

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Field Device Integration (FDI®) –  
Part 4: FDI Packages**

**Intégration des appareils de terrain (FDI®) –  
Partie 4: Paquetages FDI**

IEC 62769-4:2023

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IEC Secretariat  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

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## FIELD DEVICE INTEGRATION (FDI®) –

### Part 4: FDI® Packages

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This third edition cancels and replaces the second edition published in 2021. This edition constitutes a technical revision.

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

- a) added DocumentClass to Package Schema, Description of Feature Table and Documentation Catalog, individual schemas for Feature Table and Package Documentation Catalog, schema for UnitConversion, interactive download to device, and Feature Unit Conversion;
- b) moved DocumentClass to Package Documentation Catalog Schema;
- c) updated Description of Feature Table updated XML schema for Feature Table.

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

Draft	Report on voting
65E/857/CDV	65E/914/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

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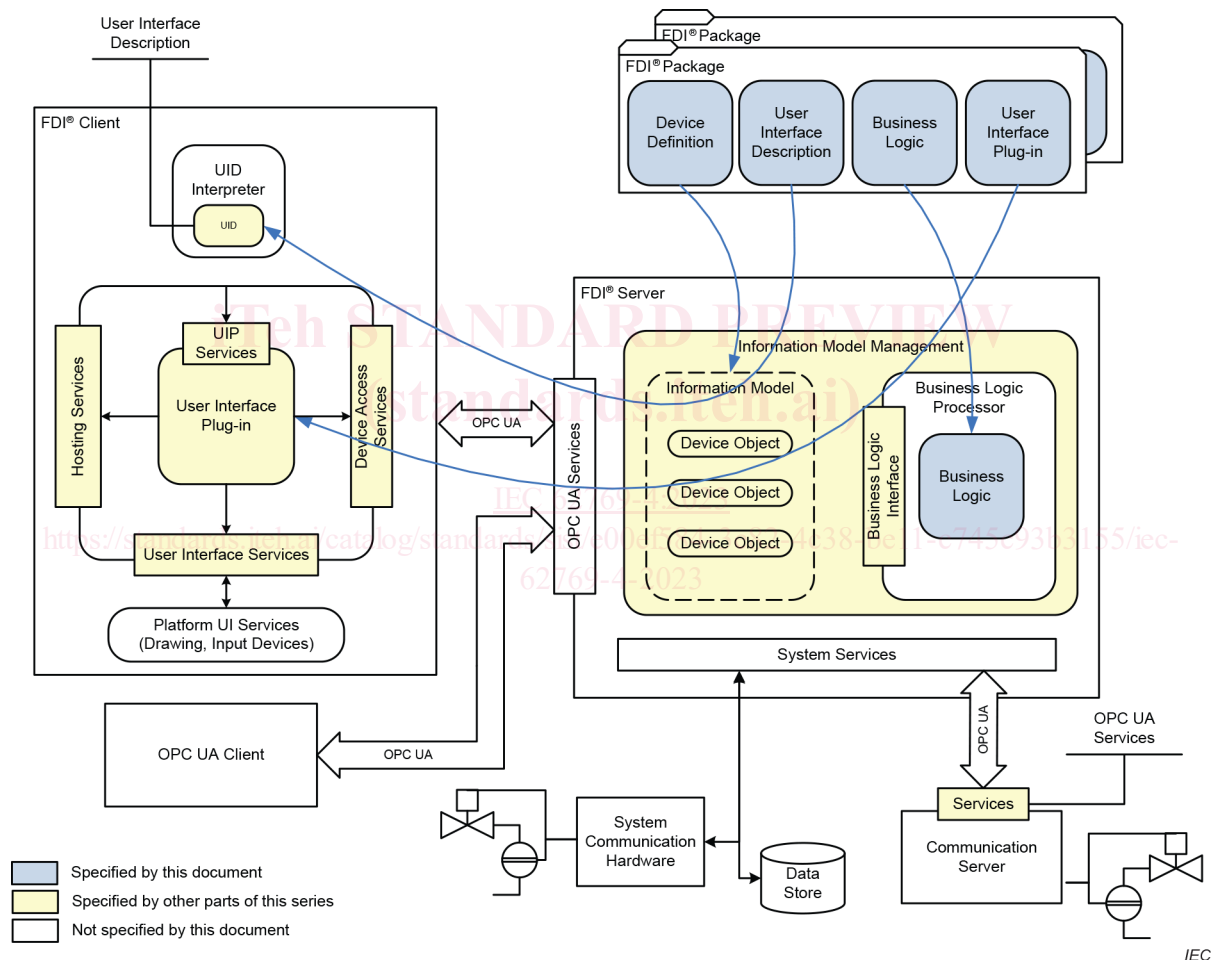
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# FIELD DEVICE INTEGRATION (FDI®) – Part 4: FDI® Packages

## 1 Scope

This part of IEC 62769 specifies the FDI<sup>®1</sup> Packages. The overall FDI<sup>®</sup> 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.

