

**ZigBee Profile:**

PICS Proforma

Version

|  |  |
| --- | --- |
| ZigBee Document - | |
|  | |
| Sponsored by: ZigBee Alliance | |
| Accepted by | This document has not yet been accepted for release by the ZigBee Alliance Board of Directors |
| Abstract | As a part of formal conformance testing, manufacturers will be asked to submit a statement of protocol conformance with respect to the appropriate ZigBee devices required by the application profile under test. This document is intended to provide the form of that statement of conformance for the Light Link profile. |
| Keywords |  |

This page is intentionally blank

Notice of use and disclosure

The ZigBee Specification is available to individuals, companies and institutions free of charge for all non-commercial purposes (including university research, technical evaluation, and development of non-commercial software, tools, or documentation). No part of this specification may be used in development of a product for sale without becoming a member of ZigBee Alliance.

Copyright © ZigBee Alliance, Inc. (2008-2011). All rights Reserved. This information within this document is the property of the ZigBee Alliance and its use and disclosure are restricted.

Elements of ZigBee Alliance specifications may be subject to third party intellectual property rights, including without limitation, patent, copyright or trademark rights (such a third party may or may not be a member of ZigBee). ZigBee is not responsible and shall not be held responsible in any manner for identifying or failing to identify any or all such third party intellectual property rights.

This document and the information contained herein are provided on an “AS IS” basis and ZigBee DISCLAIMS ALL WARRANTIES EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO (A) ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OF THIRD PARTIES (INCLUDING WITHOUT LIMITATION ANY INTELLECTUAL PROPERTY RIGHTS INCLUDING PATENT, COPYRIGHT OR TRADEMARK RIGHTS) OR (B) ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE OR NONINFRINGEMENT. IN NO EVENT WILL ZIGBEE BE LIABLE FOR ANY LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OF DATA, INTERRUPTION OF BUSINESS, OR FOR ANY OTHER DIRECT, INDIRECT, SPECIAL OR EXEMPLARY, INCIDENTIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND, IN CONTRACT OR IN TORT, IN CONNECTION WITH THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE. All Company, brand and product names may be trademarks that are the sole property of their respective owners.

The above notice and this paragraph must be included on all copies of this document that are made.

ZigBee Alliance, Inc.

2400 Camino Ramon, Suite 375

San Ramon, CA 94583

This page is intentionally blank

Table of contents

[1 Introduction 1](#_Toc316897310)

[1.1 Scope 1](#_Toc316897311)

[1.2 Purpose 1](#_Toc316897312)

[1.3 Abbreviations and special symbols 1](#_Toc316897313)

[1.4 Instructions for completing the PICS proforma 2](#_Toc316897314)

[1.5 PICS proforma tables 2](#_Toc316897315)

[2 References 3](#_Toc316897316)

[3 Implementation declaration 4](#_Toc316897317)

[3.1 Identification of the implementation 4](#_Toc316897318)

[3.2 Identification of the protocol 6](#_Toc316897319)

[3.3 Global statement of conformance 6](#_Toc316897320)

[4 General 7](#_Toc316897321)

[4.1 [FDT] ZigBee device types 7](#_Toc316897322)

[4.2 [CDD] Commissioning device descriptions 7](#_Toc316897323)

[5 [DD] Device descriptions 8](#_Toc316897324)

[5.1 [CC] Common clusters 9](#_Toc316897331)

[5.2 Lighting devices 9](#_Toc316897332)

[5.2.1 [ADOOL] On/off light 9](#_Toc316897333)

[5.2.2 [ADOOPIU] On/Off plug-in unit 10](#_Toc316897336)

[5.2.3 [ADDL] Dimmable light 10](#_Toc316897337)

[5.2.4 [ADDPIU] Dimmable plug-in unit 11](#_Toc316897338)

[5.2.5 [ADCL] Color light 12](#_Toc316897339)

[5.2.6 [ADECL] Extended color light 12](#_Toc316897340)

[5.2.7 [ADCTL] Color temperature light 13](#_Toc316897341)

[5.3 Controller devices 14](#_Toc316897342)

[5.3.1 [ADCC] Color controller 14](#_Toc316897343)

[5.3.2 [ADCSC] Color scene controller 15](#_Toc316897344)

[5.3.3 [ADNCC] Non-color controller 15](#_Toc316897345)

[5.3.4 [ADNCSC] Non-color scene controller 16](#_Toc316897346)

[5.3.5 [ADCB] Control bridge 17](#_Toc316897347)

[5.3.6 [ADOOS] On/off sensor 18](#_Toc316897348)

[6 ZCL usage and enhancements 19](#_Toc316897350)

[6.1 [GCF] General command frames 19](#_Toc316897351)

[6.2 Basic cluster 19](#_Toc316897352)

[6.2.1 [BCS] Server 19](#_Toc316897353)

[6.2.1.1 [BCSA] Attributes 20](#_Toc316897354)

[6.2.2 [BCC] Client 20](#_Toc316897355)

[6.3 Identify cluster 21](#_Toc316897356)

[6.3.1 [ICS] Server 21](#_Toc316897357)

[6.3.1.1 [ICSA] Attributes 21](#_Toc316897358)

[6.3.1.2 [ICSCR] Commands received 21](#_Toc316897359)

[6.3.1.3 [ICSCG] Commands generated 22](#_Toc316897360)

[6.3.2 [ICC] Client 22](#_Toc316897361)

[6.3.2.1 Attributes 22](#_Toc316897362)

[6.3.2.2 [ICCCR] Commands received 22](#_Toc316897363)

[6.3.2.3 [ICCCG] Commands generated 23](#_Toc316897364)

[6.4 Groups cluster 23](#_Toc316897365)

[6.4.1 [GCS] Server 23](#_Toc316897366)

[6.4.1.1 [GCSA] Attributes 23](#_Toc316897367)

[6.4.1.2 [GCSCR] Commands received 24](#_Toc316897368)

[6.4.1.3 [GCSCG] Commands generated 24](#_Toc316897369)

[6.4.2 [GCC] Client 26](#_Toc316897370)

[6.4.2.1 Attributes 26](#_Toc316897371)

[6.4.2.2 [GCCCR] Commands received 26](#_Toc316897372)

[6.4.2.3 [GCCCG] Commands generated 27](#_Toc316897373)

[6.5 Scenes cluster 28](#_Toc316897374)

[6.5.1 [SCS] Server 28](#_Toc316897375)

[6.5.1.1 [SCSA] Attributes 28](#_Toc316897376)

[6.5.1.2 [SCSSTE] Scene table enhancements 29](#_Toc316897377)

[6.5.1.3 [SCSCR] Commands received 29](#_Toc316897378)

[6.5.1.4 [SCSCG] Commands generated 30](#_Toc316897379)

[6.5.2 [SCC] Client 33](#_Toc316897380)

[6.5.2.1 Attributes 33](#_Toc316897381)

[6.5.2.2 [SCCCR] Commands received 33](#_Toc316897382)

[6.5.2.3 [SCCCG] Commands generated 35](#_Toc316897383)

[6.6 On/off cluster 36](#_Toc316897384)

[6.6.1 [OOCS] Server 36](#_Toc316897385)

[6.6.1.1 [OOCSD] Dependencies 36](#_Toc316897386)

[6.6.1.2 [OOCSA] Attributes 36](#_Toc316897387)

[6.6.1.3 [OOCSSTE] Scene table enhancement 37](#_Toc316897388)

[6.6.1.4 [OOCSCR] Commands received 37](#_Toc316897389)

[6.6.2 [OOCC] Client 38](#_Toc316897390)

[6.6.2.1 Attributes 38](#_Toc316897391)

[6.6.2.2 Commands received 38](#_Toc316897392)

[6.6.2.3 [OOCCCG] Commands generated 39](#_Toc316897393)

[6.7 Level control cluster 39](#_Toc316897395)

[6.7.1 [LCCS] Server 39](#_Toc316897396)

[6.7.1.1 [LCCSA] Attributes 40](#_Toc316897397)

[6.7.1.2 [LCCSSTE] Scene table enhancements 40](#_Toc316897398)

[6.7.1.3 [LCCSCR] Commands received 40](#_Toc316897399)

[6.7.2 [LCCC] Client 41](#_Toc316897400)

[6.7.2.1 Attributes 41](#_Toc316897401)

[6.7.2.2 Commands received 41](#_Toc316897402)

[6.7.2.3 [LCCCCG] Commands generated 42](#_Toc316897403)

[6.8 Color control cluster 43](#_Toc316897404)

[6.8.1 [CCCS] Server 43](#_Toc316897405)

[6.8.1.1 [CCCSA] Attributes 43](#_Toc316897406)

[6.8.1.1.8 [CCCSACC] ColorCapabilities attribute 46](#_Toc316897407)

[6.8.1.2 [CCCSSTE] Scene table enhancements 46](#_Toc316897408)

[6.8.1.3 [CCCSCR] Commands received 47](#_Toc316897409)

[6.8.2 [CCCC] Client 49](#_Toc316897410)

[6.8.2.1 Attributes 49](#_Toc316897411)

[6.8.2.2 Commands received 49](#_Toc316897412)

[6.8.2.3 [CCCCCG] Commands generated 50](#_Toc316897413)

[7 New clusters 52](#_Toc316897414)

[7.1 ZLL commissioning cluster 52](#_Toc316897415)

[7.1.1 Overview 52](#_Toc316897416)

[7.1.2 [ZCCS] Server 52](#_Toc316897417)

[7.1.2.1 Attributes 52](#_Toc316897418)

[7.1.2.2 [ZCCSCR] Commands received 52](#_Toc316897419)

[7.1.2.3 [ZCCSCG] Commands generated 54](#_Toc316897420)

[7.1.3 [ZCCC] Client 55](#_Toc316897421)

[7.1.3.1 Attributes 55](#_Toc316897422)

[7.1.3.2 [ZCCCCR] Commands received 55](#_Toc316897423)

[7.1.3.3 [ZCCCCG] Commands generated 57](#_Toc316897424)

[8 Functional description 59](#_Toc316897425)

[8.1 General 59](#_Toc316897426)

[8.1.1 [ZSP] ZigBee Stack Profile 59](#_Toc316897427)

[8.1.2 [C] Channels 59](#_Toc316897428)

[8.1.3 [ADV] Application device version 59](#_Toc316897429)

[8.1.4 [PI] Profile identifier 59](#_Toc316897430)

[8.1.5 [ZDO] ZDO requirements 60](#_Toc316897431)

[8.1.6 Startup attribute set 61](#_Toc316897432)

[8.1.6.1 [SUSAS] Startup attributes 61](#_Toc316897433)

[8.1.6.2 [SSAS] Security attributes 62](#_Toc316897434)

[8.1.7 [DIT] Device information table 63](#_Toc316897435)

[8.1.8 Constants 63](#_Toc316897436)

[8.1.9 [ZPA] ZLL profile attributes 63](#_Toc316897437)

[8.1.10 [IPFF] Inter-PAN frame format 63](#_Toc316897438)

[8.1.11 [IPTI] Inter-PAN transaction identifier 64](#_Toc316897439)

[8.1.12 Commissioning scenarios 64](#_Toc316897440)

[8.2 ZigBee-pro stack requirements 64](#_Toc316897441)

[8.2.1 [INS] Initialization NIB settings 64](#_Toc316897442)

[8.2.2 [EDRJ] End-device rejoining 65](#_Toc316897443)

[8.2.3 [LSM] Link status messages 65](#_Toc316897444)

[8.2.4 [ZDA] ZigBee device announcement 65](#_Toc316897445)

[8.2.5 [EDP] End device polling 65](#_Toc316897446)

[8.2.6 [CTM] Child table maintenance 66](#_Toc316897447)

[8.3 Device startup 67](#_Toc316897448)

[8.3.1 [EDSU] End-device 67](#_Toc316897449)

[8.3.2 [RSU] Router 67](#_Toc316897450)

[8.4 [TC] Touchlink commissioning 67](#_Toc316897451)

[8.4.1 [TDD] Device discovery 68](#_Toc316897452)

[8.4.2 [TI] Identify 69](#_Toc316897453)

[8.4.3 [TSNN] Starting a new network 69](#_Toc316897454)

[8.4.4 [TJR] Joining routers to the network 70](#_Toc316897455)

[8.4.5 [TJED] Joining end devices 70](#_Toc316897456)

[8.4.6 [TNU] Network update 71](#_Toc316897457)

[8.4.7 [TRFN] Reset to factory new 71](#_Toc316897458)

[8.4.8 [AA] Address assignment 72](#_Toc316897459)

[8.5 Classical ZigBee commissioning 73](#_Toc316897460)

[8.5.1 [NTLC] Classical ZigBee commissioning of ZLL devices 73](#_Toc316897461)

[8.5.2 [NTNZD2ZR] Classical ZigBee commissioning of a non-ZLL device to a ZLL router in case there is no trust center 74](#_Toc316897462)

[8.5.3 [NTT2NZN] Touchlinking devices on non-ZLL networks 74](#_Toc316897463)

[8.6 [FA] Frequency agility 75](#_Toc316897464)

[8.7 [S] Security 76](#_Toc316897465)

# 

# 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).

## Scope

This document provides the protocol implementation conformance statement (PICS) proforma for the ZigBee Light Link profile [R3] in compliance with the relevant requirements, and in accordance with the relevant guidance, given in ISO/IEC 9646-7.

