

Mesh Device Firmware Update Model (DFUM)

Bluetooth® Implementation Conformance Statement (ICS) Proforma

- **Revision:** DFUM.ICS.p2
- **Revision Date:** 2026-02-17
- **Prepared By:** Mesh Working Group
- **Published during TCRL:** TCRL.pkg102



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1 General principles

1.1 Implementation Under Test (IUT) identification

Using the Bluetooth SIG qualification tool, the implementer is expected to declare details about what will be implemented.

1.2 Auto-fill tables

This ICS includes one or more tables that are defined as auto-fill tables. Auto-fill tables are defined to allow for less-complex conditions within other tables. Auto-fill tables are distinguished from regular ICS tables by the addition of "(auto-fill)" after the Table number, prior to the colon ":".

An auto-fill table is automatically populated based on selected capabilities elsewhere in the ICS. The populated settings in the auto-fill table are not user editable.

1.3 Enforcement of inter-layer dependencies

This ICS includes one or more tables with inter-layer dependencies (ILDs). ILDs are used for specification requirements that are dependent on other supporting specifications. ILDs can refer to an individual ICS item in a separate layer (individual ILD), or it can refer to the full layer (full-layer ILD).

ILDs residing in an X2Core layer will be enforced from the Bluetooth SIG qualification tool in the following conditions, depending on where the referred ILD is residing:

Referred ILD resides in	Individual ILD	Full-layer ILD
Controller layer	Core-Complete configuration, or Referred layer is supported	N/A
Lower HCI layer	HCI is supported	N/A
Upper HCI layer	Core-Host configuration, or UHCI is supported	N/A
Host layer	Core-Host configuration, or Core-Complete configuration, or Referred layer is supported	N/A
X2Core layer	Core-Host configuration, or Core-Complete configuration, or Referred layer is supported	Core-Host configuration, or Core-Complete configuration

Table 1.1: Enforcement of an ILD within the Bluetooth SIG qualification tool

2 ICS declarations

2.1 Versions

Table 0: X.Y Versions

Item	Version	Reference	Status
1	DFUM v1.0	[1]	M

Table 1: X.Y.Z Versions

Table number reserved but not yet in use.

Table 2: No longer used

2.2 Models

Table 3: Model Requirements

Item	Model	Reference	Status
1	Firmware Update Server model	[1] 6.1	O
2	Firmware Distribution Server model	[1] 6.2	C.1
3	Firmware Update Client model	[1] 6.3	O
4	Firmware Distribution Client model	[1] 6.4	C.1

C.1: Optional IF DFUM 3/3 "Firmware Update Client model", otherwise Excluded.

2.3 Firmware Update Server Model

Table 10: Firmware Update Server Model Dependencies

Prerequisite: DFUM 3/1 "Firmware Update Server model"

Item	Model	Reference	Status	Inter-Layer Dependency
1	BLOB Transfer Server model	[1] 2.1.1	M	[2] MBTM 3/1

Table 11: BLOB Transfer Server Model Requirements

Prerequisite: DFUM 10/1 "BLOB Transfer Server model"

Item	Model	Reference	Status	Inter-Layer Dependency
1	Pull BLOB Transfer Mode	[1] 2.1.1	C.1	[2] MBTM 10/1
2	Push BLOB Transfer Mode	[1] 2.1.1	C.2	[2] MBTM 10/2

C.1: Mandatory IF DFUM 50/1 "MESH Low Power Feature", otherwise Optional.

C.2: Mandatory IF NOT DFUM 50/1 "MESH Low Power Feature", otherwise Optional.



