ZigBee ZID Profile: PICS Proforma

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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 ZID profile.
Keywords	ZID, HID, PICS, Profile testing.

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1 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).

1.1 Scope

This document provides the protocol implementation conformance statement (PICS) proforma for the ZigBee ZID profile [R3] in compliance with the relevant requirements, and in accordance with the relevant guidance.

1.2 Purpose

The supplier of a protocol implementation claiming to conform to the ZigBee ZID 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.

1.3 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.

1.4 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.

PICS which conform 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.

1.5 PICS proforma tables

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

2 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.

2.1 ZigBee Alliance documents

[R1] ZigBee document 11187: GDP Specification

[R2] ZigBee document 10-5557: ZID Profile Specification

[R3] ZigBee document 10-5933: ZigBee ZID Profile Interoperability Specification

[R4] ZigBee document 08-0002: RF4CE Specification

3 Implementation declaration

3.1 Identification of the implementation

Implementation under test (IUT) identification

IUT name: Greenpeak-RF4CE-ZID

IUT version: 1.5

System under test (SUT) identification

SUT name: Greenpeak-RF4CE-ZID

Software Version: 1.5

Hardware Version: GP5X0/1

Operating system (optional):

Product supplier

Name: Greenpeak Technologies BV

Address: Vinkenburgstraat 2A
3512AB Utrecht
The Netherlands

Telephone number: +32 52 45 87 26

Facsimile number: _____

Email address: Bram.Van.den.Bosch@greenpeak.com

Additional information: _____

Client

Name: Greenpeak Technologies BV
Address: Vinkenburgstraat 2A
3512AB Utrecht
The Netherlands
Telephone number: +32 52 45 87 26
Facsimile number: _____
Email address: Bram.Van.den.Bosch@greenpeak.com
Additional information: _____

PICS contact person

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Address: Vinkenburgstraat 2A
3512AB Utrecht
The Netherlands
Telephone number: +32 52 45 87 26
Facsimile number: _____
Email address: Bram.Van.den.Bosch@greenpeak.com
Additional information: _____

3.2 Identification of the protocol

This PICS proforma applies to ZigBee ZID profile specification.

3.3 Global statement of conformance

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

Application Profile: ZigBee ZID – 105557

(•) Yes

( ) No

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

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

4 General

4.1 ZigBee Device Types

Item number	Item description	Reference	Status	Support
FDT1	Is this a ZigBee HID Adaptor?	[R1]/ Section 2	O.1	Yes
FDT2	Is this a ZigBee HID Class Device?	[R1]/Section 2	O.1	Yes

4.2 Boot Protocol

Item number	Item description	Reference	Status	Support
BPT1	Is this a ZigBee HID Adaptor handles the boot mechanism?	[R1]/ Section 5.1.4	M	Untested
BPT2	Is this a ZigBee HID Class Device support the boot protocol?	[R1]/Section 5.1.4	O	Untested

4.3 Fragmentation

Item number	Item description	Reference	Status	Support
BFT1	Does the ZigBee HID adaptor receives and defragment the non standard descriptor component?	[R1]/ Section 5.1.5	O	Untested
BFT2	Does the ZigBee HID Class device properly send the non standard descriptor component using the fragmentation mechanism?	[R1]/Section 5.1.5	O	Untested

4.4 Security

Item number	Item description	Reference	Status	Support
ST1	Is this a ZigBee HID Adaptor that transmits the command frames security enabled?	[R1]/ Section 5.4.1	M	Yes
ST2	Is this a ZigBee HID Class Device that transmits the command frames security enabled?	[R1]/ Section 5.4.1	M	Yes
ST5	Is this a ZigBee HID Adaptor that transmits the Report Data command frames security enabled?	[R1]/ Section 5.4.2	M	Yes
ST6	Is this a ZigBee HID Class Device that transmits the Report Data command frames security enabled?	[R1]/ Section 5.4.2	M	Yes

5 HID Adaptor

5.1 GDP Command Code

Item number	Item description	Reference	Status	Support
GCCA1	Does this HID Adaptor generates and Transmits the **Generic response** command frame?	[R1]/ Section 5.1	M	Yes
GCCA2	Does this HID Adaptor generates and Transmits the **Get Attributes** command frame?	[R1]/ Section 5.4	M	Untested
GCCA3	Does this HID Adaptor generates and Transmits the **Get Attributes Response** command frame?	[R1]/ Section 5.5	M	Yes
GCCA4	Does this HID Adaptor support reception of the **Generic response** command frame?	[R1]/ Section 5.1	M	Yes
GCCA5	Does this HID Adaptor support reception of the **Get Attributes** command frame?	[R1]/ Section 5.4	M	Yes
GCCA6	Does this HID Adaptor support reception of the **Get Attributes response** command frame?	[R1]/ Section 5.5	M	Untested
GCCA7	Does this HID Adaptor support reception of the **Configuration complete** command frame?	[R1]/ Section 5.2	M	Yes
GCCA8	Does this HID Adaptor support reception of the **Heartbeat** command frame?	[R1]/ Section 5.3	M	Untested
GCCA9	Does this HID Adaptor support reception of the **Push Attributes** command frame?	[R1]/ Section 5.6	M	Yes

