

INTERNATIONAL STANDARD

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**Field device integration (FDI) –
Part 3: Server**

**Intégration des appareils de terrain (FDI) –
Partie 3: Serveur**



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FIELD DEVICE INTEGRATION (FDI) –**Part 3: Server****FOREWORD**

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International Standard IEC 62769-3 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This second edition cancels and replaces the first 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) modification of the edit context concept to harmonize the IEC 61804 and the IEC 62769 series.

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

FDIS	Report on voting
65E/760/FDIS	65E/770/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.

A list of all parts in the IEC 62769 series, published under the general title *Field Device Integration (FDI)*, 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,
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INTRODUCTION

The IEC 62769 series has the general title *Field Device Integration (FDI)* and the following parts:

- Part 1: Overview
- Part 2: FDI Client
- Part 3: FDI Server
- Part 4: FDI Packages
- Part 5: FDI Information Model
- Part 6: FDI Technology Mapping
- Part 7: FDI Communication Devices
- Part 100: Profiles – Generic Protocol Extensions
- Part 101-1: Profiles – Foundation Fieldbus H1
- Part 101-2: Profiles – Foundation Fieldbus HSE
- Part 103-1: Profiles – PROFIBUS
- Part 103-4: Profiles – PROFINET
- Part 109-1: Profiles – HART and WirelessHART
- Part 115-2: Profiles – Protocol-specific Definitions for Modbus RTU
- Part 150-1: Profiles – ISA 100.11a

FIELD DEVICE INTEGRATION (FDI) –

Part 3: Server

1 Scope

This part of IEC 62769 specifies the FDI Server. The overall FDI architecture is illustrated in Figure 1. The architectural components that are within the scope of this document have been highlighted in this figure.

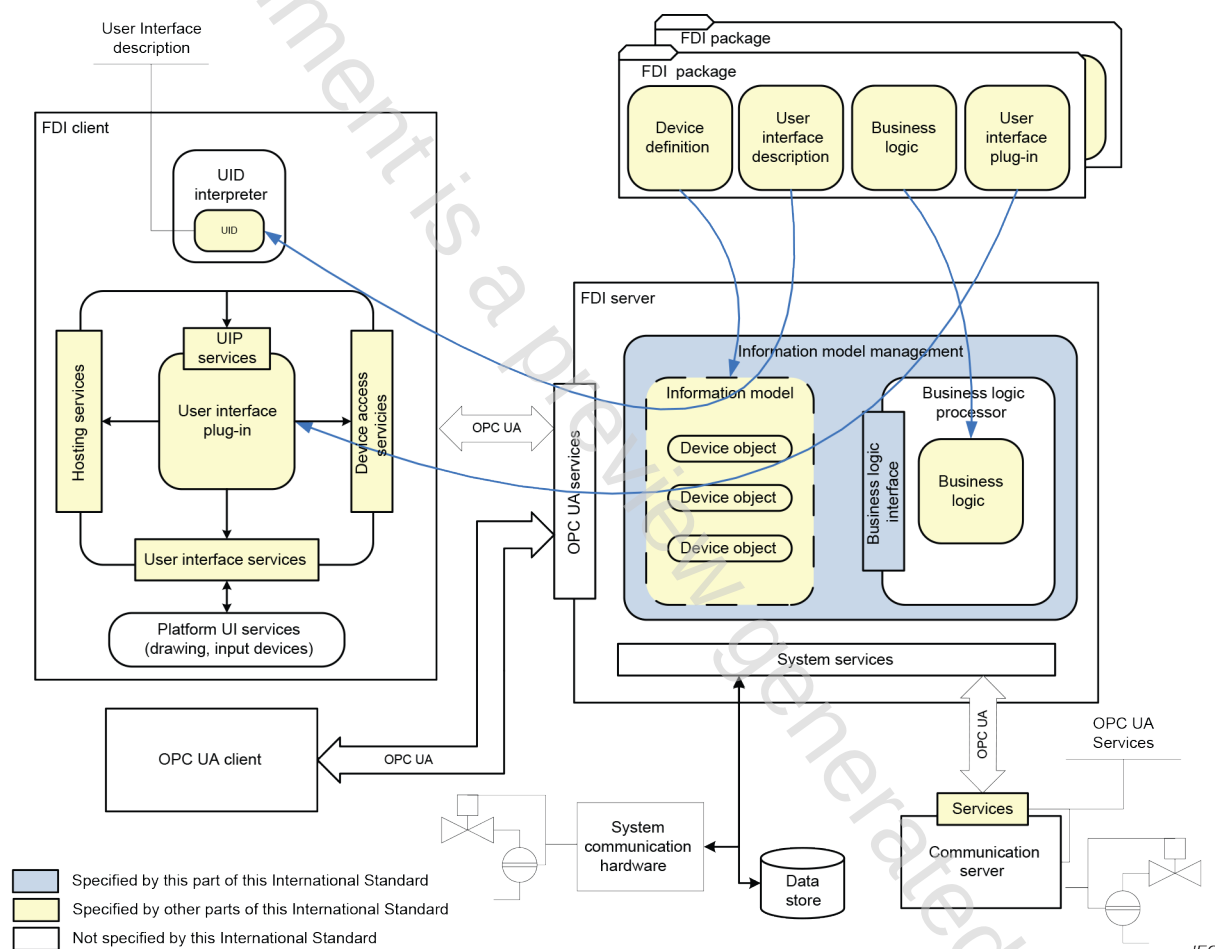


Figure 1 – FDI architecture diagram

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 61804 (all parts), *Function blocks (FB) for process control and electronic device description language (EDDL)*

IEC 61804-4:2020, *Function blocks (FB) for process control and electronic device description language (EDDL) – Part 4: EDD interpretation*

IEC 62541-4, *OPC unified architecture – Part 4: Services*

IEC 62541-7, *OPC unified architecture – Part 7: Profiles*

IEC 62769-1, *Field Device Integration (FDI) – Part 1: Overview*

IEC 62769-2, *Field Device Integration (FDI) – Part 2: FDI Client*

IEC 62769-4, *Field Device Integration (FDI) – Part 4: FDI Packages*

IEC 62769-5, *Field Device Integration (FDI) – Part 5: FDI Information Model*

IEC 62769-7, *Field Device Integration (FDI) – Part 7: Communication Devices*

3 Terms, definitions, abbreviated terms and conventions

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62769-1 as well as 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

Actions Proxy

internal FDI Server entity that encapsulates all the EDD Methods specified in an EDD Action definition

3.2 Abbreviated terms

For the purposes of this document, the abbreviated terms given in IEC 62769-1 apply.

3.3 Conventions

For the purposes of this document, the conventions given in IEC 62769-1 apply.

4 Overview

The structure for an FDI Server is shown in Figure 1.

FDI Servers that support connectivity with third-party FDI Clients shall support OPC-UA. A vendor can provide both an FDI Server and one or more FDI Clients. In this case, the FDI Clients can communicate with the FDI Server through proprietary protocols.

An FDI Server communicates with devices via Native Communication (see 7.2.1) and/or Communication Devices (see IEC 62769-7).