## Purpose

The supplier of a protocol implementation claiming to conform to the ZigBee Light Link profile 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.

## Abbreviations and special symbols

Notations for requirement status:

|  |  |
| --- | --- |
| M | Mandatory |
| O | Optional |
| O.n | Optional, but support of at least one of the group of options labeled O.n is required. |
| N/A | Not applicable |
| X | Prohibited |
| *Item Number*:*Status* | Status is conditional on support of item number |

“*Item Number*”: Conditional, status dependent upon the support marked for the “*Item Number*”.

For example, FD1: O.1 indicates that the status is optional but at least one of the features described in FD1 is required to be implemented, if this implementation is to follow the standard of which this PICS Proforma is a part.

## 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.

## PICS proforma tables

The tables in clauses 4 onwards are composed of the detailed questions to be answered, which make up the PICS proforma.

# 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. ZigBee Alliance documents

1. ZigBee document 053474: ZigBee Specification
2. ZigBee document 08006: ZigBee-2007 Layer PICS and Stack Profiles
3. ZigBee document 11-0037: ZigBee Light Link Profile Specification
4. ZigBee document 075123: ZigBee Cluster Library

# Implementation declaration

## Identification of the implementation

**Implementation under test (IUT) identification**

IUT name:

**N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

IUT version:

**N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**System under test (SUT) identification**

SUT name: **Texas Instruments ZigBee Light Link End Device**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Software Version:

**ZStack-2.6.0** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hardware Version:

**SmartRF05EB + CC2530EM** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Operating system (optional):

**N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Product supplier**

Name: **Texas Instruments Inc.**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address: **9276 Scranton Rd, Suite 450, San Diego, CA 92121 USA**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Telephone number: **1-858-638-4265** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Facsimile number: **1-858-638-4202** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email address: **nimrod@ti.com** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Additional information: **N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Client**

Name: **N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address: **N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Telephone number: **N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Facsimile number: **N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email address: **N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Additional information: **N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PICS contact person**

Name: **Nimrod Ilan** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address: **9276 Scranton Rd, Suite 450, San Diego, CA 92121 USA** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Telephone number:

**1-858-638-4265** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Facsimile number:

**1-858-638-4202** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email address: **nimrod@ti.com** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Additional information:

**N/A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Identification of the protocol

This PICS proforma applies to ZigBee Light Link profile [R3].

## Global statement of conformance

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

Application Profile: ZigBee Light Link [R3]





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 sub-clause. That means, by clicking the above, the statement of conformance is complete.

# General

## [FDT] ZigBee device types

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| FDT1 | Is this device capable of acting as a ZigBee coordinator? | [R1]/2.5.5.5.1 | X | No |
| FDT2 | Is this device capable of acting as a ZigBee router? | [R1]/2.5.5.5.2 | O.1 | No |
| FDT3 | Is this a ZigBee end device? | [R1]/2.5.5.5.3 | O.1 | Yes |

## [CDD] Commissioning device descriptions

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CDD1 | Is the product programmed as a commissioning server? | [R3]/5 | O.2 | No |
| CDD2 | Is the product programmed as a commissioning server/client? | [R3]/5 | O.2 | No |
| CDD3 | Is the product programmed as a commissioning client? | [R3]/5 | O.2 | Yes |

# [DD] Device descriptions

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| DD1 | Is the product programmed as an On/Off Light? | [R3]/5 | O.3 | No |
| DD2 | Is the product programmed as an On/Off plug-in unit? | [R3]/5 | O.3 | No |
| DD3 | Is the product programmed as a dimmable light? | [R3]/5 | O.3 | No |
| DD4 | Is the product programmed as a dimmable plug-in unit? | [R3]/5 | O.3 | No |
| DD5 | Is the product programmed as a color light? | [R3]/5 | O.3 | No |
| DD51 | Is the product programmed as an extended color light? | [R3]/5 | O.3 | No |
| DD52 | Is the product programmed as a color temperature light? | [R3]/5 | O.3 | No |
| DD6 | Is the product programmed as a color controller? | [R3]/5 | O.3 | No |
| DD7 | Is the product programmed as a color scene controller? | [R3]/5 | O.3 | Yes |
| DD8 | Is the product programmed as a non-color controller? | [R3]/5 | O.3 | No |
| DD9 | Is the product programmed as a non-color scene controller? | [R3]/5 | O.3 | No |
| DD10 | Is the product programmed as a control bridge? | [R3]/5 | O.3 | No |
| DD11 | Is the product programmed as an on/off sensor? | [R3]/5 | O.3 | No |

## [CC] Common clusters

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CC1 | Does the device support the basic cluster as a server? | [R3]/5.1 | M | Yes |

## Lighting devices

### [ADOOL] On/off light

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADOOL0 | Is the device programmed as a commissioning server or a commissioning server/client? | [R3]/5 | DD1: (CDD1: O4 CDD2: O4 CDD3: X) | N/A |
| ADOOL1 | Does the device support the identify cluster as a server? | [R3]/5.2.1 | DD1:M | N/A |
| ADOOL2 | Does the device support the groups cluster as a server? | [R3]/5.2.1 | DD1:M | N/A |
| ADOOL3 | Does the device support the scenes cluster as a server? | [R3]/5.2.1 | DD1:M | N/A |
| ADOOL4 | Does the device support the on/off cluster as a server? | [R3]/5.2.1 | DD1:M | N/A |

### [ADOOPIU] On/Off plug-in unit

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADOOPIU0 | Is the device programmed as a commissioning server or a commissioning server/client? | [R3]/5 | DD2: (CDD1: O5 CDD2: O5 CDD3: X) | N/A |
| ADOOPIU1 | Does the device support the identify cluster as a server? | [R3]/5.2.2 | DD2:M | N/A |
| ADOOPIU2 | Does the device support the groups cluster as a server? | [R3]/5.2.2 | DD2:M | N/A |
| ADOOPIU3 | Does the device support the scenes cluster as a server? | [R3]/5.2.2 | DD2:M | N/A |
| ADOOPIU4 | Does the device support the on/off cluster as a server? | [R3]/5.2.2 | DD2:M | N/A |

### [ADDL] Dimmable light

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADDL0 | Is the device programmed as a commissioning server or a commissioning server/client? | [R3]/5 | DD3: (CDD1: O6 CDD2: O6 CDD3: X) | N/A |
| ADDL1 | Does the device support the identify cluster as a server? | [R3]/5.2.3 | DD3:M | N/A |
| ADDL2 | Does the device support the groups cluster as a server? | [R3]/5.2.3 | DD3:M | N/A |
| ADDL3 | Does the device support the scenes cluster as a server? | [R3]/5.2.3 | DD3:M | N/A |
| ADDL4 | Does the device support the on/off cluster as a server? | [R3]/5.2.3 | DD3:M | N/A |
| ADDL5 | Does the device support the level control cluster as a server? | [R3]/5.2.3 | DD3:M | N/A |

### [ADDPIU] Dimmable plug-in unit

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADDPIU0 | Is the device programmed as a commissioning server or a commissioning server/client? | [R3]/5 | DD4: (CDD1: O7 CDD2: O7 CDD3: X) | N/A |
| ADDPIU1 | Does the device support the identify cluster as a server? | [R3]/5.2.4 | DD4:M | N/A |
| ADDPIU2 | Does the device support the groups cluster as a server? | [R3]/5.2.4 | DD4:M | N/A |
| ADDPIU3 | Does the device support the scenes cluster as a server? | [R3]/5.2.4 | DD4:M | N/A |
| ADDPIU4 | Does the device support the on/off cluster as a server? | [R3]/5.2.4 | DD4:M | N/A |
| ADDPIU5 | Does the device support the level control cluster as a server? | [R3]/5.2.4 | DD4:M | N/A |

### [ADCL] Color light

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADCL0 | Is the device programmed as a commissioning server or a commissioning server/client? | [R3]/5 | DD5:  (CDD1: O8 CDD2: O8 CDD3: X) | N/A |
| ADCL1 | Does the device support the identify cluster as a server? | [R3]/5.2.5 | DD5:M | N/A |
| ADCL2 | Does the device support the groups cluster as a server? | [R3]/5.2.5 | DD5:M | N/A |
| ADCL3 | Does the device support the scenes cluster as a server? | [R3]/5.2.5 | DD5:M | N/A |
| ADCL4 | Does the device support the on/off cluster as a server? | [R3]/5.2.5 | DD5:M | N/A |
| ADCL5 | Does the device support the level control cluster as a server? | [R3]/5.2.5 | DD5:M | N/A |
| ADCL6 | Does the device support the color control cluster as a server? | [R3]/5.2.5 | DD5:M | N/A |
| ADCL7 | Does the device set the *ColorCapabilities* attribute to 0x000f? | [R3]/5.2.5 | DD5:M | N/A |

### [ADECL] Extended color light

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADECL0 | Is the device programmed as a commissioning server or a commissioning server/client? | [R3]/5 | DD51:  (CDD1: O9 CDD2: O9 CDD3: X) | N/A |
| ADECL1 | Does the device support the identify cluster as a server? | [R3]/5.2.6 | DD51:M | N/A |
| ADECL2 | Does the device support the groups cluster as a server? | [R3]/5.2.6 | DD51:M | N/A |
| ADECL3 | Does the device support the scenes cluster as a server? | [R3]/5.2.6 | DD51:M | N/A |
| ADECL4 | Does the device support the on/off cluster as a server? | [R3]/5.2.6 | DD51:M | N/A |
| ADECL5 | Does the device support the level control cluster as a server? | [R3]/5.2.6 | DD51:M | N/A |
| ADECL6 | Does the device support the color control cluster as a server? | [R3]/5.2.6 | DD51:M | N/A |
| ADECL7 | Does the device set the *ColorCapabilities* attribute to 0x001f? | [R3]/5.2.6 | DD51:M | N/A |

### [ADCTL] Color temperature light

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADCTL0 | Is the device programmed as a commissioning server or a commissioning server/client? | [R3]/5 | DD52:  (CDD1: O10 CDD2: O10 CDD3: X) | N/A |
| ADCTL1 | Does the device support the identify cluster as a server? | [R3]/5.2.7 | DD52:M | N/A |
| ADCTL2 | Does the device support the groups cluster as a server? | [R3]/5.2.7 | DD52:M | N/A |
| ADCTL3 | Does the device support the scenes cluster as a server? | [R3]/5.2.7 | DD52:M | N/A |
| ADCTL4 | Does the device support the on/off cluster as a server? | [R3]/5.2.7 | DD52:M | N/A |
| ADCTL5 | Does the device support the level control cluster as a server? | [R3]/5.2.7 | DD52:M | N/A |
| ADCTL6 | Does the device support the color control cluster as a server? | [R3]/5.2.7 | DD52:M | N/A |
| ADCTL7 | Does the device set the *ColorCapabilities* attribute to 0x0010? | [R3]/5.2.7 | DD52:M | N/A |

## Controller devices

### [ADCC] Color controller

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADCC0 | Is the device programmed as a commissioning server, a commissioning server/client or a commissioning client? | [R3]/5 | DD6:  (CDD1: O11 CDD2: O11 CDD3: O11) | N/A |
| ADCC1 | Does the device support the identify cluster as a client? | [R3]/5.3.1 | DD6:M | N/A |
| ADCC2 | Does the device support the groups cluster as a client? | [R3]/5.3.1 | DD6:M | N/A |
| ADCC3 | Does the device support the on/off cluster as a client? | [R3]/5.3.1 | DD6:M | N/A |
| ADCC4 | Does the device support the level control cluster as a client? | [R3]/5.3.1 | DD6:M | N/A |
| ADCC5 | Does the device support the color control cluster as a client? | [R3]/5.3.1 | DD6:M | N/A |
| ADCC6 | Does the device support the ZLL commissioning cluster: utility as both a server and a client? | [R3]/5.3.1 | DD6:M | N/A |

