

Brief information

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INSIKA

The tax laws of most countries stipulate that digital records of sales transactions have to be complete and unchangeable. The taxpayers themselves are required to supply a proof for this. Application of the INSIKA concept guarantees the legal and auditable recording of the data.

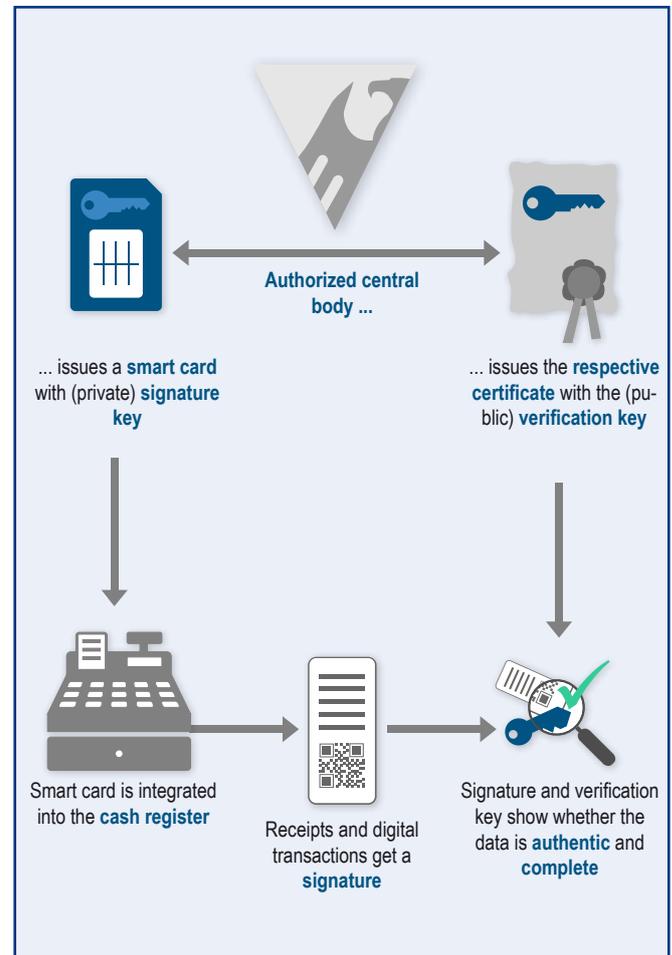
From 2008 to 2012, the Physikalisch-Technische Bundesanstalt (German National Metrology Institute) together with industrial partners developed and tested INSIKA („INtegrierte SICherheitslösung für messwertverarbeitende KAsensysteme“ meaning “integrated security solution for cash registers processing metered values”) based on a concept of the German fiscal authorities. The INSIKA method can be used without patents, licence costs or similar expenses or restrictions. However, INSIKA can only be applied reasonably when there is a legal basis, allowing its acceptance by the fiscal authorities.

Principle of operation

The tamper protection is based on a digital signature for each sales transaction. Thanks to this signature, data cannot be changed undetected and can be attributed unambiguously to the company.

The signature is generated by a smart card which is issued by the fiscal authorities or on their behalf. The INSIKA security is exclusively based on the smart card and not on any other part of the system. Users and fiscal authorities do not have to rely on third parties. A time-consuming and expensive certification of cash registers is not required and thus it is not part of the concept. The signature is stored together with the data and is also printed on every receipt. The signed receipts allow the correct recording of transactions to be checked easily at any time.

The smart card stores the monthly total sales so that the main turnover figures are available even if the saved sales data is lost or corrupted.



Possible applications

INSIKA can be used in practically any system which records digital sales data. This could be any type of electronic cash registers, taximeters, vending or gaming machines.

The only technical requirements are a simple smart card reader and the capability to record each individual sales transaction. There are no other technical requirements, certifications or similar.

In addition to „traditional“ cash registers, INSIKA can be used with any PC software (e.g. business software with a cash sales module) or with smartphone/tablet apps (using a plug-in card reader or a Wi-Fi printer with an integrated card reader).



QR-code on the receipt – try it yourself!

Using INSIKA does not change the operation of the devices. Therefore, no additional training for the users is required.

Current applications

INSIKA is presently being used in more than 2,000 taxis in Hamburg. They are equipped with an INSIKA unit connected to the taximeters. The system works trouble-free.

Several manufacturers have already integrated INSIKA to their cash registers. Field tests with different types of cash register have been running for years without problems.

Security

The applied smart cards and signature algorithms comply with the highest demands on security. These cryptographic methods so far withstood all (even intensive) attempts to break them. Single smart cards can only be „cracked“ with the utmost effort – if at all. Even in the worst case one only had to issue new smart cards.

As with any other cash register, an INSIKA-protected system could be circumvented by not entering sales correctly or not at all. These risks can be absorbed by regular checks by the fiscal authorities together with the obligation to issue receipts. By means of the signed receipts these checks can easily be made at any time.

Costs

There are no licence fees or similar costs for using the INSIKA concept. One-off costs in the double-digit euro range arise for the user per smart card. No running costs incur.

As INSIKA is easy to integrate and the only additional hardware required is the card reader. No or no significant price increase is to be expected for medium- and high-priced cash registers. The same applies for mere software solutions. Minor price increases cannot be ruled out for low-end cash registers if compared to devices that meet the current demands. A first supplier already announced an INSIKA-capable cash register for less than 400 Euros (end-user price plus smart card) in March 2015.

Since INSIKA - in contrast to „conventional“ fiscal solutions - does not impede competition and innovations, it avoids monopolistic structures which usually lead to high prices. Furthermore, numerous existing systems can be upgraded to support INSIKA with little effort so that investments are protected.

Bureaucracy is not increased but reduced because tax audits are considerably facilitated for all parties involved.

Additional information

For further details please visit www.insika.de. Here you can order test cards which help you simulate the procedure together with the INSIKA demo software.