5.2 ZID Command Code

Item number	Item description	Reference	Status	Support
ZCCA1	Does this HID Adaptor generates and Transmits the **Get Report** command frame?	[R1]/ Section 3.2	M	Yes
ZCCA2	Does this HID Adaptor generates and Transmits the **Report Data** command frame?	[R1]/ Section 3.3	M	Untested

Item number	Item description	Reference	Status	Support
ZCCA3	Does this HID Adaptor generates and Transmits the **Set Report** command frame?	[R1]/ Section 3.4	O	Yes
ZCCA4	Does this HID Adaptor support reception of the **Report Data** command frame?	[R1]/ Section 3.3	M	Yes

5.3 ZID Attributes

Item number	Item description	Reference	Status	Support
ZAA1	Does this HID Adaptor support the **aplKeyExchangeTransferCount** attribute?	[R1]/ Section 4.2.1	O	Yes
ZAA2	Does this HID Adaptor support the **aplZIDProfileVersion** attribute?	[R1]/ Section 4.2.2	M	Yes
ZAA3	Does this HID Adaptor support the **aplHIDParserVersion** attribute?	[R1]/ Section 4.2.5	M	Yes
ZAA4	Does this HID Adaptor support the **aplHIDCountryCode** attribute?	[R1]/ Section 4.2.8	M	Yes
ZAA5	Does this HID Adaptor support the **aplHIDDeviceReleaseNumber** attribute?	[R1]/ Section 4.2.9	M	Yes
ZAA6	Does this HID Adaptor support the **aplHIDVendorId** attribute?	[R1]/ Section 4.2.10	M	Yes
ZAA7	Does this HID Adaptor support the **aplHIDProductId** attribute?	[R1]/ Section 4.2.11	M	Yes

5.4 Transmission Model

Item number	Item description	Reference	Status	Support
ZTA1	Does this HID Adaptor support the reception of packets over the **Control Pipe**?	[R1]/ Section 5.1.2.1	M	Yes

Item number	Item description	Reference	Status	Support
ZTA2	Does this HID Adaptor support the transmission of packets over the **Control Pipe**?	[R1]/ Section 5.1.2.1	M	Yes
ZTA3	Does this HID Adaptor support the reception of the packets from the HID Class Device in the **Interrupt Pipe**?	[R1]/ Section 5.1.2.2	M	Yes
ZTA4	Does this HID Adaptor support the transmission of low latency or asynchronous reports to the HID Class Device over the **Interrupt Pipe**?	[R1]/ Section 5.1.2.2	O	Untested

5.5 Proxy Table

Item number	Item description	Reference	Status	Support
PTA1	Does this HID Adaptor store the **aplHIDParserVersion** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA2	Does this HID Adaptor store the **aplHIDDeviceSubclass** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA3	Does this HID Adaptor store the **aplHIDProtocolCode** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA4	Does this HID Adaptor store the **aplHIDCountryCode** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA5	Does this HID Adaptor store the **aplHIDDeviceReleaseNumber** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA6	Does this HID Adaptor store the **aplHIDVendorId** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes

Item number	Item description	Reference	Status	Support
PTA7	Does this HID Adaptor store the **aplHIDProductId** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA8	Does this HID Adaptor store the **aplHIDNumEndpoints** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA9	Does this HID Adaptor store the **aplHIDPollInterval** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA10	Does this HID Adaptor store the **aplHIDNumStdDescComps** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA12	Does this HID Adaptor store the **aplHIDStdDescCompsList** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA13	Does this HID Adaptor store the **aplHIDNumNonStdDescComps** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA14	Does this HID Adaptor store the **aplHIDNonStdDescCompSpec** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA15	Does this HID Adaptor store the **aplHIDNonStdDescCompSpec-i** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA16	Does this HID Adaptor store the **aplHIDNumNullReports** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA17	Does this HID Adaptor store the **aplDeviceIdleRate** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes
PTA18	Does this HID Adaptor store the **aplCurrentProtocol** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes

Item number	Item description	Reference	Status	Support
PTA19	Does this HID Adaptor store the **aplNullReportSpecList** attribute values in the proxy table?	[R1]/ Section 5.2.1	M	Yes

