



## Product Overview

### Whole Database Encryption *and* Column Encryption

NetLib® Encryptionizer® for SQL Server and NetLib® Encryptionizer® for MSDE offer the ability to add an additional layer of security separate from Windows and SQL security. It can be deployed without programming and without adding any administrative overhead, which will be greatly appreciated by today's over-stressed database and security administrators.

**Automatic Whole Database Encryption** – The purpose of whole database encryption is to make a database unusable if it is stolen, copied, downloaded, lost, or otherwise improperly accessed. It is fast, unobtrusive, requires no programming, no administration, and can usually be deployed in a couple of hours or less. Whole database encryption uses completely on-the-fly, dynamic encryption and decryption. Data is never decrypted on disk, only in memory as requested by SQL Server. In addition, data is automatically encrypted before being written back to disk.

**Column-Level Encryption** – Column Encryption protects specific columns from users/groups who normally need access to the underlying table. And can be used to protect data even from the SQL System Administrator. Encryptionizer Column Encryption supports Repeating Values Protection (RVP), the ability to mask the occurrence of frequently repeating values such as salaries, PIN's and test scores.

#### Benefits/Features

- Quick and easy to deploy
- No administration
- No programming (optional APIs for column encryption)
- Extremely fast with very small memory footprint
- Multi-processor and cluster safe
- Industry-standard encryption algorithms
- Allows separation of roles
- Scalable across the enterprise
- Seamless and flexible
- Easy to bundle with SQL based applications

Column Encryption can be implemented one of two ways, or a combination of both:

**Col-E Manager** - The Encryptionizer Column Encryption Manager (Col-E) utilizes a point-and-click interface that allows you to quickly set up column encryption that in most cases can be transparent to existing applications. The Col-E Manager allows you to encrypt a column and specify the groups of users that are allowed to view the encrypted data through the use of database roles.

**Column Encryption APIs** – Also available are column encryption APIs that allow you to incorporate encryption functions into your applications directly. Column encryption APIs are extremely easy to use in SQL 2000, SQL 2005 and SQL 2008. They can be used anywhere built-in SQL functions can be used, including views, triggers, procedures, user defined functions, jobs, in-line SQL commands, etc. (In SQL 7, APIs can be used in triggers, procedures and jobs, but not in views or in-line SQL commands.)

In addition to column encryption, there are APIs for encrypting and decrypting simple files. For example, a log file can be encrypted before it is attached and sent with xp\_sendmail.



## Encryptionizer for SQL Express/ MSDE

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### Scalability

All three versions of Encryptionizer are interoperable. This allows you to secure data all the way from the primary server down to the desktop/laptop. For example, a mobile sales-force might have portions of a database replicated on a laptop that is later synchronized with a database on the server. Databases can even be securely distributed on CD/DVD or the Internet. Encryptionizer can easily be bundled into an application. Developers can protect their own intellectual property (in many cases you can even protect against the sysadmin), while enterprise users can create their own customized installation scripts for easy, enterprise-wide deployment.

### Algorithms Supported

- AES (up to 256 bits – 128 bits int'l)
- DES
- Triple DES (3DES) with two keys
- Triple DES (3DES) with three keys (US only)
- Blowfish (up to 256 bits – 128 bits int'l)

#### Why only a few algorithms?

Some encryption products advertise long lists of algorithms. We plan to support only the few that have gained wide acceptance in business, finance, industry and government. We also consider special requests from customers.

### Performance

- **Whole database encryption** – negligible impact in most multiprocessor servers.
- **Column encryption** – 5-6% slower on accessing/updating an encrypted column versus plaintext column in typical transactions.
- **Memory footprint** – very small: nonpaged portion less than 12K.

### Certifications

- FIPS 140-2 Validated (FIPS 140-2 Validated edition)
- Microsoft Certified Partner.
- Adheres to ANSI X9.52 for Triple DES Data Encryption Algorithm, and FIPS 46-3 for Data Encryption Standard (DES) Algorithm.

### Pricing

Pricing available on request. Encryptionizer for SQL Server is licensed per-server or per database, and must be installed on each server in a cluster. Volume pricing and OEM licensing is available. Encryptionizer for MSDE is licensed primarily through OEM or volume licensing. Per-seat and royalty-free distribution plans are available. Time-limited evaluation versions are available at no charge by filling out the form on our web site, [www.netlib.com](http://www.netlib.com).