<sup>1</sup> FDI<sup>®</sup> is a registered trademark of the non-profit organization Fieldbus Foundation, Inc. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the trademark holder or any of its products. Compliance does not require use of the trade name. Use of the trade name requires permission of the trade name holder.

For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61804-3, *Devices and integration in enterprise systems – Function blocks (FB) for process control and electronic device description language (EDDL) – Part 3: EDDL syntax and semantics*

IEC 61804-5:2020, *Devices and intergration in enterprise systems – Function blocks (FB) for process control and electronic device description language (EDDL) – Part 5: EDDL Builtin library*

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

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

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

IEC 62769-6, *Field Device Integration (FDI®) – Part 6: FDI® Technology Mappings*

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

IEC 62769-1xx (all parts), *Field Device Integration (FDI®) – Part 1xx-y: Profiles*

ISO/IEC 11578, *Information technology – Open Systems Interconnection – Remote Procedure Call (RPC)*

ISO/IEC 29500-2:2021, *Document description and processing languages – Office Open XML file formats – Part 2: Open packaging conventions*

ISO 639-1, *Codes for the representation of names of languages – Part 1: Alpha-2 code*

ISO 32000-1, *Document management – Portable document format – Part 1: PDF 1.7*

Dublin Core Metadata Initiative: DCMI Metadata Terms, 2020

FCG TS10099, *Field Device Integration (FDI®) – Technology Management*

FIPS 140-3:2019, *Security Requirements for Cryptographic Modules*

ETSI EN 319 132-1, *Electronic Signatures and Infrastructures (ESI); XAdES digital signatures; Part 1: Building blocks and XAdES baseline signatures*

ETSI TS 101 733, *Electronic Signatures and Infrastructures (ESI); CMS Advanced Electronic Signatures (CAAdES)*

### **3 Terms, definitions, abbreviated terms and acronyms**

#### **3.1 Terms and definitions**

For the purposes of this document, the terms and definitions given in IEC 62769-1, ISO/IEC 29500-2 and the following apply.

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

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

### 3.1.1

#### **attachment**

device and protocol specific support files that are not directly used to integrate the Device into the system

### 3.1.2

#### **FDI® Communication Package**

FDI® Package that provides information to integrate an FDI® Communication Server to an FDI® Server

### 3.1.3

#### **FDI® Device Package**

FDI® Package that provides one or more device types to an FDI® Server

### 3.1.4

#### **FDI® Package Model**

description of the structure and elements of an FDI® Package

### 3.1.5

#### **FDI® Profile Package**

FDI® Package that provides information for creating a device type node that can be associated with a class of devices

### 3.1.6

#### **FDI® Registration Authority**

entity, which has the right and the ability to perform FDI® conformance tests on FDI® Packages and to issue registration certificate documents

### 3.1.7

#### **FDI® UIP Package**

FDI® Package that provides one or more UIPs to an FDI® Server

### 3.1.8

#### **Package Catalog**

file that describes the contents of an FDI® Package

### 3.1.9

#### **UIP Catalog**

file that describes the properties of a UIP

### 3.1.10

#### **UIP Variant**

platform specific element of a User Interface Plug-in

Note 1 to entry: A UIP is composed of one or more variants. For example, one variant can be optimized for portable devices while another variant is optimized for large screen devices.

## 3.2 Abbreviated terms and acronyms

For the purposes of this document, the abbreviated terms and acronyms given in IEC 62769-1 as well as the following apply.

CFF	Capabilities File for FOUNDATION Fieldbus
ID	Identifier
IDE	Integrated Development Environment

IM	Information Model
PNG	Portable network graphics
ZIP	Zipper (archive file format)

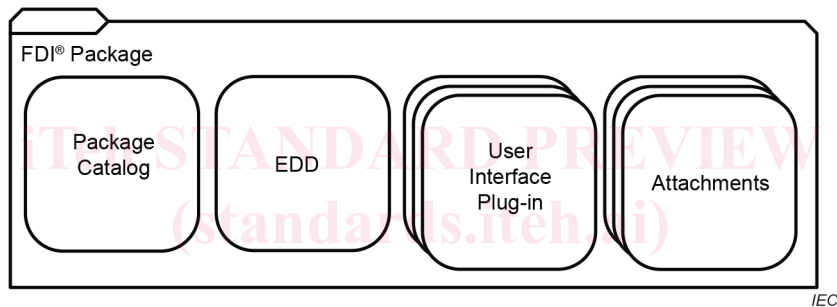
### 3.3 Conventions

Capitalization of the first letter of words is used in the IEC 62769 series to emphasize an FDI® defined term.

## 4 FDI® Package Model

### 4.1 Overview

The FDI® Package Model (see Figure 2) provides all of the elements necessary to integrate devices, network components and FDI® Communication Servers into a system. File name conventions are described in Annex A.



IEC 62769-4:2023  
<https://standards.iteh.ai/catalog/standards/sist/38-be11-c745c93b3155/iec-62769-4-2023>  
**Figure 2 – FDI® Package Model**

Figure 3 shows the mapping of the FDI® Package functional elements, as specified in IEC 62769-1, to the physical elements in an actual FDI® Package, as specified in this document.