

# Smart Ticketing Alliance - Certification Working Group



## STA Contactless Interface Certification for Public Transport Products Implementation Conformance Statement (ICS) for PICC

Author:

Editor:

The logo for the Smart Ticketing Alliance, identical to the one at the top of the page.	The logo for Nextendis, featuring a blue square icon with a white checkmark, followed by the text "NEXTENDIS" in a bold, blue, sans-serif font, and "CONSEIL EN INNOVATION" in a smaller, grey, sans-serif font below it.
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## REVISION LIST

Version	Date	Modifications
V1.0	13/12/2017	First public version for PICC and PCD
V2.0	06/07/2018	Separation in two different documents: one for PCD and this document for PICC Version applicable for PICC testing according to CEN/TS 16794:2017
V2.1	16/11/2018	Editorial changes and correction of some mistakes
V2.2	16/06/2020	Editorial update on the item [PICC3.1] The information about a previous certification shall be published in the certification letter.



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## 1 Scope

This document contains the Implementation Conformance Statement (ICS) for STA Contactless Interface Certification for Public Transport Products and is intended for Vendors submitting a PT object for certification.

**Please note that ICS data with (\*) will be published in the certification letter issued by the STA Certification body.**



## 2 Certification Stakeholders

### a. Vendor

Vendor identification	
<b>Company name:</b>	Click here to enter text.
Main contact	
<b>Contact name:</b>	Click here to enter text.
<b>Address:</b>	Click here to enter text.
<b>Telephone:</b>	Click here to enter text.
<b>Email address:</b>	Click here to enter text.

### b. Test Laboratory

Test Laboratory identification	
<b>Company name:</b>	Click here to enter text.
Main contact	
<b>Contact name:</b>	Click here to enter text.
<b>Address:</b>	Click here to enter text.
<b>Telephone:</b>	Click here to enter text.
<b>Email address:</b>	Click here to enter text.

### c. Certification Body

Certification Body identification	
<b>Company name:</b>	Click here to enter text.
Main contact	
<b>Contact name:</b>	Click here to enter text.
<b>Address:</b>	Click here to enter text.
<b>Telephone:</b>	Click here to enter text.
<b>Email address:</b>	Click here to enter text.



### 3 ICS for PT objects - PICC

This clause sets out the information that needs to be provided by the PT object Vendor when filing a product validation request.

This ICS references the technical characteristics for PICC defined in Clause 9.2.4 of CEN/TS 16794-1:2017.

#### a. PICC Product Description

[PICC1] Administrative data

[PICC1.1] (\*) Brand name: [Click here to enter text.](#)

[PICC1.2] (\*) Trade name: [Click here to enter text.](#)

[PICC1.3a] (\*) Hardware version: [Click here to enter text.](#)

[PICC1.3b] (\*) Software version: [Click here to enter text.](#)

[PICC1.4] (\*) PICC features ISO/IEC 7816 contact interface (dual):  Yes  No

[PICC1.5] (\*) IC manufacturer: [Click here to enter text.](#)

[PICC1.6] (\*) IC reference / size: [Click here to enter text.](#)

[PICC1.7] Contactless antenna manufacturer: [Click here to enter text.](#)

[PICC1.8] Contactless antenna model reference: [Click here to enter text.](#)

[PICC1.9] Type of card body structure: [Click here to enter text.](#)

[PICC1.10] Card body or PICC structure manufacturing site: [Click here to enter text.](#)

[PICC1.11] IC embedding site (for dual PICC card): [Click here to enter text.](#)

The PICC is based on a STA certified PICC (\*):  Yes  No

If yes STA PICC certificate number (\*): [Click here to enter text.](#)

If yes rationale to justify the delta-certification (\*): [Click here to enter text.](#)

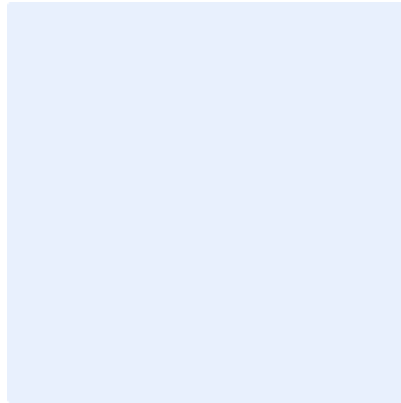
Additional information concerning product description: [Click here to enter text.](#)



## b. PICC General Technical Characteristics

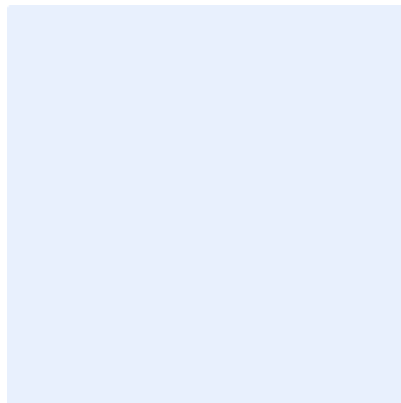
[PICC2] General technical characteristics

[PICC2.1] Antenna diagram and position on the PT object under test:



[Click here to enter text.](#)

[PICC2.2] (\*) Reference of PICC Zero Point (target ID-marked on sample or photo or diagram):



[Click here to enter text.](#)

[PICC2.3] (\*) Operational temperature range supported:

- Class A (Ambient)
- Class I (-10 °C to + 50 °C)

[PICC2.4] (\*) Antenna class according to ISO/IEC 14443:

- Unclassified
- "Class 1"
- "Class 2"
- "Class 3"

Additional information concerning technical characteristics: [Click here to enter text.](#)



### c. PICC Supported Options

#### [PICC3] Protocol characteristics

[PICC3.1] (\*) Supported communication signal interface(s) and protocol(s): Type A  Type B   
Other: [Click here to enter text.](#)

#### [PICC4] Type A (where applicable)

[PICC4.1] (\*) PCD -> PICC bit rates supported:  fc/128 (~106 kbit/s)  
Other: [Click here to enter text.](#)

[PICC4.2] (\*) PICC -> PCD bit rates supported:  fc/128 (~106 kbit/s)  
Other: [Click here to enter text.](#)

[PICC4.3] (\*) Only symmetrical bit rates supported:  Yes  No

[PICC4.4] UID:  Single size (4 bytes)  Double Size (7 bytes)  
 Triple size (10 bytes)

[PICC4.5] (\*) UID value:  Fixed number  Random number

[PICC4.6] FWI: [Click here to enter text.](#)

[PICC4.7] SFGI: [Click here to enter text.](#)

[PICC4.8] FSCI: [Click here to enter text.](#)

[PICC4.9] CID support:  Yes  No

[PICC4.10] NAD support:  Yes  No

[PICC4.11] (\*) S(PARAMETERS) support:  Yes  No

#### [PICC5] Type B (where applicable)

[PICC5.1] (\*) PCD -> PICC bit rates supported:  fc/128 (~106 kbit/s)  
Other: [Click here to enter text.](#)

[PICC5.2] (\*) PICC -> PCD bit rates supported:  fc/128 (~106 kbit/s)  
Other: [Click here to enter text.](#)

[PICC5.3] (\*) Only symmetrical bit rates supported:  Yes  No

[PICC5.4] (\*) PUPI value:  Fixed number  Random number

[PICC5.5] FWI: [Click here to enter text.](#)

[PICC5.6] Maximum Frame Size Code in ATQB: [Click here to enter text.](#)

[PICC5.7] CID support:  Yes  No

[PICC5.8] NAD support:  Yes  No

[PICC5.9] (\*) Extended ATQB support:  Yes  No

If yes, SFGI: [Click here to enter text.](#)





[PICC5.10] (\*) S(PARAMETERS) support:  Yes  No

[PICC5.11] (\*) All AFIs are supported:  Yes  No

If not, indicate all supported AFI(s): [Click here to enter text.](#)

[PICC5.12] (\*) REQB/WUPB with N > 1 support:  Yes  No

Additional information concerning supported options: [Click here to enter text.](#)



#### d. PICC Test Parameters

[PICC6] Test parameters

[PICC6.1a] TEST\_COMMAND1 APDU definition (hexadecimal value): [Click here to enter text.](#)

[PICC6.1b] TEST\_COMMAND1 Answer to ADPU definition (hexadecimal value): [Click here to enter text.](#)

[PICC6.1c] Precondition sequence for TEST\_COMMAND1: [Click here to enter text.](#)

Is there a command which expects a response consisting of n chained I-blocks?  Yes  No

[PICC6.2a] TEST\_COMMAND2 APDU definition (hexadecimal value): [Click here to enter text.](#)

[PICC6.2b] TEST\_COMMAND2 Answer to ADPU definition (hexadecimal value): [Click here to enter text.](#)

[PICC6.2c] Precondition sequence for TEST\_COMMAND2: [Click here to enter text.](#)

Is there a command which needs more than FWT time for execution?  Yes  No

[PICC6.3a] TEST\_COMMAND3 APDU definition (hexadecimal value): [Click here to enter text.](#)

[PICC6.3b] TEST\_COMMAND3 Answer to ADPU definition (hexadecimal value): [Click here to enter text.](#)

[PICC6.3c] Precondition sequence for TEST\_COMMAND3: [Click here to enter text.](#)

[PICC6.4] TEST\_COMMAND\_SEQUENCE: [Click here to enter text.](#)

Additional information concerning test parameters: [Click here to enter text.](#)

NOTE Usages of TEST\_COMMAND1, TEST\_COMMAND2 and TEST\_COMMAND3 for PICC tests are defined in ISO/IEC 10373-6.

If the PICC requires additional sequences to be ready to accept TEST\_COMMAND1, TEST\_COMMAND2 or TEST\_COMMAND3, those sequences should be described in the precondition sequence fields.

A test sequence (list of APDUs) shall be defined. The list shall contain at minimum 2 APDUs with their respective expected answers.

Since the use of cryptographic functions have a strong influence on the power consumption of the carrier medium and therefore on the parameters of its contactless interface, testing of the RF interface shall be conducted with those cryptographic functions that are employed by the specific application-to-application transactions.



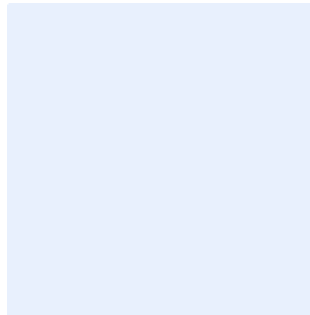
## 4 Status of the ICS

<b>Status:</b>	To be validated
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ICS number<sup>1</sup>: [Click here to enter text.](#)

Date of validation by the Certification Body: [Click here to select a date.](#)

Signature of the Certification Body's representative:



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<sup>1</sup> For Certification Body use