### [ADCSC] Color scene controller

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADCSC0 | Is the device programmed as a commissioning server, a commissioning server/client or a commissioning client? | [R3]/5 | DD7:  (CDD1: O12 CDD2: O12 CDD3: O12) | Yes |
| ADCSC1 | Does the device support the identify cluster as a client? | [R3]/5.3.2 | DD7:M | Yes |
| ADCSC2 | Does the device support the groups cluster as a client? | [R3]/5.3.2 | DD7:M | Yes |
| ADCSC3 | Does the device support the scenes cluster as a client? | [R3]/5.3.2 | DD7:M | Yes |
| ADCSC4 | Does the device support the on/off cluster as a client? | [R3]/5.3.2 | DD7:M | Yes |
| ADCSC5 | Does the device support the level control cluster as a client? | [R3]/5.3.2 | DD7:M | Yes |
| ADCSC6 | Does the device support the color control cluster as a client? | [R3]/5.3.2 | DD7:M | Yes |
| ADCSC7 | Does the device support the ZLL commissioning cluster: utility as both a server and a client? | [R3]/5.3.2 | DD7:M | Yes |

### [ADNCC] Non-color controller

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADNCC0 | Is the device programmed as a commissioning server, a commissioning server/client or a commissioning client? | [R3]/5 | DD8:  (CDD1: O13 CDD2: O13 CDD3: O13) | N/A |
| ADNCC1 | Does the device support the identify cluster as a client? | [R3]/5.3.3 | DD8:M | N/A |
| ADNCC2 | Does the device support the groups cluster as a client? | [R3]/5.3.3 | DD8:M | N/A |
| ADNCC3 | Does the device support the on/off cluster as a client? | [R3]/5.3.3 | DD8:M | N/A |
| ADNCC4 | Does the device support the level control cluster as a client? | [R3]/5.3.3 | DD8:M | N/A |
| ADNCC5 | Does the device support the ZLL commissioning cluster: utility as both a server and a client? | [R3]/5.3.3 | DD8:M | N/A |

### [ADNCSC] Non-color scene controller

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADNCSC0 | Is the device programmed as a commissioning server, a commissioning server/client or a commissioning client? | [R3]/5 | DD9:  (CDD1: O14 CDD2: O14 CDD3: O14) | N/A |
| ADNCSC1 | Does the device support the identify cluster as a client? | [R3]/5.3.4 | DD9:M | N/A |
| ADNCSC2 | Does the device support the groups cluster as a client? | [R3]/5.3.4 | DD9:M | N/A |
| ADNCSC3 | Does the device support the scenes cluster as a client? | [R3]/5.3.4 | DD9:M | N/A |
| ADNCSC4 | Does the device support the on/off cluster as a client? | [R3]/5.3.4 | DD9:M | N/A |
| ADNCSC5 | Does the device support the level control cluster as a client? | [R3]/5.3.4 | DD9:M | N/A |
| ADNCSC6 | Does the device support the ZLL commissioning cluster: utility as both a server and a client? | [R3]/5.3.4 | DD9:M | N/A |

### [ADCB] Control bridge

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADCB0 | Is the device programmed as a commissioning server, a commissioning server/client or a commissioning client? | [R3]/5 | DD10:  (CDD1: O15 CDD2: O15 CDD3: O15) | N/A |
| ADCB9 | Does the device support the identify cluster as a client? | [R3]/5.3.5 | DD10:M | N/A |
| ADCB10 | Does the device support the groups cluster as a client? | [R3]/5.3.5 | DD10:M | N/A |
| ADCB11 | Does the device support the scenes cluster as a client? | [R3]/5.3.5 | DD10:M | N/A |
| ADCB12 | Does the device support the on/off cluster as a client? | [R3]/5.3.5 | DD10:M | N/A |
| ADCB13 | Does the device support the level control cluster as a client? | [R3]/5.3.5 | DD10:M | N/A |
| ADCB14 | Does the device support the color control cluster as a client? | [R3]/5.3.5 | DD10: M | N/A |
| ADCB15 | Does the device support the ZLL commissioning cluster: utility as both a server and a client? | [R3]/5.3.5 | DD10:M | N/A |

### [ADOOS] On/off sensor

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADOOS0 | Is the device programmed as a commissioning server, a commissioning server/client or a commissioning client? | [R3]/5 | DD11:  (CDD1: O16 CDD2: O16 CDD3: O16) | N/A |
| ADOOS3 | Does the device support the identify cluster as a client? | [R3]/5.3.6 | DD11:M | N/A |
| ADOOS4 | Does the device support the groups cluster as a client? | [R3]/5.3.6 | DD11:M | N/A |
| ADOOS5 | Does the device support the scenes cluster as a client? | [R3]/5.3.6 | DD11:M | N/A |
| ADOOS6 | Does the device support the on/off cluster as a client? | [R3]/5.3.6 | DD11:M | N/A |
| ADOOS7 | Does the device support the level control cluster as a client? | [R3]/5.3.6 | DD11:M | N/A |
| ADOOS8 | Does the device support the color control cluster as a client? | [R3]/5.3.6 | DD11:M | N/A |
| ADOOS9 | Does the device support the ZLL commissioning cluster: utility as both a server and a client? | [R3]/5.3.6 | DD11:M | N/A |

# ZCL usage and enhancements

## [GCF] General command frames

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| GCF1 | Does the device support the **read attributes** command? | [R4]/2.4.1 | M | Yes |
| GCF2 | Does the device support the **read attributes response** command? | [R4]/2.4.2 | M | Yes |
| GCF3 | Does the device support the **write attributes** command? | [R4]/2.4.3 | M | Yes |
| GCF4 | Does the device support the **write attributes undivided** command? | [R4]/2.4.4 | M | Yes |
| GCF5 | Does the device support the **write attributes response** command? | [R4]/2.4.5 | M | Yes |
| GCF6 | Does the device support the **write attributes no response** command? | [R4]/2.4.6 | M | Yes |
| GCF7 | Does the device support the **default response** command? | [R4]/2.4.12 | M | Yes |

## Basic cluster

### [BCS] Server

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| BCS1 | Does the device support the **basic** cluster as a server? | [R4]/3.2.2 | M | Yes |

* + - 1. [BCSA] Attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| BCSA1 | Does the device support the **ZCLVersion** attribute? | [R4]/3.2.2.2.2 | M | Yes |
| BCSA2 | Does the device support the **ApplicationVersion** attribute? | [R4]/3.2.2.2.3 | M | Yes |
| BCSA3 | Does the device support the **StackVersion** attribute? | [R4]/3.2.2.2.4 | M | Yes |
| BCSA4 | Does the device support the **HWVersion** attribute? | [R4]/3.2.2.2.5 | M | Yes |
| BCSA5 | Does the device support the **ManufacturerName** attribute? | [R4]/3.2.2.2.6 | M | Yes |
| BCSA6 | Does the device support the  **ModelIdentifier** attribute? | [R4]/3.2.2.2.7 | M | Yes |
| BCSA7 | Does the device support the  **DateCode** attribute? | [R4]/3.2.2.2.8 | M | Yes |
| BCSA8 | Does the device support the  **PowerSource** attribute? | [R4]/3.2.2.2.9 | M | Yes |
| BCSA9 | Does the device support the  **SWBuildID** attribute? | [R3]/6.2.1.1.1 | M | Yes |

### [BCC] Client

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| BCC1 | Does the device support the **basic** cluster as a client? | [R4]/3.2.3 | O | No |

## Identify cluster

### [ICS] Server

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ICS1 | Does the device support the  **identify** cluster as a server? | [R4]/3.5.2 | DD1: M DD2: M DD3: M DD4: M DD5: M DD51: M DD52: M | Yes |

* + - 1. [ICSA] Attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ICSA1 | Does the device support the  **IdentifyTime** attribute? | [R4]/3.5.2.2.1 | ICS1: M | Yes |

* + - 1. [ICSCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ICSCR1 | Does the device support the reception of the **identify** command? | [R4]/3.5.2.3.1 | ICS1: M | Yes |
| ICSCR2 | Does the device support the reception of the **identify query** command? | [R4]/3.5.2.3.2 | ICS1: M | N/A |
| ICSCR3 | Does the device support the reception of the  **trigger effect** command? | [R3]/6.3.1.2.1 | ICS1: M | N/A |

* + - 1. [ICSCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ICSCG1 | Does the device support the generation and transmission of the **identify query response** command? | /3.5.2.4.1 | ICS1: M | Yes |

### [ICC] Client

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ICC1 | Does the device support the  **identify** cluster as a client? | /3.5.3 | DD6: M DD7: M DD8: M DD9: M DD10: M DD11: M | Yes |

* + - 1. Attributes

There are no PICS requirements for this section.

* + - 1. [ICCCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ICCCR1 | Does the device support the reception of the **identify query response** command? | [R4]/3.5.2.4.1 | ICCCG2: M | Yes |

* + - 1. [ICCCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ICCCG1 | Does the device support the generation and transmission of the  **identify** command? | [R4]/3.5.2.3.1 | ICC1: O | Yes |
| ICCCG2 | Does the device support the generation and transmission of the  **identify query** command? | [R4]/3.5.2.3.2 | ICC1: O | Yes |
| ICCCG3 | Does the device support the generation and transmission of the  **trigger effect** command? | [R3]/6.3.1.2.1 | ICC1: O | Yes |

## Groups cluster

### [GCS] Server

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| GCS1 | Does the device support the  **groups** cluster as a server? | [R4]/3.6.2 | DD1: M DD2: M DD3: M DD4: M DD5: M DD51: M DD52: M | No |

* + - 1. [GCSA] Attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| GCSA1 | Does the device support the  **NameSupport** attribute? | [R4]/3.6.2.2 | GCS1: M | N/A |

* + - 1. [GCSCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| GCSCR1 | Does the device support the reception of the **add group** command? | /3.6.2.2.3 | GCS1:M | N/A |
| GCSCR2 | Does the device support the reception of the **view group** command? | [R4]/3.6.2.2.4 | GCS1:M | N/A |
| GCSCR3 | Does the device support the reception of the **get group membership** command? | [R4]/3.6.2.2.5 | GCS1:M | N/A |
| GCSCR4 | Does the device support the reception of the **remove group** command? | [R4]/3.6.2.2.6 | GCS1:M | N/A |
| GCSCR5 | Does the device support the reception of the **remove all groups** command? | [R4]/3.6.2.2.7 | GCS1:M | N/A |
| GCSCR6 | Does the device support the reception of the **add group if identifying** command? | [R4]/3.6.2.2.8 | GCS1:M | N/A |

* + - 1. [GCSCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| GCSCG1 | Does the device support the generation and transmission of the **add group response** command in the case that an **add group** command was received as a unicast? | /3.6.2.3.1 | GCS1:M | N/A |
| GCSCG1a | Does the device not support the generation and transmission of the  **add group response** command in the case that an **add group** command was received as a groupcast or broadcast? | [R3]/6.4.1.2.1 | GCS1:M | N/A |
| GCSCG2 | Does the device support the generation and transmission of the **view group response** command in the case that an **view group** command was received as a unicast? | [R4]/3.6.2.3.2 | GCS1:M | N/A |
| GCSCG2a | Does the device not support the generation and transmission of the  **view group response** command in the case that an **view group** command was received as a groupcast or broadcast? | [R3]/6.4.1.2.1 | GCS1:M | N/A |
| GCSCG3 | Does the device support the generation and transmission of the **get group membership response** command in the case that a **get group membership** command was received as a unicast? | [R4]/3.6.2.3.3 | GCS1: M | N/A |
| GCSCG3a | Does the device not support the generation and transmission of the  **get group membership response** command in the case that a **get group membership** command was received as a groupcast or broadcast? | [R3]/6.4.1.2.1 | GCS1:M | N/A |
| GCSCG4 | Does the device support the generation and transmission of the **remove group response** command in the case that a **remove group** command was received as a unicast? | [R4]/3.6.2.3.4 | GCS1: M | N/A |
| GCSCG4a | Does the device not support the generation and transmission of the  **remove group response** command in the case that a **remove group** command was received as a groupcast or broadcast? | [R3]/6.4.1.2.1 | GCS1:M | N/A |

### [GCC] Client

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| GCC1 | Does the device support the **groups** cluster as a client? | [R4]/3.6.3 | DD6: M DD7: M DD8: M DD9: M DD10: M DD11: M | Yes |

* + - 1. Attributes

There are no PICS requirements for this section.

