

Field Device Integration (FDI) - Part 7: FDI  
Communication Devices

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|                                                                                                                     |                                                                                                                                    |
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ICS 25.040.40; 35.100

English Version

**Field Device Integration (FDI) - Part 7: FDI Communication  
Devices  
(IEC 62769-7:2015)**

Intégration des appareils de terrain (FDI) - Partie 7:  
Appareils de communication FDI  
(IEC 62769-7:2015)

Feldgeräteintegration (FDI) - Teil 7: Kommunikationsgeräte  
(IEC 62769-7:2015)

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## European foreword

The text of document 65E/350/CDV, future edition 1 of IEC 62769-7, prepared by SC 65E "Devices and integration in enterprise systems" of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62769-7:2015.

The following dates are fixed:

- latest date by which the document has to be (dop) 2016-03-16  
implemented at national level by  
publication of an identical national  
standard or by endorsement
- latest date by which the national (dow) 2018-06-16  
standards conflicting with the  
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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

| <u>Publication</u> | <u>Year</u> | <u>Title</u>                                                                                            | <u>EN/HD</u>   | <u>Year</u> |
|--------------------|-------------|---------------------------------------------------------------------------------------------------------|----------------|-------------|
| IEC 61804-3        | -           | Function Blocks (FB) for process control -- Part 3: Electronic Device Description Language (EDDL)       | EN 61804-3     | -           |
| IEC 61804-4        | -           | Function blocks (FB) for process control -- Part 4: EDD interpretation                                  | -              | -           |
| IEC 62541-4        | -           | OPC Unified Architecture - Part 4: Services                                                             | EN 62541-4     | -           |
| IEC 62541-6        | -           | OPC unified architecture - Part 6: Mappings                                                             | EN 62541-6     | -           |
| IEC 62541-7        | -           | OPC unified architecture - Part 7: Profiles                                                             | EN 62541-7     | -           |
| IEC 62541          | series      | OPC Unified Architecture                                                                                | EN 62541       | series      |
| IEC 62541-100      | -           | OPC unified architecture - Part 100: Device Interface                                                   | EN 62541-100   | -           |
| IEC 62769-1        | -           | Devices and integration in enterprise systems; Field Device Integration - Part 1: Overview              | -              | -           |
| IEC 62769-2        | -           | Devices and integration in enterprise systems; Field Device Integration - Part 2: FDI Client            | -              | -           |
| IEC 62769-3        | -           | Devices and integration in enterprise systems; Field Device Integration - Part 3: FDI Server            | -              | -           |
| IEC 62769-4        | 2015        | Devices and integration in enterprise systems; Field Device Integration - Part 4: FDI Packages          | -              | -           |
| IEC 62769-5        | -           | Devices and integration in enterprise systems; Field Device Integration - Part 5: FDI Information Model | -              | -           |
| IEC/TR 62541-1     | -           | OPC unified architecture - Part 1: Overview and concepts                                                | CLC/TR 62541-1 | -           |

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## INTRODUCTION

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning

- a) Method for the Supplying and Installation of Device-Specific Functionalities, see Patent Family DE10357276;
- b) Method and device for accessing a functional module of automation system, see Patent Family EP2182418;
- c) Methods and apparatus to reduce memory requirements for process control system software applications, see Patent Family US2013232186;
- d) Extensible Device Object Model, see Patent Family US12/893,680.

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## FIELD DEVICE INTEGRATION (FDI) –

### Part 7: FDI Communication Devices

#### 1 Scope

This part of IEC 62769 specifies the elements implementing communication capabilities called Communication Devices (IEC 62769-5).

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 illustration. The document scope with respect to FDI Packages is limited to Communication Devices. The Communication Server shown in Figure 1 is an example of a specific Communication Device.

