

First edition  
2009-11-15

**AMENDMENT 1**  
2019-02

---

---

**Intelligent transport systems —  
Automatic vehicle and equipment  
identification — Interfaces**

**AMENDMENT 1**

*Systèmes intelligents de transport — Identification automatique des  
véhicules et de leurs équipements — Interfaces*

*AMENDEMENT 1*

STANDARDSISO.COM : Click to view the full PDF of ISO 17264:2009/Amd 1:2019



Reference number  
ISO 17264:2009/Amd.1:2019(E)

© ISO 2019

STANDARDSISO.COM : Click to view the full PDF of ISO 17264:2009/Amd 1:2019



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

STANDARDSISO.COM : Click to view the full PDF of ISO 17264:2009/Amd 1:2019

# Intelligent transport systems — Automatic vehicle and equipment identification — Interfaces

## AMENDMENT 1

*Page 5, Table 1*

For the service primitive "Initialization", replace the required feature during transaction

"Optional"

by

"Conditional"

*Page 5, Table 2*

For the service primitive "Initialization", replace the required feature during transaction

"Optional"

by

"Conditional"

*Page 6, A.2.2*

Replace the two list items with:

- EID shall not be transmitted in the BST related to the AVI/AI application;
- no Parameter shall be transmitted in the BST related to the AVI/AEI application.

*Page 6, A.2.3*

Replace

"Each AVI/AEI application and corresponding contract shall"

by

"Each AVI/AEI application, and if applicable corresponding contract, shall"

*Page 7, A.2.3*

Replace in 2<sup>nd</sup> list item:

"the EID value may be unique"

by

"the EID value shall be unique"

Page 7, A.2.3

Replace the 2<sup>nd</sup> list item by

- the EID value shall be unique within the OBE throughout the complete DSRC session, and may be logically associated with the corresponding, e.g. "AVI-ContextMark" contained in the "Parameter";

Page 7, A.2.3

Replace the 3<sup>rd</sup> list item by

- the "Parameter" shall be of Container CHOICE type OCTET STRING and shall comprise the "AVI-ContextMark" as defined below, and may also be configured to carry additional data types in accordance with the value of aVIProfile in the AVI-ContextMark.

Page 7, A.2.3

Replace the definition of AVI-ContextMark by

```
AVI-ContextMark ::= SEQUENCE {
  aVIProfile      AVIProfile,
  profileVersion  INTEGER(0..255) -- Version control can be added
}
```

```
AVIProfile ::= INTEGER {
  attributeInTransactionPhaseOnly (0),
  iso14816CS1AttrPointer (1), --CS1 appended in VST
  iso14816CS2AttrPointer (2), --CS2 appended in VST
  iso14816CS3AttrPointer (3), --CS3 appended in VST
  iso14816CS4AttrPointer (4), --CS4 appended in VST
  iso14816CS5AttrPointer (5), --CS5 appended in VST
  iso14816CS6AttrPointer (6), --CS6 appended in VST
  iso14816CS7AttrPointer (7), --CS7 appended in VST
  iso14816CS8AttrPointer (8), --CS8 appended in VST
  reservedforFutureISOUse1 (9),
  reservedforFutureISOUse2 (10),
  reservedforFutureISOUse3 (11),
  enIso19061 (12) -- VST according to EN ISO 19061
  reservedforFutureISOUse5 (13),
  reservedforFutureISOUse6 (14),
  reservedforFutureISOUse7 (15),
  reservedforFutureISOUse8 (16),
  reservedforFutureISOUse9 (17),
  private18To65535 (18)
} (0..65535) --Private profiles
```

Page 7

Replace paragraph above NOTE 1 by:

The value of aVIProfile determines which data type is concatenated to the AVI-ContextMark in the VST "Parameter". The data type corresponds to an AVI attribute but does not included its attribute Id or container type.

Page 7

Replace NOTE 1 by

NOTE 1 If the aVIPProfile value is set to the values 1 to 8, ISO 14816 data types are included in the VST, if aVIPProfile value is set to 0, the attributes are sent in the data exchange phase. If the value of aVIPProfile is set to 12, the OBE is compliant to the definition of the ApplicationContextMark of ISO 19061.