* + - 1. [GCCCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| GCCCR1 | Does the device support the reception of the **add group response** command? | /3.6.2.3.1 | GCCCG1: M | Yes |
| GCCCR2 | Does the device support the reception of the **view group response** command? | /3.6.2.3.2 | GCCCG2: M | Yes |
| GCCCR3 | Does the device support the reception of the **get group membership response** command? | /3.6.2.3.3 | GCCCG3: M | Yes |
| GCCCR4 | Does the device support the reception of the **remove group response** command? | [R4]/3.6.2.3.4 | GCCCG4: M | Yes |

* + - 1. [GCCCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| GCCCG1 | Does the device support the generation and transmission of the **add group** command? | /3.6.2.2.3 | GCC1: O | Yes |
| GCCCG2 | Does the device support the generation and transmission of the **view group** command? | [R4]/3.6.2.2.4 | GCC1: O | No |
| GCCCG3 | Does the device support the generation and transmission of the **get group membership** command? | [R4]/3.6.2.2.5 | GCC1: O | No |
| GCCCG4 | Does the device support the generation and transmission of the **remove group** command? | [R4]/3.6.2.2.6 | GCC1: O | No |
| GCCCG5 | Does the device support the generation and transmission of the **remove all groups** command? | [R4]/3.6.2.2.7 | GCC1: O | No |
| GCCCG6 | Does the device support the generation and transmission of the **add group if identifying** command? | [R4]/3.6.2.2.8 | GCC1: O | No |

## Scenes cluster

### [SCS] Server

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SCS1 | Does the device support the **scenes** cluster as a server? | [R4]/3.7.2 | DD1: M DD2: M DD3: M DD4: M DD5: M DD51: M DD52: M | No |

* + - 1. [SCSA] Attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SCSA1 | Does the device support the **SceneCount** attribute? | /3.7.2.2.1.1 | SCS1: M | N/A |
| SCSA2 | Does the device support the  **CurrentScene** attribute? | [R4]/3.7.2.2.1.2 | SCS1: M | N/A |
| SCSA3 | Does the device support the  **CurrentGroup** attribute? | [R4]/3.7.2.2.1.3 | SCS1: M | N/A |
| SCSA4 | Does the device support the  **SceneValid** attribute? | [R4]/3.7.2.2.1.4 | SCS1: M | N/A |
| SCSA5 | Does the device support the  **NameSupport** attribute, fixed to 0, indicating no name support? | [R4]/3.7.2.2.1.5 | SCS1: M | N/A |

* + - 1. [SCSSTE] Scene table enhancements

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SCSSTE1 | Does the device support the scene table item **TransitionTime100ms**? | /6.5.1.2 | SCS1: M | N/A |

* + - 1. [SCSCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SCSCR1 | Does the device support the reception of the **add scene** command? | /3.7.2.4.1 | SCS1: M | N/A |
| SCSCR2 | Does the device support the reception of the **view scene** command? | [R4]/3.7.2.4.2 | SCS1: M | N/A |
| SCSCR3 | Does the device support the reception of the **remove scene** command? | [R4]/3.7.2.4.3 | SCS1: M | N/A |
| SCSCR4 | Does the device support the reception of the **remove all scenes** command? | [R4]/3.7.2.4.4 | SCS1: M | N/A |
| SCSCR5 | Does the device support the reception of the **store scene** command? | [R4]/3.7.2.4.5 | SCS1: M | N/A |
| SCSCR6 | Does the device support the reception of the **recall scene** command? | [R4]/3.7.2.4.6 | SCS1: M | N/A |
| SCSCR7 | Does the device support the reception of the **get scene membership** command? | [R4]/3.7.2.4.7 | SCS1: M | N/A |
| SCSCR8 | Does the device support the reception of the **enhanced add scene** command? | [R3]/6.5.1.3.1 | SCS1: M | N/A |
| SCSCR9 | Does the device support the reception of the **enhanced view scene** command? | [R3]/6.5.1.3.2 | SCS1: M | N/A |
| SCSCR10 | Does the device support the reception of the **copy scene** command? | [R3]/6.5.1.3.3 | SCS1: M | N/A |

* + - 1. [SCSCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SCSCG1 | Does the device support the generation and transmission of the  **add scene response** command in the case that an **add scene** command was received as a unicast? | [R4]/3.7.2.5.1 | SCS1: M | N/A |
| SCSCG1a | Does the device not support the generation and transmission of the  **add scene response** command in the case that an **add scene** command was received as a groupcast or broadcast? | /6.5.1.3.1 | SCS1: M | N/A |
| SCSCG2 | Does the device support the generation and transmission of the  **view scene response** command in the case that a **view scene** command was received as a unicast? | [R4]/3.7.2.5.2 | SCS1: M | N/A |
| SCSCG2a | Does the device not support the generation and transmission of the  **view scene response** command in the case that a **view scene** command was received as a groupcast or broadcast? | [R3]/6.5.1.3.1 | SCS1: M | N/A |
| SCSCG3 | Does the device support the generation and transmission of the  **remove scene response** command in the case that a **remove scene** command was received as a unicast? | [R4]/3.7.2.5.3 | SCS1: M | N/A |
| SCSCG3a | Does the device not support the generation and transmission of the  **remove scene response** command in the case that a **remove scene** command was received as a groupcast or broadcast? | /6.5.1.3.1 | SCS1: M | N/A |
| SCSCG4 | Does the device support the generation and transmission of the  **remove all scenes response** command in the case that a **remove all scenes** command was received as a unicast? | [R4]/3.7.2.5.4 | SCS1: M | N/A |
| SCSCG4a | Does the device not support the generation and transmission of the  **remove all scenes response** command in the case that a **remove all scenes** command was received as a groupcast or broadcast? | [R3]/6.5.1.3.1 | SCS1: M | N/A |
| SCSCG5 | Does the device support the generation and transmission of the  **store scene response** command in the case that a **store scene** command was received as a unicast? | [R4]/3.7.2.5.5 | SCS1: M | N/A |
| SCSCG5a | Does the device not support the generation and transmission of the  **store scene response** command in the case that a **store scene** command was received as a groupcast or broadcast? | [R3]/6.5.1.3.1 | SCS1: M | N/A |
| SCSCG6 | Does the device support the generation and transmission of the  **get scene membership response** command in the case that a **get scene membership** command was received as a unicast? | [R4]/3.7.2.5.6 | SCS1: M | N/A |
| SCSCG6a | Does the device not support the generation and transmission of the  **get scene membership response** command in the case that a **get scene membership** command was received as a groupcast or broadcast? | [R3]/6.5.1.3.1 | SCS1: M | N/A |
| SCSCG7 | Does the device support the generation and transmission of the **enhanced add scene response** command in the case that an **enhanced add scene** command was received as a unicast? | [R3]/6.5.1.4.1 | SCS1: M | N/A |
| SCSCG7a | Does the device not support the generation and transmission of the  **enhanced add scene response** command in the case that an **enhanced add scene** command was received as a groupcast or broadcast? | [R3]/6.5.1.3.1 | SCS1: M | N/A |
| SCSCG8 | Does the device support the generation and transmission of the  **enhanced view scene response** command in the case that an **enhanced view scene** command was received as a unicast? | [R3]/6.5.1.4.2 | SCS1: M | N/A |
| SCSCG8a | Does the device not support the generation and transmission of the  **enhanced view scene response** command in the case that an **enhanced view scene** command was received as a groupcast or broadcast? | [R3]/6.5.1.3.1 | SCS1: M | N/A |
| SCSCG9 | Does the device support the generation and transmission of the  **copy scene response** command in the case that a **copy scene** command was received as a unicast? | [R3]/6.5.1.4.3 | SCS1: M | N/A |
| SCSCG9a | Does the device not support the generation and transmission of the  **copy scene response** command in the case that a **copy scene** command was received as a groupcast or broadcast? | [R3]/6.5.1.3.1 | SCS1: M | N/A |

### [SCC] Client

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SCC1 | Does the device support the **scenes** cluster as a client? | [R4]/3.7.3 | DD7: M DD9: M DD10: M DD11: M | Yes |

* + - 1. Attributes

There are no PICS requirements for this section.

* + - 1. [SCCCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SCCCR1 | Does the device support the reception of the **add scene response** command? | /6.5.2.2 | SCCCG1: M | Yes |
| SCCCR2 | Does the device support the reception of the **view scene response** command? | /6.5.2.2 | SCCCG2: M | Yes |
| SCCCR3 | Does the device support the reception of the **remove scene response** command? | /6.5.2.2 | SCCCG3: M | Yes |
| SCCCR4 | Does the device support the reception of the **remove all scenes response** command? | /6.5.2.2 | SCCCG4: M | Yes |
| SCCCR5 | Does the device support the reception of the **store scene response** command? | /6.5.2.2 | SCCCG5: M | Yes |
| SCCCR6 | Does the device support the reception of the **get scene membership response** command? | /6.5.2.2 | SCCCG7: M | Yes |
| SCCCR7 | Does the device support the reception of the **enhanced add scene response** command? | /6.5.1.4.1 | SCCCG8: M | Yes |
| SCCCR8 | Does the device support the reception of the **enhanced view scene response** command? | /6.5.1.4.2 | SCCCG9: M | Yes |
| SCCCR9 | Does the device support the reception of the **copy scene response** command? | [R3]/6.5.1.4.3 | SCCCG10: M | Yes |

* + - 1. [SCCCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SCCCG1 | Does the device support the generation and transmission of the **add scene** command? | /3.7.2.4.1 | SCC1: O | No |
| SCCCG2 | Does the device support the generation and transmission of the  **view scene** command? | [R4]/3.7.2.4.2 | SCC1: O | No |
| SCCCG3 | Does the device support the generation and transmission of the  **remove scene** command? | [R4]/3.7.2.4.3 | SCC1: O | No |
| SCCCG4 | Does the device support the generation and transmission of the  **remove all scenes** command? | [R4]/3.7.2.4.4 | SCC1: O | No |
| SCCCG5 | Does the device support the generation and transmission of the  **store scene** command? | [R4]/3.7.2.4.5 | SCC1: O | Yes |
| SCCCG6 | Does the device support the generation and transmission of the  **recall scene** command? | [R4]/3.7.2.4.6 | SCC1: O | Yes |
| SCCCG7 | Does the device support the generation and transmission of the  **get scene membership** command? | [R4]/3.7.2.4.7 | SCC1: O | No |
| SCCCG8 | Does the device support the generation and transmission of the **enhanced add scene** command? | [R3]/6.5.1.3.1 | SCC1: O | No |
| SCCCG9 | Does the device support the generation of the **enhanced view scene** command? | [R3]/6.5.1.3.2 | SCC1: O | No |
| SCCCG10 | Does the device support the generation of the **copy scene** command? | [R3]/6.5.1.3.3 | SCC1: O | No |

## On/off cluster

### [OOCS] Server

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| OOCS1 | Does the device support the **on/off** cluster as a server? | [R4]/3.8.2 | DD1: M DD2: M DD3: M DD4: M DD5: M DD51: M DD52: M | No |

* + - 1. [OOCSD] Dependencies

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| OOCSD1 | Does the device set the **OnTime** attribute to 0x0000 on receipt of a **level control** cluster command that causes the **OnOff** attribute to be set to 0x00? | 6.6.1.1.1 | OOCS1: M | N/A |
| OOCSD2 | Does the device set the **OffWaitTime** attribute to 0x0000 on receipt of a **level control** cluster command that causes the **OnOff** attribute to be set to 0x01 if the **OnTime** attribute is equal to 0x0000? | 6.6.1.1.1 | OOCS1: M | N/A |

* + - 1. [OOCSA] Attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| OOCSA1 | Does the device support the **OnOff** attribute? | /3.8.2.2 | OOCS1:M | N/A |
| OOCSA2 | Does the device support the  **GlobalSceneControl** attribute? | /6.6.1.2.1 | OOCS1:M | N/A |
| OOCSA3 | Does the device support the  **OnTime** attribute? | [R3]/6.6.1.2.2 | OOCS1:M | N/A |
| OOCSA4 | Does the device support the  **OffWaitTime** attribute? | [R3]/6.6.1.2.3 | OOCS1:M | N/A |

* + - 1. [OOCSSTE] Scene table enhancement

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| OOCSSTE1 | Does the device support the scene table item **OnOff**? | /6.6.1.3 | OOCS1: M | N/A |

* + - 1. [OOCSCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| OOCSCR1 | Does the device support the reception of the **off** command? | /6.6.1.4.1 [R4]/3.8.2.3.1 | OOCS1: M | N/A |
| OOCSCR2 | Does the device support the reception of the **on** command? | /6.6.1.4.2 [R4]/3.8.2.3.2 | OOCS1: M | N/A |
| OOCSCR3 | Does the device support the reception of the **toggle** command? | /6.6.1.4.3 [R4]/3.8.2.3.3 | OOCS1: M | N/A |
| OOCSCR4 | Does the device support the reception of the **off with effect** command? | [R3]/6.6.1.4.4 | OOCS1: M | N/A |
| OOCSCR5 | Does the device support the reception of the **on with recall global scene** command? | [R3]/6.6.1.4.5 | OOCS1: M | N/A |
| OOCSCR6 | Does the device support the reception of the **on with timed off** command? | [R3]/6.6.1.4.6 | OOCS1: M | N/A |

### [OOCC] Client

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| OOCC1 | Does the device support the **on/off** cluster as a client? | [R4]/3.8.3 | DD6: M DD7: M DD8: M DD9: M DD10: M DD11: M | Yes |

* + - 1. Attributes

There are no PICS requirements for this section.

