



**SmartM2M;
Smart Appliances Ontology and Communication
Framework Testing;
Part 2: Protocol Implementation
Conformance Statement (PICS) pro forma**

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650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Smart Machine-to-Machine communications (SmartM2M).

The present document is part 2 of a multi-part deliverable covering Conformance test specifications for Smart Appliances Ontology and Communication Framework Testing as identified below:

Part 1: "Testing methodology";

Part 2: "Protocol Implementation Conformance Statement (PICS) pro forma";

Part 3: "Test Suite Structure and Test Purposes (TSS & TP)";

Part 4: "Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)".

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

1 Scope

The present document provides the Protocol Implementation Conformance Statement (PICS) pro forma for Conformance test specifications for Smart Appliances testing as defined in ETSI TS 103 268-1 [6] and ETSI TS 118 115 [8] in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-7 [7].

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://docbox.etsi.org/Reference>.

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The following referenced documents are necessary for the application of the present document.

- [1] ETSI TS 103 264: "SmartM2M; Smart Appliances; Reference Ontology and oneM2M Mapping".
- [2] ETSI TS 103 267: "SmartM2M; Smart Appliances; Communication Framework".
- [3] ETSI TS 118 101: "oneM2M; Functional Architecture (oneM2M TS-0001)".
- [4] ETSI TS 118 104: "oneM2M; Service Layer Core Protocol Specification (oneM2M TS-0004)".
- [5] ETSI TS 118 112: "oneM2M; Base Ontology (oneM2M TS-0012)".
- [6] ETSI TS 103 268-1: "SmartM2M; Smart Appliances Ontology and Communication Framework Testing; Part 1: Testing methodology".
- [7] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".
- [8] ETSI TS 118 115: "oneM2M; Testing Framework (oneM2M TS-0015)".
- [9] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ETSI TS 103 268-1 [6], ISO/IEC 9646-1 [9] and ISO/IEC 9646-7 [7] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ETSI TS 103 268-1 [6], ETSI TS 103 264 [1], ETSI TS 118 112 [5] and the following apply:

API	Application Programming Interface
EUT	Equipment Under Test
IFS	Interoperable Features Statement
IUT	Implementation Under Test
IWF	InterWorking Function
PICS	Protocol Implementation Conformance Statement
QE	Qualified Equipment
RP	Reference Point
SAP	Smart Appliance
SUT	System Under Test
TP	Test Purpose
TSS	Test Suite Structure

4 Conformance requirement concerning PICS

If it claims to conform to the present document, the actual PICS pro forma to be filled in by a supplier shall be technically equivalent to the text of the PICS pro forma given in annex A, and shall preserve the numbering, naming and ordering of the pro forma items.

An ICS which conforms to the present document shall be a conforming PICS pro forma completed in accordance with the instructions for completion given in clause A.1.

Annex A (normative): Smart Appliances Testing PICS Pro forma

A.0 Foreword

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the Smart Appliances PICS pro forma in this annex so that it can be used for its intended purposes and may further publish the completed Smart Appliances PICS.

A.1 Guidance for completing the ICS pro forma

A.1.1 Purposes and structure

The purpose of this ICS pro forma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in ETSI TS 118 101 [3] may provide information about the implementation in a standardized manner. The ICS pro forma is subdivided into clauses for the following categories of information:

- guidance for completing the ICS pro forma;
- identification of the implementation;
- identification of the ETSI TS 118 101 [3];
- global statement of conformance;
- ICS pro forma tables.

A.1.2 Abbreviations and conventions

The ICS pro forma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [7].

Item column

The item column contains a number which identifies the item in the table.

Item description column

The item description column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?".

Reference column

The reference column gives reference to the relevant clauses in core specifications.

Status column

The various status used in this annex are in accordance with the rules in table A.1.2-1.

Table A.1.2-1: Key to status codes

Status code	Status name	Meaning
m	mandatory	The capability shall be supported. It is a static view of the fact that the conformance requirements related to the capability in the reference specification are mandatory requirements. This does not mean that a given behaviour shall always be observed (this would be a dynamic view), but that it shall be observed when the implementation is placed in conditions where the conformance requirements from the reference specification compel it to do so. For instance, if the support for a parameter in a sent PDU is mandatory, it does not mean that it shall always be present, but that it shall be present according to the description of the behaviour in the reference specification (dynamic conformance requirement).
o	optional	The capability may or may not be supported. It is an implementation choice.
n/a	not applicable	It is impossible to use the capability. No answer in the support column is required.
c.<integer>	conditional	The requirement on the capability ("m", "o", "n/a") depends on the support of other optional or conditional items. <integer> is the identifier of the conditional expression.
o.<integer>	qualified optional	For mutually exclusive or selectable options from a set. <integer> is the identifier of the group of options, and the logic of selection of the options.

Mnemonic column

The Mnemonic column contains mnemonic identifiers for each item.

Support column

The support column shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7 [7], are used for the support column:

- Y or y supported by the implementation
- N or n not supported by the implementation
- N/A, n/a or - no answer required (allowed only if the status is N/A, directly or after evaluation of a conditional status)

References to items

For each possible item answer (answer in the support column) within the ICS pro forma there exists a unique reference, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table.

EXAMPLE 1: A.5/4 is the reference to the answer of item 4 in table A.5.

EXAMPLE 2: A.6/3b is the reference to the second answer (i.e. in the second support column) of item 3 in table 6 of annex A.

Values allowed column

The values allowed column contains the type, the list, the range, or the length of values allowed. The following notations are used:

- range of values: <min value> .. <max value>
example: 5 .. 20
- list of values: <value1>, <value2>, ..., <valueN>
example: 2,4,6,8,9
example: '1101'B, '1011'B, '1111'B
example: '0A'H, '34'H, '2F'H
- list of named values: <name1>(<val1>), <name2>(<val2>), ..., <nameN>(<valN>)
example: reject(1), accept(2)
- length: size (<min size> .. <max size>)

example: size (1 .. 8)

Values supported column

The values supported column shall be filled in by the supplier of the implementation. In this column, the values or the ranges of values supported by the implementation shall be indicated.

Prerequisite line

A prerequisite line takes the form: Prerequisite: <predicate>.

A prerequisite line after a clause or table title indicates that the whole clause or the whole table is not required to be completed if the predicate is FALSE.

A.1.3 Instructions for completing the ICS pro forma

The supplier of the implementation shall complete the ICS pro forma in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the support or supported column boxes provided, using the notation described in clause A.1.2.

If necessary, the supplier may provide additional comments in space at the bottom of the tables or separately.

More detailed instructions are given at the beginning of the different clauses of the ICS pro forma.

A.2 Identification of the implementation

A.2.1 Introduction

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the ICS should be named as the contact person.

A.2.2 Date of the statement

.....

A.2.3 Implementation Under Test (IUT) identification

IUT name:

.....

.....

IUT version:

.....

.....