

OMG: OPC-UA/DDS Gateway (DDS-OPCUA)

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Table 1: Data sheet for OPC-UA/DDS Gateway (DDS-OPCUA)

Title	OPC-UA/DDS Gateway
Acronym	DDS-OPCUA
Version	1.0
OMG Document Number	formal/20-01-01
Release Date	January 2020
About Specification	https://www.omg.org/spec/DDS-OPCUA/
Document	https://www.omg.org/spec/DDS-OPCUA/1.0/PDF

Note: The following is an excerpt from the actual document. It is provided here as a convenience and is not authoritative. Refer to the original document as the authoritative reference.

Scope

[data_distribution_service_dds](#) is a family of standards from the [omg](#) that provide connectivity, interoperability, and portability for Industrial Internet, cyber-physical, and mission-critical applications.

The DDS connectivity standards cover [Publish-Subscribe \(DDS\)](#), [Service Invocation \(DDS-RPC\)](#), [Interoperability \(DDS-RTSPS\)](#), [Information Modeling \(DDS-XTYPES\)](#), [Security \(DDS-SECURITY\)](#), as well as programming APIs for C, C++, Java and other languages.

The [opc](#) Unified Architecture (OPC-UA) is an information exchange standard for Industrial Automation and related systems created by the OPC Foundation. The [opc_ua](#) standard provides an Addressing and Information Model for Data Access, Alarms, and Service invocation layered over multiple transport-level protocols such as Binary [tcp](#) and Web-Services.

DDS and OPC-UA exhibit significant deployment similarities:

- Both enable independently developed applications to interoperate even when those applications come from different vendors, use different [programming languages](#), or run on different platforms and operating systems.*
- Both have significant traction within Industrial Automation systems.*
- Both define standard protocols built on top of the [TCP/UDP/IP](#) Internet stacks. The two technologies may coexist within the same application domains; however, while there are solutions that [bridge](#) between DDS and OPC-UA, these are based on custom mappings and cannot be relied to work across vendors and products.*

This specification overcomes this situation by defining a standard, vendor-independent, configurable [gateway](#) that enables interoperability and information exchange between systems

that use DDS and systems that use OPC-UA.

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