* + - 1. Commands received

There are no PICS requirements for this section.

* + - 1. [OOCCCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| OOCCCG1 | Does the device support the generation and transmission of the **off** command? | [R4]/3.8.2.3.1 | OOCC1: O | Yes |
| OOCCCG2 | Does the device support the generation and transmission of the **on** command? | [R4]/3.8.2.3.2 | OOCC1: O | Yes |
| OOCCCG3 | Does the device support the generation and transmission of the **toggle** command? | [R4]/3.8.2.3.3 | OOCC1: O | No |
| OOCCCG4 | Does the device support the generation and transmission of the  **off with effect** command? | [R3]/6.6.1.4.4 | OOCC1: O | No |
| OOCCCG5 | Does the device support the generation and transmission of the  **on with recall global scene** command? | [R3]/6.6.1.4.5 | OOCC1: O | No |
| OOCCCG6 | Does the device support the generation and transmission of the  **on with timed off** command? | [R3]/6.6.1.4.6 | OOCC1: O | No |

## Level control cluster

### [LCCS] Server

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| LCCS1 | Does the device support the **level control** cluster as a server? | [R4]/3.10.2 | DD3: M DD4: M DD5: M DD51: M DD52: M | No |

* + - 1. [LCCSA] Attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| LCCSA1 | Does the device support the  **CurrentLevel** attribute? | [R4]/3.10.2.2.1 | LCCS1: M | N/A |
| LCCSA2 | Does the device support the  **RemainingTime** attribute? | [R4]/3.10.2.2.2 | LCCS1: M | N/A |

* + - 1. [LCCSSTE] Scene table enhancements

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| LCCSSTE1 | Does the device support the scene table item **CurrentLevel**? | [R3]/6.7.1.2 | LCCS1: M | N/A |

* + - 1. [LCCSCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| LCCSCR1 | Does the device support the reception of the **move to level** command? | [R4]/3.10.2.3.1 | LCCS1: M | N/A |
| LCCSCR2 | Does the device support the reception of the **move** command? | [R4]/3.10.2.3.2 | LCCS1: M | N/A |
| LCCSCR3 | Does the device support the reception of the **step** command? | [R4]/3.10.2.3.3 | LCCS1: M | N/A |
| LCCSCR4 | Does the device support the reception of the **stop** command? | [R4]/3.10.2.3.4 | LCCS1: M | N/A |
| LCCSCR5 | Does the device support the reception of the **move to level (with on/off)** command? | [R4]/3.10.2.3.5 | LCCS1: M | N/A |
| LCCSCR6 | Does the device support the reception of the **move (with on/off)** command? | [R4]/3.10.2.3.5 | LCCS1: M | N/A |
| LCCSCR7 | Does the device support the reception of the **step (with on/off)** command? | [R4]/3.10.2.3.5 | LCCS1: M | N/A |
| LCCSCR8 | Does the device support the reception of the **stop (with on/off)** command? | [R4]/3.10.2.3.4 | LCCS1: M | N/A |

### [LCCC] Client

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| LCCC1 | Does the device support the **level control** cluster as a client? | [R4]/3.10.3 | DD6: M DD7: M DD8: M DD9: M DD10: M DD11: M | Yes |

* + - 1. Attributes

There are no PICS requirements for this section.

* + - 1. Commands received

There are no PICS requirements for this section.

* + - 1. [LCCCCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| LCCCCG1 | Does the device support the generation and transmission of the **move to level** command? | [R4]/3.10.2.3.1 | LCCC1: O | No |
| LCCCCG2 | Does the device support the generation and transmission of the **move** command? | [R4]/3.10.2.3.2 | LCCC1: O | No |
| LCCCCG3 | Does the device support the generation and transmission of the **step** command? | [R4]/3.10.2.3.3 | LCCC1: O | Yes |
| LCCCCG4 | Does the device support the generation and transmission of the  **stop** command? | [R4]/3.10.2.3.4 | LCCC1: O | No |
| LCCCCG5 | Does the device support the generation and transmission of the  **move to level (with on/Off)** command? | [R4]/3.10.2.3.5 | LCCC1: O | No |
| LCCCCG6 | Does the device support the generation and transmission of the  **move (with on/off)** command? | [R4]/3.10.2.3.5 | LCCC1: O | No |
| LCCCCG7 | Does the device support the generation and transmission of the  **step (with on/off)** command? | [R4]/3.10.2.3.5 | LCCC1: O | No |
| LCCCCG8 | Does the device support the generation and transmission of the  **stop (with on/off)** command? | [R4]/3.10.2.3.4 | LCCC1: O | No |

## Color control cluster

### [CCCS] Server

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CCCS1 | Does the device support the **color control** cluster as a server? | [R4]/5.2.2 | DD5: M DD51: M DD52: M | No |

* + - 1. [CCCSA] Attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CCCSA1 | Does the device support the  **CurrentHue** attribute? | /5.2.2.2.1.1 | CCCS1: M | N/A |
| CCCSA2 | Does the device support the  **CurrentSaturation** attribute? | [R4]/5.2.2.2.1.2 | CCCS1: M | N/A |
| CCCSA3 | Does the device support the  **RemainingTime** attribute? | [R4]/5.2.2.2.1.3 | CCCS1: M | N/A |
| CCCSA4 | Does the device support the  **CurrentX** attribute? | [R4]/5.2.2.2.1.4 | CCCS1: M | N/A |
| CCCSA5 | Does the device support the  **CurrentY** attribute? | [R4]/5.2.2.2.1.5 | CCCS1: M | N/A |
| CCCSA51 | Does the device support the  **ColorTemperature** attribute? | [R4]/5.2.2.2.1.8 | CCCS1: M | N/A |
| CCCSA6 | Does the device support the  **ColorMode** attribute? | [R4]/5.2.2.2.1.9 | CCCS1: M | N/A |
| CCCSA7 | Does the device support the  **NumberOfPrimaries** attribute? | [R4]/5.2.2.2.2.1 | CCCS1: M | N/A |
| CCCSA8 | Does the device support the  **Primary1X** attribute? | [R4]/5.2.2.2.2.2 | CCCS1: M | N/A |
| CCCSA9 | Does the device support the  **Primary1Y** attribute? | [R4]/5.2.2.2.2.3 | CCCS1: M | N/A |
| CCCSA10 | Does the device support the  **Primary1Intensity** attribute? | [R4]/5.2.2.2.2.4 | CCCS1: M | N/A |
| CCCSA11 | Does the device support the  **Primary2X** attribute? | [R4]/5.2.2.2.2.5 | CCCS1: M | N/A |
| CCCSA12 | Does the device support the  **Primary2Y** attribute? | [R4]/5.2.2.2.2.5 | CCCS1: M | N/A |
| CCCSA13 | Does the device support the  **Primary2Intensity** attribute? | [R4]/5.2.2.2.2.5 | CCCS1: M | N/A |
| CCCSA14 | Does the device support the  **Primary3X** attribute? | [R4]/5.2.2.2.2.5 | CCCS1: M | N/A |
| CCCSA15 | Does the device support the  **Primary3Y** attribute? | [R4]/5.2.2.2.2.5 | CCCS1: M | N/A |
| CCCSA16 | Does the device support the  **Primary3Intensity** attribute? | [R4]/5.2.2.2.2.5 | CCCS1: M | N/A |
| CCCSA17 | Does the device support the  **Primary4X** attribute? | [R4]/5.2.2.2.3.1 | CCCS1: M | N/A |
| CCCSA18 | Does the device support the  **Primary4Y** attribute? | [R4]/5.2.2.2.3.1 | CCCS1: M | N/A |
| CCCSA19 | Does the device support the  **Primary4Intensity** attribute? | [R4]/5.2.2.2.3.1 | CCCS1: M | N/A |
| CCCSA20 | Does the device support the  **Primary5X** attribute? | [R4]/5.2.2.2.3.1 | CCCS1: M | N/A |
| CCCSA21 | Does the device support the  **Primary5Y** attribute? | [R4]/5.2.2.2.3.1 | CCCS1: M | N/A |
| CCCSA22 | Does the device support the  **Primary5Intensity** attribute? | [R4]/5.2.2.2.3.1 | CCCS1: M | N/A |
| CCCSA23 | Does the device support the  **Primary6X** attribute? | [R4]/5.2.2.2.3.1 | CCCS1: M | N/A |
| CCCSA24 | Does the device support the  **Primary6Y** attribute? | [R4]/5.2.2.2.3.1 | CCCS1: M | N/A |
| CCCSA25 | Does the device support the  **Primary6Intensity** attribute? | [R4]/5.2.2.2.3.1 | CCCS1: M | N/A |
| CCCSA26 | Does the device support the  **EnhancedCurrentHue** attribute? | [R3]/6.8.1.1.1 | CCCS1: M | N/A |
| CCCSA27 | Does the device support the  **EnhancedColorMode** attribute? | [R3]/6.8.1.1.2 | CCCS1: M | N/A |
| CCCSA28 | Does the device support the  **ColorLoopActive** attribute? | [R3]/6.8.1.1.3 | CCCS1: M | N/A |
| CCCSA29 | Does the device support the  **ColorLoopDirection** attribute? | [R3]/6.8.1.1.4 | CCCS1: M | N/A |
| CCCSA30 | Does the device support the  **ColorLoopTime** attribute? | [R3]/6.8.1.1.5 | CCCS1: M | N/A |
| CCCSA31 | Does the device support the  **ColorLoopStartEnhancedHue** attribute? | [R3]/6.8.1.1.6 | CCCS1: M | N/A |
| CCCSA32 | Does the device support the  **ColorLoopStoredEnhancedHue** attribute? | [R3]/6.8.1.1.7 | CCCS1: M | N/A |
| CCCSA33 | Does the device support the  **ColorCapabilities** attribute? | [R3]/6.8.1.1.8 | CCCS1: M | N/A |
| CCCSA34 | Does the device support the  **ColorTempPhysicalMin** attribute? | [R3]/6.8.1.1.9 | CCCS1: M | N/A |
| CCCSA35 | Does the device support the  **ColorTempPhysicalMax** attribute? | [R3]/6.8.1.1.10 | CCCS1: M | N/A |

* + - * 1. [CCCSACC] ColorCapabilities attribute

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CCCSACC0 | Is bit 0 of the ***ColorCapabilities*** attribute set to 1? | /6.8.1.1.8 | CCCSACC1: M CCCSACC2: M ADCL7: M ADECL7: M | N/A |
| CCCSACC1 | Is bit 1 of the ***ColorCapabilities*** attribute set to 1? | [R3]/6.8.1.1.8 | CCCSA33: O ADCL7: M ADECL7: M | N/A |
| CCCSACC2 | Is bit 2 of the ***ColorCapabilities*** attribute set to 1? | [R3]/6.8.1.1.8 | CCCSA33: O ADCL7: M ADECL7: M | N/A |
| CCCSACC3 | Is bit 3 of the ***ColorCapabilities*** attribute set to 1? | [R3]/6.8.1.1.8 | CCCSA33: O ADCL7: M ADECL7: M | N/A |
| CCCSACC4 | Is bit 4 of the ***ColorCapabilities*** attribute set to 1? | [R3]/6.8.1.1.8 | CCCSA33: O ADECL7: M ADCTL7: M | N/A |

