2 References

---

- [1] Specification of the Bluetooth System, Volume 2, Part C (LMP)
- [2] Specification of the Bluetooth System, Volume 2, Part A (RF)
- [3] Specification of the Bluetooth System, Volume 2, Part B (BB)
- [4] Erratum 10734
- [5] Specification of the Bluetooth System, Volume 2, Part C (LMP), Version 5.1 or later
- [6] ICS Proforma for Base Band (BB)
- [7] Specification of the Bluetooth System, Volume 4, Part E (HCI)

### 3 Mapping of LMP feature bits to ICS items

This section is informative.

Not all LMP features have corresponding ICS items.

Feature	LMP Bit	ICS Item
3 slot packets	0	LMP 2/1
5 slot packets	1	LMP 2/2
Encryption	2	LMP 2/3
Slot offset	3	LMP 2/4
Timing accuracy	4	LMP 2/5
Role switch	5	LMP 2/6
Hold mode	6	LMP 2/7
Sniff mode	7	LMP 2/8
Park	8	LMP 2/9
Power control requests	9	LMP 2/13a
Channel quality driven data rate (CQDDR)	10	LMP 2/11
SCO link	11	LMP 2/12
HV2 packets	12	LMP 2a/12
HV3 packets	13	LMP 2a/13
μ-law log synchronous data	14	LMP 2a/14
A-law log synchronous data	15	LMP 2a/15
CVSD synchronous data	16	LMP 2a/16
Paging parameter negotiation	17	LMP 2/30
Power control	18	LMP 2/10
Transparent synchronous data	19	LMP 2a/19
Flow control lag (least significant bit)	20	See below
Flow control lag (middle bit)	21	See below
Flow control lag (most significant bit)	22	See below
Broadcast Encryption	23	LMP 2/14
Enhanced Data Rate ACL 2 Mb/s mode	25	LMP 2/17
Enhanced Data Rate ACL 3 Mb/s mode	26	LMP 2/17a
Enhanced inquiry scan	27	See below
Interlaced inquiry scan	28	LMP 2a/28
Interlaced page scan	29	LMP 2a/29
RSSI with inquiry results	30	LMP 2/13
Extended SCO link (EV3 packets)	31	LMP 2/15
EV4 packets	32	LMP 2a/32
EV5 packets	33	LMP 2a/33
AFH capable Peripheral	35	LMP 26/2
AFH classification Peripheral	36	LMP 26/4
No longer used	37	N/A

Feature	LMP Bit	ICS Item
LE Supported (Controller)	38	LMP 2/22
3-slot Enhanced Data Rate ACL packets	39	LMP 2a/39
5-slot Enhanced Data Rate ACL packets	40	LMP 2a/40
Sniff subrating	41	LMP 16/7
Pause encryption	42	LMP 6/10
AFH capable Central	43	LMP 26/1
AFH classification Central	44	LMP 26/4a
Enhanced Data Rate eSCO 2 Mb/s mode	45	LMP 2/18
Enhanced Data Rate eSCO 3 Mb/s mode	46	LMP 2/18a
3-slot Enhanced Data Rate eSCO packets	47	LMP 2a/47
Extended Inquiry Response	48	LMP 2a/48
Simultaneous LE and BR/EDR to Same Device Capable (Controller)	49	LMP 2/23
Secure Simple Pairing (Controller Support)	51	LMP 2/19b
Encapsulated PDU	52	LMP 2a/52
Erroneous Data Reporting	53	LMP 2a/53
Non-flushable Packet Boundary Flag	54	LMP 2a/54
Link Supervision Timeout Changed event	56	LMP 2a/56
Variable Inquiry TX Power Level	57	LMP 2a/57
Enhanced Power Control	58	LMP 2/20
Extended features	63	LMP 11/4
Secure Simple Pairing (Host Support)	64	See below
LE Supported (Host)	65	See below
Simultaneous LE and BR/EDR to Same Device Capable (Host)	66	See below
Secure Connections (Host Support)	67	See below
Connectionless Peripheral Broadcast - Central Operation	128	LMP 2a/128
Connectionless Peripheral Broadcast - Peripheral Operation	129	LMP 2a/129
Synchronization Train	130	LMP 2a/130
Synchronization Scan	131	LMP 2a/131
Inquiry Response Notification event	132	LMP 2a/132
Generalized interlaced scan	133	LMP 2a/133
Coarse Clock Adjustment	134	LMP 2/28
Secure Connections (Controller Support)	136	LMP 2/26
Ping	137	LMP 2/27
Slot Availability Mask	138	LMP 2/29
Train nudging	139	LMP 2a/139

