

EFD Vendors

This documentation puts forward detailed technical instructions for all Electronic Fiscal Device (EFD) vendors. Make sure you read them carefully if you plan to develop an invoicing system (POS) or an E-SDC solution for issuing fiscal invoices.

Only solutions that are fully compliant with these instructions will be officially accredited by the [accreditation authority](#).

EFD Components

By definition, each EFD setup consists of three logically separated components, all connected into one system:

- An accredited invoicing system - POS;
- A version of SDC service - V-SDC or an accredited E-SDC;
- A Secure Element.

Warning:

These three components must communicate using protocols published as part of this documentation. Protocols are public and subject to change. Please familiarize yourself with [Versioning](#) and [End of Life](#) policies.

Every taxpayer can decide which EFD setup best suits their business needs to issue fiscal receipts and report audit data to a Tax Authority.

Point-of-Sale (POS) (or Invoicing System)

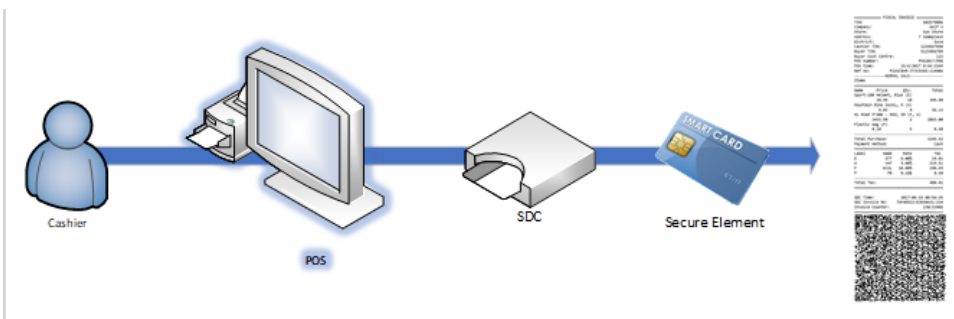
[Click here to see more information about POS's](#)

An Invoicing System or a POS is a point-of-sale invoicing device or software used by a business for:

Management control in the areas of sales analysis and stock control;

- Entering the transaction data for each transaction made by the business;
- Submitting the transaction data to an SDC service;
- Issuing fiscal invoices to customers after receiving the fiscalized data back from the SDC.





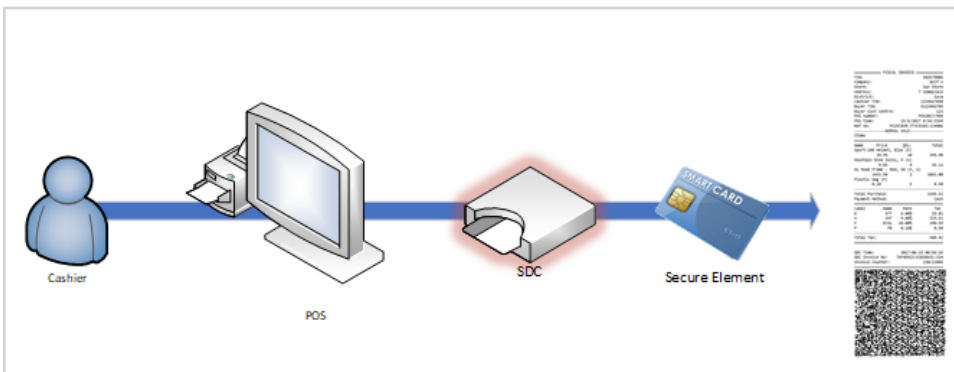
Sales Data Controller (SDC)

[Click here to see more information about SDCs](#)

An SDC is the hardware or software component of an EFD that:

Receives transaction data from a POS component of the EFD;

- Analyzes the transaction data into fiscal data;
- Formats the fiscal data as a fiscal invoice, creates the digital signature for the EFD, and records the digital signature on the fiscal invoice;
- Transmits the fiscal invoice to the POS;
- Preserves the transaction data and fiscal data in an irrevocable and secure manner;
- Transmits the fiscal data to the Authority's system;
- Communicates with the Secure Element, TaxCore.API, and POS to configure itself, fiscalize invoices, and transmit audit data.



Virtual SDC (V-SDC)

A V-SDC is a web service operated by the Tax Authority that enables authorized taxpayers to use the SDC functionality via the Internet.

V-SDC is limited to connected scenarios, which means that any invoicing system that targets V-SDC must have a reliable internet connection at the moment of sale.

External SDC (E-SDC)

An E-SDC is a 'black box' type of software or hardware that communicates with a smart card Secure Element and enables semi-connected fiscalization scenarios (enables issuing fiscal invoice when the Internet is down).

It resides at taxpayers' business locations and communicates with a Secure Element issued to taxpayers on a smart card. In other words, an E-SDC uses the taxpayer's Secure Element to place a digital signature on the fiscal invoice.

Development E-SDC (Dev E-SDC)

A Dev E-SDC is a software version of an E-SDC used by POS developers. It is built according to the latest technical specifications for E-SDC devices and is used to develop, test, and accredit invoicing solutions.