* + - 1. [CCCSSTE] Scene table enhancements

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CCCSSTE1 | Does the device support the scene table item **CurrentX**? | [R3]/6.8.1.2 | CCCS1: M | N/A |
| CCCSSTE2 | Does the device support the scene table item **CurrentY**? | [R3]/6.8.1.2 | CCCS1: M | N/A |
| CCCSSTE3 | Does the device support the scene table item **EnhancedCurrentHue**? | [R3]/6.8.1.2 | CCCS1: M | N/A |
| CCCSSTE4 | Does the device support the scene table item **CurrentSaturation**? | [R3]/6.8.1.2 | CCCS1: M | N/A |
| CCCSSTE5 | Does the device support the scene table item **ColorLoopActive**? | [R3]/6.8.1.2 | CCCS1: M | N/A |
| CCCSSTE6 | Does the device support the scene table item **ColorLoopDirection**? | [R3]/6.8.1.2 | CCCS1: M | N/A |
| CCCSSTE7 | Does the device support the scene table item **ColorLoopTime**? | [R3]/6.8.1.2 | CCCS1: M | N/A |

* + - 1. [CCCSCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CCCSCR1 | Does the device support the reception of the **move to hue** command? | /5.2.2.3.2 | CCCSACC0: M CCCSACC1: M CCCSACC2: M | N/A |
| CCCSCR2 | Does the device support the reception of the **move hue** command? | [R4]/5.2.2.3.3 | CCCSACC0: M CCCSACC1: M CCCSACC2: M | N/A |
| CCCSCR3 | Does the device support the reception of the **step hue** command? | [R4]/5.2.2.3.4 | CCCSACC0: M CCCSACC1: M CCCSACC2: M | N/A |
| CCCSCR4 | Does the device support the reception of the **move to saturation** command? | [R4]/5.2.2.3.5 | CCCSACC0: M CCCSACC1: M CCCSACC2: M | N/A |
| CCCSCR5 | Does the device support the reception of the **move saturation** command? | [R4]/5.2.2.3.6 | CCCSACC0: M CCCSACC1: M CCCSACC2: M | N/A |
| CCCSCR6 | Does the device support the reception of the **step saturation** command? | [R4]/5.2.2.3.7 | CCCSACC0: M CCCSACC1: M CCCSACC2: M | N/A |
| CCCSCR7 | Does the device support the reception of the **move to hue and saturation** command? | [R4]/5.2.2.3.8 | CCCSACC0: M CCCSACC1: M CCCSACC2: M | N/A |
| CCCSCR8 | Does the device support the reception of the **move to color** command? | [R4]/5.2.2.3.9 | CCCSACC3: M | N/A |
| CCCSCR9 | Does the device support the reception of the **move color** command? | [R4]/5.2.2.3.10 | CCCSACC3: M | N/A |
| CCCSCR10 | Does the device support the reception of the **step color** command? | [R4]/5.2.2.3.11 | CCCSACC3: M | N/A |
| CCCSCR101 | Does the device support the reception of the **move to color temperature** command? | [R4]/5.2.2.3.12 | CCCSACC4: M | N/A |
| CCCSCR11 | Does the device support the reception of the **enhanced move to hue** command? | [R3]/6.8.1.3.2 | CCCSACC1: M | N/A |
| CCCSCR12 | Does the device support the reception of the **enhanced move hue** command? | [R3]/6.8.1.3.3 | CCCSACC1: M | N/A |
| CCCSCR13 | Does the device support the reception of the **enhanced step hue** command? | [R3]/6.8.1.3.4 | CCCSACC1: M | N/A |
| CCCSCR14 | Does the device support the reception of the **enhanced move to hue and saturation** command? | [R3]/6.8.1.3.5 | CCCSACC1: M | N/A |
| CCCSCR15 | Does the device support the reception of the **color loop set** command? | [R3]/6.8.1.3.6 | CCCSACC2: M | N/A |
| CCCSCR16 | Does the device support the reception of the **stop move step** command? | [R3]/6.8.1.3.7 | CCCS1: M | N/A |
| CCCSCR17 | Does the device support the reception of the **move color temperature** command? | [R3]/6.8.1.3.8 | CCCSACC4: M | N/A |
| CCCSCR18 | Does the device support the reception of the **step color temperature** command? | [R3]/6.8.1.3.9 | CCCSACC4: M | N/A |

### [CCCC] Client

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CCCC1 | Does the device support the **color control** cluster as a client? | [R4]/5.2.3 | DD6: M DD7: M DD10: M DD11: M | Yes |

* + - 1. Attributes

There are no PICS requirements for this section.

* + - 1. Commands received

There are no PICS requirements for this section.

* + - 1. [CCCCCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CCCCCG1 | Does the device support the generation and transmission of the **move to hue** command? | /5.2.2.3.2 | CCCC1: O | Yes |
| CCCCCG2 | Does the device support the generation and transmission of the **move hue** command? | [R4]/5.2.2.3.3 | CCCC1: O | No |
| CCCCCG3 | Does the device support the generation and transmission of the **step hue** command? | [R4]/5.2.2.3.4 | CCCC1: O | Yes |
| CCCCCG4 | Does the device support the generation and transmission of the **move to saturation** command? | [R4]/5.2.2.3.5 | CCCC1: O | Yes |
| CCCCCG5 | Does the device support the generation and transmission of the **move saturation** command? | [R4]/5.2.2.3.6 | CCCC1: O | No |
| CCCCCG6 | Does the device support the generation and transmission of the **step saturation** command? | [R4]/5.2.2.3.7 | CCCC1: O | No |
| CCCCCG7 | Does the device support the generation and transmission of the **move to hue and saturation** command? | [R4]/5.2.2.3.8 | CCCC1: O | No |
| CCCCCG8 | Does the device support the generation and transmission of the  **move to color** command? | [R4]/5.2.2.3.9 | CCCC1: O | No |
| CCCCCG9 | Does the device support the generation and transmission of the  **move color** command? | [R4]/5.2.2.3.10 | CCCC1: O | No |
| CCCCCG10 | Does the device support the generation and transmission of the  **step color** command? | [R4]/5.2.2.3.11 | CCCC1: O | No |
| CCCCCG101 | Does the device support the generation and transmission of the  **move to color temperature** command? | [R4]/5.2.2.3.12 | CCCC1: O | No |
| CCCCCG11 | Does the device support the generation and transmission of the  **enhanced move to hue** command? | [R3]/6.8.1.3.2 | CCCC1: O | Yes |
| CCCCCG12 | Does the device support the generation and transmission of the  **enhanced move hue** command? | [R3]/6.8.1.3.3 | CCCC1: O | No |
| CCCCCG13 | Does the device support the generation and transmission of the  **enhanced step hue** command? | [R3]/6.8.1.3.4 | CCCC1: O | Yes |
| CCCCCG14 | Does the device support the generation and transmission of the  **enhanced move to hue and saturation** command? | [R3]/6.8.1.3.5 | CCCC1: O | No |
| CCCCCG15 | Does the device support the generation and transmission of the  **color loop set** command? | [R3]/6.8.1.3.6 | CCCC1: O | No |
| CCCCCG16 | Does the device support the generation and transmission of the  **stop move step** command? | [R3]/6.8.1.3.7 | CCCC1: O | No |
| CCCCCR17 | Does the device support the generation of the **move color temperature** command? | [R3]/6.8.1.3.8 | CCCC1: O | No |
| CCCCCR18 | Does the device support the generation of the **step color temperature** command? | [R3]/6.8.1.3.9 | CCCC1: O | No |

# New clusters

Tables in the following sub-clauses detail PICS items for new clusters defined within the ZigBee Light link profile.

## ZLL commissioning cluster

### Overview

There are no PICS requirements for this section.

### [ZCCS] Server

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZCCS1 | Does the device support the **ZLL commissioning: touchlink** cluster as a server? | [R3]/7.1.2 | CDD1: M CDD2: M | Yes |
| ZCCUS1 | Does the device support the **ZLL commissioning: utility** cluster as a server? | [R3]/7.1.2 | DD6: M DD7: M DD8: M DD9: M DD10: M DD11: M | Yes |

* + - 1. Attributes

There are no PICS requirements for this section.

* + - 1. [ZCCSCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZCCSCR1 | Does the device support the reception of the **scan request** inter-PAN command? | [R3]/7.1.2.2.1 | ZCCS1: M | Yes |
| ZCCSCR2 | Does the device support the reception of the **device information request** inter-PAN command? | [R3]/7.1.2.2.2 | ZCCS1: M | Yes |
| ZCCSCR3 | Does the device support the reception of the **identify request** inter-PAN command? | [R3]/7.1.2.2.3 | ZCCS1: M | Yes |
| ZCCSCR4 | Does the device support the reception of the **reset to factory new request** inter-PAN command? | [R3]/7.1.2.2.4 | ZCCS1: M | Yes |
| ZCCSCR5 | Does the device support the reception of the **network start request** inter-PAN command? | [R3]/7.1.2.2.5 | ZCCS1: M | N/A |
| ZCCSCR6 | Does the device support the reception of the **network join router request** inter-PAN command? | [R3]/7.1.2.2.6 | ZCCS1: M | N/A |
| ZCCSCR7 | Does the device support the reception of the **network join end device request** inter-PAN command? | [R3]/7.1.2.2.7 | ZCCS1: M | Yes |
| ZCCSCR8 | Does the device support the reception of the **network update request** inter-PAN command? | [R3]/7.1.2.2.8 | ZCCS1: M | N/A |
| ZCCSCR9 | Does the device support the reception of the **get group identifiers** request command? | [R3]/7.1.2.2.9 | ZCCUS1: M | Yes |
| ZCCSCR10 | Does the device support the reception of the **get endpoint list request** command? | [R3]/7.1.2.2.10 | ZCCUS1: M | Yes |

* + - 1. [ZCCSCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZCCSCG1 | Does the device support the generation and transmission of the **scan response** inter-PAN command? | /7.1.2.3.1 | ZCCS1: M | Yes |
| ZCCSCG2 | Does the device support the generation and transmission of the  **device information response** inter-PAN command? | [R3]/7.1.2.3.2 | ZCCS1: M | Yes |
| ZCCSCG3 | Does the device support the generation and transmission of the  **network start response** inter-PAN command? | [R3]/7.1.2.3.3 | ZCCS1: M | N/A |
| ZCCSCG4 | Does the device support the generation and transmission of the  **network join router response** inter-PAN command? | [R3]/7.1.2.3.4 | ZCCS1: M | N/A |
| ZCCSCG5 | Does the device support the generation and transmission of the  **network join end device response** inter-PAN command? | [R3]/7.1.2.3.5 | ZCCS1: M | Yes |
| ZCCSCG6 | Does the device support the generation and transmission of the  **endpoint information** command? | [R3]/7.1.2.3.6 | ZCCUS1: M | Yes |
| ZCCSCG7 | Does the device support the generation and transmission of the  **get group identifiers response** command? | [R3]/7.1.2.3.7 | ZCCUS1: M | Yes |
| ZCCSCG8 | Does the device support the generation and transmission of the  **get endpoint list response** command? | [R3]/7.1.2.3.8 | ZCCUS1: M | Yes |

### [ZCCC] Client

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZCCC1 | Does the device support the **ZLL commissioning: touchlink** cluster component as a client? | [R3]/7.1.3 | CDD2: M CDD3: M | Yes |
| ZCCUC1 | Does the device support the **ZLL commissioning: utility** cluster component as a client? | [R3]/7.1.3 | DD6: M DD7: M DD8: M DD9: M DD10: M DD11: M | Yes |

* + - 1. Attributes

There are no PICS requirements for this section.