2.4 Firmware Distribution Server Model

Table 20: Firmware Distribution Server Model Dependencies

Prerequisite: DFUM 3/2 "Firmware Distribution Server model"

Item	Model	Reference	Status	Inter-Layer Dependency
1	BLOB Transfer Server model	[1] 2.1.1	M	[2] MBTM 3/1

Table 21: BLOB Transfer Server Model Requirements

Prerequisite: DFUM 20/1 "BLOB Transfer Server model"

Item	Model	Reference	Status	Inter-Layer Dependency
1	Pull BLOB Transfer Mode	[1] 2.1.1	C.1	[2] MBTM 10/1
2	Push BLOB Transfer Mode	[1] 2.1.1	C.2	[2] MBTM 10/2

C.1: Mandatory IF DFUM 50/1 "MESH Low Power Feature", otherwise Optional.

C.2: Mandatory IF NOT DFUM 50/1 "MESH Low Power Feature", otherwise Optional.

Table 22: Firmware Distribution Server Model Requirements

Prerequisite: DFUM 3/2 "Firmware Distribution Server model"

Item	Model	Reference	Status
1	Store Firmware OOB procedure	[1] 6.2.2.3	O
2	Firmware Retrieval Over HTTPS procedure	[1] 3.3	C.1
3	Multiple Firmware Image Support	[1] 4.3.2.2	O

C.1: Optional IF DFUM 22/1 "Store Firmware OOB procedure", otherwise Excluded.

2.5 Firmware Update Client Model

Table 30: Firmware Update Client Model Dependencies

Prerequisite: DFUM 3/3 "Firmware Update Client model"

Item	Model	Reference	Status	Inter-Layer Dependency
1	BLOB Transfer Client model	[1] 2.1.1	M	[2] MBTM 3/2

2.6 Firmware Distribution Client Model

Table 40: Firmware Distribution Client Model Dependencies

Prerequisite: DFUM 3/4 "Firmware Distribution Client model"

Item	Model	Reference	Status	Inter-Layer Dependency
1	BLOB Transfer Client model	[1] 2.1.1	M	[2] MBTM 3/2



Table 41: Firmware Distribution Client Model Features*Prerequisite: DFUM 3/4 "Firmware Distribution Client model"*

Item	Capability	Reference	Status
1	Upload Firmware OOB procedure	[1] 7.2.2.8	O

2.7 MESH requirements

Table 50 (auto-fill): MESH Requirements

Item	Capability	Reference	Status	Inter-Layer Dependency
1	MESH Low Power Feature	[1] 2.1.1	C.1	[3] MESH 7/4

C.1: (Reverse ILD) Mandatory IF MESH 7/4 "Low Power Feature", otherwise Excluded.

3 References

- [1] Mesh Device Firmware Update Model Specification, Version 1.0 or later
- [2] ICS Proforma for Mesh Binary Large Object Transfer Model (MBTM)
- [3] ICS Proforma for Mesh Protocol (MESH)

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	p0	2023-09-19	Approved by BTI on 2023-08-27. MBT v1.0 adopted by the BoD on 2023-09-12. Prepared for initial publication.
	p1r00–r02	2024-02-05 – 2024-03-29	TSE 24228 (rating 2): Updated C.1 and C.2 in Tables 11 and 21. TSE 24287 (rating 2): In Table 22, updated conditional C.1 and the status for Item 1. TSE 25133 (rating 1): Updated all instances of “DFU” to “DFUM” to reflect that the Mesh Device Firmware Update spec is a model spec. TSE 25169 (rating 1): Updated all instances of “MBT” to “MBTM” to reflect that the Mesh Device Firmware Update spec is a model spec.
1	p1	2024-07-01	Approved by BTI on 2024-04-18. Prepared for TCRL 2024-1 publication.
	p2r00–r01	2025-12-10 – 2025-12-15	TSE 28119 (rating 1): Added a MESH ILD auto-fill table with a reverse ILD (Table 50). Updated conditions in Tables 11 and 21 accordingly. Updated the references list. Incorporated editorials to align the document with the current template.
2	p2	2026-02-17	Approved by BTI on 2026-01-21. Prepared for TCRL pkg102 publication.

Acknowledgments

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