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1 References

The following standards contain provisions, which, through reference in this document, constitute provisions of this standard. All the standards listed are normative references. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

1.1 ZigBee Alliance documents

- [R1] ZigBee document 053474r19: ZigBee Specification 2007
- [R2] ZigBee document 08006r03: ZigBee 2007 Layer PICS and Stack Profiles
- [R3] ZigBee document 075123r04, ZigBee Cluster Library Specification
- [R4] ZigBee document 095499r24: Green Power Specification
- [R5] ZigBee document 105521r21: Green Power test specification
- [R6] ZigBee document 064113r08: ZigBee Cluster Library PICS
- [R7] ZigBee document 120624, Errata for GP 1.0 specification (095499)
- [R8] ZigBee document 120625, Errata for GP 1.0 Test specification (105521)
- [R9] ZigBee document 120626, Errata for GP 1.0 PICS (105850)

1.2 IEEE documents

- [R10] IEEE Standard for Part 15.4: Wireless Medium Access Control (MAC) and Physical Layer (PHY) specifications for Low Rate Wireless Personal Area Networks (LR-WPANs), 2003.

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2 Introduction

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a given standard. Such a statement is called a protocol implementation conformance statement (PICS).

2.1 Scope

This document provides the protocol implementation conformance statement (PICS) proforma for the ZigBee specifications cited in Reference [R4] in compliance with the relevant requirements.

This document addresses the Green Power feature of the ZigBee core stack, together with the necessary cluster-level components (Green Power cluster).

2.2 Purpose

The supplier of a protocol implementation claiming to conform to the Green Power feature shall complete the following PICS proforma and accompany it with the information necessary to identify fully both the supplier and the implementation.

The PICS is in the form of answers to a set of questions in the PICS proforma. The questions in a proforma consist of a systematic list of protocol capabilities and options as well as their implementation requirements. The implementation requirement indicates whether implementation of a capability is mandatory, optional, or conditional depending on options selected. When a protocol implementer answers questions in a PICS proforma, they would indicate whether an item is implemented or not, and provide explanations if an item is not implemented.

3 Green Power certification status

The current status of the certification and golden unit availability for GreenPower functionality is listed in the tables below.

3.1 Not certified GP functionality

Table 1 – Not certified GP functionality

Item number	Item description	Reference
GPPCSF6 GPPCCF6	Lightweight unicast communication functionality	[R4] A.3.2.8
GPPCSF20 GPPCCF20	GPD IEEE address functionality	[R4] A.3.2.8
GPCF12B GPCF13B	TC-LK encryption of the GPD key exchanged during commissioning	[R4] A.3.9, A.1.5.9
GPD0 GPS1A	GP Simple Generic 1-state Switch	[R4] A.4.3
GPD1 GPS1B	GP Simple Generic 2-state Switch	[R4] A.4.3
GPD3 GPS3	GP Level Control Switch	[R4] A.4.3
GPD4 GPS4	GP Simple Sensor	[R4] A.4.3
GPD5 GPS14A	GP Advanced Generic 1-state Switch	[R4] A.4.3
GPD6 GPS14B	GP Advanced Generic 2-state Switch	[R4] A.4.3
GPD10 GPS5	GP Color Dimmer Switch	[R4] A.4.3
GPD11 GPS6	GP Light Sensor	[R4] A.4.3
GPD12 GPS7	GP Occupancy Sensor	[R4] A.4.3
GPD20 GPS8	GP Door Lock Controller	[R4] A.4.3
GPD30 GPS9	GP Temperature Sensor	[R4] A.4.3
GPD31 GPS10	GP Pressure Sensor	[R4] A.4.3
GPD32 GPS11	GP Flow Sensor	[R4] A.4.3
GPD33 GPS12, GPS13, GPS9, GPS6	GP Indoor Environment Sensor	[R4] A.4.3

3.2 Certified GP functionality

Table 2 – To-date certified device types

Item number	Item description	Reference
GPDT0	Green Power Device (GPD) functionality	[R4] A.1.6, A.1.7
GPDT2f	GP proxy functionality of Green Power Proxy (GPP) device	[R4] A.3.2.3
GPDT2c	GP proxy functionality of Green Power Combo (GPC) device	[R4] A.3.2.4
GPDT3t+	GP sink functionality of Green Power Target+ (GPT+) device	[R4] A.3.2.2
GPDT3c	GP sink functionality of Green Power Combo (GPC) device	[R4] A.3.2.4
GPDT3cm	GP sink functionality of Green Power Combo minimum (GPCm) device	[R4] A.3.2.7

Table 3 – To-date certified GP functionality

Item number	Item description	Reference
GPPCSF1 GPPCCF1	GP feature	[R4] A.3.2.8
GPPCSF2 GPPCCF2 GPF4A	Direct communication (via GP stub) functionality	[R4] A.3.2.8
GPPCSF3 GPPCCF3	Derived groupcast communication functionality	[R4] A.3.2.8
GPPCSF4 GPPCCF4	Pre-commissioned groupcast communication functionality	[R4] A.3.2.8
GPPCSF5 GPPCCF5	Unicast communication functionality	[R4] A.3.2.8
GPPCSF7 GPPCCF7 GPF9A GPF100 GPF102 GPF108	Single-hop (in sink's range) bidirectional operation functionality	[R4] A.3.2.8
GPPCSF8 GPPCCF8 GPF9A GPF100 GPF102 GPF108	Multi-hop (Proxy-based) bidirectional operation functionality	[R4] A.3.2.8
GPPCSF9 GPPCCF9	Proxy Table maintenance (active and passive) functionality	[R4] A.3.2.8
GPPCSF10 GPPCCF10 GPCF1 GPCF2 GPCF4 GPCF10 GPCF11 GPCF12A GPCF13A	Single-hop (in sink's range) commissioning (unidirectional and bidirectional) functionality	[R4] A.3.2.8

Item number	Item description	Reference
GPPCSF11 GPPCCF11 GPCF1 GPCF2 GPCF4 GPCF10 GPCF11 GPCF12A GPCF13A	Multi-hop (Proxy-based) commissioning (unidirectional and bidirectional) functionality	[R4] A.3.2.8
GPPCSF12 GPPCCF12 GPCF1 GPCF2 GPCF4 GPCF10 GPCF11 GPCF12A GPCF13A	CT-based commissioning functionality	[R4] A.3.2.8
GPPCSF13 GPPCCF13 GPF9A GPF100 GPCF7	Maintenance of GPD (deliver channel/key during operation) functionality	[R4] A.3.2.8
GPPCSF14 GPPCCF14 GPF8	gpdSecurityLevel = 0b00 functionality	[R4] A.3.2.8
GPPCSF15 GPPCCF15 GPF7	gpdSecurityLevel = 0b01 functionality	[R4] A.3.2.8
GPPCSF16 GPPCCF16 GPF6	gpdSecurityLevel = 0b10 functionality	[R4] A.3.2.8
GPPCSF17 GPPCCF17 GPF5	gpdSecurityLevel = 0b11 functionality	[R4] A.3.2.8
GPPCSF18	Sink Table-based groupcast forwarding functionality	[R4] A.3.2.8
GPPCSF19	Translation Table functionality	[R4] A.3.2.8
GPD2 GPS2	GP On/Off switch functionality	[R4] A.4

4 Abbreviations and special symbols

Notations for requirement status:

M	Mandatory
O	Optional
O.n	Optional, but support of at least one or only one (as indicated in the footnote to the O.n label) of the group of options labeled O.n is required. (Clarification - the number 'n' is a label for the group, not a count of the number of options within the group, or the ordinal number of the option within the group. All options in the group are indicated identically as O.n)
N/A	Not applicable
X	Prohibited
Item label: Status	Status is conditional on support of the item with the given item label.

Examples

1/ If items labeled A and B are both marked "O.n" this indicates that the status is optional for both A and B, but at least one of the two features described by items A and B is required to be implemented.

2/ If m items are each marked A: O.n, this indicates that, if item A is implemented, the status is optional for all of them, but at least one of the m features described by the items is required to be implemented.

5 Instructions for completing the PICS proforma

If a given implementation is claimed to conform to this standard, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma in this annex, and shall preserve the numbering and naming and the ordering of the PICS proforma.

A PICS which conforms to this document shall be a conforming PICS proforma completed in accordance with the instructions for completion given in this annex.

The main part of the PICS is a fixed-format questionnaire, divided into five tables. Answers to the questionnaire are to be provided in the rightmost column, either by simply marking an answer to indicate a restricted choice (such as Yes or No), or by entering a value, set, or range of values.

6 Identification of the implementation

Implementation under test (IUT) identification

IUT name: _____

IUT version: _____

System under test (SUT) identification

SUT name: **Philips ZGP OnOff Switch (ZGP Device ID 0x02)**

Software Version: **S3071-A215-5**

Hardware Version: **T1-PTM-215Z-DA**

Operating system (optional):

ZigBee stack revision and profile (should be PRO r20 or later): **Not applicable**

Product supplier

Name: **Philips**

Address: **High Tech Campus 45, 5656 AE, Eindhoven, The Netherlands**

Telephone number: **+31 40 2791111**

Facsimile number: _____

Email address: _____

Additional information: _____

Client

Name: _____

Address: _____

Telephone number: _____

Facsimile number: _____

Email address: _____

Additional information: _____

PICS contact person

Name: **Rob Houtepen**

Address: **High Tech Campus 45, 5656 AE, Eindhoven, The Netherlands**

Telephone number: _____

Facsimile number: _____

Email address: **rob.houtepen@philips.com**

Additional information: _____

PICS/System conformance statement

7 Identification of the protocol

This PICS proforma applies to the Green Power feature, cited in Reference [R4].

8 Global statement of conformance

The implementation described in this PICS proforma meets all of the mandatory requirements of the referenced standards:

Green Power – 095499r24ZB

Yes

No

Note -- Answering 'No' indicates non-conformance to the specified protocol standard. Non-supported mandatory capabilities are to be identified in the following tables, with an explanation by the implementer explaining why the implementation is non-conforming.

The supplier will have fully complied with the requirements for a statement of conformance by completing the statement contained in this subclause. That means, by clicking the above, the statement of conformance is complete.

9 ZigBee stack profile [R2] errata

9.1 Modify the Table in “8.6.3.1.5 ZigBee Device Objects functions”, p.89, of 08006r03

9.1.1 After AZD18, add

AZD19	Does the device support conflict checking with its own short address, on reception of Device_ance with IEEE address 0xffffffffffffffff?	[R4] A.2	M	
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9.2 Modify the Table in “8.4.2.2 Network layer frames” to include alias usage for Tx and Rx, p.47,

9.2.1 after NDF4, add

NDF5	Does the device support reception of ZigBee NWK frames with non-incremental sequence number in the NWK header Sequence Number field?	ZigBee	GPDT4: M	
		ZigBee-PRO	M	
NDF6	Does the device support transmission of ZigBee NWK frames with AliasSrcAddr and AliasSeqNumb, as supplied by next higher layer?	ZigBee	GPDT4: O	
		ZigBee-PRO	GPDT2: M GPDT3t: X GPDT3t+: X GPDT3c: X GPDT3cm: M GPDT4: M	

10 Green Power feature

The following tables are composed of the detailed questions to be answered, which make up the PICS proforma.