*Page 8, Definition of VST*

Replace AVIPProfile by aVIPProfile.

*Page 8, Definition of VST*

Delete the sentence above NOTE 3.

*Page 10, Table A.1*

Replace

EuTwoOrThreeWheelCategory

by

EuTwoOrThreeWheelCategory  
(=EuVehicleCategoryL)

*Page 11*

Add below NOTE 2:

NOTE 3 Some of the attributes are elements of other attributes.

It is recommended not to use attribute 14 "Position" stand-alone.

NOTE 4 Attribute 31 "OfficialVehcileTestData" and other potentially large attributes require profiling. Profiling is not specified in this document.

*Page 11, A.5*

Replace the whole clause by

The AVI/AEI data types and associated coding related to the AVI/AEI action parameters, response parameters and attributes, are defined using the "Abstract Syntax Notation One" (ASN.1) technique according to ISO/IEC 8824-1:

- AVIAEINumberingAndDataStructures is ISO 14816;
- AVIAEIIntermodalNumberingAndDataStructures is ISO 17262;
- ElectronicRegistrationIdentificationVehicleDataModule is ISO 24534-3;
- ElectronicRegistrationIdentificationTransactionsModule is ISO 24534-4;
- EriSecretKeyTransactionsModule is ISO 24534-55.

In case the ASN.1 specification of AVIAEIDSRInterfaceModule given in this Annex is not compliant with illustrations or specifications provided elsewhere in this document, the specifications given in this Annex shall prevail.

## ISO 17264:2009/Amd.1:2019(E)

The ASN.1 module AVIAEIDSRInterfaceModule contained in this Annex will be published on <http://standards.iso.org/iso/17264>.

In all definitions

```
fill BIT STRING (SIZE(x))
```

each bit of the BIT STRING shall be set to the value '0'b.

```
AVIAEIDSRInterfaceModule {iso (1) standard(0) iso17264(17264) version1 (1)}
DEFINITIONS AUTOMATIC TAGS ::= BEGIN

IMPORTS
AviEriDateTime, CS1, CS2, CS3, CS4, CS5, CS7, CS8 FROM AVIAEINumberingAndDataStructures
{iso(1) standard(0) iso14816(14816) asnm1(1) version1(1)}

AccessControlStatus, AEIMessageType, CS9, DisplayMessageType, TransportComponentStatus,
MsgInfo, Position, ReaderLocation, TerminalMonitoringType, TransportObjectIdentifier,
TransportObjectMessageType, TransportObjectType, UNLocode FROM
AVIAEIIIntermodalNumberingAndDataStructures {iso(1) standard(0) iso17262(17262) version2
(2)}

VehicleId, RaSpecificVehicleId, EriData, Iso3833VehicleType, EuVehicleCategoryCode,
EuVehicleCategoryM, EuVehicleCategoryN, EuVehicleCategoryO,
EuVehicleCategoryL, EuroType, OfficialVehicleTestData, PowerSource FROM
ElectronicRegistrationIdentificationVehicleDataModule {iso(1) standard(0) iso24534 (24534)
vehicleData (1) version1 (1)}

EriRequestPdu, EriResponsePdu FROM ElectronicRegistrationIdentificationTransactionsModule
{iso(1) standard(0) iso24534 (24534) transactions (2) version1 (1)}

SecretKeyEriReqPdu, SecretKeyEriRspPdu FROM EriSecretKeyTransactionsModule {iso(1)
standard(0) iso24535 (24534) secretKeyTransactions (5) version1 (1)}
;
-- bug fixes done in Amd.1:2015

EuTwoOrThreeWheelCategory ::= EuVehicleCategoryL

CS6 ::= NULL -- dummy type

-- end of bug fixes

AVI-ContextMark ::= SEQUENCE {
aVIPProfile AVIProfile,
profileVersion INTEGER(0..255) -- Version control can be added
}

AVIProfile ::= INTEGER {
attributeInTransactionPhaseOnly (0),
iso14816CS1AttrPointer (1), --CS1 appended in VST
iso14816CS2AttrPointer (2), --CS2 appended in VST
iso14816CS3AttrPointer (3), --CS3 appended in VST
iso14816CS4AttrPointer (4), --CS4 appended in VST
iso14816CS5AttrPointer (5), --CS5 appended in VST
iso14816CS6AttrPointer (6), --CS6 appended in VST
iso14816CS7AttrPointer (7), --CS7 appended in VST
iso14816CS8AttrPointer (8), --CS8 appended in VST
-- reservedforFutureISOUse1 (9),
-- reservedforFutureISOUse2 (10),
-- reservedforFutureISOUse3 (11),
enIso19061 (12) -- VST according to EN ISO 19061
-- reservedforFutureISOUse5 (13),
-- reservedforFutureISOUse6 (14),
-- reservedforFutureISOUse7 (15),
-- reservedforFutureISOUse8 (16),
-- reservedforFutureISOUse9 (17),
-- private18To65535 (18)
} (0..65535) --Private profiles
```

