



**NSAI**  
Standards

Irish Standard Recommendation  
S.R. CWA 16926-70:2020

Extensions for Financial Services (XFS)  
interface specification Release 3.40 - Part  
70: Vendor Dependent Mode (VDM) Device  
Class Interface - Migration from Version  
3.30 (CWA 16926) to Version 3.40 (this  
CWA) - Programmer's Reference

**S.R. CWA 16926-70:2020**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

CWA 16926-70:2020

*Published:*

2020-02-12

*This document was published under the authority of the NSAI and comes into effect on:*

2020-03-01

ICS number:

35.200

35.240.15

35.240.40

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

## National Foreword

S.R. CWA 16926-70:2020 is the adopted Irish version of the European Document CWA 16926-70:2020, Extensions for Financial Services (XFS) interface specification Release 3.40 - Part 70: Vendor Dependent Mode (VDM) Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

**Compliance with this document does not of itself confer immunity from legal obligations.**

*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

This page is intentionally left blank

**CEN**

**CWA 16926-70**

**WORKSHOP**

February 2020

**AGREEMENT**

---

ICS 35.200; 35.240.15; 35.240.40

English version

**Extensions for Financial Services (XFS) interface  
specification Release 3.40 - Part 70: Vendor Dependent  
Mode (VDM) Device Class Interface - Migration from  
Version 3.30 (CWA 16926) to Version 3.40 (this CWA) -  
Programmer's Reference**

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its Members.

This CEN Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

---

© 2020 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No.:CWA 16926-70:2020 E

## Table of Contents

---

<b>European Foreword.....</b>	<b>3</b>
<b>1. Migration Information.....</b>	<b>7</b>
<b>2. Vendor Dependent Mode .....</b>	<b>8</b>
2.1 VDM Entry triggered by XFS Application .....	9
2.2 VDM Entry triggered by Vendor Dependent Switch .....	10
2.3 VDM Exit triggered by XFS Application.....	11
2.4 VDM Exit triggered by Vendor Dependent Switch.....	12
2.5 Controlling / Determining the Active Interface .....	13
2.5.1 Vendor Dependent Application independent of the VDM Service Provider .....	13
2.5.2 Vendor Dependent Application under Control of the VDM Service Provider.....	14
<b>3. References .....</b>	<b>15</b>
<b>4. Info Commands .....</b>	<b>16</b>
4.1 WFS_INF_VDM_STATUS.....	16
4.2 WFS_INF_VDM_CAPABILITIES .....	18
4.3 WFS_INF_VDM_ACTIVE_INTERFACE .....	19
<b>5. Execute Commands .....</b>	<b>20</b>
5.1 WFS_CMD_VDM_ENTER_MODE_REQ.....	20
5.2 WFS_CMD_VDM_ENTER_MODE_ACK.....	21
5.3 WFS_CMD_VDM_EXIT_MODE_REQ .....	22
5.4 WFS_CMD_VDM_EXIT_MODE_ACK .....	23
5.5 WFS_CMD_VDM_SET_ACTIVE_INTERFACE.....	24
<b>6. Events.....</b>	<b>25</b>
6.1 WFS_SRVE_VDM_ENTER_MODE_REQ .....	25
6.2 WFS_SRVE_VDM_EXIT_MODE_REQ.....	26
6.3 WFS_SYSE_VDM_MODEENTERED .....	27
6.4 WFS_SYSE_VDM_MODEEXITED.....	28
6.5 WFS_SRVE_VDM_INTERFACE_CHANGED .....	29
<b>7. C-Header file .....</b>	<b>30</b>

## European Foreword

---

This CEN Workshop Agreement has been developed in accordance with the CEN-CENELEC Guide 29 “CEN/CENELEC Workshop Agreements – The way to rapid consensus” and with the relevant provisions of CEN/CENELEC Internal Regulations – Part 2. It was approved by a Workshop of representatives of interested parties on 2019-10-08, the constitution of which was supported by CEN following several public calls for participation, the first of which was made on 1998-06-24. However, this CEN Workshop Agreement does not necessarily include all relevant stakeholders.

The final text of this CEN Workshop Agreement was provided to CEN for publication on 2019-12-12.

The following organizations and individuals developed and approved this CEN Workshop Agreement:

- ATM Japan LTD
- AURIGA SPA
- BANK OF AMERICA
- CASHWAY TECHNOLOGY
- CHINAL ELECTRONIC FINANCIAL EQUIPMENT SYSTEM CO.
- CIMA SPA
- CLEAR2PAY SCOTLAND LIMITED
- DIEBOLD NIXDORF
- EASTERN COMMUNICATIONS CO. LTD – EASTCOM
- FINANZ INFORMATIK
- FUJITSU FRONTTECH LIMITED
- FUJITSU TECHNOLOGY
- GLORY LTD
- GRG BANKING EQUIPMENT HK CO LTD
- HESS CASH SYSTEMS GMBH & CO. KG
- HITACHI OMRON TS CORP.
- HYOSUNG TNS INC
- JIANGSU GUOQUANG ELECTRONIC INFORMATION TECHNOLOGY
- KAL
- KEBA AG
- NCR FSG
- NEC CORPORATION
- OKI ELECTRIC INDUSTRY SHENZHEN

**CWA 16926-70:2020 (E)**

- OKI ELECTRONIC INDUSTRY CO
- PERTO S/A
- REINER GMBH & CO KG
- SALZBURGER BANKEN SOFTWARE
- SIGMA SPA
- TEB
- ZIJIN FULCRUM TECHNOLOGY CO

It is possible that some elements of this CEN/CWA may be subject to patent rights. The CEN-CENELEC policy on patent rights is set out in CEN-CENELEC Guide 8 “Guidelines for Implementation of the Common IPR Policy on Patents (and other statutory intellectual property rights based on inventions)”. CEN shall not be held responsible for identifying any or all such patent rights.