* + - 1. [ZCCCCR] Commands received

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZCCCCR1 | Does the device support the reception of the **scan response** inter-PAN command? | /7.1.2.3.1 | ZCCC1: M | Yes |
| ZCCCCR2 | Does the device support the reception of the **device information response** inter-PAN command? | [R3]/7.1.2.3.2 | ZCCC1: M | Yes |
| ZCCCCR3 | Does the device support the reception of the **network start response** inter-PAN command? | [R3]/7.1.2.3.3 | ZCCC1: M | Yes |
| ZCCCCR4 | Does the device support the reception of the **network join router response** inter-PAN command? | [R3]/7.1.2.3.4 | ZCCC1: M | Yes |
| ZCCCCR5 | Does the device support the reception of the **network join end device response** inter-PAN command? | [R3]/7.1.2.3.5 | ZCCC1: M | Yes |
| ZCCCCR6 | Does the device support the reception of the **endpoint information** command? | [R3]/7.1.2.3.6 | ZCCUC1: O | No |
| ZCCCCR7 | Does the device support the reception of the **get group identifiers response** command? | [R3]/7.1.2.3.7 | ZCCCCG9: M | Yes |
| ZCCCCR8 | Does the device support the reception of the **get endpoint list response** command? | [R3]/7.1.2.3.8 | ZCCCCG10: M | Yes |

* + - 1. [ZCCCCG] Commands generated

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZCCCCG1 | Does the device support the generation and transmission of the **scan request** inter-PAN command? | /7.1.2.2.1 | ZCCC1: M | Yes |
| ZCCCCG2 | Does the device support the generation and transmission of the  **device information request** inter-PAN command? | [R3]/7.1.2.2.2 | ZCCC1: M | Yes |
| ZCCCCG3 | Does the device support the generation and transmission of the  **identify request** inter-PAN command? | [R3]/7.1.2.2.3 | ZCCC1: M | Yes |
| ZCCCCG4 | Does the device support the generation and transmission of the  **reset to factory new request** inter-PAN command? | [R3]/7.1.2.2.4 | ZCCC1: M | Yes |
| ZCCCCG5 | Does the device support the generation and transmission of the  **network start request** inter-PAN command? | [R3]/7.1.2.2.5 | ZCCC1: M | Yes |
| ZCCCCG6 | Does the device support the generation and transmission of the  **network join router request** inter-PAN command? | [R3]/7.1.2.2.6 | ZCCC1: M | Yes |
| ZCCCCG7 | Does the device support the generation and transmission of the  **network join end device request** inter-PAN command? | [R3]/7.1.2.2.7 | ZCCC1: M | Yes |
| ZCCCCG8 | Does the device support the generation and transmission of the  **network update request** inter-PAN command? | [R3]/7.1.2.2.8 | ZCCC1: M | Yes |
| ZCCCCG9 | Does the device support the generation and transmission of the  **get group identifiers request** command? | [R3]/7.1.2.2.9 | ZCCUC1: O | No |
| ZCCCCG10 | Does the device support the generation and transmission of the  **get endpoint list request** command? | [R3]/7.1.2.2.10 | ZCCUC1: O | No |

# Functional description

## General

### [ZSP] ZigBee Stack Profile

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZSP1 | Is the device built on a ZigBee Compliant Platform certified for the ZigBee PRO stack profile? | 8.1.1 | M | Yes |

### [C] Channels

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| C1 | Is the device able to operate on any of the 16 channels available at 2.4GHz? | 8.1.2 | M | Yes |

### [ADV] Application device version

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ADV1 | Is the **application device version** field of all simple descriptors supported by the device, and hence the **version** field used in the *scan response*, *device information response*, *endpoint information* and *get endpoint list response* inter-PAN command frames, equal to 0x2? | 8.1.3 | M | Yes |

### [PI] Profile identifier

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| PI1 | Does the device indicate the **profile identifier** field of the corresponding ZLL simple descriptor as 0xc05e? | 8.1.4 | M | Yes |
| PI2 | When the device transmits a ZLL commissioning cluster command is the profile identifier indicated as being 0xc05e? | 8.1.4 | M | Yes |
| PI3 | When the device transmits a ZLL specified ZCL cluster command is the profile identifier indicated as being 0x0104? | 8.1.4 | M | Yes |

### [ZDO] ZDO requirements

This subclause details additional constraints on implementation by the ZigBee Device Object (ZDO) of certain ZigBee Device Profile (ZDP) commands.

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZDO1 | Does the device support the optional NWK address client service of the Device and Service Discovery Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |
| ZDO2 | Does the device support the optional IEEE address client service of the Device and Service Discovery Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |
| ZDO3 | Does the device support the optional Node Descriptor client service of the Device and Service Discovery Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |
| ZDO4 | Does the device support the optional Power Descriptor client service of the Device and Service Discovery Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |
| ZDO5 | Does the device support the optional Simple Descriptor client service of the Device and Service Discovery Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |
| ZDO6 | Does the device support the optional Active Endpoint client service of the Device and Service Discovery Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |
| ZDO7 | Does the device support the optional Match Descriptor client service of the Device and Service Discovery Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |
| ZDO8 | Does the device support the mandatory Device Announce client service of the Device and Service Discovery Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |
| ZDO9 | Does the device support the Device Announce server service of the Device and Service Discovery Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |
| ZDO10 | Does the device support the optional NLME PERMIT JOINING service of the Network Manager Object? | [R3]/8.1.5,  [R2]/8.6.3.1.5 | M | Yes |

### Startup attribute set

* + - 1. [SUSAS] Startup attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SUSAS1 | Does the device set the **short address** SAS attribute to 0xffff? | 8.1.6.1 | M | Yes |
| SUSAS2 | Does the device set the **extended PAN identifier** SAS attribute to 0x00[x8]? | 8.1.6.1 | M | Yes |
| SUSAS3 | Does the device set the **PAN identifier** SAS attribute to 0xffff? | 8.1.6.1 | M | Yes |
| SUSAS4 | Does the device set the **channel mask** SAS attribute to indicate all channels at 2.4GHz? | 8.1.6.1 | M | Yes |
| SUSAS5 | Does the device set the **protocol version** SAS attribute to 0x02? | 8.1.6.1 | M | Yes |
| SUSAS6 | Does the device set the **stack profile** SAS attribute to 0x02? | 8.1.6.1 | M | Yes |
| SUSAS7 | Does the device set the **startup control** SAS attribute to 0x03? | 8.1.6.1 | M | Yes |
| SUSAS8 | Does the device set the **permit join** SAS attribute to indicate disabled? | 8.1.6.1 | M | Yes |

* + - 1. [SSAS] Security attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| SSAS1 | Does the device set the **trust centre address** SAS attribute to 0x00[x8]? | 8.1.6.2 | M | Yes |
| SSAS2 | Does the device set the **master key** SAS attribute to 0x00[x16]? | 8.1.6.2 | M | Yes |
| SSAS3 | Does the device set the **network key type** SAS attribute to 0x01? | 8.1.6.2 | M | Yes |
| SSAS4 | Does the device set the **network key sequence number** SAS attribute to 0x00? | 8.1.6.2 | M | Yes |
| SSAS5 | Does the device set the **network key** SAS attribute to 0x00[x16]? | 8.1.6.2 | M | Yes |
| SSAS6 | Does the device set the **preconfigured link key** SAS attribute to 0x00[x16]? | 8.1.6.2 | M | Yes |
| SSAS7 | Does the device set the **trust centre link key** SAS attribute to 0x5a 0x69 0x67 0x42 0x65 0x65 0x41 0x6c 0x6c 0x69 0x61 0x6e 0x63 0x65 0x30 0x39? | 8.1.6.2 | M | Yes |
| SSAS8 | Does the device set the **use insecure join** SAS attribute to true? | 8.1.6.2 | M | Yes |
| SSAS9 | Does the device set the **trust centre network key** to indicate that the trust centre will pick the key. | 8.1.6.2 | M | Yes |

### [DIT] Device information table

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| DIT1 | Does the device maintain a device information table with an entry for each sub-device in accordance with the device information table record format? | [R3]/8.1.7 | M | Yes |

### Constants

There are no PICS requirements for this section.

### [ZPA] ZLL profile attributes

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZPA1 | Does the device support the internal attribute ***aplFreeNwkAddrRangeBegin***? | [R3]/8.1.9.1 | M | Yes |
| ZPA2 | Does the device support the internal attribute ***aplFreeNwkAddrRangeEnd***? | [R3]/8.1.9.2 | M | Yes |
| ZPA3 | Does the device support the internal attribute ***aplFreeGroupIDRangeBegin***? | [R3]/8.1.9.3 | M | Yes |
| ZPA4 | Does the device support the internal attribute ***aplFreeGroupIDRangeEnd***? | [R3]/8.1.9.4 | M | Yes |

### [IPFF] Inter-PAN frame format

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| IPFF1 | Does the device support generation of inter-PAN command frames according to the general inter-PAN command frame format? | /8.1.10 | M | Yes |
| IPFF2 | Does the device support reception of inter-PAN command frames according to the general inter-PAN command frame format? | [R3]/8.1.10 | M | Yes |

### [IPTI] Inter-PAN transaction identifier

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| IPTI1 | Does the device transmitting a scan request inter-PAN command frame preserve the same transaction identifier within the same inter-PAN transaction? | [R3]/8.1.11 | M | Yes |
| IPTI2 | Does the device receiving a scan request inter-PAN command frame reuse the same transaction identifier in all responses within the same inter-PAN transaction? | [R3]/8.1.11 | M | Yes |

### Commissioning scenarios

There are no PICS requirements for this section.

## ZigBee-pro stack requirements

### [INS] Initialization NIB settings

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| INS1 | Does the device set *nwkUseMulticast* to FALSE? | [R3]/8.2.1 | M | Yes |

### [EDRJ] End-device rejoining

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| EDRJ1 | If an end device has lost communication with its parent does it attempt to poll at most *aplcMaxLostParentRetryAttempts* times? | [R3]/8.2.2 | FDT3: M | Yes |
| EDRJ2 | If the poll is unsuccessful, does the end device perform a network scan on the primary channels and, if *apsTrustCenterAddress* is not equal to 0xffffffffffffffff, also on the secondary channels for a new parent. | /8.2.2 | FDT3: M | Yes |
| EDRJ3 | After a successful rejoin, does the device transmit a **Device\_annce** command frame? | [R3]/8.2.2 | FDT3: M | Yes |

### [LSM] Link status messages

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| LSM1 | When a router device is non factory new does it set ***nwkLinkStatusPeriod*** to 0x0f? | [R3]/8.1.14 | FDT2: M | N/A |

### [ZDA] ZigBee device announcement

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| ZDA1 | Is the device capable of broadcasting a Device\_annce command frame after joining or rejoining a network? | [R3]/8.1.14 | FDT3: M | N/A |

### [EDP] End device polling

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| EDP1 | Does the end device poll its parent? | [R3]/8.2.5 | FDT3: O | YES |
| EDP2 | If the end device polls at a rate greater than *aplcMaxPollInterval* or does not poll at all, does it transmit a NWK rejoin command frame to its assumed parent before transmitting any application data? | /8.2.5 | FDT3: M | YES |
| EDP3 | If the NWK rejoin was successful, does the end device NOT transmit a device\_annce command frame? | /8.2.5 | EDP2: M | YES |
| EDP4 | If the NWK rejoin was not successful, does the end device continue to scan for suitable parents? | /8.2.5 | EDP2: M | YES |
| EDP5 | If the end device has been in contact with its parent within a time less than or equal to *aplcMaxPollInterval*, does it not attempt a rejoin before transmitting any application data. | /8.2.5 | EDT3: M | YES |

### [CTM] Child table maintenance

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| CTM1 | Are the contents of the child table preserved through a power cycle? | [R3]/8.2.6 | FDT2: M | N/A |
| CTM2 | If a parent device does not receive a message from one of its child devices within *aplcMinChildPersistenceTime*, does it remove that device from its child table? | [R3]/8.2.6 | FDT2: O | N/A |
| CTM3 | On receipt of a message from a device which is listed in its child table, does the parent device verify that this device is indeed one of its children, removing it from the child table if not? | [R3]/8.2.6 | FDT2: M | N/A |
| CTM4 | On receipt of a message from a device which is not listed in its child table, does the parent device transmit a NWK leave request to the device using its short network address? | [R3]/8.2.6 | FDT2: O | N/A |

## Device startup

### [EDSU] End-device

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| EDSU1 | If the device is an end device and is factory new, does it do nothing on start up? | [R3]/8.3.1 | FDT3: M | YES |
| EDSU2 | If the device is an end device and is not factory new, does it resume ZigBee functionality on start up based on information stored in NVRAM? | [R3]/8.3.1 | FDT3: M | YES |
| EDSU3 | If the device is an end device and is not factory new, does it transmit a **device\_annce** command after a successful network rejoin? | [R3]/8.3.1 | FDT3: M | YES |

### [RSU] Router

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| RSU1 | If the device is a router and is factory new, does it do nothing on start up? | [R3]/8.3.2 | FDT2: M | N/A |
| RSU2 | If the device is a router and is not factory new, does it resume ZigBee functionality on start up based on information stored in NVRAM? | [R3]/8.3.2 | FDT2: M | N/A |
| RSU5 | If the device is a router and is not factory new, does it transmit a **device\_annce** command after a successful startup? | [R3]/8.3.2 | FDT2: M | N/A |

## [TC] Touchlink commissioning

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| TC1 | Is the device capable of initiating a touchlink operation? | [R3]/8.4.1.1 | AA1: M | Yes |