-- The subsequent XXx definitions and the Container cause problems with future revisions.  
 --XX1 .. XX8 are reserved for future use

```
XX1 ::= NULL
XX2 ::= NULL
XX3 ::= NULL
XX4 ::= NULL
XX5 ::= NULL
XX6 ::= NULL
XX7 ::= NULL
XX8 ::= NULL
```

```
EmbeddedERIType{ERIType} ::= OCTET STRING (CONTAINING ERIType)
```

```
BooleanType ::= INTEGER{
false          (0),
true           (255)
} (0..255)
```

```
Container ::= SEQUENCE{
fill          BIT STRING (SIZE(1)),
-- '0': together with CHOICE tag and extension bit this is one octet
select       CHOICE {
int          [0] INTEGER,
bitstr       [1] BIT STRING, -- shall be an integer multiple of 8 bits.
octstr       [2] OCTET STRING (SIZE(0 .. 127, ...)),
unitstr      [3] UniversalString (SIZE(0 .. 127, ...)),
utctime      [4] AvEriDateTime,
real         [5] REAL,
bool         [6] BooleanType,
objid        [7] OBJECT IDENTIFIER,
sequ         [8] SEQUENCE SIZE(0 .. 127, ...) OF OCTET STRING,
null         [9] NULL,
xx1          [10] XX1,
xx2          [11] XX2,
xx3          [12] XX3,
xx4          [13] XX4,
xx5          [14] XX5,
xx6          [15] XX6,
xx7          [16] XX7,
xx8          [17] XX8,
avicm        [18] AVI-ContextMark,
cs1          [19] CS1,
cs2          [20] CS2,
cs3          [21] CS3,
cs4          [22] CS4,
cs5          [23] CS5,
cs6          [24] CS6,
cs7          [25] CS7,
cs8          [26] CS8,
cs9          [27] CS9,
acst         [28] AccessControlStatus,
amt          [29] AEIMessageType,
dmt          [30] DisplayMessageType,
tcs         [31] TransportComponentStatus,
mi          [32] MsgInfo,
pos         [33] Position,
rl          [34] ReaderLocation,
tmt          [35] TerminalMonitoringType,
tmi          [36] TransportObjectIdentifier,
tomt        [37] TransportObjectMessageType,
tot         [38] TransportObjectType,
unlocode     [39] UNLocode,
vi           [40] EmbeddedERIType{VehicleId},
rsvi        [41] RaSpecificVehicleId,
ed          [42] EmbeddedERIType{EriData},
ivt         [43] Iso3833VehicleType,
evcc        [44] EmbeddedERIType{EuVehicleCategoryCode},
evcm        [45] EmbeddedERIType{EuVehicleCategoryM},
evcn        [46] EmbeddedERIType{EuVehicleCategoryN},
evco        [47] EmbeddedERIType{EuVehicleCategoryO},
ettwc       [48] EmbeddedERIType{EuTwoOrThreeWheelCategory},
```