

TWO-FACTOR AUTHENTICATION (TFA)

www.transysa.com/Panama_en/twofactor.shtml

With the sole purpose of innovating in the cyberspace world of business and banking, OPUS Financials gathered a group of experts who worked with top-of-the-line technologies to create a unique and powerful way to do online transactions, in a secure and guaranteed environment while allowing customers to have a physical card. This is how the EBSG® CD-ROM card was born.

The CD Card has computer-readable media on one side for conducting communications over a global network and a magnetic strip on the other side for interfacing with existing financial payment system.

The CD Card inserted into the CD-ROM drive allows a secure communication with the Financial Institution.

How the CD Card Works as a payment tool over the internet:

Buyer visits Seller's website. Buyer fills shopping cart and proceeds to the checkout page. Buyer selects CD Card as the payment option.

The Seller makes a request to the Authentication Server to initiate a payment session. With that unique session ID, the Seller then redirects the Buyer to the Authentication Server.

The Authentication Server instructs the Buyer to insert the CD Card, issued by their financial institution (card issuer), into their computer CD-ROM drive.

The Authentication Server remotely reads the encrypted data on the CD Card and decrypts it. In a separate session, the Authentication Server generates a random PIN encoding key and displays a virtual PIN Pad.

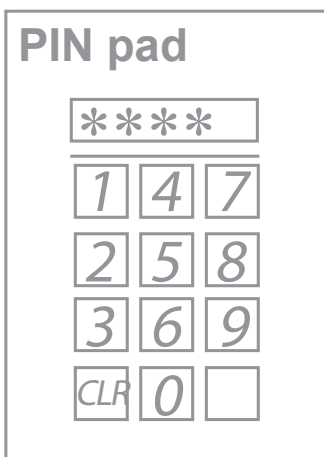
Buyer selects from virtual PIN pad using mouse. The encrypted PIN is routed to the security module of the authorization server for decryption.

The security module re-encrypts the data based on the financial institution's keys and returns it to the Authentication Server. The Authentication Server sends the PIN key in a standard ISO 8583 message format to the Network(s) as POS transaction or in a proprietary format, based on the financial institution's particular needs.

The network requests an authorization or decline from the Buyer's financial institution (card issuer). The network sends the response to the Authentication server, which in turn is sent to the Seller.

Based on the authorization or decline the seller communicates with the buyer and concludes transaction.

OPUS also offers a variety of TFA based products, such as mini CDs, which are wallet size CDs designed for authentication purposes, USB memory sticks, DVD's and the Mycropod MP3 Player; all of these devices can be easily used via a personal computer.



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Two-factor authentication (TFA) is a system wherein two different methods are used to authenticate. Using two factors as opposed to one implies a higher level of security. Common implementations of two-factor authentication uses 'something you know' (a password) as one of the two factors, and uses 'something you have' (a physical device) as the other factor in a secured environment. A common example of TFA is a bank issued debit card; the card itself is the physical "something you have" item, and the personal identification number (PIN) is the "something you know" password that goes with it at an ATM or POS which is the secured environment.



TRANSYSA

PATENT NUMBER

7,735,121

7,299,980

6,749,114

Financial Institution /Issuer Benefits:

- **No proprietary hardware to deploy.** With its new and patented design, the EBSG® CD-ROM card presents a unique way of integrating with users' computers without needing to install any peripheral devices.
- **Based on existing, accepted, secure technologies.** TFA-based authentication via our remote server offers a quick and secure way of ensuring online transactions by validating a user's identity.
- **Cost of distribution same as with current plastic / magnetic strip cards.** The cost of implementing this new technology is relatively the same as implementing existing plastic card based form of payment.

Seller's Benefits

Sellers benefit from receiving a guaranteed payment from the financial institution, which dramatically reduces the risk of returned payments. Likewise, the risk of fraud is much lower because financial institutions authenticate Buyers, with whom they have an existing relationship.

- **Guaranteed payments.** Guaranteed to receive payments except for non-delivery of goods and services, thereby eliminating charge backs. Via our TFA and Authentication server, sellers can be sure of the availability of funds prior to authorizing a transaction to successfully be processed.
- **More than 500 million CD-ROM installed base.** Lack of proprietary hardware/software required allows effortless consumers' adoption.
- **Based on existing, accepted, secure, standard-based technologies.** The CD-ROM card can integrate with any existing payment solution platform, POS and ATM around the world, as well as every home and office computer with a CD-ROM drive installed.

Buyers' Benefits

- Buyer authorizes his or her own Financial Institution to make payment to sellers
- No financial information is conveyed to the seller
- No Identity theft
- No erroneous charges

EBSG® CD-ROM card makes it simple, fast, secure and convenient for cardholders/ buyers to make purchases online and in the physical environment.

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