Table 3.1: Mapping of LMP feature bits to ICS items

Feature bits 64, 65, 66, and 67 are set at run-time by the Host; therefore, they do not have a corresponding ICS entry. Tests that check that feature masks match the ICS should ignore these bits.

Feature bits 20, 21, and 22 are the three bits corresponding to the Flow Control Lag. These bits should be ignored when testing the mask.

The value for Feature bit 27 is ignored when testing the mask.

The missing bit numbers are RFU and are 0 when testing the mask.

## 4 Bridge mapping between the SUM ICS and the LMP ICS

Erratum 23556 removed Vol 0 Part B “Compliance” and Vol 1 Part D “Mixing Of Specification Versions” from the Core specification and replaced them with a new Vol 0 Part D “Core Configurations”.

The concepts of product types, as well as some conditions tied to specific core capabilities, were described in Vol 0 Part B “Compliance” and indicated by entries in the SUM ICS.

The withdrawal of the SUM ICS means that three ICS items for EDR capabilities (SUM ICS 22/1, SUM ICS 22/2, and SUM ICS 22/4) have been relocated to the LMP ICS. This means that implementations that previously selected these items in the SUM ICS will now need to select the corresponding items in the LMP ICS.

[Table 4.1](#) provides the mapping between the LMP ICS and SUM ICS items. If an implementation previously supported one of the SUM ICS capabilities, then it now supports the corresponding LMP ICS capability.

LMP ICS	Description	Past SUM ICS representation
LMP 2b/1	EDR for asynchronous transports (single slot)	SUM ICS 22/1
LMP 2b/2	EDR for asynchronous transports (multi-slot)	SUM ICS 22/2
LMP 2b/3	EDR for synchronous transports (Core 3.0 or later)	SUM ICS 22/4

*Table 4.1: Mapping between the LMP ICS and SUM ICS items*

## 5 Revision history and acknowledgments

### Revision History

Publication Number	Revision Number	Date	Comments
	D5r3	2003-11-05	Original Release
	D10R00	2004-03-10	Re-partitioned to match Main Specification Volume/Part partitioning. TSE 523, 524, 525, 545, and 547 incorporated.
	D10r01	2004-03-11	Editorial changes
	D12r02	2004-03-23	Editorial changes. Changed reference and document numbering to D12 to reflect applicable Bluetooth version.
	D12r03	2004-03-25	Editorial Changes
10	1.2.2	2004-03-29	Changed document number and revision number to conform to legacy system. Added Disclaimer and Copyright Notice.
11	1.2.3	2004-06-21	TSE 578 incorporated.
	2.0.E.0 Draft	2004-10-22	Incorporate Enhanced Data Rate Changes, affecting Tables 2, 14a, and 14b.
12	2.0.E.0	2004-11-04	First version for 1.2/2.0/2.0 + EDR available for qualification.
	2.0.E.1r1	2005-03-24	Editorial and format changes. TSE 820: Added Table 8 heading
13	2.0.E.1	2005-10-26	Prepare for publication.
14	2.1.E.0	2006-12-28	Add line 7 to Table 16 for Sniff Subrating (but maybe not needed) Add line 10 to Table 6 for Encryption Pause Resume Update Table 2 and Table 6 for Simple Pairing feature Adjustment to previous Revision History document number. Adjustments to accommodate the introduction of mandatory/ optional settings for 2.1 features
15	2.1.E.1	2007-07-31	TSE 2113: Table 2: Change C.2 and C.3 TSE 2115: Table 26: Fix Prerequisite
16	2.1.E.2	2008-04-29	TSE 2438: Table 26/3: Update description Remove "Prepare for Publication" rows from table
	2.1.E.3r0	2009-02-12	Add rows to Table 2.0 and add new table for EPC
	2.1.E.3r1	2009-03-25	Removed SUM 21/9 as it does not exist Added SUM 21/8 to conditions where SUM 21/5 and SUM 21/6 were used Editorial – replaced 2-1 with 21 and 2-2 with 22.
17	3.0.H.0/2.1.E.3	2009-07-04	Prepare for publication.
18	3.0.H.1	2009-08-12	TSE 2795: New condition for Item LMP:6/10
	3.0.H.2r0	2009-10-6	New PICS due to LMP Enhancements

Publication Number	Revision Number	Date	Comments
	3.0.H.2r1	2009-12-01	Editorial review. Formatted table row height. Fixed Table 4 footnotes. Removed earlier Doc IDs from cover page. Updated title to include Tokyo.
19	4.0.0r2-4.0.0	2009-12-15	Updated document number. Prepare for publication.
	4.0.1r0	2011-01-27	TSE 4220: Address legacy issues by adding "OR SUMMARY 21/9" to: Table 2: C2, C3, C4; Table 6: C1, C2; Table 16: C2 (TSE 3827)
20	4.0.1	2011-07-18	Prepare for publication.
	4.0.2r0	2011-11-07	TSE 4228 Update Table 4 for ESR05 Erratum 2421. TSE 3857: Table 16, C.2—Check for sniff—Implemented in previous release; see TSE 4220.
21	4.0.2	2012-30-12	Prepare for publication.
	4.0.3r0	2012-05-16	TSE 4765: Change 2/16 and 26/2 to O per core spec TSE 4597: Table 2, Footnotes C.2 and C.3
22	4.0.3	2012-07-24	Prepare for publication.
	4.0.4rT	2013-08-09	Template Conversion
	4.0.4rTr3	2013-09-16	Template Review Comment Resolution & Changes Accepted
	4.1.0r01	2013-09-16	BR/EDR Secure Connections CR
	4.1.0r02	2013-10-09	Piconet Clock Adjust CR
23	4.1.0	2013-12-03	Prepare for Publication
	4.1.1r00	2014-04-07	TSE 5446: Removed prerequisite for Table 14, and updated items 18/1 and 18/2.
24	4.1.1	2014-07-07	TCRL 2014-1 Publication
	4.1.2r00	2014-11-06	TSE 6081: Updated Table 2, C.4 to include "OR SUM ICS 21/13 (Core Specification 4.1)".
	4.2.0r00	2014-11-17	Revved version to align with Core Specification Version 4.2 Release.
25	4.2.0	2014-12-04	Prepare for TCRL 2014-2 publication
	4.2.1r00	2016-03-02	TSE 6593: Updated Table 2 Status column and conditional statements. Deleted Item 25. Added two new conditional statements.
26	4.2.1	2016-07-07	Prepared for TCRL 2016-1 Publication
	5.0.0r00	2016-07-08	Integrated Core Slot Availability Masks CRr06 for Core Specification v5.0 release
	5.0.0r01	2016-08-30	Issue 7534: Updated "TBD" references in Table 2 and 29.
	5.0.0r02	2016-10-05	TSE 7448: In Table 2, C.8 and C.11 were duplicates. 2/28 remapped to C.11. C.8 repurposed for new conditional statement. 2/22 remapped to C.8. Updated blank items in Table 16 and 17.
	5.0.0r03	2016-10-13	TSE 7215: "Packages" changed to "Packets" in the section heading and table title for Table 22.
	5.0.0r03	2016-11-11	Issue 7884: Global edit. Added support in conditionals for Core Spec version 5.0.



Publication Number	Revision Number	Date	Comments
	5.0.0r04	2016-11-14	Update Template. Remove unnecessary parentheses. Replaced with quotation marks. TSE 8069: Revises C.6 in Table 2. Reversed the logic in Conditionals to address the issue of having to add in the next Core Version where it is to indicate “or later” (Table 2, C.4 and C.9; Table 6, C.1 and C.2; Table 16, C.2).
27	5.0.0	2016-12-13	Approved by BTI. Prepared for TCRL 2016-2 publication.
	5.0.1r00	2017-03-27	TSE 8219: Added new conditional to Table 2 to exclude Park mode feature (LMP 2/9) for Bluetooth Core Specification v5.0 or later.
	5.0.1r01	2017-05-18	Removal of Note preceding table 2. This note was found to be inconsistent with how items in table 2 are used (decision in BTI call 18 <sup>th</sup> of May)
28	5.0.1	2017-07-05	Approved by BTI. Prepared for TCRL 2017-1 publication.
	5.0.2r00	2017-07-19	TSE 7437: In C.2 and C.3 of Table 2: Supported Features, add LMP conditions for feature selection to reflect opportunity to optionally claim partial support of Core Configuration EDR, and change “Excluded” to “Optional”.
29	5.0.2	2017-12-07	Approved by BTI. Prepared for TCRL 2017-2 publication.
	5.0.3r00-01	2018-04-27 – 2018-05-10	TSE 10614 (rating 2): Added new C.14 to Table 2 and changed status of 2/29 from O to C.14. TSE 10613 (rating 2): Added C.15 to Table 2 and changed status of item 2/28 from C.11 to C.15. Editorial fix to C.10 and added LMP prefix.
30	5.0.3	2018-07-02	Approved by BTI. Prepared for TCRL 2018-1 publication.
	5.0.4r00	2018-10-16	TSE 10930 (rating 2): Removed items 5/1 and 5/7. Updated revision number to 5.1.0 to align with the adoption of Core Specification version 5.1 Corrected conditional for Item 5/2 to M after removal of 5/1.
	5.1.0r00-r01	2018-11-13 – 2018-12-07	Updated revision number from 5.0.4 to 5.1.0 to align with the adoption of Core Specification version 5.1. Corrected conditional for Item 5/2 to M after removal of 5/1.
31	5.1.0	2018-12-07	Approved by BTI. Prepared for TCRL 2018-2 publication.
	5.1.1r00-r02	2019-04-02– 2019-08-14	TSE 11296 (rating 3): Removed item 2/9 and all of Table 17 due to deprecation of the Park Mode feature.
32	5.1.1	2019-08-01	Approved by BTI. Prepared for TCRL 2019-1 publication.

Publication Number	Revision Number	Date	Comments
	p33r00–r03	2019-10-03 – 2019-12-03	<p>TSE 12761 (rating 2): Added LMP item 2/19a for Erratum 10734 pairing updates and added that erratum and “Specification of the Bluetooth System, Volume 2, Part C, Version 5.1 or later” to the References section.</p> <p>TSE 12606 (rating 2): Removed references to deprecated and/or withdrawn core specs in conditionals by updating C.3 - C.6 and C.9 for Table 2, updating the status of items 1 and 10 and deleting C.1 and C.2 for Table 6, and updating the status of item 7 and deleting C.2 for Table 16; removed multiple table prerequisites, created conditionals C.1-C.4 to replace the removed prerequisites, and updated the status of items 1 - 10 for Table 18 (concatenated all rows into a cohesive table); removed reference to ESR05 by deleting C.3 and updating status of item 7 for Table 4.</p> <p>TSE 13025 (rating 3): Added item 26b and conditional note C.17 to Table 2; also added “(Controller Support)” to item 26 and “(Host Support)” to item 19.</p> <p>Revised document numbering convention, setting last release publication of 5.1.1 as p32; added publication number column to Revision History.</p> <p>Updated Contributors list.</p>
33	p33	2020-01-07	Approved by BTI on 2019-12-22. Prepared for TCRL 2019-2 publication.
	p34r00–r11	2020-03-04 – 2021-06-10	<p>TSE 12735 (rating 2): Removed item 2/16 “Adaptive frequency hopping” as a single selectable item and instead use Table 26 items for better clarity. Cleaned up conditionals and prerequisites that referenced 2/16. Added item LMP 2/13a “Power Control Requests”. Revised conditionals for LMP 2/21 “BR/EDR Not Supported” and LMP 2/27 “Ping”. Fixed Table 2 conditionals. Revised conditional for LMP 11/1 “Request supported features”. Revised conditional C1 of Table 18. Revised conditional applied to LMP 18/7 “Request to go to max power”. Added item LMP 26/4a “Support of Channel Classification reporting as Central”. Removed item LMP 26/3 “Support of Channel Classification reporting — post Role Switch (as Slave)”. Corrections to Table 26 conditionals. Added informative Section 3 “Mapping of LMP feature bits to ICS items”. Revised Table 11 conditional C.2 to refer to the new LMP Feature Bits table.</p> <p>TSE 13061 (rating 3): In Table 2, added items 17a and 18a, modified items 17 and 18, updated conditionals C.2 and C.3, and added conditionals C.19 and C.20.</p> <p>TSE 13586 (rating 2): Revised conditionals for items LMP 2/14 “Broadcast Encryption” and LMP 2/28 “Coarse Clock Adjustment” to show that they are mutually exclusive features.</p>

Publication Number	Revision Number	Date	Comments
			<p>TSE 14935 (rating 3): Added item LMP 2/30 "Paging Parameter Negotiation". Made LMP 2/30 a prerequisite for Table 23. Updated all conditionals of Table 23 to M.</p> <p>TSE 14942 (rating 3): Added ICS item LMP 2/19b "Secure Simple Pairing (Controller Support)" and updated all relevant conditionals that should reference Secure Simple Pairing (Controller Support) to LMP 2/19b.</p> <p>TSE 15092 (rating 2): Changed items LMP 2/19 and LMP 2/24 to "No Longer Used"; updated Status for LMP 2/19a; deleted conditionals C.7, C.16, and C.21 (added temporarily for TSE 14942); updated conditional C.17.</p> <p>TSE 15175 (rating 2): Updated status of 12/1 to Mandatory.</p> <p>TSE 15488 (rating 1): To address Erratum 15334, globally changed "Master/Slave" language as it relates to role switches.</p> <p>TSE 15452 (rating 1): To address Erratum 15352, globally changed "Master" to "Central" and "Slave" to "Peripheral".</p> <p>Incorporated Host_To_Controller_Encryption_Key_Control_Enhancements_TEST_CR_r06: Added Table 5 item 8 and related conditional for "Support for 7 bytes or longer encryption key size".</p> <p>Template-related and consistency checker editorials.</p>
34	p34	2021-07-13	Approved by BTI on 2021-06-27. Prepared for TCRL 2021-1 publication.
	p35r00	2022-04-04 – 2022-04-05	<p>TSE 18364 (rating 1): Updated C.1 – C.6, C.8, C.9, C.11 – C.15, and C.17 – C.20 for Table 2; C.2 for Table 4; C.1 for Table 5; C.3 for Table 6; C.1 for Table 8; C.1 for Table 14a; C.1 for Table 14b; C.1 for Table 15; C.1 for Table 16; C.1 – C.3 for Table 18; C.1 for Table 20; C.1 – C.4 for Table 21; C.1 for Table 22; and C.2 – C.4 for Table 26.</p> <p>TSE 18406 (rating 2): Updated the status for Table 5 item 8, deleted C.1 for Table 5, and added detail to the revision history for p34r00–r11 (per BTI).</p> <p>Performed template-related formatting fixes. Updated copyright page to align with v2 of the DNMD.</p>
35	p35	2022-06-28	Approved by BTI on 2022-05-31. Prepared for TCRL 2022-1 publication.

