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

INTERNATIONAL  
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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.

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| FDIS         | Report on voting |
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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](https://www.unece.org/cefact/codesfortrade/codes_index.html)

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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

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

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## COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

## ARCHITECTURE UNIFIÉE OPC –

## Partie 8: Accès aux données

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Cette troisième édition annule et remplace la deuxième édition parue en 2015. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) ajout de nouveaux VariableTypes pour les AnalogItems;
- b) ajout d'une annexe qui spécifie le mapping recommandé entre OPC UA DataAccess et OPC COM DataAccess;
- c) modification de la description ambiguë de "Bad\_NotConnected";

- d) mise à jour de la description de EUInformation pour renvoyer à la dernière révision des unités CEFAC-ONU.

Le texte de cette Norme internationale est issu des documents suivants:

| FDIS         | Rapport de vote |
|--------------|-----------------|
| 65E/708/FDIS | 65E/726/RVD     |

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette Norme internationale.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Dans l'ensemble du présent document et dans les autres parties de la série IEC 62541, certaines conventions de document sont utilisées:

Le format *italique* est utilisé pour mettre en évidence un terme défini ou une définition qui apparaît à l'article "Termes et définitions" dans l'une des parties de la série IEC 62541.

Le format *italique* est également utilisé pour mettre en évidence le nom d'un paramètre d'entrée ou de sortie de service, ou le nom d'une structure ou d'un élément de structure habituellement défini dans les tableaux.

Par ailleurs, les *termes* et les *noms en italique* sont, à quelques exceptions près, écrits en camel-case (pratique qui consiste à joindre, sans espace, les éléments des mots ou expressions composés, la première lettre de chaque élément étant en majuscule). Par exemple, le terme défini est *AddressSpace* et non Espace d'adressage. Cela permet de mieux comprendre qu'il existe une définition unique pour *AddressSpace*, et non deux définitions distinctes pour Espace et pour Adressage.

Une liste de toutes les parties de la série IEC 62541, publiées sous le titre général *Architecture unifiée OPC*, peut être consultée sur le site web de l'IEC.

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## ARCHITECTURE UNIFIÉE OPC –

### Partie 8: Accès aux données

#### 1 Domaine d'application

La présente partie de l'IEC 62541 fait partie intégrante de la série de normes générales sur l'architecture unifiée OPC (OPC UA). Elle définit le modèle d'information associé à l'Accès aux données (DA). Elle spécifie notamment des *VariableTypes* supplémentaires et fournit des descriptions complémentaires concernant les *NodeClasses* et *attributs* nécessaires pour l'Accès aux données, ainsi que des *propriétés* supplémentaires et d'autres paramètres relatifs aux informations et au comportement.

Le modèle d'espace d'adresses complet, comprenant toutes les *NodeClasses* et tous les *Attributs*, est spécifié dans l'IEC 62541-3. Les services de détection et d'accès aux données sont spécifiés dans l'IEC 62541-4.

#### 2 Références normatives

Les documents ci-après sont des références normatives indispensables à l'application du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC TR 62541-1, *OPC Unified Architecture – Part 1: Overview and Concepts* (disponible en anglais seulement)

IEC 62541-3, *Architecture unifiée OPC – Partie 3: Modèle d'espace d'adressage*

IEC 62541-4, *Architecture unifiée OPC – Partie 4: Services*

IEC 62541-5, *Architecture unifiée OPC – Partie 5: Modèle d'information*

CEFACT-ONU: Recommandation n° 20 de la CEE-ONU, *Codes for Units of Measure Used in International Trade*, disponible à l'adresse  
[https://www.unece.org/cefact/codesfortrade/codes\\_index.html](https://www.unece.org/cefact/codesfortrade/codes_index.html)