6 HID Class Device

6.1 GDP Command Code

Item number	Item description	Reference	Status	Support
GCCD1	Does this HID Class Device generates and Transmits the **Generic response** command frame?	[R1]/ Section 5.1	M	Yes
GCCD2	Does this HID Class Device generates and Transmits the **Configuration Complete** command frame?	[R1]/ Section 5.2	M	Yes
GCCD3	Does this HID Class Device generates and Transmits the **Heartbeat** command frame?	[R1]/ Section 5.3	O	Untested
GCCD4	Does this HID Class Device generates and Transmits the **Get Attributes** command frame?	[R1]/ Section 5.4	M	Yes
GCCD5	Does this HID Class Device generates and Transmits the **Get Attributes Response** command frame?	[R1]/ Section 5.5	M	Untested
GCCD6	Does this HID Class Device generates and Transmits the **Push Attributes** command frame?	[R1]/ Section 5.6	M	Yes
GCCD7	Does this HID Adaptor support reception of the **Generic response** command frame?	[R1]/ Section 5.1	M	Yes
GCCD8	Does this HID Adaptor support reception of the **Get Attributes** command frame?	[R1]/ Section 5.4	M	Untested
GCCD9	Does this HID Adaptor support reception of the **Get Attributes response** command frame?	[R1]/ Section 5.5	M	Yes

6.2 ZID Command Code

Item number	Item description	Reference	Status	Support
ZCCD1	Does this HID Class Device generates and Transmits the **Report Data** command frame?	[R1]/ Section 3.3	M	Yes

Item number	Item description	Reference	Status	Support
ZCCD2	Does this HID Class device support reception of the **Get Report** command frame?	[R1]/ Section 3.2	M	Yes
ZCCD3	Does this HID Class device support reception of the **Report Data** command frame?	[R1]/ Section 3.3	M	Untested
ZCCD4	Does this HID Class device support reception of the **Set Report** command frame?	[R1]/ Section 3.4	O	Yes

6.3 ZID Attributes

Item number	Item description	Reference	Status	Support
ZAD1	Does this HID Class Device support the **aplKeyExchangeTransferCount** attribute?	[R1]/ Section 4.2.1	M	Yes
ZAD2	Does this HID Class Device support the **aplZIDProfileVersion** attribute?	[R1]/ Section 4.2.2	M	Yes
ZAD3	Does this HID Class Device support the **aplIntPipeUnsafeTxWindowTime** attribute?	[R1]/ Section 4.2.3	M	Yes
ZAD4	Does this HID Class Device support the **aplReportRepeatInterval** attribute?	[R1]/ Section 4.2.4	M	Yes
ZAD5	Does this HID Class Device support the **aplHIDParserVersion** attribute?	[R1]/ Section 4.2.5	M	Yes
ZAD6	Does this HID Class Device support the **aplHIDDeviceSubclass** attribute?	[R1]/ Section 4.2.6	M	Yes
ZAD7	Does this HID Class Device support the **aplHIDProtocolCode** attribute?	[R1]/ Section 4.2.7	M	Yes
ZAD8	Does this HID Class Device support the **aplHIDCountryCode** attribute?	[R1]/ Section 4.2.8	M	Yes
ZAD9	Does this HID Class Device support the **aplHIDDeviceReleaseNumber** attribute?	[R1]/ Section 4.2.9	M	Yes

Item number	Item description	Reference	Status	Support
ZAD10	Does this HID Class Device support the **aplHIDVendorId** attribute?	[R1]/ Section 4.2.10	M	Yes
ZAD11	Does this HID Class Device support the **aplHIDProductId** attribute?	[R1]/ Section 4.2.11	M	Yes
ZAD12	Does this HID Class Device support the **aplHIDNumEndpoints** attribute?	[R1]/ Section 4.2.12	M	Yes
ZAD13	Does this HID Class Device support the **aplHIDPollInterval** attribute?	[R1]/ Section 4.2.13	M	Yes
ZAD14	Does this HID Class Device support the **aplHIDNumStdDescComps** attribute?	[R1]/ Section 4.2.14	M	Yes
ZAD15	Does this HID Class Device support the **aplHIDStdDescCompsList** attribute?	[R1]/ Section 4.2.15	O	Yes
ZAD16	Does this HID Class Device support the **aplHIDNumNullReports** attribute?	[R1]/ Section 4.2.16	M	Yes
ZAD17	Does this HID Class Device support the **aplHIDNumNonStdDescComps** attribute?	[R1]/ Section 4.2.17	M	Yes
ZAD18	Does this HID Class Device support the **aplHIDNonStdDescCompSpec-i** attribute?	[R1]/ Section 4.2.11	O	Yes

6.4 Transmission Model

Item number	Item description	Reference	Status	Support
ZTD1	Does this HID Class Device support the transmission of application data over a **Control Pipe**?	[R1]/ Section 5.1.2.1	M	Yes
ZTD2	Does this HID Class Device support the Transmission of the information to the HID Adaptor in the **Interrupt Pipe**?	[R1]/ Section 5.1.2.2	M	Yes
ZTD3	Does this HID Class Device support the reception of low latency or asynchronous reports from the HID Adaptor over the **Interrupt Pipe**?	[R1]/ Section 5.1.2.2	M	Untested