

Erratum 29031: Cookware Device ID in CWS

Bluetooth® Expedited Specification Update

- **Version:** v1.0
- **Version Date:** 2026-09-01
- **Prepared By:** Automation Work Group

This Expedited Specification Update (ESU) applies to the following specification:

- Cookware Service, Version 1.0 [\[1\]](#)

Abstract:

This ESU specifies the changes to Cookware Service required for a cooking controller and cooking appliance to identify a cookware device (CWD).

Version History

Version Number	Date (yyyy-mm-dd)	Comments
v1.0	2026-09-01	Adopted by the Bluetooth SIG Board of Directors.

Acknowledgments

Name	Company
Victor Zhodzishsky	Infineon Technologies AG

Use of this specification is your acknowledgement that you agree to and will comply with the following notices and disclaimers. You are advised to seek appropriate legal, engineering, and other professional advice regarding the use, interpretation, and effect of this specification.

Use of Bluetooth specifications by members of Bluetooth SIG is governed by the membership and other related agreements between Bluetooth SIG and its members, including those agreements posted on Bluetooth SIG's website located at www.bluetooth.com. Any use of this specification by a member that is not in compliance with the applicable membership and other related agreements is prohibited and, among other things, may result in (i) termination of the applicable agreements and (ii) liability for infringement of the intellectual property rights of Bluetooth SIG and its members. This specification may provide options, because, for example, some products do not implement every portion of the specification. All content within the specification, including notes, appendices, figures, tables, message sequence charts, examples, sample data, and each option identified is intended to be within the bounds of the Scope as defined in the Bluetooth Patent/Copyright License Agreement ("PCLA"). Also, the identification of options for implementing a portion of the specification is intended to provide design flexibility without establishing, for purposes of the PCLA, that any of these options is a "technically reasonable non-infringing alternative."

Use of this specification by anyone who is not a member of Bluetooth SIG is prohibited and is an infringement of the intellectual property rights of Bluetooth SIG and its members. The furnishing of this specification does not grant any license to any intellectual property of Bluetooth SIG or its members. **THIS SPECIFICATION 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 WARRANTIES OF MERCHANTABILITY, TITLE, NON-INFRINGEMENT, FITNESS FOR ANY PARTICULAR PURPOSE, OR THAT THE CONTENT OF THIS SPECIFICATION IS FREE OF ERRORS.** For the avoidance of doubt, Bluetooth SIG has not made any search or investigation as to third parties that may claim rights in or to any specifications or any intellectual property that may be required to implement any specifications and it disclaims any obligation or duty to do so.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, BLUETOOTH SIG, ITS MEMBERS AND THEIR AFFILIATES DISCLAIM ALL LIABILITY ARISING OUT OF OR RELATING TO USE OF THIS SPECIFICATION AND ANY INFORMATION CONTAINED IN THIS SPECIFICATION, 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 THE DAMAGES.

Products equipped with Bluetooth wireless technology ("Bluetooth Products") and their combination, operation, use, implementation, and distribution may be subject to regulatory controls under the laws and regulations of numerous countries that regulate products that use wireless non-licensed spectrum. Examples include airline regulations, telecommunications regulations, technology transfer controls, and health and safety regulations. You are solely responsible for complying with all applicable laws and regulations and for obtaining any and all required authorizations, permits, or licenses in connection with your use of this specification and development, manufacture, and distribution of Bluetooth Products. Nothing in this specification provides any information or assistance in connection with complying with applicable laws or regulations or obtaining required authorizations, permits, or licenses.

Bluetooth SIG is not required to adopt any specification or portion thereof. If this specification is not the final version adopted by Bluetooth SIG's Board of Directors, it may not be adopted. Any specification adopted by Bluetooth SIG's Board of Directors may be withdrawn, replaced, or modified at any time. Bluetooth SIG reserves the right to change or alter final specifications in accordance with its membership and operating agreements.

Copyright © 2026. All copyrights in the Bluetooth Specifications themselves are owned by Apple Inc., Ericsson AB, Intel Corporation, Google LLC, Lenovo (Singapore) Pte. Ltd., Microsoft Corporation, Nokia Corporation, and Toshiba Corporation. 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

1	Drafting conventions.....	5
1.1	Language.....	5
1.2	Formatting and color	5
2	Changes to Cookware Service, Version 1.0	6
2.1	Changes to Cookware Service, Version 1.0.....	6
2.1.1	[Modified Section] 1.5 Terminology.....	6
2.1.2	[Modified Section] 3 Service characteristics.....	7
2.1.3	[New Section] 3.10 Cookware Device ID characteristic.....	8
2.1.4	[New Section] 3.10.1 Characteristic format.....	8
2.1.5	[New Section] 3.10.2 Characteristic behavior.....	8
3	References	9

1 Drafting conventions

1.1 Language

Refer to and follow any terminology, language conventions, and interpretation sections of the Source Specification(s).

1.2 Formatting and color

The formatting and color conventions described in [Table 1.1](#) below are used in this Expedited Specification Update to describe the specific changes and additions to the Source Specification(s) identified on the cover page.

Text Color	Description
black	Text that is unmodified from the Source Specification.
red	Text that is added to the Source Specification.
red strikethrough	Text that is deleted from the Source Specification.
[green bracketed text]	Comments that explain the changes to be made to the Source Specification.
[...]	Indicates the section of the Source Specification that includes additional text that is not included in black text.
blue	Default color used for section numbers and headings of this document.

Table 1.1: Color key for headings, captions, and body text

2 Changes to Cookware Service, Version 1.0

This Section sets forth the specific changes and additions, using the formatting and color conventions described in Section 1.2, to Cookware Service, Version 1.0 [1].

2.1 Changes to Cookware Service, Version 1.0

2.1.1 [Modified Section] 1.5 Terminology

[The modified text with changes is shown below.]

Table 2.1 defines terms that are used in the CWS.

Term	Definition Location
Associated Cooking Zone	A Cooking Zone is considered Associated with a Cookware Device (CWD) when the Cooking Zone can deliver power to the CWD. For example, when a pot is placed on an induction cooktop or in an oven.
Associated Cookware Device	A CWD is considered Associated with a Cooking Zone when the CWD is placed such that the Cooking Zone can deliver power to the CWD.
Control Loop	A procedure that calculates the necessary cooking conditions, such as power level, based on the target cooking conditions (e.g., the desired temperature) and the measured cooking conditions. The Control Loop can be executed on a Cooking Controller, a Cooking Appliance, or a CWD.
Cooking Appliance	A device that can emit power to change the cooking conditions for the CWD. In this specification, the term Cooking Appliance mostly applies to traditional or induction cooktops, but it may also be used with gas cooktops, ovens, grills, refrigerators, or other heating or cooling appliances.
Cooking Controller	A device such as a smartphone, a tablet, a wearable device, or a dedicated control panel that can observe and/or modify the Cooking Appliance behavior.
Cooking Zone	A zone of the Cooking Appliance that provides heat or cold to a CWD. This can be, for example, a burner of the cooktop or a chamber of the oven.
Cookware Device	A device such as a pot or pan, a temperature probe, or another external sensor that may be used to assist a cooking process that uses an oven, cooktop, or other food preparation device.
Cookware Device ID	A randomly generated 128-bit number that uniquely identifies an individual CWD.
Recipe Parameters	In the context of the Sensor-Assisted Cooking System, Recipe Parameters is a set of cooking parameters, including target temperature, pressure, and humidity (i.e., the amount of steam) that should be maintained in a CWD for the duration of the cooking step.

Table 2.1: Terminology used in CWS

2.1.2 [Modified Section] 3 Service characteristics

[The modified text with changes is shown below.]

This section defines the characteristic and descriptor requirements. Where a characteristic can be indicated or notified, a Client Characteristic Configuration descriptor must be included in that characteristic, as required by GATT in Section 3.3.1.1 in [3].

Characteristic / Descriptor Name	Requirement	Mandatory Properties	Optional Properties	Security Permissions
Cookware Description (see Section 3.1)	M	Read	Indicate	Encryption required
Cookware Device ID (see Section 3.10)	M	Read	-	Encryption required
Recipe Parameters (see Section 3.2)	C.1	Read, Write, Notify	-	Encryption required
Recipe Control (see Section 3.3)	C.1	Write	-	Encryption required
Cooking Step Status (see Section 3.4)	C.1	Read, Notify	-	Encryption required
Cooking Zone Capabilities (see Section 3.5)	C.1	Write	-	Encryption required
Cooking Zone Desired Cooking Conditions (see Section 3.6)	C.1	Indicate	-	Encryption required
Cooking Zone Actual Cooking Conditions (see Section 3.7)	C.1	Write	-	Encryption required
Cookware Sensor Data (see Section 3.8)	M	Read, Notify	-	Encryption required
Cookware Sensor Data descriptors (see Section 3.8.3)	M	Read, Write	-	Encryption required
Cookware Sensor Aggregate (see Section 3.9)	C.2	Read, Notify	-	Encryption required

- C.1: Mandatory if the CWD supports execution of the Control Loop, otherwise Excluded.
- C.2: Mandatory if there is more than one Cookware Sensor Data characteristic, otherwise Excluded.

CWS shall contain up to one instance of each characteristic defined in [Table 3.1](#), except for the Cookware Sensor Data characteristic.

CWS shall expose at least one Cookware Sensor Data characteristic and should use additional instances of the Cookware Sensor Data characteristic for each additional sensor present in the CWD.

A CWD may keep certain sensors inaccessible to clients by not exposing the corresponding Cookware Sensor Data characteristic.

2.1.3 [New Section] 3.10 Cookware Device ID characteristic

[The new text is shown below.]

The Cookware Device ID characteristic allows bonded clients to identify a CWD. While the CWD is identified by the Bluetooth Device Address, this characteristic must be present (see Section 3) because on some platforms, the Bluetooth Device Address is not available for the cookware-related application.

The Cookware Device ID characteristic may be used, for example, in a smartphone application to associate a CWD with a specific cooking zone of a cooking appliance.

2.1.4 [New Section] 3.10.1 Characteristic format

[The new text is shown below.]

The Cookware Device ID characteristic is 16 octets long.

2.1.5 [New Section] 3.10.2 Characteristic behavior

[The new text is shown below.]

The Cookware Device ID characteristic is a 128-bit randomly generated value and shall meet the following requirements:

- At least one bit of the random value shall be 0.
- At least one bit of the random value shall be 1.
- The value shall never change during the lifetime of the CWD.

3 References

- [1] Cookware Service, Version 1.0