# Encryptionizer for SQL Express/ MSDE

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## System Requirements

### **Encryptionizer for SQL Express/MSDE**

*for installation on x64 OS, see Encryptionizer x64*

#### SQL Server Versions

- SQL 2008 R2 Express
- SQL 2008 Express
- SQL 2005 Express
- MSDE (SQL 2000)

#### Windows Versions

- Windows 2008 Server
- Windows 2003 Server
- Windows 2000 Server
- Windows 2000 Professional
- Windows 7
- Windows Vista
- Windows XP

### **Encryptionizer x64 for SQL Express/MSDE**

#### SQL Server Versions

- SQL 2008 R2 Express x64
- SQL 2008 Express
- SQL 2005 Express
- MSDE (SQL 2000)

#### Windows Versions

- Windows 2008 R2 (x64)
- Windows 2008 Server x64
- Windows 2003 Server x64
- Windows 7 x64]
- Windows Vista x64
- Windows XP x64

## General

#### File Systems Supported

- **FAT**
- **FAT32**
- **NTFS**
- **CDROM/DVD**
- **RAW**

#### Maximum Supported Data File Size

(up to Microsoft SQL Server Edition limits)

- **NTFS: 10 GB (SQL Express limit)**
- **Other: 4 GB**



## Encryptionizer for SQL Express/ MSDE

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### Support

Standard (business hours) or 24/7 support is available. More information for support options can be found on our website at [http://www.netlib.com/support\\_options.asp](http://www.netlib.com/support_options.asp)

### References

Here are some larger organizations recently added to the list of satisfied customers:

- medical equipment manufacturer
- securities clearing house
- government contracts clearinghouse
- human resources software
- international and regional banks
- online retailer
- online hotel reservations
- pharmaceuticals distributor
- state university
- stock brokerage
- trade-show and events management
- truck leasing
- business systems integrator

### Recent Customer Comments

- “Every Thing went well. HR loves their super secret database”
- “Specifically, I setup 100 concurrent connections that repeatedly either inserted (1,000,000) or selected records with encrypted data. At the same time I ran encrypt\_column against a table with 100,000 records. The processes worked flawlessly.”
- “I was starting to think that implementing Encryptionizer, in the [short] amount of time we have left to wrap up this project, wasn't going to be feasible. Things are looking up.”
- “It is really a great product, maybe only one on the market [of its kind]”
- “Your product worked perfectly as advertised. It was easy to install and use.”

In addition, in a Nov. 2002 webcast on SQL Server Security, NetLib was the only third-party encryption solution mentioned by Microsoft (not to be considered an endorsement). For details, see “Resources” page on our web site: <http://www.netlib.com>.



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### Companion Products

Encryptionizer for MSDE – works similarly to Encryptionizer for SQL Server, but designed to provide encryption for the desktop edition of SQL Server. Frequently used to provide encryption protection for applications distributed on laptops, and on remote or individual workstations. Applications using Encryptionizer for MSDE can be upsized to Encryptionizer for SQL Server easily.

Encryptionizer DE (Desktop Edition) – offers client-side encryption and is interoperable with Encryptionizer for SQL Server and Encryptionizer MSDE. It can secure data stored in standard files, such as MS Access databases, DBFs, spreadsheets, documents, etc. Encryptionizer DE can also be used for electronic content distribution via the Internet.

#### **NetLib Encryptionizer Timeline**

1989	Released DOS version of NetLib incorporating file and field encryption capabilities.
1992	Released Win16 version of NetLib
1996	Released Win32 version of NetLib
1998	Released NetLib Encryptionizer DE (Desktop Edition)
2000	Released Encryptionizer for SQL Server
2001	Released Encryptionizer for MSDE
2005	Released Col-E Manager
2008	Released Encryptionizer x64
2009	Released FIPS 140-2 Validated Edition

### About Communication Horizons



Since 1986 Communication Horizons has been producing award-winning data security, connectivity and productivity-enhancing software for database developers and enterprise users.

Our software is used by thousands of organizations worldwide. These include Fortune 1000 corporations, governmental agencies, independent consultants and numerous small and medium-sized businesses. Communication Horizons is dedicated to providing top-notch software and technical support for mission-critical applications.

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