10.1 Green Power Device Types

Table 4 – Green Power device types

Item number	Item description	Reference	Status	Support
GPDT0	Does the product support GPD functionality?	[R4] A.1.6, A.1.7	O.6 ¹	Yes
GPDT1	Does the product support the functionality of GP infrastructure device?	[R4] A.3.2	O.6	No
GPDT2	Does the product support GPP functionality?	[R4] A.3.2.3	GPDT1: O.7 ²	
GPDT2f	Is the product programmed as a GPP?	[R4] A.3.2.3	GPDT2: O.8 ³	
GPDT2m	Is the product programmed as a GPPm?	[R4] A.3.2.6	GPDT2: O.8	
GPDT2c ⁴	Is the product programmed as a GPC?	[R4] A.3.2.4	GPDT2: O.8	
GPDT3	Does the product support GPS functionality?	[R4] A.3.2	GPDT1: O.7	
GPDT3t	Is the product programmed as a GPT?	[R4] A.3.2.1	GPDT3: O.10 ⁵	
GPDT3t+	Is the product programmed as a GPT+?	[R4] A.3.2.2	GPDT3: O.10	
GPDT3c	Is the product programmed as a GPC?	[R4] A.3.2.4	GPDT3: O.10	
GPDT3cm	Is the product programmed as a GPCm?	[R4] A.3.2.7	GPDT3: O.10	
GPDT4	Does the product support GP commissioning tool functionality	[R4] A.3.2.5	GPDT1: O.7	
GPDT4ct	Is the product programmed as a GP Commissioning Tool?	[R4] A.3.2.5	GPDT1: O	

Please note: all PICS items applicable for all the GPP and GPS subtypes, use the generic item label: GPDT2 or GPDT3, respectively.

The sub-type specific item labels (GPDT2f, GPDT2m, GPDT2c, GPDT3t, GPDT3t+, GPDT3c, GPDT3cm) are used for sub-type specific requirements.

¹ O.6 - Device under test shall select only one of these options.

² O.7 - Device under test shall select at least one of these options.

³ O.8 - Device under test shall select only one of these options.

⁴ Note: this item covers only the client side, i.e. proxy functionality of the GPC.

⁵ O.10 – Device under test shall select only one of these options.

11 Functionality of Green Power infrastructure device

11.1 Green Power stub capabilities of GP infrastructure devices

This PICS table applies to GP infrastructure devices GPDT1, GPDT2, GPDT3 and GPDT4.

All PICS items applicable for all the generic GP device types, use the generic item label: GPDT1 if applicable to all devices, or GPDT2, GPDT3, and GPDT4, if applicable in general to GPP, GPS or GPCT functionality, respectively.

The sub-type specific item labels (GPDT2f, GPDT2m, GPDT2c, GPDT3t, GPDT3t+, GPDT3c, GPDT3cm) are used for sub-type specific requirements.

Since GPDT0 are not ZigBee-PRO devices, their functionality is not discussed here. Please see ZCL PICS for GPDT0 compliance requirements.

Item number	Item description	Reference	Status	Support
GPF1	Does the device implement cGP stub?	[R4] A.1	GPDT2: M GPDT3t: X GPDT3t+: M GPDT3c: M GPDT3cm: M GPDT4: M	
GPF2	Does the device implement dGP stub?	[R4] A.1	GPDT2: M GPDT3t: X GPDT3t+: M GPDT3c: M GPDT3cm: M GPDT4: M	
GPF3	Does the device support the general Green Power Device Frame format?	[R4] A.1.4	GPDT2: M GPDT3t: X GPDT3t+: M GPDT3c: M GPDT3cm: M GPDT4: M	
GPF3A	Does the device support nwkcProtocolVersion = 0x3?	[R4] A.1.4	GPDT2: M GPDT3t: X GPDT3t+: M GPDT3c: M GPDT3cm: M GPDT4: M	
GPF4A	Does the device support receiving GPDF frame format with ApplicationID sub-field of the Extended NWK Frame Control field set to 0b000?	[R4] A.1.4	GPDT2: M GPDT3t: X GPDT3t+: M GPDT3c: M GPDT3cm: M GPDT4: M	
GPF4B	Does the device support receiving GPDF frame format with ApplicationID sub-field of the Extended NWK Frame Control field set to 0b010?	[R4] A.1.4	GPDT2: O GPDT3: O GPDT4: M	
GPF5	Does the device's dGP stub support GPDF SecurityLevel=0b11?	[R4] A.1.5.4; A.3.7.2	GPDT2m: O GPDT2f: M GPDT2c: M GPDT3t: X GPDT3t+: O.4 ⁶ GPDT3c: M GPDT3cm: O.4 GPDT4: M	
GPF6	Does the device's dGP stub support GPDF SecurityLevel=0b10?	[R4] A.1.5.4; A.3.7.2	GPDT2: M GPDT3t: X GPDT3t+: O.4 GPDT3c: M GPDT3cm: O.4 GPDT4: M	

⁶ O.4: DUT shall support at least one of those options.

Item number	Item description	Reference	Status	Support
GPF7	Does the device's dGP stub support GPDF SecurityLevel=0b01?	[R4] A.1.5.4; A.3.7.2	GPDT2m: O GPDT2f: M GPDT2c: M GPDT3t: X GPDT3t+: O.4 GPDT3c: M GPDT3cm: O.4 GPDT4: M	
GPF8	Does the device's dGP stub support GPDF SecurityLevel=0b00?	[R4] A.1.5.4; A.3.7.2	GPDT2m: M GPDT2f: M GPDT2c: M GPDT3t: X GPDT3t+: O.4 GPDT3c: M MGPDT3cm: O.4 GPDT4: M	
GPF9A	Does the device support transmitting GPDF frame format with ApplicationID sub-field of the Extended NWK Frame Control field set to 0b000?	[R4] A.1	GPDT2m: O GPDT2f: M GPDT3t: X GPDT3t+: M GPDT3c: M GPDT3cm: M GPDT4: M	
GPF9B	Does the device support transmitting GPDF frame format with ApplicationID sub-field of the Extended NWK Frame Control field set to 0b010?	[R4] A.1	GPDT2: O GPDT3: O GPDT4: M	
GPSF1	Does the device support gpTxQueue?	[R4] A.1	GPDT2m: O GPDT2f: M GPDT3t: X GPDT3t+: M GPDT3c: M GPDT3cm: M GPDT4: M	

11.2 Green Power: Support of minimal proxy functionality

This PICS table applies to GP infrastructure devices GPDT1, GPDT2, GPDT3 and GPDT4.

All PICS items applicable for all the generic GP device types, use the generic item label: GPDT1 if applicable to all devices, or GPDT2, GPDT3, and GPDT4, if applicable in general to GPP, GPS or GPCT functionality, respectively.

The sub-type specific item labels (GPDT2f, GPDT2m, GPDT2c, GPDT3t, GPDT3t+, GPDT3c, GPDT3cm) are used for sub-type specific requirements.

Since GPDT0 are not ZigBee-PRO devices, their functionality is not discussed here. Please see ZCL PICS for GPDT0 compliance requirements.

Item number	Item description	Reference	Status	Support
GPPC0	Does the device support minimum GP proxy functionality?	[R4] A.3.2.6	GPDT2m: M GPDT2f: M GPDT2c: M GPDT3t: X GPDT3t+: O GPDT3c: M MGPDT3cm: M GPDT4: O	
GPPC1	Is the GreenPower cluster supported?	[R4] A.3	GPPC0: M	
GPPC2	Does the device support Green Power End Point (GPEP)?	[R4] A.3.1	GPPC0: M	
GPPC3	Does the device support GPEP duplicate filtering?	[R4] A.3.6.1	GPPC0: M	
GPPCC1	Is the GreenPower cluster supported as a client?	[R4] A.3.4	GPPC0: O.5 ⁷ GPPC0&GPDT2m: M	

⁷ O.5: DUT shall support at least one of those options.

Item number	Item description	Reference	Status	Support
GPPCC2	Is the gppMaxProxyTableEntries attribute supported?	[R4] A.3.4.2.1	GPPCC1: M	
GPPCC3A	Is the Proxy Table attribute supported?	[R4]A.3.4.2.2	GPPCC1: M	
GPPCC3B	Is the minimum number of 10 entries in the Proxy Table attribute supported?	[R4]A.3.4.2.2	GPPCC1: M	
GPPCC8	Is the gppFunctionality attribute supported?	[R4]A.3.4.2.7	GPPCC1: M	
GPPCC9	Is the gppActiveFunctionality attribute supported?	[R4]A.3.4.2.8	GPPCC1: M	
GPPCS1	Is the GreenPower cluster supported as a server?	[R4]A.3.3	GPPC0: O.5 GPPC0&GPDT3cm: M	
GPPCS2	Is the gppMaxSinkTableEntries attribute supported?	[R4]A.3.3.2.1	GPPCS1: M	
GPPCS3A	Is the Sink Table attribute supported?	[R4]A.3.3.2.2	GPPCS1: M	
GPPCS3B	Is the minimum number of 5 entries in the Sink Table attribute supported?	[R4]A.3.3.2.2	GPPCS1: M	
GPPCS8	Is the gpsFunctionality attribute supported?	[R4]A.3.3.2.7	GPPCS1: M	
GPPCS9	Is the gpsActiveFunctionality attribute supported?	[R4]A.3.3.2.8	GPPCS1: M	
GPPC101	Is the gpSharedSecurityKeyType attribute supported?	[R4]A.3.3.3.1	GPPC0: M	
GPPC102	Is the gpSharedSecurityKey attribute supported?	[R4]A.3.3.3.2	GPPC0: M	
GPPC103	Is the gpLinkKey attribute supported?	[R4]A.3.3.3.3	GPPC0: M	
GPPCC102	Is transmission of the GP Notification command in derived groupcast supported?	[R4]A.3.3.4.1	GPDT2m: M GPDT3cm: O	
GPPCC103	Is transmission of the GP Notification command in commissioned groupcast supported?	[R4]A.3.3.4.1	GPDT2m: M GPDT3cm: M	
GPPCC110	Is reception of the GP Pairing command supported?	[R4] A.3.3.5.2	GPPCC1: M	
GPPCS110	Is reception of the GP Pairing Configuration command supported?	[R4] A.3.3.4.7	GPPCS1: M	

11.3 Functionality of GreenPower cluster

The GPPCCF\$ items refer ONLY to the PROXY functionality of the DUT. Analogously, the GPPCSF\$ items refer ONLY to the SINK functionality of the DUT.

Thus, for a GPC, each item set covers only a part of GPC's functionality. Therefore, for the two functional parts of the GPC, both PICS items sets have to be checked independently.

