

Low Complexity Communication Codec (LC3)

Bluetooth® Implementation Conformance Statement (ICS) Proforma

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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 Versions

Table 0: X.Y Versions

| Item | Version | Reference | Status |
|------|----------|-----------|--------|
| 1 | LC3 v1.0 | [1] | M |

Table 1: X.Y.Z Versions

| Item | Version | Reference | Status |
|------|------------|-----------|--------|
| 1 | LC3 v1.0.1 | [2] | O |

1.3 Roles

Table 2: Role Requirements

| Item | Role | Reference | Status |
|------|---------------------|--------------|--------|
| 1 | LC3 Encoder | [1] 2.2 | C.1 |
| 2 | LC3 Decoder | [1] 2.4 | C.1 |
| 3 | LC3 Encoder-Decoder | [1] 2.2, 2.4 | C.2 |

C.1: Mandatory to support at least one.

C.2: Optional IF LC3 2/1 “LC3 Encoder” AND LC3 2/2 “LC3 Decoder”, otherwise Excluded.

1.4 LC3 Encoder Features

Table 3: Encoder Features

Prerequisite: LC3 2/1 “LC3 Encoder”

| Item | Feature | Reference | Status |
|------|-----------------------------|-----------|--------|
| 1 | Narrow Band (8 kHz) | [1] 2.1 | C.1 |
| 2 | Wideband (16 kHz) | [1] 2.1 | C.1 |
| 3 | Semi-Superwideband (24 kHz) | [1] 2.1 | C.1 |
| 4 | Superwideband (32 kHz) | [1] 2.1 | C.1 |
| 5 | Full Band (44.1 kHz) | [1] 2.1 | C.1 |
| 6 | Full Band (48 kHz) | [1] 2.1 | C.1 |

C.1: Mandatory to support at least one of the encoder features.

Table 4: Frame Interval

Prerequisite: LC3 2/1 “LC3 Encoder”

| Item | Feature | Reference | Status |
|------|---------|-----------|--------|
| 1 | 7.5 ms | [1] 2.1 | C.1 |
| 2 | 10 ms | [1] 2.1 | C.1 |

C.1: Mandatory to support at least one.



1.5 LC3 Decoder Features

Table 5: Decoder Features

Prerequisite: LC3 2/2 “LC3 Decoder”

| Item | Feature | Reference | Status |
|------|-----------------------------|-----------|--------|
| 1 | Narrow Band (8 kHz) | [1] 2.1 | C.1 |
| 2 | Wideband (16 kHz) | [1] 2.1 | C.1 |
| 3 | Semi-Superwideband (24 kHz) | [1] 2.1 | C.1 |
| 4 | Superwideband (32 kHz) | [1] 2.1 | C.1 |
| 5 | Full Band (44.1 kHz) | [1] 2.1 | C.1 |
| 6 | Full Band (48 kHz) | [1] 2.1 | C.1 |

C.1: Mandatory to support at least one.

Table 6: Frame Interval

Prerequisite: LC3 2/2 “LC3 Decoder”

| Item | Feature | Reference | Status |
|------|---------|-----------|--------|
| 1 | 7.5 ms | [1] 2.1 | C.1 |
| 2 | 10 ms | [1] 2.1 | C.1 |

C.1: Mandatory to support at least one.

2 References

- [1] Low Complexity Communication Codec Specification, Version 1.0 or later
- [2] Low Complexity Communication Codec Specification, Version 1.0.1



3 Revision history and acknowledgements

Revision History

| Publication Number | Revision Number | Date | Comments |
|--------------------|-----------------|----------------------------|--|
| 0 | p0 | 2020-09-09 | Approved by BTI on 2020-09-02. LC3 v1.0 specification adopted by BoD on 2020-09-15. Prepared for publication. |
| | p1r00–r02 | 2024-08-13 – 2024-08-26 | TSE 25568 (rating 1): Per E15623, E15933, E15957, E16047, E16056, E17227, E18892, E23727, E23833, and E24819, added new X.Y.Z version as part of the .Z release. Added a reference to Low Complexity Communication Codec Specification v1.0.1. Performed edits to apply current template, formatting, and styles. Incorporated consistency checker updates. |
| 1 | p1 | 2024-10-08 | Approved by BTI on 2024-09-11. LC3 v1.0.1 adopted by the BoD on 2024-10-01. Prepared for TCRL 2024-2-addition publication. |

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