### [TDD] Device discovery

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| TDD1 | Is the device capable of carrying out a series of scan operations, first 5 times on a single channel, then once each on the remaining channels? | [R3]/8.4.1.1 | TC1: M | Yes |
| TDD2 | Is the device capable of being discovered by a scan operation? | [R3]/8.4.1.2 | M | Yes |
| TDD3 | Is the device capable of generating a broadcast **scan request** inter-PAN command frame at 0dBm, and waiting for a response? | [R3]/8.4.1.1 | TC1: M | Yes |
| TDD4 | Is the device capable of receiving a broadcast **scan request** inter-PAN command frame? | [R3]/8.4.1.2 | M | Yes |
| TDD5 | Is the device capable of generating a **scan response** inter-PAN command frame containing the RSSI correction factor, the device information table if it has only one sub-device, and the value of its nwkUpdateId attribute? | [R3]/8.4.1.2  [R3]/8.4.1.1  [R3]/8.6 | M | Yes |
| TDD6 | Does the device include in its **scan response** inter-PAN command frame the logical channel on which it is currently operating, and if not factory new, also its other network settings? | [R3]/8.4.1.2 | FDT2: M | Yes |
| TDD7 | Does the device include in its **scan response** inter-PAN command frame the logical channel on which it will operate after the scan? | [R3]/8.4.1.2 | FDT3: M | Yes |
| TDD8 | Is the device capable of receiving a **scan response** inter-PAN command frame, and discarding it if the RSSI is too low? | [R3]/8.4.1.2 | M | Yes |
| TDD9 | Is the device capable of gathering detailed device information by use of the **device information request** and **device information response** inter-PAN command frames? | [R3]/8.4.1.1 | TC1: O | No |
| TDD10 | Is the device capable of providing detailed device information by use of the **device information request** and **device information response** inter-PAN command frames? | [R3]/8.4.1.2 | M | Yes |

### [TI] Identify

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| TI1 | Following the touch-link operation, does the device select one or more devices for further processing? | [R3]/8.4.2 | TC1: M | Yes |
| TI2 | Is the device capable of requesting another device to identify itself using the **identify request** inter-PAN command frame? | [R3]/8.4.2.1 | O | Yes |
| TI3 | Is the device capable of identifying itself when requested to do so by reception of the **identify request** inter-PAN command frame? | [R3]/8.4.2.2 | M | Yes |

### [TSNN] Starting a new network

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| TSNN1 | Is the device capable of requesting another device to start a network using the **network start request** inter-PAN command frame? | [R3]/8.4.3.1 | TC1: M | Yes |
| TSNN2 | Is the device capable of receiving a **network start request** inter-PAN command frame and carrying out the steps required to start a network, taking account of whether or not it is factory new? | [R3]/8.4.3.2 | FDT2: M | Yes |
| TSNN3 | Is the device capable of generating a **network start response** inter-PAN command frame? | [R3]/8.4.3.2 | FDT2: M | Yes |
| TSNN4 | Is the device capable of receiving a **network start response** inter-PAN command frame and carrying out the steps required to join the new network? | [R3]/8.4.3.1 | TC1: M | Yes |

### [TJR] Joining routers to the network

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| TJR1 | Is the device capable of requesting another device to join a network using the **network join router request** inter-PAN command frame? | [R3]/8.4.4.1 | TC1: M | Yes |
| TJR2 | Is the device capable of adding the end device to its neighbor table, receiving a **network join router request** inter-PAN command frame and carrying out the steps required to join a network? | [R3]/8.4.4.2 | FDT2: M | Yes |
| TJR3 | Is the device capable of generating a **network join router response** inter-PAN command frame? | [R3]/8.4.4.2 | FDT2: M | Yes |
| TJR4 | Is the device capable of receiving a **network join router response** inter-PAN command? | [R3]/8.4.4.1 | TC1: M | Yes |

### [TJED] Joining end devices

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| TJED1 | Is the device capable of requesting a factory new end device to join a network using the **network join end device request** inter-PAN command frame? | [R3]/8.4.5.1 | TC1: M | Yes |
| TJED2 | Is the device capable of receiving a **network join end device request** inter-PAN command and carrying out the steps required to join a network? | [R3]/8.4.5.2 | FDT3: M | Yes |
| TJED3 | Is the device capable of generating a **network join end device response** inter-PAN command frame? | [R3]/8.4.5.2 | FDT3: M | Yes |
| TJED4 | Is the device capable of receiving a **network join end device response** inter-PAN command? | [R3]/8.4.5.1 | TC1: M | Yes |

### [TNU] Network update

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| TNU1 | If an initiator receives a **scan response** inter-PAN command frame from a device on its network with a lower network update identifier than its own, does it transmit a **network update request** inter-PAN command frame to the target? | [R3]/8.4.6.1 | O | No |
| TNU2 | If an initiator receives a **scan response** inter-PAN command frame from a device on its network with a higher network update identifier than its own, does it update its own value and its logical channel with those values received in the **scan response** inter-PAN command frame. | [R3]/8.4.6.1 | M | Yes |
| TNU3 | If after updating its network update identifier and logical channel, does the device attempt a network rejoin? | [R3]/8.4.6.1 | M | Yes |
| TNU4 | If a target receives a **network update request** inter-PAN command frame with a valid transaction identifier and a higher network update identifier than its own, does it update its own value and its logical channel with those values received in the **network update request** inter-PAN command frame. | [R3]/8.4.6.2 | M | Yes |

### [TRFN] Reset to factory new

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| TRFN1 | Is the device capable of requesting another device to reset to its factory new state using the **reset to factory new request** inter-PAN command frame? | [R3]/8.4.7.1 | O | No |
| TRFN2 | Is the device capable of resetting to its factory new state when requested to do so by reception of the **reset to factory new request** inter-PAN command frame with a valid transaction identifier? | [R3]/8.4.7.2 | M | Yes |

### [AA] Address assignment

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| AA1 | Is the device network address and group address assignment capable? | [R3]/8.4.8.1  [R3]/8.4.8.2 | O | N |
| AA2 | Does the device keep track of its current free network address range? | [R3]/8.4.8.1 | AA1: M | Yes |
| AA3 | When starting a network from factory new state, does the device assign itself network address 0x0001, and free network address range 0x0002-0xfff7? | [R3]/8.4.8.1 | AA1: M | Yes |
| AA4 | When it requests a device to join a network, is the device assigned the first free network address, and the network address range updated accordingly? | [R3]/8.4.8.1 | AA1: M | Yes |
| AA5 | If there are no free network addresses does the device not permit further devices to join the network? | [R3]/8.4.8.1 | AA1: M | Yes |
| AA6 | When a device requests a network assignment capable device to join the network, does it split its own network address range in two and assign the higher numbered range to the joining device, and update its own address range accordingly? | [R3]/8.4.8.1 | AA1: M | Yes |
| AA7 | When joining a network, does the device support being assigned a network address range? | [R3]/8.4.8.1 | AA1: M | Yes |
| AA8 | If splitting the range of free network addresses would result in there being less than an implementation specific threshold, then does the device not permit further address assignment capable devices to join the network? | [R3]/8.4.8.1 | AA1: M | Yes |
| AA9 | Is the device network address assignment capable but not group address assignment capable? | [R3]/8.4.8.2 | X | No |
| AA10 | Does the device keep track of its current free group address range? | [R3]/8.4.8.2 | AA1: M | Yes |
| AA11 | When starting a network from factory new state, does the device assign itself group addresses starting from 0x0001, and free group address range up to 0xfeff? | [R3]/8.4.8.2 | AA1: M | Yes |
| AA12 | When it requests a device to join a network, is the device assigned a range of free group address, and the group address range updated accordingly? | [R3]/8.4.8.2 | AA1: M | Yes |
| AA13 | When a device requests an address assignment capable device to join the network, does it, if possible, split its own group address range in two and assign the higher numbered range to the joining device, and update its own group address range accordingly? | [R3]/8.4.8.2 | AA1: M | Yes |
| AA14 | When joining a network, does the device support being assigned a group address range? | [R3]/8.4.8.2 | AA1: M | Yes |
| AA15 | If splitting the range of free group addresses would result in there being less than an implementation specific threshold, then does the device not permit further address assignment capable devices to join the network? | [R3]/8.4.8.2 | AA1: M | Yes |

## Classical ZigBee commissioning

### [NTLC] Classical ZigBee commissioning of ZLL devices

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| NTLC1 | If requested under application control, does the device perform a network discovery over the primary channel set? | [R3]/8.5.1 | FDT2: M FDT3: M | Yes |
| NTLC2 | If requested under application control, is the device able to join a suitable network on one of the primary channels? | [R3]/8.5.1 | FDT2: M FDT3: M | Yes |
| NTLC3 | If requested under application control and its primary network discovery failed, does the device perform a network discovery over the secondary channel set? | [R3]/8.5.1 | FDT2: M FDT3: M | Yes |
| NTLC4 | If requested under application control, is the device able to join a suitable network on one of the secondary channels? | [R3]/8.5.1 | FDT2: M FDT3: M | Yes |

### [NTNZD2ZR] Classical ZigBee commissioning of a non-ZLL device to a ZLL router in case there is no trust center

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| NTNZD2ZR1 | If the device is a router, when requested under application control, does the device enable its permit joining flag and receiver for a predetermined period, allowing non-ZLL devices to join? | [R3]/8.5.2 | FDT2: M | N/A |
| NTNZD2ZR2 | If a non-ZLL device requests to join the ZLL router (as above), does the ZLL router assign an address to the new device using classical ZigBee stochastic addressing. | [R3]/8.5.2 | FDT2: M | N/A |

### [NTT2NZN] Touchlinking devices on non-ZLL networks

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| NTT2NZN1 | Can a factory new device initiate a touchlink operation to a ZLL device on a non-ZLL network? | [R3]/8.5.3 | FDT3: M | Yes |
| NTT2NZN2 | Can a device on a non-ZLL network touchlink to another device on the same network? | [R3]/8.5.3 | FDT3: M | Yes |
| NTT2NZN3 | Does a device on a non-ZLL network ignore scan response command frames from factory new devices or devices connected to a different network? | [R3]/8.5.3 | FDT3: M | Yes |

## [FA] Frequency agility

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| FA1 | Does the device support instigation of the channel change mechanism? | [R3]/8.6 | O | No |
| FA2 | Does the device support transmission of an Mgmt\_NWK\_Update\_req command frame broadcast to all RxOnWhenIdle devices? | [R3]/8.6 | FA1: M | N/A |
| FA3 | On receipt of an Mgmt\_NWK\_Update\_req command frame, does the device update its NIB and execute the channel change procedure? | [R3]/8.6 | FDT2: M | N/A |
| FA4 | Following a channel change, does the device rejoin? | [R3]/8.6 | FDT3: M | N/A |
| FA5 | In that case that a router misses a channel change, does the device support use of the touch-link procedure for bringing a router back into the network? | [R3]/8.6 | O | No |
| FA6 | Does the device support transmission of an inter-PAN network update request command frame unicast to a router it wishes to bring back into the network? | [R3]/8.6 | FA5: M | N/A |
| FA7 | If a device detects a router reporting a nwkUpdateId attribute value newer than its own, does it update its network settings according to the values in the scan response command frame, and execute a rejoin procedure? | [R3]/8.6 | TC1: M | N/A |

## [S] Security

| Item number | Item description | Reference | Status | Support |
| --- | --- | --- | --- | --- |
| S1 | Does the device use ZigBee network layer security? | [R3]/8.7 | M | Yes |
| S2 | Does the device randomly generate the network key for use by the network when initiating starting of a new network? | [R3]/8.7 | TC1: M | Yes |
| S3 | Does the device transmit the network key encrypted as part of the start and join commands? | [R3]/8.7.1 | TC1: M | Yes |
| S4 | Is the nwkSecurityLevel NIB attribute set to 0x05? (use data encryption and frame integrity) | [R3]/8.7.2 | M | Yes |
| S5 | Is the nwkAllFresh NIB attribute set to True? (check frame counter) | [R3]/8.7.2 | M | Yes |
| S6 | Is the nwkSecureAllFrames NIB attribute set to True? (only accept secured frames) | [R3]/8.7.2 | M | Yes |
| S7 | Does the device use the ZSL Certification key for certification testing? | [R3]/8.7.4.1.2 | M | Yes |
| S8 | Does the device use the ZSL Master key in commercial products, and not use the ZSL Certification key in commercial products? | [R3]/8.7.4.1.1 | M | Yes |