Table 5 – GreenPower cluster feature support

Item number	Item description	Reference	Status	Support
GPPCSF1	Is GP feature supported as a server? (GP feature sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: M GPDT4: M	
GPPCSF2	Is Direct communication (via GP stub) supported as a server? (Direct communication sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: X GPDT3t+: M GPDT3c: M GPDT3cm: M GPDT4: M	
GPPCSF3	Is Derived groupcast communication supported as a server? (Derived groupcast communication sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: O.11 ⁸ GPDT3t+: O.11 GPDT3c: O.11 GPDT3cm: M GPDT4: O	

⁸ O.11: DUT shall support at least one of those options.

Item number	Item description	Reference	Status	Support
GPPCSF4	Is Pre-commissioned groupcast communication supported as a server? (Pre-commissioned groupcast communication sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: O.11 GPDT3t+: O.11 GPDT3c: O.11 GPDT3cm: M (GPDT3 & GPPCSF3: M) GPDT4: O	
GPPCSF5	Is Unicast communication supported as a server? (Unicast communication sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: O.11 GPDT3t+: O.11 GPDT3c: O.11 GPDT3cm: X GPDT4: O	
GPPCSF6	Is Lightweight unicast communication supported as a server? (Lightweight unicast communication sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: O.11 GPDT3t+: O.11 GPDT3c: O.11 GPDT3cm: X GPDT4: O	
GPPCSF7	Is Single-hop (in sink's range) bidirectional operation supported as a server? (Single-hop bidirectional operation sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: X GPDT3t+: O GPDT3c: O GPDT3cm: O GPDT4: O	
GPPCSF8	Is Multi-hop (Proxy-based) bidirectional operation supported as a server? (Multi-hop bidirectional operation sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: O GPDT3t+: O GPDT3c: O GPDT3cm: O GPDT4: O	
GPPCSF9	Is Proxy Table maintenance (active and passive) supported as a server? (Proxy Table maintenance sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: M GPDT3t+: M GPDT3c: M GPDT3cm: O GPDT4: O	
GPPCSF10	Is Single-hop (in sink's range) commissioning (unidirectional and bidirectional) supported as a server? (Single-hop commissioning sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: N/A GPDT3t+: M GPDT3c: M GPDT3cm: M GPDT4: M	
GPPCSF11	Is Multi-hop (Proxy-based) commissioning (unidirectional and bidirectional) supported as a server? (Multi-hop commissioning sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: M GPDT3t+: O GPDT3c: O GPDT3cm: O GPDT4: O	
GPPCSF12	Is CT-based commissioning supported as a server? (CT-based commissioning sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: O GPDT3t+: O GPDT3c: O GPDT3cm: M GPDT4: M	
GPPCSF13	Is Maintenance of GPD (deliver channel/key during operation) supported as a server? (Maintenance of GPD sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: O GPDT4: O	

Item number	Item description	Reference	Status	Support
GPPCSF14	Is gpdSecurityLevel = 0b00 supported as a server? (gpdSecurityLevel = 0b00 sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: O.12 ⁹ GPDT4: O	
GPPCSF15	Is gpdSecurityLevel = 0b01 supported as a server? (gpdSecurityLevel = 0b01 sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: O.12 GPDT4: O	
GPPCSF16	Is gpdSecurityLevel = 0b10 supported as a server? (gpdSecurityLevel = 0b10 sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: O.12 GPDT4: O	
GPPCSF17	Is gpdSecurityLevel = 0b11 supported as a server? (gpdSecurityLevel = 0b11 sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: O.12 GPDT4: O	
GPPCSF18	Is SinkTable-based groupcast forwarding supported as a server? (SinkTable-based groupcast forwarding sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3t: O GPDT3t+: O GPDT3c: O GPDT3cm: M GPDT4: O	
GPPCSF19	Is Translation Table feature supported as a server? (Translation Table sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: O GPDT4: O	
GPPCSF20	Is GPD IEEE address feature supported as a server? (GPD IEEE address sub-field of the gpsFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: O GPDT4: M	
GPPCCF1	Is GP feature supported as a client? (GP feature sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: M GPDT3: N/A GPDT4: O	
GPPCCF2	Is Direct communication (via GP stub) supported as a client? (Direct communication sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: M GPDT3: N/A GPDT4: O	
GPPCCF3	Is Derived groupcast communication supported as a client? (Derived groupcast communication sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: M GPDT3t: N/A GPDT3t+: N/A GPDT3c: N/A GPDT3cm: M GPDT4: O	
GPPCCF4	Is Pre-commissioned groupcast communication supported as a client? (Pre-commissioned groupcast communication sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: M GPDT3t: N/A GPDT3t+: N/A GPDT3c: N/A GPDT3cm: M GPDT4: O	
GPPCCF5	Is Unicast communication supported as a client? (Unicast communication sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2c: M GPDT2f: M GPDT2m: O GPDT3: N/A GPDT4: O	
GPPCCF6	Is Lightweight unicast communication supported as a client? (Lightweight unicast communication sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: O GPDT3: N/A GPDT4: O	
GPPCCF7	Is Single-hop (in sink's range) bidirectional operation supported as a client? (Single-hop bidirectional operation sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: N/A GPDT4: O	
GPPCCF8	Is Multi-hop (Proxy-based) bidirectional operation supported as a client? (Multi-hop bidirectional operation sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2c: O GPDT2f: O GPDT2m: O GPDT3: N/A GPDT4: O	

⁹ O.12: DUT shall implement at least one of those options.

Item number	Item description	Reference	Status	Support
GPPCCF9	Is Proxy Table maintenance (active and passive) supported as a client? (Proxy Table maintenance sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2c: M GPDT2f: M GPDT2m: O GPDT3: N/A GPDT4: O	
GPPCCF10	Is Single-hop (in sink's range) commissioning (unidirectional and bidirectional) supported as a client? (Single-hop commissioning sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: N/A GPDT4: O	
GPPCCF11	Is Multi-hop (Proxy-based) commissioning (unidirectional and bidirectional) supported as a client? (Multi-hop commissioning sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2f: M GPDT2m: O GPDT2c: M GPDT3: N/A GPDT4: O	
GPPCCF12	Is CT-based commissioning supported as a client? (CT-based commissioning sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2c: M GPDT2f: M GPDT2m: O GPDT3: N/A GPDT4: O	
GPPCCF13	Is Maintenance of GPD (deliver channel/key during operation) supported as a client? (Maintenance of GPD sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2f: M GPDT2m: O GPDT2c: M GPDT3: N/A GPDT4: O	
GPPCCF14	Is gpdSecurityLevel = 0b00 supported as a client? (gpdSecurityLevel = 0b00 sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2f: M GPDT2m: M GPDT2c: M GPDT3: N/A GPDT4: O	
GPPCCF15	Is gpdSecurityLevel = 0b01 supported as a client? (gpdSecurityLevel = 0b01 sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2f: M GPDT2m: O GPDT2c: M GPDT3: N/A GPDT4: O	
GPPCCF16	Is gpdSecurityLevel = 0b10 supported as a client? (gpdSecurityLevel = 0b10 sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2f: M GPDT2m: M GPDT2c: M GPDT3: N/A GPDT4: O	
GPPCCF17	Is gpdSecurityLevel = 0b11 supported as a client? (gpdSecurityLevel = 0b11 sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2f: M GPDT2m: O GPDT2c: M GPDT3: N/A GPDT4: O	
GPPCCF18	Is SinkTable-based groupcast forwarding supported as a client? (SinkTable-based groupcast forwarding sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: N/A GPDT4: N/A	
GPPCCF19	Is Translation Table feature supported as a client? (Translation Table sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: N/A GPDT3: N/A GPDT4: N/A	
GPPCCF20	Is GPD IEEE address feature supported as a client? (GPD IEEE address sub-field of the gppFunctionality attribute set?)	[R4] A.3.2.8	GPDT2: O GPDT3: N/A GPDT4: N/A	

11.3.1 GreenPower cluster: items common to client and server

Table 6 – GreenPower cluster items common to client and server

Item number	Item description	Reference	Status	Support
GPPC1	Is the GreenPower cluster supported?	[R4] A.3	GPDT1: M	
GPPC2	Does the device support Green Power End Point (GPEP)?	[R4] A.3.1	GPDT1: M	
GPPC3	Does the device support GPEP duplicate filtering?	[R4] A.3.6.1.2	GPDT1: M	
GPPC3r	Does the device support random MAC sequence number for GPD commands' duplicate filtering?	[R4] A.3.6.1.2	GPDT1&& GPF8: M	
GPPC3i	Does the device support incremental MAC sequence number for GPD commands' duplicate filtering?	[R4] A.3.6.1.2	GPDT1&& GPF8: M	
GPPC3s	Does the device support GPD security frame counter for GPD commands' duplicate filtering?	[R4] A.3.6.1.2	GPDT1&& (GPF5 GPF6 GPF7): M	
GPPC4	Does the device support transmission of Device_annce for the alias?	[R4] A.3.6.3.3, A.3.6.3.4	GPDT1: M	
GPPC5	Does the device support conflict checking for the alias on reception of Device_annce?	[R4] A.3.6.3.3, A.3.6.3.4	GPDT1: M	
GPPC101	Is the <i>gpSharedSecurityKeyType</i> attribute supported?	[R4] A.3.3.3.1	GPDT1&& (GPF5 GPF6 GPF7): M	
GPPC102	Is the <i>gpSharedSecurityKey</i> attribute supported?	[R4] A.3.3.3.2	GPDT1&& (GPF5 GPF6 GPF7): M	
GPPC103	Is the <i>gpLinkKey</i> attribute supported?	[R4] A.3.3.3.3	GPDT1&& (GPF5 GPF6 GPF7): M	

11.3.2 Server side

Table 7 – GreenPower cluster server capabilities

Item number	Item description	Reference	Status	Support
GPPCS1	Is the GreenPower cluster supported as a server?	[R4] A.3.3	GPDT2: O GPDT3: M GPDT4: M GPPCSF1: M	
GPPCS2	Is the <i>gpsMaxSinkTableEntries</i> attribute supported?	[R4] A.3.3.2.1	GPDT2: X GPDT3: M GPDT4: O	
GPPCS3A	Is the Sink Table attribute supported?	[R4] A.3.3.2.2	GPDT2: X GPDT3: M GPDT4: O	
GPPCS3B	Is the required minimum number of entries in the Sink Table attribute supported? ¹⁰	[R4] A.3.3.2.2	GPDT3: 5	
GPPCS4	Is the <i>gpsCommunication mode</i> attribute supported?	[R4] A.3.3.2.3	GPDT2: X GPDT3: M GPDT4: O	
GPPCS5	Is the <i>gpsCommissioningExitMode</i> attribute supported?	[R4] A.3.3.2.4	GPDT2: X GPDT3: M GPDT4: O	

¹⁰ 5 is the default minimum number of entries defined by the GP Proxy cluster [R4]. A particular profiles adopting the cluster may mandate different value.

Item number	Item description	Reference	Status	Support
GPPCS6	Is the <code>gpsCommissioningWindow</code> attribute supported?	[R4] A.3.3.2.5	GPDT2: X GPDT3: O GPDT4: O	
GPPCS7	Is the <code>gpsSecurityLevel</code> attribute supported?	[R4] A.3.3.2.6	GPDT2: X GPDT3: M GPDT4: O	
GPPCS8	Is the <code>gpsFunctionality</code> attribute supported?	[R4] A.3.3.2.7	GPDT2: X GPDT3: M GPDT4: O	
GPPCS9	Is the <code>gpsActiveFunctionality</code> attribute supported?	[R4] A.3.3.2.8	GPDT2: X GPDT3: M GPDT4: O	
GPPCS99	Is Translation Table supported?	[R4] A.3.5.2.2	GPDT2: X GPDT3: O GPDT4: O GPPCSF19: M	
GPPCS100	Is reception of the GP Notification command supported?	[R4] A.3.2.10 [R4] A.3.3.3	GPDT2c: M GPDT2f: M GPDT2m: O GPDT3: M GPDT4: O	
GPPCS101	Is reception of the GP Notification command in unicast supported?	[R4] A.3.2.10 [R4] A.3.3.4.1	GPDT2: X GPDT3t GPDT3t+ GPDT3c: O.14 ¹¹ GPDT3cm: X GPPCSF5 GPPCSF6: M GPDT4: O	
GPPCS102	Is reception of the GP Notification command in derived groupcast supported?	[R4] A.3.2.10 [R4] A.3.3.4.1	GPDT2& (GPPCCF8 GPPCCF9 GPPCCF13) : M GPDT3cm: O GPDT3t GPDT3t+ GPDT3c: O.14 GPDT4: O	
GPPCS103	Is reception of the GP Notification command in commissioned groupcast supported?	[R4] A.3.2.10 [R4] A.3.3.4.1	GPDT2& (GPPCCF8 GPPCCF9 GPPCCF13): M GPDT3cm: M GPDT3t GPDT3t+ GPDT3c: O.14 GPPCS102: M GPDT4: O	
GPPCS104	Is reception of the GP Notification command in broadcast supported?	[R4] A.3.2.10 [R4] A.3.3.4.1 [R4] A.5.2.1	GPDT2: O GPPCCF9: M GPDT3: O GPPCSF9: M GPDT4: O	
GPPCS105	Is reception of the GP Pairing Search command supported?	[R4] A.3.2.10 [R4] A.3.3.4.2	GPDT2: O GPPCCF9: O GPDT3cm: O GPDT3t, GPDT3t+, GPDT3c: M GPDT4: O GPPCSF9: M	
GPPCS106	Is reception of the GP Tunneling Stop command supported?	[R4] A.3.2.10 [R4] A.3.4.4.1	GPDT2m: O GPPCCF5: M GPDT2f: M GPDT2c: M GPDT3: X GPDT4: O	

¹¹ O.14: The device under test shall implement at least one of those options; only one is enabled at any given time.

Item number	Item description	Reference	Status	Support
GPPCS107	Is reception of the GP Commissioning Notification command supported?	[R4] A.3.2.10 [R4] A.3.3.4.4	GPDT2m: O (GPPCCF11: M) GPDT2f GPDT2c: M GPDT3t: M GPDT3t+ GPDT3c GPDT3cm: O (GPPCSF11: M) GPDT4: O	
GPPCS108	Is reception of the GP Translation Table Update command supported?	[R4] A.3.2.10 [R4] A.3.3.4.6	GPDT2: X GPDT3: O GPDT4: O GPPCSF19: M	
GPPCS109	Is reception of the GP Translation Table Request command supported?	[R4] A.3.2.10 [R4] A.3.3.4.5	GPDT2: X GPDT3: O GPDT4: O GPPCSF19: M	
GPPCS110	Is reception of the GP Pairing Configuration command supported?	[R4] A.3.2.10 [R4] A.3.3.4.7	GPDT2: X GPDT3cm: M GPDT3t GPDT3t+ GPDT3c: O GPDT4: O GPPCSF4 GPPCSF12 GPPCSF18: M	
GPPCS150	Is transmission of the GP Notification Response command supported?	[R4] A.3.2.10 [R4] A.3.3.5.1	GPDT2: X GPDT3cm: X GPDT3t GPDT3t+ GPDT3c: O GPDT4: O GPPCSF5 GPPCSF6: M	
GPPCS151	Is transmission of the GP Response command supported?	[R4] A.3.2.10 [R4] A.3.3.5.4	GPDT2: X GPDT3: O GPDT4: O GPPCSF8 GPPCSF11 GPPCSF13: M	
GPPCS152	Is transmission of the GP Pairing command supported?	[R4] A.3.2.10 [R4] A.3.3.5.2	GPDT2: X GPDT3: M GPDT4: M	
GPPCS153	Is generation of the GP Pairing command with RemoveGPD sub-field set to 0b1 supported?	[R4] A.3.2.10 [R4] A.3.3.5.2	GPDT2: X GPDT3: O GPDT4: M	
GPPCS154	Is transmission of the GP Proxy Commissioning Mode command supported?	[R4] A.3.2.10 [R4] A.3.3.5.3	GPDT2: X GPDT3t: M GPDT3t+ GPDT3c GPDT3cm: O GPDT4: M GPPCSF11: M	
GPPCS155	Is transmission of the GP Translation Table Response command supported?	[R4] A.3.2.10 [R4] A.3.3.5.5	GPDT2: X GPDT3: O GPDT3&&GPPCS109:M GPDT4: O GPPCSF19: M	
GPPCS201	Is persistent storage of Sink Table supported?	[R4] A.3.2.10 [R4] A.3.3.2.2	GPDT2: X GPDT3: M GPDT4: O	

11.3.3 Client side

Table 8 – GreenPower cluster client capabilities

Item number	Item description	Reference	Status	Support
GPPCC1	Is the GreenPower cluster supported as a client?	[R4] A.3.4	GPDT2: M GPDT3: O GPDT4: O	
GPPCC2	Is the <i>gppMaxProxyTableEntries</i> attribute supported?	[R4] A.3.4.2.1	GPDT2: M GPDT3: X GPDT4: O	
GPPCC3A	Is the Proxy Table attribute supported?	[R4] A.3.4.2.2	GPDT2: M GPDT3: X GPDT4: O	
GPPCC3B	Is the required minimal number of entries in the Proxy Table attribute supported? ¹²	[R4] A.3.4.2.2	GPDT2: 10	
GPPCC3C	Is the required minimal number of entries in the <i>Sink address list</i> per Proxy Table entry supported?	[R4] A.3.4.2.2	GPDT2 && GPPCSF5: 2	
GPPCC3D	Is the required minimal number of entries in the <i>Sink group list</i> per Proxy Table entry supported?	[R4] A.3.4.2.2	GPDT2 && GPPCSF4: 2	
GPPCC3E	Is the required minimal number of simultaneously used entries in the <i>Sink address list</i> and in the <i>Sink group list</i> per Proxy Table entry supported?	[R4] A.3.4.2.2	GPDT2 && GPPCSF5 && GPPCSF5: 1+1	
GPPCC4	Is the <i>gppNotificationRetryNumber</i> attribute supported?	[R4] A.3.4.2.3	GPDT2f GPDT2c: M GPDT2m: O (GPPCCF5 GPPCCF6: M) GPDT3: X GPDT4: O	
GPPCC5	Is the <i>gppNotificationRetryTimer</i> attribute supported?	[R4] A.3.4.2.4	GPDT2f GPDT2c: M GPDT2m: O (GPPCCF5 GPPCCF6: M) GPDT3: X GPDT4: O	
GPPCC6	Is the <i>gppMaxSearchCounter</i> attribute supported?	[R4] A.3.4.2.5	GPDT2: O (GPPCCF9: M) GPDT3: X GPDT4: O	
GPPCC7	Is the <i>gppBlockedSrcID</i> attribute supported?	[R4] A.3.4.2.6	GPDT2: O (GPPCCF9: M) GPDT3: X GPDT4: O	
GPPCC8	Is the <i>gppFunctionality</i> attribute supported?	[R4] A.3.4.2.7	GPDT2: M GPDT3: X GPDT4: O	
GPPCC9	Is the <i>gppActiveFunctionality</i> attribute supported?	[R4] A.3.4.2.8	GPDT2: M GPDT3: X GPDT4: O	
GPPCC100	Is transmission of the GP Notification command supported?	[R4] A.3.2.10 [R4] A.3.3.4.1	GPDT2: M GPDT3cm: M GPDT3t GPDT3t+ GPDT3c: X GPDT4: O	
GPPCC101	Is transmission of the GP Notification command in unicast supported?	[R4] A.3.2.10 [R4] A.3.3.4.1	GPDT2f GPDF2c: M GPDT2m: O GPDT3: X GPPCCF 5 GPPCCF6: M GPDT4: O	

¹² 10 is the default minimum number of entries defined by the GP Proxy cluster [R4]. A particular profiles adopting the cluster may mandate different value.

Item number	Item description	Reference	Status	Support
GPPCC102	Is transmission of the GP Notification command in derived groupcast supported?	[R4] A.3.2.10 [R4] A.3.3.4.1	GPDT2: M GPDT3cm: O GPDT4: O	
GPPCC103	Is transmission of the GP Notification command in commissioned groupcast supported?	[R4] A.3.2.10 [R4] A.3.3.4.1	GPDT2: M GPDT3cm: M GPDT4: O	
GPPCC104	Is transmission of the GP Notification command in broadcast supported?	[R4] A.3.2.10 [R4] A.3.3.4.1	GPDT2 GPDT3cm: O GPPCCF9:M GPDT4: O	
GPPCC105	Is transmission of the GP Notification command in multiple communication modes supported?	[R4] A.3.2.10 [R4] A.3.5.2.1	GPDT2c GPDT2f: M GPDT2m GPDT3cm: O GPPCCF 5 GPPCCF6: M GPDT4: O	
GPPCC106	Is transmission of the GP Pairing Search command supported?	[R4] A.3.2.10 [R4] A.3.4.2	GPDT2 GPDT3cm: O GPPCCF9: M GPDT3t GPDT3t+ GPDT3c: X GPDT4: M	
GPPCC107	Is transmission of the GP Tunneling Stop command supported?	[R4] A.3.2.10 [R4] A.3.4.4.1	GPDT2c GPDT2f: M GPDT2m: O GPPCCF5 GPPCCF6: M GPDT3: X GPDT4: O	
GPPCC108	Is transmission of the GP Commissioning Notification command supported?	[R4] A.3.2.10 [R4] A.3.3.4.4	GPDT2c GPDT2f: M GPDT2m GPDT3cm: O GPPCCF11: M GPDT3t GPDT3t+ GPDT3c: X GPDT4: O	
GPPCC108	Is transmission of the GP Translation Table Update command supported?	[R4] A.3.2.10 [R4] A.3.3.4.5 [R4] A.3.2.5	GPDT2: X GPDT3: O GPDT4: M	
GPPCC109	Is transmission of the GP Translation Table Request command supported?	[R4] A.3.2.10 [R4] A.3.3.4.6 [R4] A.3.2.5	GPDT2: X GPDT3: O GPDT4: M	
GPPCC110	Is transmission of the GP Pairing Configuration command supported?	[R4] A.3.2.10 [R4] A.3.3.4.7 [R4] A.3.2.5	GPDT2: X GPDT3cm: M GPDT3t GPDT3t+ GPDT3c: O GPDT4: M GPPCSF4 GPPCSF18: M	
GPPCC150	Is reception of the GP Notification Response command supported?	[R4] A.3.2.10 [R4] A.3.3.5.1	GPDT2c GPDT2f: M GPDT2m: O GPPCCF5 GPPCCF6: M GPDT3: X GPDT4: O	
GPPCC151	Is reception of the GP Pairing command supported?	[R4] A.3.2.10 [R4] A.3.3.5.2	GPDT2: M GPDT3: X GPDT4: M	
GPPCC152	Is reception of the GP Pairing command with <i>RemoveGPD</i> sub-field set to 0b1 supported?	[R4] A.3.2.10 [R4] A.3.3.5.2	GPDT2: M GPDT3: X GPDT4: M	
GPPCC153	Is reception of the GP Proxy Commissioning Mode command supported?	[R4] A.3.2.10 [R4] A.3.3.5.3	GPDT2c GPDT2f: M GPDT2m: O GPPCCF11: M GPDT3: O GPDT4: M	
GPPCC154	Is reception of the GP Response command supported?	[R4] A.3.2.10 [R4] A.3.3.5.4	GPDT2c GPDT2f: M GPDT2m GPDT3cm: O GPPCCF8 GPPCCF11 GPPCCF13:M GPDT3t GPDT3t+ GPDT3c: X GPDT4: O	

Item number	Item description	Reference	Status	Support
GPPCC155	Is reception of the GP Translation Table Response command supported?	[R4] A.3.2.10 [R4] A.3.3.5.5 [R4] A.3.2.5	GPDT2: X GPDT3: O (GPDT3&&GPPCC109:M) GPDT4: M	
GPPCC200	Is persistent storage of Proxy Table supported?	[R4] A.3.4.2.2	GPPCC3A: M	
GPPCC201	Is handling of Proxy Table entries with status other than active and valid supported?	[R4] A.3.5.2.2	GPDT2: O GPDT3: X GPDT4: O GPPCCF9: M	
GPPCC202	Is passive discovery supported?	[R4] A.3.5.2.2.3	GPDT2: O GPDT3: X GPDT4: O GPPCCF9: M	
GPPCC2034	Is active discovery supported?	[R4] A.3.5.2.2.4	GPDT2: O GPDT3: X GPDT4: O GPPCCF9: M	
GPPCC204	Is active re-discovery supported?	[R4] A.3.5.2.2.5	GPDT2: O GPDT3: X GPDT4: O GPPCCF9: M	
GPPCC205	Is limiting the number of the transmitted GreenPower cluster messages supported?	[R4] A.3.6.3.1, A.3.6.3.3	GPDT2: M GPDT3: O GPDT4: O	
GPPCC205A	Is distance-based gppTunnelingDelay supported?	[R4] A.3.6.3.1 [R4] A.3.2.8, [R4] A.3.2.9	GPDT2c GPDT2f: M GPDT2m GPDT3cm: O GPPCCF5 GPPCCF8 GPPCCF1 1 GPPCCF13: M GPDT3 GPDT3t+ GPDT3c: X GPDT4: O	
GPPCC205B	Is dropping the scheduled GreenPower cluster message on reception of equivalent message supported?	[R4] A.3.6.3.1 [R4] A.3.2.8, [R4] A.3.2.9	GPDT2c GPDT2f: M GPDT2m GPDT3cm: O GPPCCF5 GPPCCF8 GPPCCF1 1 GPPCCF13: M GPDT3: O GPDT4: O	
GPPCC205C	Is transmission of GreenPower cluster commands with alias supported?	[R4] A.3.6.3.3 [R4] A.3.2.8, [R4] A.3.2.9	GPDT2: M GPDT3cm: M GPPCCF5 GPPCCF8 GPPCCF1 1 GPPCCF13: M GPDT3t GPDT3t+ GPDT3c: O GPDT4: O	
GPPCC206	Is updating <i>TargetList</i> field of the <i>ProxyTable</i> attribute on reception of Device_annce supported?	[R4] A.3.5.2.1	GPDT2c GPDT2f: M GPDT2m: O GPPCC3A&&(GPPCCF5 GPPCCF6): M GPDT3: N/A GPDT4: O	

11.3.4 Support of GP functionality

11.3.4.1 Bidirectional operation

Table 9 – Support for Green Power bidirectional operation

Item number	Item description	Reference	Status	Support
GPF101	Is transmission of GPD Read Attributes command supported?	[R4] A.4.2.5 [R4] A.3.6.1.5	GPPCCF8: M.9 ¹³ GPPCSF7 GPPCSF8: O	
GPF102	Is reception of GPD Read Attributes command supported?	[R4] A.4.2.5 [R4] A.3.6.1.5	GPPCCF8: M.16 GPPCSF7 GPPCSF8: X	
GPF103	Is transmission of GPD Read Attributes Response supported?	[R4] A.4.2.5 [R4] A.3.6.1.5	GPPCCF8: M.16 GPPCSF7 GPPCSF8: X	
GPF104	Is reception of GPD Read Attributes Response command supported?	[R4] A.4.2.5 [R4] A.3.6.1.5	GPPCCF8: M.16 (GPPCSF7 GPPCSF8)&&GPF101: M	
GPF105	Is transmission of GPD Request Attributes command supported?	[R4] A.4.2.5 [R4] A.3.6.1.5	GPPCCF8: M.16 GPPCSF7 GPPCSF8: X	
GPF106	Is reception of GPD Request Attributes command supported?	[R4] A.4.2.5 [R4] A.3.6.1.5	GPPCCF8: M.16 GPPCSF7 GPPCSF8: M	
GPF107	Is transmission of GPD Write Attributes command supported?	[R4] A.4.2.5 [R4] A.3.6.1.5	GPPCCF8: M.16 GPPCSF7 GPPCSF8: O	
GPF108	Is reception of GPD Write Attributes command supported?	[R4] A.4.2.5 [R4] A.3.6.1.5	GPPCCF8: M.16 GPPCSF7 GPPCSF8: X	

11.3.4.2 Green Power Commissioning Support

Table 10 – GP Commissioning Support

Item number	Item description	Reference	Status	Support
GPCF1	Does the device support pairing with Data GPDF with Auto-Commissioning bit set to 0b1?	[R4] A.3.9	GPPCCF11: M GPDT3: O GPDT4: M	
GPCF2	Does the device support pairing with Commissioning GPDF?	[R4] A.3.9	GPPCCF11: M GPDT3: M GPDT4: M	
GPCF3A	Does the device support transmission of GPD Commissioning command?	[R4] A.4.2.1.1	GPDT2: X GPDT3: X	
GPCF3B	Does the device support reception of GPD Commissioning command?	[R4] A.4.2.1.1	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	
GPCF4	Does the device support bidirectional communication in commissioning mode?	[R4] A.3.9	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	
GPCF5A	Does the device support transmission of the GPD Channel Request command in commissioning mode?	[R4] A.3.9	GPDT1: X	
GPCF5B	Does the device support reception of the GPD Channel Request command in commissioning mode?	[R4] A.3.9	GPPCCF11: M GPPCSF10 GPPCSF11: M	
GPCF6	Does the device support transmission of the GPD Channel Configuration command?	[R4] A.3.9	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	

¹³ M.16: Note: the bidirectional operation is transparent to the proxy. It just needs to act add the command received in GP Response to its `zgpTxQueue` and send it upon reception of GPDF frame with `RxAfterTx` set; it doesn't care about the type of the command.

Item number	Item description	Reference	Status	Support
GPCF6A	Does the device support transmission of the GPD Channel Configuration command in commissioning mode?	[R4] A.3.9	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	
GPCF6B	Does the device support transmission of the GPD Channel Configuration command in operational mode?	[R4] A.3.9	GPPCCF8 GPPCCF13: M GPPCSF13: M GPDT4: O	
GPCF7	Does the device support reception of the GPD Channel Configuration command?	[R4] A.3.9	GPDT1: X	
GPCF8	Does the device support transmission of the GPD Commissioning Reply command?	[R4] A.4.2.1.2	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	
GPCF8A	Does the device support transmission of the GPD Commissioning Reply command in commissioning mode?	[R4] A.4.2.1.2	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	
GPCF8B	Does the device support transmission of the GPD Commissioning Reply command in operational mode?	[R4] A.4.2.1.2	GPPCCF8 GPPCCF13: M GPPCSF13: M GPDT4: O	
GPCF9	Does the device support reception of the GPD Commissioning Reply command?	[R4] A.4.2.1.2	GPDT1: X	
GPCF10	Is GPD removal via GPD Decommissioning command supported?	[R4] A.4.2.1.3	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	
GPCF11	Does the device come with pre-configured GPD key?	[R4] A.3.9	GPDT1: X	
GPCF12A	Does the device support GPD key exchange in GPD Commissioning command?	[R4] A.3.9	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	
GPCF12B	Does the device support exchange of encrypted GPD key in GPD Commissioning command?	[R4] A.3.9	GPPCCF11: O GPPCSF10 GPPCSF11: O GPDT4: O	
GPCF13A	Does the device support GPD key exchange in GPD Commissioning Reply command?	[R4] A.3.9	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	
GPCF13B	Does the device support exchange of encrypted GPD key in GPD Commissioning Reply command?	[R4] A.3.9	GPPCCF11: O GPPCSF10 GPPCSF11: O GPDT4: O	
GPCF14	Does the device support out-of-band GPD key configuration?	[R4] A.3.9	GPDT2: O GPDT3: O GPDT4: O	
GPCF15A	Does the device support transmission of GPD Success command in commissioning mode?	[R4] A.3.9	GPDT1: X	
GPCF15B	Does the device support reception of GPD Success command in commissioning mode?	[R4] A.3.9	GPPCCF11: M GPPCSF10 GPPCSF11: M GPDT4: M	
GPCF16	Does the device support in-band configuration of PANId (via GPD Commissioning Reply command)?	[R4] A.3.9	GPDT1: O	
GPCF100	Is writing into Sink Table attribute via generic ZCL command supported during commissioning mode?	[R4] A.3.3.2	GPPCCF12: N/A GPPCSF12: X GPDT4: X	
GPCF101	Is writing into Sink Table attribute via generic ZCL command supported during operational mode?	[R4] A.3.3.2	GPPCCF12: N/A GPPCSF12: X GPDT4: X	
GPCF102	Is writing into Proxy Table attribute via generic ZCL command supported during commissioning mode?	[R4] A.3.4.2	GPPCCF12: X GPPCSF12: N/A GPDT4: X	
GPCF103	Is writing into Proxy Table attribute via generic ZCL command supported during operational mode?	[R4] A.3.4.2	GPPCCF12: X GPPCSF12: N/A GPDT4: X	

11.4 GPS application functionality

11.4.1.1 GPS device description support

In Table 11, device descriptions for the GPS (GPDT3, i.e. GPDT3t, GPDT3t+, GPDT3c and GPDT3cm) are given.

These PICS items are not applicable to the other GP device types (i.e. GPDT0: X, GPDT1: X, GPDT2: X, GPDT4: X).

Table 11 – GPS device description support

Item number	Item description	Reference	Status	Support
GPS1A	Is the product programmed with support for GP Simple generic 1-state switch functionality?	[R4] A.4.3	GPDT3: O.17 ¹⁴	
GPS1B	Is the product programmed with support for GP Simple generic 2-state switch functionality?	[R4] A.4.3	GPDT3: O.17	
GPS2	Is the product programmed with (GP-controllable) server-side On/Off cluster?	[R4] A.4.3	GPDT3: O.17	
GPS3	Is the product programmed with (GP-controllable) server-side Level Control cluster?	[R4] A.4.3	GPDT3: O.17	
GPS4	Is the product programmed with (GP-controllable) client-side Binary Input cluster?	[R4] A.4.3	GPDT3: O.17	
GPS5	Is the product programmed with (GP-controllable) server-side Color control cluster?	[R4] A.4.3	GPDT3: O.17	
GPS6	Is the product programmed with (GP-controllable) client-side Illuminance Measurement cluster?	[R4] A.4.3	GPDT3: O.17	
GPS7	Is the product programmed with (GP-controllable) client-side Occupancy Sensing cluster?	[R4] A.4.3	GPDT3: O.17	
GPS8	Is the product programmed with (GP-controllable) server-side Door Lock cluster?	[R4] A.4.3	GPDT3: O.17	
GPS9	Is the product programmed with (GP-controllable) client-side Temperature measurement cluster?	[R4] A.4.3	GPDT3: O.17	
GPS10	Is the product programmed with (GP-controllable) client-side Pressure Measurement cluster?	[R4] A.4.3	GPDT3: O.17	
GPS11	Is the product programmed with (GP-controllable) client-side Flow Measurement cluster?	[R4] A.4.3	GPDT3: O.17	
GPS12	Is the product programmed with (GP-controllable) client-side Relative Humidity Measurement cluster?	[R4] A.4.3	GPDT3: O.17	
GPS13	Is the product programmed with (GP-controllable) client-side CO2 cluster?	[R4] A.4.3	GPDT3: O.17	
GPS14A	Is the product programmed with support for GP Advanced generic 1-state switch functionality?	[R4] A.4.3	GPDT3: O.17	
GPS14B	Is the product programmed with support for GP Advanced generic 2-state switch functionality?	[R4] A.4.3	GPDT3: O.17	

¹⁴ O.17: DUT shall implement at least one of those options.

11.4.2 GPD command support by GPS

Note: all the commands below are transparent to GPP, thus GPDT2: X. For GPDT0: X.

Table 12 – GPD commands support - reception

Item number	Item description	Reference	Status	Support
GPDRX20	Is reception of GPD Off command supported?	[R4] A.4.3 [R4] A.4.1	GPS2: O.20 ¹⁵	
GPDRX21	Is reception of GPD On command supported?	[R4] A.4.3 [R4] A.4.1	GPS2 && GPDRX21: M	
GPDRX22	Is reception of GPD Toggle command supported?	[R4] A.4.3 [R4] A.4.1	GPS2: O.20	
GPDRX23	Is reception of GPD Release command supported?	[R4] A.4.3 [R4] A.4.1	GPS2: M	
GPDRX30	Is reception of GPD Move up command supported?	[R4] A.4.3 [R4] A.4.2.4	GPS3: O.21 ¹⁶	
GPDRX31	Is reception of GPD Move Down command supported?	[R4] A.4.3 [R4] A.4.2.4	GPS3 && GPDRX30: M	
GPDRX32	Is reception of GPD Step UP command supported?	[R4] A.4.3 [R4] A.4.2.4	GPS3: O.21	
GPDRX33	Is reception of GPD Step Down command supported?	[R4] A.4.3 [R4] A.4.2.4	GPS3 && GPDRX32: M	
GPDRX34	Is reception of GPD Stop command supported?	[R4] A.4.3 [R4] A.4.1	GPS3 && (GPDRX30 GPDRX35): M	
GPDRX35	Is reception of GPD Move Up (with On/Off) command supported?	[R4] A.4.3 [R4] A.4.2.4	GPS3: O.21	
GPDRX36	Is reception of GPD Move Down (with On/Off) command supported?	[R4] A.4.3 [R4] A.4.2.4	GPS3: O.21 &&GPDRX35	
GPDRX37	Is reception of GPD Step Up (with On/Off) command supported?	[R4] A.4.3 [R4] A.4.2.4	GPS3: O.21	
GPDRX38	Is reception of GPD Step Down (with On/Off) command supported?	[R4] A.4.3 [R4] A.4.2.4	GPS3: O.21 &&GPDRX37	
GPDRX40	Is reception of GPD Move Hue command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5: O.22 ¹⁷	
GPDRX41	Is reception of GPD Move Hue Up command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5: O.22	
GPDRX42	Is reception of GPD Move Hue Down command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5 && GPDRX41	
GPDRX43	Is reception of GPD Step Hue Up command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5: O.22	
GPDRX44	Is reception of GPD Step Hue Down command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5 && GPDRX43	
GPDRX45	Is reception of GPD Move Saturation command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5: O.22	
GPDRX46	Is reception of GPD Move Saturation Up command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5: O.22	
GPDRX47	Is reception of GPD Move Saturation Down command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5 && GPDRX46	
GPDRX48	Is reception of GPD Step Saturation Up command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5: O.22	

¹⁵ O.20: DUT shall implement exactly one of those options.

¹⁶ O.21: DUT shall implement at least one of those options.

¹⁷ O.22: DUT shall implement at least one of those options.

Item number	Item description	Reference	Status	Support
GPDRX49	Is reception of GPD Step Saturation Down command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5 && GPDRX48	
GPDRX4a	Is reception of GPD Move Color command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5: O.22	
GPDRX4b	Is reception of GPD Step Color command supported?	[R4] A.4.3 [R4] A.4.2.5	GPS5: O.22	
GPDRX50	Is reception of GPD Lock Door command supported?	[R4] A.4.3 [R4] A.4.1	GPS8: M	
GPDRX51	Is reception of GPD Unlock Door command supported?	[R4] A.4.3 [R4] A.4.1	GPS8: M	
GPDRX60	Is reception of GPD Press 1 of 1 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPS1A: M GPS14A: M	
GPDRX61	Is reception of GPD Release 1 of 1 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPS1A: M GPS14A: M	
GPDRX62	Is reception of GPD Press 1 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPS1B: M GPS14B: M	
GPDRX63	Is reception of GPD Release 1 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPS1B: M GPS14B: M	
GPDRX64	Is reception of GPD Press 2 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPS1B: M GPS14B: M	
GPDRX65	Is reception of GPD Release 2 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPS1B: M GPS14B: M	
GPDRX66	Is reception of GPD Short press 1 of 1 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPS14A: M	
GPDRX67	Is reception of GPD Short press 1 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPS14B: M	
GPDRX68	Is reception of GPD Short press 2 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPS14B: M	
GPDRXA0	Is reception of GPD Attribute reporting command supported?	[R4] A.4.3 [R4] A.4.2.3	GPS4, GPS6, GPS7, GPS12, GPS13, GPS14, GPS15 GPS16, GPS17, GPS18, GPS19, GPS20: M	

Item number	Item description	Reference	Status	Support
GPDRXA1	Is reception of GPD Manufacturer-specific attribute reporting command supported?	[R4] A.4.3 [R4] A.4.2.3	GPS4, GPS6, GPS7, GPS12, GPS13, GPS14, GPS15, GPS16, GPS17, GPS18, GPS19, GPS20: O	
GPDRXA2	Is reception of GPD Multi-cluster reporting command supported?	[R4] A.4.3 [R4] A.4.2.3	GPS4, GPS6, GPS7, GPS12, GPS13, GPS14, GPS15, GPS16, GPS17, GPS18, GPS19, GPS20: O	
GPDRXA3	Is reception of GPD manufacturer-specific multi-cluster reporting command supported?	[R4] A.4.3 [R4] A.4.2.3	GPS4, GPS6, GPS7, GPS12, GPS13, GPS14, GPS15, GPS16, GPS17, GPS18, GPS19, GPS20: O	

12 Green Power Device functionality

The PICS items in section 12 are only applicable to the GPD (GPDT0). They are not applicable to the other GP device types (i.e. GPDT1: X, GPDT2: X, GPDT3: X, GPDT4: X).

12.1 GPD device description support

In Table 13, device descriptions for the GPD (GPDT0) are given.

Table 13 – GPD device description support

Item number	Item description	Reference	Status	Support
GPDT0	Is the product programmed as a GP Simple Generic 1-state Switch?	[R4] A.4.3	GPDT1: O.23 ¹⁸	
GPDT1	Is the product programmed as a GP Simple Generic 2-state Switch?	[R4] A.4.3	GPDT1: O.23	
GPDT2	Is the product programmed as a GP On/Off Switch?	[R4] A.4.3	GPDT1: O.23	Yes
GPDT3	Is the product programmed as a GP Level Control Switch?	[R4] A.4.3	GPDT1: O.23	
GPDT4	Is the product programmed as a GP Simple Sensor?	[R4] A.4.3	GPDT1: O.23	
GPDT5	Is the product programmed as a GP Advanced Generic 1-state Switch?	[R4] A.4.3	GPDT1: O.23	
GPDT5B	What is the value of the short press time threshold?	[R4] A.4.2.2	Implementation-specific	
GPDT6	Is the product programmed as a GP Advanced Generic 2-state Switch?	[R4] A.4.3	GPDT1: O.23	
GPDT6B	What is the value of the short press time threshold?	[R4] A.4.2.2	Implementation-specific	
GPDT10	Is the product programmed as a GP Color Dimmer Switch?	[R4] A.4.3	GPDT1: O.23	
GPDT11	Is the product programmed as a GP Light Sensor?	[R4] A.4.3	GPDT1: O.23	
GPDT12	Is the product programmed as a GP Occupancy Sensor?	[R4] A.4.3	GPDT1: O.23	
GPDT20	Is the product programmed as a GP Door Lock Controller?	[R4] A.4.3	GPDT1: O.23	
GPDT30	Is the product programmed as a GP Temperature Sensor?	[R4] A.4.3	GPDT1: O.23	
GPDT31	Is the product programmed as a GP Pressure Sensor?	[R4] A.4.3	GPDT1: O.23	
GPDT32	Is the product programmed as a GP Flow Sensor?	[R4] A.4.3	GPDT1: O.23	
GPDT33	Is the product programmed as a GP Indoor Environment Sensor?	[R4] A.4.3	GPDT1: O.23	

12.2 GPD functionality

Table 14 – GPD functionality

Item number	Item description	Reference	Status	Support
GPSF1	Does the device implement cGP stub?	[R4] A.1	GPDT0: X	No
GPSF2	Does the device implement dGP stub?	[R4] A.1	GPDT0: X	No
GPPE1	Does the device support Green Power End Point (GPEP)?	[R4] A.3.1	GPDT0: X	No

¹⁸ O.23: DUT shall implement exactly one of those options.

Item number	Item description	Reference	Status	Support
GPF4A	Does the device support transmitting GPDF frame format with <i>ApplicationID</i> sub-field of the <i>Extended NWK Frame Control</i> field set to 0b000?	[R4] A.1.4.1.3	GPDT0: O.22 ¹⁹	Yes
GPF4B	Does the device support transmitting GPDF frame format with <i>ApplicationID</i> sub-field of the <i>Extended NWK Frame Control</i> field set to 0b010?	[R4] A.1.4.1.3	GPDT0: O.22	No
GPF5	Does the device support SecurityLevel=0b11?	[R4] A.1.5.4 [R4] A.3.7.2.1	GPDT0: O.24 ²⁰	No
GPF6	Does the device support SecurityLevel=0b10?	[R4] A.1.5.4 [R4] A.3.7.2.1	GPDT0: O.24	Yes
GPF7	Does the device support SecurityLevel=0b01?	[R4] A.1.5.4 [R4] A.3.7.2.1	GPDT0: O.24	No
GPF8	Does the device support SecurityLevel=0b00?	[R4] A.1.5.4 [R4] A.3.7.2.1	GPDT0: O.24	No
GPF9A	Does the device support receiving GPDF frame format with <i>ApplicationID</i> sub-field of the <i>Extended NWK Frame Control</i> field set to 0b000?	[R4] A.1.4.1.3	GPDT0&&GPF4A: O (GPF4B: X)	No
GPF9B	Does the device support receiving GPDF frame format with <i>ApplicationID</i> sub-field of the <i>Extended NWK Frame Control</i> field set to 0b010?	[R4] A.1.4.1.3	GPDT0&&GPF4B: O (GPF4A: X)	No
GPDF1	Does the device support random MAC sequence number for GPD commands?	[R4] A.1.6, A.1.7	GPDT0 && GPF8: O.25 ²¹	No
GPDF2	Does the device support incremental MAC sequence number for GPD commands?	[R4] A.1.6, A.1.7	GPDT0 && GPF8: O.25	Yes
GPDF3	Is the FixedLocation flag in the Commissioning GPD command set?	[R4] A.1.6, A.1.7	GPDT0: O	No

12.2.1 GPD Bidirectional operation

Table 15 – Support for GreenPower functionality

Item number	Item description	Reference	Status	Support
GPF100	Does the device support bidirectional communication in operational mode?	[R4] A.1.6.3 [R4] A.3.6.1.5	GPDT0: O	No
GPF101	Is transmission of GPD Read Attributes command supported?	[R4] A.4.2.5	GPDT0: X	No
GPF102	Is reception of GPD Read Attributes command supported?	[R4] A.4.2.5	GPDT0&&GPF100: M	No
GPF103	Is transmission of GPD Read Attributes Response supported?	[R4] A.4.2.5	GPDT0&&GPF100: M	No
GPF104	Is reception of GPD Read Attributes Response command supported?	[R4] A.4.2.5	GPDT0: X	No
GPF105	Is transmission of GPD Request Attributes command supported?	[R4] A.4.2.5	GPDT0&&GPF100: O	No
GPF106	Is reception of GPD Request Attributes command supported?	[R4] A.4.2.5	GPDT0: X	No
GPF107	Is transmission of GPD Write Attributes command supported?	[R4] A.4.2.5	GPDT0: X	No
GPF108	Is reception of GPD Write Attributes command supported?	[R4] A.4.2.5	GPDT0&&GPF100: O	No

¹⁹ O.22: Device under test shall implement only one of those options

²⁰ O.24: Device under test shall implement at least one of those options.

²¹ O.25: Device under test shall implement only one of those options.

12.2.2 GPD commissioning support

Table 16 – GP Commissioning Feature Support

Item number	Item description	Reference	Status	Support
GPCF1	Does the device support pairing with Data GPDF with Auto-Commissioning bit set to 0b1?	[R4] A.3.9 [R4] A.1.4, A.1.6	GPDT0: O.26 ²²	No
GPCF2	Does the device support pairing with Commissioning GPDF?	[R4] A.3.9 [R4] A.4.2.1.1	GPDT0: O.26 GPDT0 && (GPD4 GPD11 GPD12 GPD30 GPD31 GPD32 GPD33): M	Yes
GPCF3A	Does the device support transmission of GPD Commissioning command?	[R4] A.4.2.1.1	GPDT0&&GPCF2: M	Yes
GPCF3B	Does the device support reception of GPD Commissioning command?	[R4] A.4.2.1.1	GPDT0: X	No
GPCF4	Does the device support bidirectional communication in commissioning mode?	[R4] A.3.9	GPDT0: O	No
GPDF10	Does the device support configuration of operational channel when in commissioning mode?	[R4] A.3.9	GPDT0: O	Yes
GPDF10A	Does the device support out-of-band configuration of operational channel?	[R4] A.3.9	GPDT0: O.27 ²³ (GPDT0 &&GPCF4: X)	Yes
GPDF10B	Does the device support configuration of operational channel via channel toggling (GPD Commissioning command with RxAfterTx = 0b0)?	[R4] A.3.9	GPDT0: O.27 (GPDT0 &&GPCF4: X)	No
GPDF10C	Does the device support in-band configuration of operational channel (via GPD Channel Request/Channel Configuration command)?	[R4] A.3.9	GPDT0: O.27 (GPDT0 &&GPCF4: M)	No
GPDF10D	Does the device support the recommended channel set (11, 15, 20, 25)?	[R4] A.1.6, A.1.7	GPDT0&&GPCF16: M	Yes
GPCF5A	Does the device support transmission of the GPD Channel Request command in commissioning mode?	[R4] A.3.9 [R4] A.4.2.1.4 [R4] A.1.4	GPDT0: O GPDT0 &&(GPCF4 GPDF10C): M	No
GPCF5B	Does the device support reception of the GPD Channel Request command in commissioning mode?	[R4] A.3.9 [R4] A.4.2.1.4 [R4] A.1.4	GPDT0: X	No
GPCF6	Does the device support transmission of the GPD Channel Configuration command?	[R4] A.3.9 [R4] A.4.2.1.5 [R4] A.1.4	GPDT0: X	No
GPCF7	Does the device support reception of the GPD Channel Configuration command?	[R4] A.3.9 [R4] A.4.2.1.5 [R4] A.1.4	GPDT0: O	No
GPCF7A	Does the device support reception of the GPD Channel Configuration command in commissioning mode?	[R4] A.3.9 [R4] A.4.2.1.5 [R4] A.1.4	GPDT0: O GPDT0 &&(GPCF4 GPDF10C): M	No
GPCF7B	Does the device support reception of the GPD Channel Configuration command in operational mode?	[R4] A.6 [R4] A.4.2.1.5 [R4] A.1.4	GPDT0: O GPDT0 &&GPF9: O	No
GPCF8	Does the device support transmission of the GPD Commissioning Reply command?	[R4] A.4.2.1.2	GPDT0: X	No

²² O.26: DUT should implement exactly one of those methods. Hull test event comment #81 (ZigBee document docs-11-5603)

²³ O.27: device under test shall support at least one of the methods.

Item number	Item description	Reference	Status	Support
GPCF9	Does the device support reception of the GPD Commissioning Reply command?	[R4] A.4.2.1.2	GPDT0 && GPCF2: O	No
GPCF9A	Does the device support reception of the GPD Commissioning Reply command in commissioning mode?	[R4] A.4.2.1.2	GPDT0 && GPCF4: M	No
GPCF9B	Does the device support reception of the GPD Commissioning Reply command in operational mode?	[R4] A.6	GPDT0 && GPF9: O	No
GPCF10	Is GPD removal via GPD Decommissioning command supported?	[R4] A.4.2.1.3	GPDT0: O	No
GPCF11	Does the device come with pre-configured GPD key?	[R4] A.3.9	GPDT0 && (GPF5 GPF6 GPF7): O.28 ²⁴	Yes
GPCF12A	Does the device support GPD key exchange in GPD Commissioning command?	[R4] A.3.9	GPDT0 && GPCF2: O GPDT0 && GPCF11: M	Yes
GPCF12B	Does the device support exchange of encrypted GPD key in GPD Commissioning command?	[R4] A.3.9 [R4] A.1.5	GPDT0 && GPCF11: O	Yes
GPCF13A	Does the device support GPD key exchange in GPD Commissioning Reply command?	[R4] A.3.9	GPDT0 && (GPF5 GPF6 GPF7): O.28 GPDT0 && GPCF9: O	No
GPCF13B	Does the device support exchange of encrypted GPD key in GPD Commissioning Reply command?	[R4] A.3.9 [R4] A.1.5	GPDT0 && GPCF13A: O	No
GPCF14	Does the device support out-of-band GPD key configuration?	[R4] A.3.9	GPDT0 && (GPF5 GPF6 GPF7): O.28	No
GPCF15A	Does the device support transmission of GPD Success command in commissioning mode?	[R4] A.3.9 [R4] A.4.1	GPDT0: O GPDT0 && GPCF4: M	No
GPCF15B	Does the device support reception of GPD Success command when in commissioning mode?	[R4] A.3.9 [R4] A.4.1	GPDT0: X	No
GPCF16	Does the device support in-band configuration of PANId (via GPD Commissioning Reply command)?	[R4] A.3.9 [R4] A.4.2.1.2	GPDT0 && GPCF4: O	No
GPCF100	Is writing into Sink Table attribute via generic ZCL command supported during commissioning mode?	[R4] A.3.3.2.2	GPDT0: X	No
GPCF101	Is writing into Sink Table attribute via generic ZCL command supported during operational mode?	[R4] A.3.3.2.2	GPDT0: X	No
GPCF102	Is writing into Proxy Table attribute via generic ZCL command supported during commissioning mode?	[R4] A.3.3.2.2	GPDT0: X	No
GPCF103	Is writing into Proxy Table attribute via generic ZCL command supported during operational mode?	[R4] A.3.3.2.2	GPDT0: X	No

²⁴ O.28: DUT shall support at least one of those options.

12.3 GPD application functionality

12.3.1 GPD command support by GPD

Table 17 – GPD commands support - transmission

Item number	Item description	Reference	Status	Support
GPDTX20	Is transmission of GPD Off command supported?	[R4] A.4.3 [R4] A.4.1	GPD2: O.29 ²⁵	No
GPDTX21	Is transmission of GPD On command supported?	[R4] A.4.3 [R4] A.4.1	GPD2 && GPDTX20: M	No
GPDTX22	Is transmission of GPD Toggle command supported?	[R4] A.4.3 [R4] A.4.1	GPD2: O.29	Yes
GPDTX23	Is transmission of GPD Release command supported?	[R4] A.4.3 [R4] A.4.1	GPD2: O	No
GPDTX30	Is transmission of GPD Move Up command supported?	[R4] A.4.3 [R4] A.4.2.4	GPD3: O.30 ²⁶	No
GPDTX31	Is transmission of GPD Move Down command supported?	[R4] A.4.3 [R4] A.4.2.4	GPD3 && GPDTX30: M	No
GPDTX32	Is transmission of GPD Step Up command supported?	[R4] A.4.3 [R4] A.4.2.4	GPD3: O.30	No
GPDTX33	Is transmission of GPD Step Down command supported?	[R4] A.4.3 [R4] A.4.2.4	GPD3 && GPDTX32: M	No
GPDTX34	Is transmission of GPD Stop command supported?	[R4] A.4.3 [R4] A.4.1	GPD3 && (GPDTX30 GPDTX35): M	No
GPDTX35	Is transmission of GPD Move Up (with On/Off) command supported?	[R4] A.4.3 [R4] A.4.2.4	GPD3: O.30	No
GPDTX36	Is transmission of GPD Move Down (with On/Off) command supported?	[R4] A.4.3 [R4] A.4.2.4	GPD3&&GPDTX35: M	No
GPDTX37	Is transmission of GPD Step Up (with On/Off) command supported?	[R4] A.4.3 [R4] A.4.2.4	GPD3: O.30	No
GPDTX38	Is transmission of GPD Step Down (with On/Off) command supported?	[R4] A.4.3 [R4] A.4.2.4	GPD3&&GPDTX37: M	No
GPDTX40	Is transmission of GPD Move Hue command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10: O.31 ²⁷	No
GPDTX41	Is transmission of GPD Move Hue Up command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10: O.31	No
GPDTX42	Is transmission of GPD Move Hue Down command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10 && GPDTX41: M	No
GPDTX43	Is transmission of GPD Step Hue Up command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10: O.31	No
GPDTX44	Is transmission of GPD Step Hue Down command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10 && GPDTX43: M	No
GPDTX45	Is transmission of GPD Move Saturation command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10: O.31	No
GPDTX46	Is transmission of GPD Move Saturation Up command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10: O.31	No
GPDTX47	Is transmission of GPD Move Saturation Down command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10 && GPDTX46: M	No
GPDTX48	Is transmission of GPD Step Saturation Up command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10: O.31	No

²⁵ O.29: Device under test shall support only one of those options.

²⁶ O.30: Device under test has to implement exactly one of those commands

²⁷ O.31: Device under test has to implement exactly one of those commands

Item number	Item description	Reference	Status	Support
GPDTX49	Is transmission of GPD Step Saturation Down command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10 && GPDTX48: M	No
GPDTX4a	Is transmission of GPD Move Color command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10: O.31	No
GPDTX4b	Is transmission of GPD Step Color command supported?	[R4] A.4.3 [R4] A.4.2.5	GPD10: O.31	No
GPDTX50	Is transmission of GPD Lock Door command supported?	[R4] A.4.3 [R4] A.4.1	GPD20: M	No
GPDTX51	Is transmission of GPD Unlock Door command supported?	[R4] A.4.3 [R4] A.4.1	GPD20: M	No
GPDTX60	Is transmission of GPD Press 1 of 1 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPD0: M GPD5: M	No
GPDTX61	Is transmission of GPD Release 1 of 1 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPD0: M GPD5: M	No
GPDTX62	Is transmission of GPD Press 1 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPD1: M GPD6: M	No
GPDTX63	Is transmission of GPD Release 1 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPD1: M GPD6: M	No
GPDTX64	Is transmission of GPD Press 2 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPD1: M GPD6: M	No
GPDTX65	Is transmission of GPD Release 2 of 2 command supported?	[R4] A.4.3 [R4] A.4.1 [R4] A.4.2.2	GPD1: M GPD6: M	No
GPDTX66	Is transmission of GPD Short press 1 of 1 command supported?	[R4] Table 43	GPD5: M	No
GPDTX67	Is transmission of GPD Short press 1 of 2 command supported?	[R4] Table 43	GPD6: M	No
GPDTX68	Is transmission of GPD Short press 2 of 2 command supported?	[R4] Table 43	GPD6: M	No
GPDTXA0	Is transmission of GPD Attribute reporting command supported?	[R4] A.4.3 [R4] A.4.2.3	GPD4, GPD11, GPD12, GPD30, GPD31, GPD32 GPD33: O.32 ²⁸	No
GPDTXA1	Is transmission of GPD Manufacturer-specific attribute reporting command supported?	[R4] A.4.3 [R4] A.4.2.3	GPD4, GPD11, GPD12, GPD30, GPD31, GPD32 GPD33: O.32	No
GPDTXA2	Is transmission of GPD Multi-cluster reporting command supported?	[R4] A.4.3 [R4] A.4.2.3	GPD11, GPD12, GPD30, GPD31, GPD32 GPD33: O.32	No

²⁸ O.32: Device under test shall implement at least one of those commands.

Item number	Item description	Reference	Status	Support
GPDTXA3	Is transmission of GPD manufacturer-specific multi-cluster reporting command supported?	[R4] A.4.3 [R4] A.4.2.3	GPD11, GPD12, GPD30, GPD31, GPD32 GPD33: O.32	No

Note: all the commands below are transparent to GPP, thus GPDT2: X. For GPDT1: X.

12.3.2 ZigBee attribute support by GPD sensor devices

In Table 18 – Table 20, ZigBee attributes supported by the GPD devices are listed.

These PICS items are not applicable to the other GP device types.

Table 18 – Reported ZigBee attributes per GPD device

Item number	Item description	Reference	Status	Support
AREP1	Does the GPD support reporting of the 0x0055: PresentValue attribute from Binary Input Cluster?	[R4] A.4.3	GPD4: M	
AREP2	Does the GPD support reporting of the 0x0000: MeasuredValue attribute from Illuminance Measurement Cluster?	[R4] A.4.3	GPD11: M GPD33: M	
AREP3	Does the GPD support reporting of the 0x0000: Occupancy attribute from Occupancy Sensing Cluster?	[R4] A.4.3	GPD12: M	
AREP4	Does the GPD support reporting of the 0x0000: MeasuredValue attribute from Temperature Measurement Cluster?	[R4] A.4.3	GPD30: M GPD33: M	
AREP5	Does the GPD support reporting of the 0x0000: MeasuredValue attribute from Pressure Measurement Cluster?	[R4] A.4.3	GPD31: M	
AREP6	Does the GPD support reporting of the 0x0000: MeasuredValue attribute from Flow Measurement Cluster?	[R4] A.4.3	GPD32: M	
AREP7	Does the GPD support reporting of the 0x0000: MeasuredValue attribute from Relative Humidity Measurement Cluster?	[R4] A.4.3	GPD33: M	

Table 19 – Readable ZigBee attributes per GPD device

Item number	Item description	Reference	Status	Support
AREAD1	Does the GPD support reading of the 0x0051: OutOfService attribute from Binary Input Cluster?	[R4] A.4.3	GPD4 && GPF102: M	
AREAD2	Does the GPD support reading of the 0x0055: PresentValue attribute from Binary Input Cluster?	[R4] A.4.3	GPD4 && GPF102: M	
AREAD3	Does the GPD support reading of the 0x006F: StatusFlags attribute from Binary Input Cluster?	[R4] A.4.3	GPD4 && GPF102: M	
AREAD4	Does the GPD support reading of the 0x0000: MeasuredValue attribute from Illuminance Measurement Cluster?	[R4] A.4.3	GPD11 && GPF102: M GPD33 && GPF102: M	
AREAD5	Does the GPD support reading of the 0x0001: MinMeasuredValue attribute from Illuminance Measurement Cluster?	[R4] A.4.3	GPD11 && GPF102: M GPD33 && GPF102: M	

Item number	Item description	Reference	Status	Support
AREAD6	Does the GPD support reading of the 0x0002: MaxMeasuredValue attribute from Illuminance Measurement Cluster?	[R4] A.4.3	GPD11 && GPF102: M GPD33 && GPF102: M	
AREAD7	Does the GPD support reading of the 0x0000: Occupancy attribute from Occupancy Sensing Cluster?	[R4] A.4.3	GPD12 && GPF102: M	
AREAD8	Does the GPD support reading of the 0x0000: Occupancy Sensor Type attribute from Occupancy Sensing Cluster?	[R4] A.4.3	GPD12 && GPF102: M	
AREAD9	Does the GPD support reading of the 0x0000: MeasuredValue attribute from Temperature Measurement Cluster?	[R4] A.4.3	GPD30 && GPF102: M GPD33 && GPF102: M	
AREAD10	Does the GPD support reading of the 0x0001: MinMeasuredValue attribute from Temperature Measurement Cluster?	[R4] A.4.3	GPD30 && GPF102: M GPD33 && GPF102: M	
AREAD11	Does the GPD support reading of the 0x0002: MaxMeasuredValue attribute from Temperature Measurement Cluster?	[R4] A.4.3	GPD30 && GPF102: M GPD33 && GPF102: M	
AREAD12	Does the GPD support reading of the 0x0000: MeasuredValue attribute from Pressure Measurement Cluster?	[R4] A.4.3	GPD31 && GPF102: M	
AREAD13	Does the GPD support reading of the 0x0000: MeasuredValue attribute from Flow Measurement Cluster?	[R4] A.4.3	GPD32 && GPF102: M GPD33 && GPF102: M	
AREAD14	Does the GPD support reading of the 0x0001: MinMeasuredValue attribute from Flow Measurement Cluster?	[R4] A.4.3	GPD32 && GPF102: M GPD33 && GPF102: M	
AREAD15	Does the GPD support reading of the 0x0002: MaxMeasuredValue attribute from Flow Measurement Cluster?	[R4] A.4.3	GPD32 && GPF102: M GPD33 && GPF102: M	
AREAD16	Does the GPD support reading of the 0x0000: MeasuredValue attribute from Relative Humidity Cluster?	[R4] A.4.3	GPD33 && GPF102: M	
AREAD17	Does the GPD support reading of the 0x0001: MinMeasuredValue attribute from Relative Humidity Cluster?	[R4] A.4.3	GPD33 && GPF102: M	
AREAD18	Does the GPD support reading of the 0x0002: MaxMeasuredValue attribute from Relative Humidity Cluster?	[R4] A.4.3	GPD33 && GPF102: M	

Table 20 – Writable ZigBee attributes per GPD device

Item number	Item description	Reference	Status	Support
AWRITE1	Does the GPD support writing of the 0x0051: OutOfService attribute from Binary Input Cluster?	[R4] A.4.3	GPD4 && GPF100: M	