The Workshop participants have made every effort to ensure the reliability and accuracy of the technical and non-technical content of CWA 16926-70, but this does not guarantee, either explicitly or implicitly, its correctness. Users of CWA 16926-70 should be aware that neither the Workshop participants, nor CEN can be held liable for damages or losses of any kind whatsoever which may arise from its application. Users of CWA 16926-70 do so on their own responsibility and at their own risk.

The CWA is published as a multi-part document, consisting of:

Part 1: Application Programming Interface (API) - Service Provider Interface (SPI) - Programmer's Reference

Part 2: Service Classes Definition - Programmer's Reference

Part 3: Printer and Scanning Device Class Interface - Programmer's Reference

Part 4: Identification Card Device Class Interface - Programmer's Reference

Part 5: Cash Dispenser Device Class Interface - Programmer's Reference

Part 6: PIN Keypad Device Class Interface - Programmer's Reference

Part 7: Check Reader/Scanner Device Class Interface - Programmer's Reference

Part 8: Depository Device Class Interface - Programmer's Reference

Part 9: Text Terminal Unit Device Class Interface - Programmer's Reference

Part 10: Sensors and Indicators Unit Device Class Interface - Programmer's Reference

Part 11: Vendor Dependent Mode Device Class Interface - Programmer's Reference

Part 12: Camera Device Class Interface - Programmer's Reference

Part 13: Alarm Device Class Interface - Programmer's Reference

Part 14: Card Embossing Unit Device Class Interface - Programmer's Reference

Part 15: Cash-In Module Device Class Interface - Programmer's Reference

Part 16: Card Dispenser Device Class Interface - Programmer's Reference

Part 17: Barcode Reader Device Class Interface - Programmer's Reference

Part 18: Item Processing Module Device Class Interface - Programmer's Reference

Part 19: Biometrics Device Class Interface - Programmer's Reference

Parts 20 - 28: Reserved for future use.

Parts 29 through 47 constitute an optional addendum to this CWA. They define the integration between the SNMP standard and the set of status and statistical information exported by the Service Providers.

Part 29: XFS MIB Architecture and SNMP Extensions - Programmer's Reference



- Part 30: XFS MIB Device Specific Definitions - Printer Device Class
- Part 31: XFS MIB Device Specific Definitions - Identification Card Device Class
- Part 32: XFS MIB Device Specific Definitions - Cash Dispenser Device Class
- Part 33: XFS MIB Device Specific Definitions - PIN Keypad Device Class
- Part 34: XFS MIB Device Specific Definitions - Check Reader/Scanner Device Class
- Part 35: XFS MIB Device Specific Definitions - Depository Device Class
- Part 36: XFS MIB Device Specific Definitions - Text Terminal Unit Device Class
- Part 37: XFS MIB Device Specific Definitions - Sensors and Indicators Unit Device Class
- Part 38: XFS MIB Device Specific Definitions - Camera Device Class
- Part 39: XFS MIB Device Specific Definitions - Alarm Device Class
- Part 40: XFS MIB Device Specific Definitions - Card Embossing Unit Class
- Part 41: XFS MIB Device Specific Definitions - Cash-In Module Device Class
- Part 42: Reserved for future use.
- Part 43: XFS MIB Device Specific Definitions - Vendor Dependent Mode Device Class
- Part 44: XFS MIB Application Management
- Part 45: XFS MIB Device Specific Definitions - Card Dispenser Device Class
- Part 46: XFS MIB Device Specific Definitions - Barcode Reader Device Class
- Part 47: XFS MIB Device Specific Definitions - Item Processing Module Device Class
- Part 48: XFS MIB Device Specific Definitions - Biometrics Device Class
- Parts 49 - 60 are reserved for future use.
- Part 61: Application Programming Interface (API) - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Service Provider Interface (SPI) - Programmer's Reference
- Part 62: Printer and Scanning Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 63: Identification Card Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 64: Cash Dispenser Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 65: PIN Keypad Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 66: Check Reader/Scanner Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 67: Depository Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 68: Text Terminal Unit Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 69: Sensors and Indicators Unit Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 70: Vendor Dependent Mode Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 71: Camera Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 72: Alarm Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference
- Part 73: Card Embossing Unit Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40

**CWA 16926-70:2020 (E)**

(this CWA) - Programmer's Reference

Part 74: Cash-In Module Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference

Part 75: Card Dispenser Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference

Part 76: Barcode Reader Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference

Part 77: Item Processing Module Device Class Interface - Migration from Version 3.30 (CWA 16926) to Version 3.40 (this CWA) - Programmer's Reference

In addition to these Programmer's Reference specifications, the reader of this CWA is also referred to a complementary document, called Release Notes. The Release Notes contain clarifications and explanations on the CWA specifications, which are not requiring functional changes. The current version of the Release Notes is available online from: [https://www.cen.eu/work/Sectors/Digital\\_society/Pages/WSXFS.aspx](https://www.cen.eu/work/Sectors/Digital_society/Pages/WSXFS.aspx).

The information in this document represents the Workshop's current views on the issues discussed as of the date of publication. It is provided for informational purposes only and is subject to change without notice. CEN makes no warranty, express or implied, with respect to this document.

## **1. Migration Information**

---

XFS 3.40 has been designed to minimize backwards compatibility issues. This document highlights the changes made to the Vendor Dependent Mode (VDM) Specification device class between version 3.30 and 3.40, by highlighting the additions and deletions to the text.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-