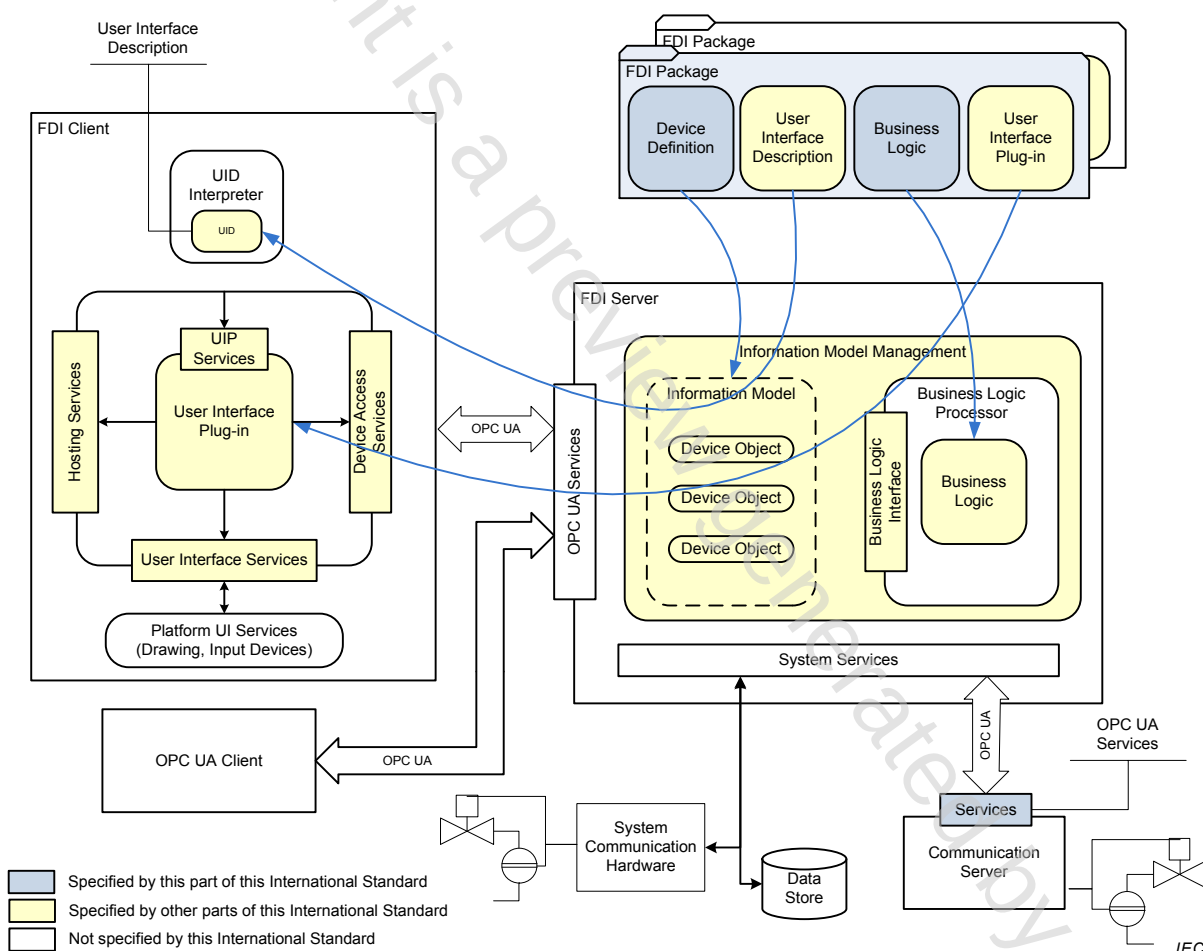


Figure 1 – FDI architecture diagram

#### 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 61804-3, *Function blocks (FB) for process control and Electronic Device Description Language (EDDL) – Part 3: EDDL syntax and semantics*

IEC 61804-4, *Function blocks (FB) for process control and Electronic Device Description Language (EDDL) – Part 4: EDD interpretation*

IEC 62541 (all parts), *OPC Unified Architecture*

IEC TR 62541-1, *OPC Unified Architecture – Part 1: Overview and Concepts*

IEC 62541-4, *OPC Unified Architecture – Part 4: Services*

IEC 62541-6, *OPC Unified Architecture – Part 6: Mappings*

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

IEC 62541-100, *OPC Unified Architecture – Part 100: OPC UA for Devices*

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

NOTE IEC 62769-1 is technically identical to FDI-2021.

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

NOTE IEC 62769-2 is technically identical to FDI-2022.

IEC 62769-3, *Field Device Integration (FDI) – Part 3: FDI Server*

NOTE IEC 62769-3 is technically identical to FDI-2023.

IEC 62769-4:2015, *Field Device Integration (FDI) – Part 4: FDI Packages*

NOTE IEC 62769-4 is technically identical to FDI-2024.

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

NOTE IEC 62769-5 is technically identical to FDI-2025.

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

##### **3.1.1**

##### **gateway**

communication device that enables to bridge between different physical networks or different protocols