

Electronic-Key-Manager EKM Update History

The technical state of the software components EKM Server, EKM Client and EKM ActiveX is characterized through the description **Build X.X.X.O**. This state is administrated for the following versions:

- ▶ Order No. 8093320 - Demo version
- ▶ Order No. 8111410 - *Light* version (starting from Build 1.4.1.0)
- ▶ Order No. 8098578 - Single-user version (from Build 1.3.0.0)
- ▶ Order No. 8093322 - Full version incl. REST API (from Build 1.7.0.0)

Adjustment of the order numbers with preceding 8* according to the new convention for software components. Changeover of the provision of all EKM software versions from CD to download from August 2025.

Build 1.0.4.0 - April 2004 - Demo version, Full version

- ▶ First state released for sales.

Build 1.1.0.0 - August 2004 - Demo version, Full version

- ▶ Adoption of the EKM client for operation with a terminal-server and port-redirection in conjunction with RDP 5.2.
- ▶ Enhancement of the data-export function in csv- and SmartCard format. Manual start-up for export in the EKM Client. Automatic start-up for export in the EKM server.
- ▶ Run-time of Demo-version increased from 6 to 10 weeks.
- ▶ Filling characters within a string up to the parameterized length changed from value 20_{hex} (ASCII space) to value 00_{hex}. This is valid for the data type string, when stored on the Electronic-Key.

Build 1.2.0.0 - August 2005 - Demo version, Full version

- ▶ Additional language version English, complete for installation, software and documentation.

Build 1.3.0.0 - July 2006 - Demo version, Single-user version, Full version

- ▶ Introduction of the EKM single-user version.
- ▶ Pull down menus for data entry.
- ▶ Additional data types for date *DateAscii* and Time *TimeAscii* for *OnKey* data.
- ▶ Key logger for plugged keys in server window.
- ▶ Extension of server logger functions including data archive options.
- ▶ New data type *StringPassword*.
- ▶ EKM log on with key or password.
- ▶ Prevent duplicate entries in defined columns through *Unique* classification of data fields.
- ