

# Media Control Profile (MCP)

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

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# 1 Identification of the implementation

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## 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 Roles and Transports

**Table 1: Role Requirements**

Item	Role	Reference	Status
1	Media Control Server	[1] 3	C.1
2	Media Control Client	[1] 4	C.1

C.1: Mandatory to support at least one.

**Table 2: Transport Requirements**

Item	Transport	Reference	Status
1	Profile supported over BR/EDR	[1] 2.4	C.1
2	Profile supported over LE	[1] 2.4	C.1

C.1: Mandatory to support at least one.

## 1.3 Media Control Server Role

### 1.3.1 Versions – Media Control Server Role

**Table 3: Media Control Server, X.Y Versions**

*Prerequisite: MCP 1/1 “Media Control Server”*

Item	Version	Reference	Status
1	Media Control Profile 1.0	[1]	M

**Table 4: Media Control Server, X.Y.Z Versions**

Table number reserved but not yet in use

### 1.3.2 Services – Media Control Server Role

**Table 5: Service Requirements**

*Prerequisite: MCP 1/1 “Media Control Server”*

Item	Service	Reference	Status	Inter-Layer Dependency
1	Media Control Service	[1] 3	O	[5] MCS
2	Generic Media Control Service	[1] 3	M	[6] GMCS
3	Object Transfer Service	[1] 3	O	[4] OTS
4	Extended Advertising	[1] 6.1.1.1	M	[8] LL 9/41

### 1.3.3 GAP Requirements

**Table 6: GAP Requirements – Media Control Server Role**

*Prerequisite: MCP 1/1 “Media Control Server”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	LE security mode 1	[1] 5.1	C.1	[2] GAP 25/1 or GAP 35/1
2	Bondable mode (LE)	[1] 5.1.1	C.1	[2] GAP 24/2 or GAP 34/2
3	Bonding procedure (LE)	[1] 5.1.1	C.1	[2] GAP 24/3 or GAP 34/3
4	Unauthenticated Pairing (LE security mode 1 level 2) with LE Secure Connections Pairing only	[1] 5	C.6	[2] GAP 25/11 or GAP 35/11
5	Authenticated Pairing (LE security mode 1 level 3) with LE Secure Connections Pairing only	[1] 5	C.6	[2] GAP 25/12 or GAP 35/12
6	LE security mode 1 level 4	[1] 5	C.6	[2] GAP 25/9 or GAP 35/9
7	Minimum 128 Bit entropy key (LE)	[1] 5	C.3	[2] GAP 25/13 or GAP 35/13
8	Derivation of LE LTK from BR/EDR Link Key	[1] 5.1	C.4	[2] GAP 43/2b or GAP 41/2b
9	Security mode 4, level 2	[1] 5.2	C.2	[2] GAP 2/7c
10	128-bit encryption key size capable (BR/EDR)	[1] 5.2	C.2	[2] GAP 2/13
11	Derivation of BR/EDR Link Key from LE LTK	[1] 5.2	C.5	[2] GAP 43/2a or GAP 41/2a

C.1: Mandatory IF MCP 2/2 “Profile supported over LE”, otherwise not defined.

C.2: Mandatory IF MCP 2/1 “Profile supported over BR/EDR”, otherwise not defined.

C.3: Mandatory IF MCP 6/4 “Unauthenticated Pairing (LE security mode 1 level 2) with LE Secure Connections Pairing only” OR MCP 6/5 “Authenticated Pairing (LE security mode 1 level 3) with LE Secure Connections Pairing only”, otherwise not defined.

C.4: Mandatory IF MCP 7/2 “Cross Transport Key Derivation Supported” AND MCP 2/2 “Profile supported over LE”, otherwise not defined.

C.5: Mandatory IF MCP 7/2 “Cross Transport Key Derivation Supported” AND MCP 2/1 “Profile supported over BR/EDR”, otherwise not defined.

C.6: Mandatory to support at least one IF MCP 2/2 “Profile supported over LE”, otherwise not defined.

### 1.3.4 SM Requirements

**Table 7: SM Requirements – Media Control Server Role**

*Prerequisite: MCP 1/1 “Media Control Server”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	LE Secure Connections	[1] 5.1	C.1	[7] SM 2/5



Item	Capability	Reference	Status	Inter-Layer Dependency
2	Cross Transport Key Derivation Supported	[1] 5.1	C.1	[7] SM 8a/1 or SM 8b/1
3	OOB supported	[1] 5.1	C.1	[7] SM 2/4

C.1: Mandatory to support at least one.

### 1.3.5 OTP Requirements

**Table 8: OTP Requirements – Media Control Server Role**

*Prerequisite: MCP 5/3 “Object Transfer Service”*

Item	Service	Reference	Status
1	Object Server Role	[1] 3	M

**Table 9: OTS Characteristics Requirements – Media Control Server Role**

*Prerequisite: MCP 5/3 “Object Transfer Service”*

Item	Feature	Reference	Status	Inter-Layer Dependency
1	Object ID Characteristic	[3] 3.2.7	M	[4] OTS 4/12
2	Object List Control Point (OLCP)	[3] 3.4	M	[4] OTS 4/16
3	Object Changed Characteristic	[3] 3.6	M	[4] OTS 4/20

**Table 10: OTS Feature Requirements – Media Control Server Role**

*Prerequisite: MCP 5/3 “Object Transfer Service”*

Item	Feature	Reference	Status	Inter-Layer Dependency
1	OACP Read Procedure	[3] 3.3.2.5	M	[4] OTS 5/5
2	OLCP Go To Procedure	[3] 3.4.2.5	M	[4] OTS 6/5

## 1.4 Media Control Client Role

### 1.4.1 Versions – Media Control Client Role

**Table 11: Media Control Client, X.Y Versions**

*Prerequisite: MCP 1/2 “Media Control Client”*

Item	Version	Reference	Status
1	Media Control Profile 1.0	[1]	M

**Table 12: Media Control Client, X.Y.Z Versions**

Table number reserved but not yet in use



## 1.4.2 Services Support – Media Control Client Role

### 1.4.2.1 Media Control Service

**Table 13: Media Control Service Support**

*Prerequisite: MCP 1/2 “Media Control Client”*

Item	Service	Reference	Status
1	Media Control Service	[1] 4	C.1
2	Generic Media Control Service	[1] 4	C.1
3	Object Transfer Service	[1] 4	C.2

C.1: Mandatory to support at least one.

C.2: Mandatory IF MCP 14/20 “Search Results Object ID Characteristic” OR MCP 16/20 “Search Results Object ID Characteristic” OR MCP 14/10 “Current Track Segments Object ID Characteristic” OR MCP 16/10 “Current Track Segments Object ID Characteristic” OR MCP 14/11 “Current Track Object ID Characteristic” OR MCP 16/11 “Current Track Object ID Characteristic”, otherwise Optional.

**Table 14: Media Control Service Characteristic Support Requirements**

*Prerequisite: MCP 13/1 “Media Control Service”*

Item	Feature	Reference	Status
1	Media Player Name Characteristic	[1] 4.5.1	M
2	Media Player Icon Object ID Characteristic	[1] 4.5.1	O
3	Media Player Icon URL Characteristic	[1] 4.5.1	O
4	Track Changed Characteristic	[1] 4.6.1	O
5	Track Title Characteristic	[1] 4.5.3	O
6	Track Duration Characteristic	[1] 4.5.4	O
7	Track Position Characteristic	[1] 4.5.5	O
8	Playback Speed Characteristic	[1] 4.5.8	O
9	Seeking Speed Characteristic	[1] 4.5.10	O
10	Current Track Segments Object ID Characteristic	[1] 4.5.11	O
11	Current Track Object ID Characteristic	[1] 4.5.12	O
12	Next Track Object ID Characteristic	[1] 4.5.14	O
13	Parent Group Object ID Characteristic	[1] 4.5.18	O
14	Current Group Object ID Characteristic	[1] 4.5.17	O
15	Playing Order Characteristic	[1] 4.5.19	O
16	Playing Order Supported Characteristic	[1] 4.5.21	O
17	Media State Characteristic	[1] 4.5.22	O
18	Media Control Point Characteristic	[1] 4.5	O
19	Media Control Point Opcodes Supported Characteristic	[1] 4.5.42	O
20	Search Results Object ID Characteristic	[1] 4.5.43	O
21	Search Control Point Characteristic	[1] 4.5.43	C.1



Item	Feature	Reference	Status
22	Content Control ID Characteristic	[1] 4.5.44	O

C.1: Mandatory IF MCP 14/20 “Search Results Object ID Characteristic”, otherwise Excluded.

**Table 15: Media Control Point Procedure Requirements**

*Prerequisite: MCP 14/18 “Media Control Point Characteristic”*

Item	Feature	Reference	Status
1	Play Current Track Procedure	[1] 4.5.22	O
2	Pause Current Track Procedure	[1] 4.5.23	O
3	Fast Forward Fast Rewind Procedure	[1] 4.5.24	O
4	Stop Current Track Procedure	[1] 4.5.25	O
5	Move Relative Procedure	[1] 4.5.7	O
6	Move to Previous Segment Procedure	[1] 4.5.26	O
7	Move to Next Segment Procedure	[1] 4.5.27	O
8	Move to First Segment Procedure	[1] 4.5.28	O
9	Move to Last Segment Procedure	[1] 4.5.29	O
10	Move to Segment Number Procedure	[1] 4.5.30	O
11	Move to Previous Track Procedure	[1] 4.5.31	O
12	Move to Next Track Procedure	[1] 4.5.32	O
13	Move to First Track Procedure	[1] 4.5.33	O
14	Move to Last Track Procedure	[1] 4.5.34	O
15	Move to Track Number Procedure	[1] 4.5.35	O
16	Move to Previous Group Procedure	[1] 4.5.36	O
17	Move to Next Group Procedure	[1] 4.5.37	O
18	Move to First Group Procedure	[1] 4.5.38	O
19	Move to Last Group Procedure	[1] 4.5.39	O
20	Move to Group Number Procedure	[1] 4.5.40	O

#### 1.4.2.2 Generic Media Control Service

**Table 16: Generic Media Control Service Characteristic Support Requirements**

*Prerequisite: MCP 13/2 “Generic Media Control Service”*

Item	Feature	Reference	Status
1	Media Player Name Characteristic	[1] 4.5.1	M
2	Media Player Icon Object ID Characteristic	[1] 4.5.1	O
3	Media Player Icon URL Characteristic	[1] 4.5.1	O
4	Track Changed Characteristic	[1] 4.6.1	O
5	Track Title Characteristic	[1] 4.5.3	O
6	Track Duration Characteristic	[1] 4.5.4	O
7	Track Position Characteristic	[1] 4.5.5	O
8	Playback Speed Characteristic	[1] 4.5.8	O



Item	Feature	Reference	Status
9	Seeking Speed Characteristic	[1] 4.5.10	O
10	Current Track Segments Object ID Characteristic	[1] 4.5.11	O
11	Current Track Object ID Characteristic	[1] 4.5.12	O
12	Next Track Object ID Characteristic	[1] 4.5.14	O
13	Parent Group Object ID Characteristic	[1] 4.5.18	O
14	Current Group Object ID Characteristic	[1] 4.5.17	O
15	Playing Order Characteristic	[1] 4.5.19	O
16	Playing Order Supported Characteristic	[1] 4.5.21	O
17	Media State Characteristic	[1] 4.5.22	O
18	Media Control Point Characteristic	[1] 4.5	O
19	Media Control Opcodes Supported Characteristic	[1] 4.5.42	O
20	Search Results Object ID Characteristic	[1] 4.5.43	O
21	Search Control Point Characteristic	[1] 4.5.43	C.1
22	Content Control ID Characteristic	[1] 4.5.44	O

C.1: Mandatory IF MCP 16/20 “Search Results Object ID Characteristic”, otherwise Excluded.

**Table 17: Media Control Point Procedure Requirements**

*Prerequisite: MCP 16/18 “Media Control Point Characteristic”*

Item	Feature	Reference	Status
1	Play Current Track Procedure	[1] 4.5.22	O
2	Pause Current Track Procedure	[1] 4.5.23	O
3	Fast Forward Fast Rewind Procedure	[1] 4.5.24	O
4	Stop Current Track Procedure	[1] 4.5.25	O
5	Move Relative Procedure	[1] 4.5.7	O
6	Move to Previous Segment Procedure	[1] 4.5.26	O
7	Move to Next Segment Procedure	[1] 4.5.27	O
8	Move to First Segment Procedure	[1] 4.5.28	O
9	Move to Last Segment Procedure	[1] 4.5.29	O
10	Move to Segment Number Procedure	[1] 4.5.30	O
11	Move to Previous Track Procedure	[1] 4.5.31	O
12	Move to Next Track Procedure	[1] 4.5.32	O
13	Move to First Track Procedure	[1] 4.5.33	O
14	Move to Last Track Procedure	[1] 4.5.34	O
15	Move to Track Number Procedure	[1] 4.5.35	O
16	Move to Previous Group Procedure	[1] 4.5.36	O
17	Move to Next Group Procedure	[1] 4.5.37	O
18	Move to First Group Procedure	[1] 4.5.38	O
19	Move to Last Group Procedure	[1] 4.5.39	O
20	Move to Group Number Procedure	[1] 4.5.40	O

### 1.4.3 GAP Requirements

**Table 18: GAP Requirements – Media Control Client Role**

*Prerequisite: MCP 1/2 “Media Control Client”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	No longer used	N/A	N/A	N/A
2	LE security mode 1	[1] 5.1	C.1	[2] GAP 25/1 or GAP 35/1
3	Bondable mode (LE)	[1] 6.2	C.1	[2] GAP 24/2 or GAP 34/2
4	Bonding procedure	[1] 6.2	C.1	[2] GAP 24/3 or GAP 34/3
5	Unauthenticated Pairing (LE security mode 1 level 2) with LE Secure Connections Pairing only	[1] 5.1	O	[2] GAP 25/11 or GAP 35/11
6	Authenticated Pairing (LE security mode 1 level 3) with LE Secure Connections Pairing only	[1] 5.1	O	[2] GAP 25/12 or GAP 35/12
7	LE security mode 1 level 4	[1] 5.1	O	[2] GAP 25/9 or GAP 35/9
8	Minimum 128 Bit entropy key (LE)	[1] 5.1	C.5	[2] GAP 25/13 or GAP 35/13
9	Derivation of LE LTK from BR/EDR Link Key	[1] 5.1	C.3	[2] GAP 43/2b or GAP 41/2b
10	Security mode 4, level 2	[1] 5.2	C.2	[2] GAP 2/7c
11	128-bit encryption key size capable (BR/EDR)	[1] 5.2	C.2	[2] GAP 2/13
12	Derivation of BR/EDR Link Key from LE LTK	[1] 5.2	C.4	[2] GAP 43/2a or GAP 41/2a

C.1: Mandatory IF MCP 2/2 “Profile supported over LE”, otherwise not defined.

C.2: Mandatory IF MCP 2/1 “Profile supported over BR/EDR”, otherwise not defined.

C.3: Mandatory IF MCP 19/2 “Cross Transport Key Derivation Supported” AND MCP 2/2 “Profile supported over LE”, otherwise not defined.

C.4: Mandatory IF MCP 19/2 “Cross Transport Key Derivation Supported” AND MCP 2/1 “Profile supported over BR/EDR”, otherwise not defined.

C.5: Mandatory IF MCP 18/5 “Unauthenticated Pairing (LE security mode 1 level 2) with LE Secure Connections Pairing only” OR MCP 18/6 “Authenticated Pairing (LE security mode 1 level 3) with LE Secure Connections Pairing only”, otherwise not defined.

### 1.4.4 SM Requirements

**Table 19: SM Requirements – Media Control Client Role**

*Prerequisite: MCP 1/2 “Media Control Client”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	LE Secure Connections	[1] 5.1	C.1	[7] SM 2/5
2	Cross Transport Key Derivation Supported	[1] 5.1	C.1	[7] SM 8a/1 or SM 8b/1
3	OOB supported	[1] 5.1	C.1	[7] SM 2/4

C.1: Mandatory to support at least one.

### 1.4.5 OTP Requirements

**Table 20: OTP Requirements – Media Control Client Role**

*Prerequisite: MCP 13/3 “Object Transfer Service”*

Item	Service	Reference	Status
1	Object Client Role	[1] 3	M

**Table 21: OTP Procedure Requirements – Media Control Client Role**

*Prerequisite: MCP 13/3 “Object Transfer Service”*

Item	Feature	Reference	Status
1	Object Discovery – Discover All Objects	[1] 3	M
2	Select Object – Select by Object ID	[1] 3	M
3	Read Object – Read Object Contents	[1] 3	M

## 2 References

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- [1] Media Control Profile Specification, Version 1.0 or later
- [2] ICS Proforma for Generic Access Profile (GAP)
- [3] Object Transfer Service Specification, Version 1.0 or later
- [4] ICS Proforma for Object Transfer Service (OTS)
- [5] ICS Proforma for Media Control Service (MCS)
- [6] ICS Proforma for Generic Media Control Service (GMCS)
- [7] ICS Proforma for Security Manager (SM)
- [8] ICS Proforma for Link Layer (LL)

### 3 Revision history and acknowledgments

#### Revision History

Publication Number	Revision Number	Date	Comments
	d09r00–r09	2019-09-10 – 2020-10-05	Track MediaControlProfile_d09r02. Addressed WG and BTI comments. Track MediaControlProfile_d09r05. E13114, E13301, E13400, E15072 Template and formatting issues. Reordered the Transport Requirement table. Updated Contributors.
	p0r00–r03	2020-10-27 – 2021-02-08	Editorial and formatting updates. Addressed BTI comments. E16292, E16387 Track MCP_d1.0r08_Clean_to_legal_xxxx. Track MCP_d1.0r09. Track MCP_d1.0r11.
0	p0	2021-03-16	Approved by BTI on 2021-02-25. MCP v1.0 adopted by the BoD on 2021-03-09. Prepared for publication.
	p1r00–r02	2021-04-19 – 2021-05-30	TSE 16754 (rating 1): Updated the inter-layer dependencies in GAP Tables 6 and 18. Removed item 18/1. Consistency checker fixes.
1	p1	2021-07-13	Approved by BTI on 2021-06-01. Prepared for TCRL 2021-1 publication.
	p1ed2r00	2022-01-25	TSE 18188 (rating 1): Updated Link Layer inter-layer dependency item in Table 5 to align with updates made in the LL ICS. Made template-related fixes, including aligning the copyright page with v2 of the DNMD.
	p1 edition 2	2022-01-27	Approved by BTI on 2022-01-27. Prepared for edition 2 publication.
	p1ed3r00	2023-02-15	TSE 22635 (rating 1): Replaced ILD references to Security Manager 8/1 with SM 8a/1 (for Central role) or SM 8b/1 (for Peripheral role) in Tables 7 and 19. Updated references. Editorials to align the document with the latest ICS template.
	p1 edition 3	2023-03-15	Approved by BTI on 2023-03-13. Prepared for edition 3 publication.

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