SS IEC 62541-10:2023
IEC 62541-10:2020, IDT
(ICS 25.040.40; 35.100.05)

SINGAPORE STANDARD

OPC unified architecture

– Part 10 : Programs

Singapore Standards Council

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OPC unified architecture

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National Foreword

This Singapore Standard was prepared by the Working Group on Open Platform Communications unified architecture set up by the Technical Committee on Smart Manufacturing under the purview of the Manufacturing Standards Committee.

This standard is a revision of SS IEC 62541-10:2019 and is an identical adoption of IEC 62541-10:2020, "OPC unified architecture – Part 10 : Programs", published by the International Electrotechnical Commission".

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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OPC unified architecture – Part 10: Programs

Architecture unifiée OPC – Partie 10: Programmes

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IEC 62541-10

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INTERNATIONAL STANDARD

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colour inside

OPC unified architecture – Part 10: Programs

Architecture unifiée OPC – Partie 10: Programmes

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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OPC UNIFIED ARCHITECTURE –

Part 10: Programs

FOREWORD

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IEC 62541-10 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 includes several clarifications and in addition the following significant technical changes with respect to the previous edition:

a) Changed ProgramType to ProgramStateMachineType. This is in line with the NodeSet (and thus implementations). In ProgramDiagnosticDataType: changed the definition of lastInputArguments and lastOutputArguments and added two additional fields for the argument values. Also changed StatusResult into StatusCode. Created new version of the type to ProgramDiagnostic2DataType.
b) Changed Optional modelling rule to OptionalPlaceHolder for Program control Methods. Following the clarification in IEC 62541-3, this now allows subtypes (or instances) to add arguments.

The text of this standard is based on the following documents:

FDIS	Report on voting
65E/719/FDIS	65E/735/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 Clause 3 in one of the parts of the 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 also, 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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

OPC UNIFIED ARCHITECTURE –

Part 10: Programs

1 Scope

This part of IEC 62451 defines the *information model* associated with *Programs* in the OPC Unified Architecture. This includes the description of the *NodeClasses,* standard *Properties, Methods* and *Events* and associated behaviour and information for *Programs*.

The complete Address Space model including all *NodeClass*es and *Attributes* is specified in IEC 62541-3. The *Services* such as those used to invoke the *Methods* used to manage *Programs* are specified in IEC 62541-4.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

IEC 62541-7, *OPC Unified Architecture – Part 7: Profiles*