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Standards

Irish Standard
I.S. EN IEC 62541-8:2020

OPC Unified Architecture - Part 8: Data Access

I.S. EN IEC 62541-8:2020

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National Foreword

I.S. EN IEC 62541-8:2020 is the adopted Irish version of the European Document EN IEC 62541-8:2020, OPC Unified Architecture - Part 8: Data Access

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EN IEC 62541-8

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2020

ICS 35.100.05; 25.040.40

Supersedes EN 62541-8:2015 and all of its amendments
and corrigenda (if any)

English Version

OPC Unified Architecture - Part 8: Data Access (IEC 62541-8:2020)

Architecture unifiée OPC - Partie 8: Accès aux données
(IEC 62541-8:2020)

OPC Unified Architecture - Teil 8: Zugriff auf
Automatisierungsdaten
(IEC 62541-8:2020)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 62541-8:2020 (E)

European foreword

The text of document 65E/708/FDIS, future edition 3 of IEC 62541-8, prepared by SC 65E "Devices and integration in enterprise systems" of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62541-8:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-04-27
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Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|--|----------------|-------------|
| IEC/TR 62541-1 | - | OPC unified architecture - Part 1: Overview and concepts | CLC/TR 62541-1 | - |
| IEC 62541-3 | - | OPC Unified Architecture - Part 3: Address Space Model | - | - |
| IEC 62541-4 | - | OPC Unified Architecture - Part 4: Services | - | - |
| IEC 62541-5 | - | OPC Unified Architecture - Part 5: Information Model | - | - |
| UNECE 20 | - | Codes for Units of Measure Used in International Trade | - | - |

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IEC 62541-8

Edition 3.0 2020-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**OPC unified architecture –
Part 8: Data access**

**Architecture unifiée OPC –
Partie 8: Accès aux données**



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IEC 62541-8

Edition 3.0 2020-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**OPC unified architecture –
Part 8: Data access**

**Architecture unifiée OPC –
Partie 8: Accès aux données**

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OPC UNIFIED ARCHITECTURE –

Part 8: Data access

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International Standard IEC 62541-8 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This third edition cancels and replaces the second edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) added new VariableTypes for AnalogItems;
- b) added an Annex that specifies a recommended mapping of OPC UA Dataaccess to OPC COM DataAccess;
- c) changed the ambiguous description of "Bad_NotConnected";
- d) updated description for EUInformation to refer to latest revision of UNCEFACT units.

The text of this International Standard is based on the following documents:

| FDIS | Report on voting |
|--------------|------------------|
| 65E/708/FDIS | 65E/726/RVD |

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

Throughout this document and the other parts of the IEC 62541 series, certain document conventions are used:

Italics are used to denote a defined term or definition that appears in the "Terms and definition" clause in one of the parts of the IEC 62541 series.

Italics are also used to denote the name of a service input or output parameter or the name of a structure or element of a structure that are usually defined in tables.

The *italicized terms and names* are, with a few exceptions, written in camel-case (the practice of writing compound words or phrases in which the elements are joined without spaces, with each element's initial letter capitalized within the compound). For example, the defined term is *AddressSpace* instead of Address Space. This makes it easier to understand that there is a single definition for *AddressSpace*, not separate definitions for Address and Space.

A list of all parts of the IEC 62541 series, published under the general title *OPC Unified Architecture*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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OPC UNIFIED ARCHITECTURE –

Part 8: Data access

1 Scope

This part of IEC 62541 is part of the overall OPC Unified Architecture (OPC UA) standard series and defines the information model associated with Data Access (DA). It particularly includes additional *VariableTypes* and complementary descriptions of the *NodeClasses* and *Attributes* needed for Data Access, additional *Properties*, and other information and behaviour.

The complete address space model, including all *NodeClasses* and *Attributes* is specified in IEC 62541-3. The services to detect and access data are specified in IEC 62541-4.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC TR 62541-1, *OPC Unified Architecture – Part 1: Overview and Concepts*

IEC 62541-3, *OPC Unified Architecture – Part 3: Address Space Model*

IEC 62541-4, *OPC Unified Architecture – Part 4: Services*

IEC 62541-5, *OPC Unified Architecture – Part 5: Information Model*

UN/CEFACT: UNECE Recommendation N° 20, *Codes for Units of Measure Used in International Trade*, available at
https://www.unece.org/cefact/codesfortrade/codes_index.html

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC TR 62541-1, IEC 62541-3, and IEC 62541-4 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1.1

DatalItem

link to arbitrary, live automation data, that is, data that represents currently valid information

Note 1 to entry: Examples of such data are

- device data (such as temperature sensors),

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