Publication Number	Revision Number	Date	Comments
	p36r00-r02	2023-04-05 – 2023-05-26	TSE 22388 (rating 3): Per E22262, removed the 2/21 entry for BR/EDR Not Supported, adjusted all conditionals that referenced it (modified C.1, C.2, C.3, C.5, C.6, C.9, C.12, C.14, C.15, C.18, C.19, and C.20 and deleted C.4, C.8, C.11, and C.13), and revised statuses accordingly for 2/1, 2/2, 2/3, 2/4, 2/5, 2/7, 2/8, 2/11, 2/12, 2/13, 2/13a, 2/15, 2/19a, 2/19b, 2/22, and 2/27. Editorial cleanup of “No longer used” throughout document to align with the latest ICS conventions.  Removed Appropriate Language doc reference per the latest ICS conventions.
36	p36	2023-06-29	Approved by BTI on 2023-06-05. Prepared for TCRL 2023-1 publication.
	p37r00-r06	2023-09-26 – 2023-11-20	TSE 22165 (rating 2): Added new reference items to cover the BB ICS, HCI ICS, and Core spec Vol 4 Part E. Added 2/9 back in with associated update to reference and status (new conditional C.21) and added new items 2/31 and 2/32. Added new Tables 30 and 31. Updated BB and HCI ICS Items in the “Mapping LMP feature bits to ICS items” table, and added new LMP items as necessary.  TSE 24076 (rating 2): Replaced SUM ICS references. Updated Table 2 conditionals C.2 and C.3 (affecting 2/17 and 2/18) and added new Table 2b for EDR Features.  TSE 24180 (rating 2): Added a new section to indicate bridge mapping between the old SUM ICS and new LMP ICS items.  Replaced the LMP ICS reference with the BB ICS in the references column per query responses 998513 and 998549.  Updated the document to align with the latest standards.
37	p37	2024-07-01	Approved by BTI on 2024-05-22. Prepared for TCRL 2024-1 publication.
	p38r00-r01	2024-07-11 – 2024-07-17	TSE 25027 (rating 1): Set 2/26a and related conditional C.17 to “No longer used”.  TSE 25355 (rating 2): Updated the status of 7/1 from Optional to Mandatory.  TSE 25389 (rating 2): Set Table 21 to “No longer used” and removed section heading for SCO Links.
38	p38	2024-09-04	Approved by BTI on 2024-08-14. Prepared for TCRL 2024-2 publication.

### Acknowledgments

Name	Company
Joakim Linde	Apple
Alicia Courtney	Broadcom
Prasanna Desai	Broadcom



Name	Company
Shawn Ding	Broadcom
Steven Hall	Broadcom
Farooq Hameed	Broadcom
Robert Hulvey	Broadcom
Knut Odman	Broadcom
Angel Polo	Broadcom
Erik Rivard	Broadcom
Mayank Batra	CSR
Joe Decuir	CSR
Tim Howes	CSR
Ian Jones	CSR
Sean Mitchell	CSR
Ross O'Connor	CSR
Steven Singer	CSR
Dishant Srivastava	CSR
Jonathan Tanner	CSR
Steven Wenham	CSR
Fabien Duvoux	Ellisys
Kyle Penri-Williams	Ellisys
Clement Vacheron	Ellisys
Leif Wilhelmsson	Ericsson
Magnus Eriksson	Intel
Marcel Holtmann	Intel
Sharon Yang	Intel
Josselin de la Broise	Marvell
L. C. Ko	MediaTek
Huanchun Ye	MediaTek
Krishna Singala	Mindtree
Lily Chen	NIST
Kaisa Nyberg	Nokia
Tsuyoshi Okada	Panasonic Corporation
Niclas Granqvist	Polar
Olaf Hirsch	Qualcomm Atheros
Joel Linsky	Qualcomm Atheros
Cameron McDonald	Qualcomm Atheros
Brian A. Redding	Qualcomm Atheros
Magnus Sommansson	Qualcomm Technologies International, Ltd.
Jean-Philippe Lambert	RivieraWaves
Rasmus Abildgren	Samsung Electronics
Clive D. W. Feather	Samsung Electronics
Kyong-Sok Seo	Samsung Electronics Co. Ltd

---

Name	Company
Andrew Estrada	Sony Corporation
Masahiko Seki	Sony Corporation
Jorgen van Parijs	ST Ericsson
Yves Wernaers	ST-Ericsson
Alon Cheifetz	Texas Instruments
Alon Paycher	Texas Instruments
Rod Kimmell	X6D, Inc.