A Dev E-SDC is available to all registered vendors via the Developer Portal.

It simulates the operation of an E-SDC on a local network in the production environment, so vendors can upgrade their applications or devices without obtaining any physical E-SDC devices or smart cards.

A Dev E-SDC is also used during the accreditation process to check whether an invoicing system is functional.

Secure Element

[Click here to see more information about Secure Elements](#)

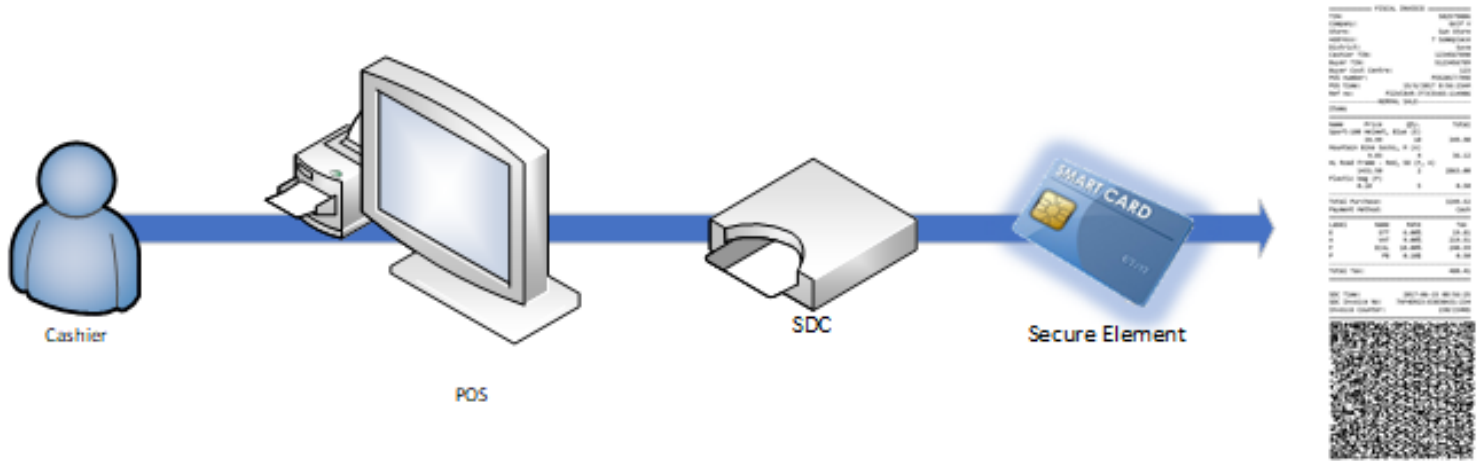
A Secure Element is a software and hardware used by an EFD and the Authority to prevent tampering and unauthorized use of fiscal data transmitted to the Authority's system, as well as to maintain the integrity of the fiscal data.

Secure Elements are provided to taxpayers by `[[TaxCore.PublicConfiguration.Organization]]`.

⚠ Warning:

It is the taxpayer's responsibility to request a separate Secure Element via Taxpayer Administration Portal for every business location they operate.

A Secure Element may be implemented in two formats: as Smart Cards or PKCS12 (.pfx) files.



Getting started with accreditation

Accreditation is the process through which EFD components become accredited in a specific tax jurisdiction. Only accredited EFD components can be sold to taxpayers and used by them.

[Click here to see more information about accreditation](#)

What EFD components are subject to accreditation?

Only POS and E-SDC products are subject to accreditation. They can be developed by any registered vendor and, upon successful accreditation, sold to taxpayers as official fiscalization tools.

□□ Note:

Taxpayers can also accredit their own POS or E-SDC products for internal use, but those products cannot be offered and sold to other taxpayers. For more information, see the distinction between **transferable** and **non-transferable** accreditation types in Accreditation.

The production of the V-SDC service and Secure Elements is under the full control of the Tax Authority. These EFD components are not subject to accreditation.

Building POS and E-SDC as one device or application

[Click here to read more](#)

POS and E-SDC components can also be developed as *all-in-one* product/device, incorporating functionalities of both components into one solution. However, in this case, the solution must enable full review of both POS and E-SDC features - i.e. the reviewers must be able to test all required POS and E-SDC functionalities.

These are the accreditation conditions you need to be aware of if you are planning to develop an all-in-one POS + E-SDC solution:

Once accreditation is completed, the POS to SDC protocol may be omitted from final documentation and made inaccessible to external callers.

The solution must pass all the tests with the SDC Analyzer Win App during the accreditation process. It means that endpoints documented in [POS to SDC protocol](#) related to E-SDC must be accessible to external callers during accreditation.

Accreditation process from the perspective of an EFD vendor

[Click here to see more information about accreditation steps](#)

Further reading

- Sections for all vendors
 - [General information](#)
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Sections for POS vendors

- o [For POS developers](#)

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Sections for E-SDC vendors

- o [For E-SDC developers](#)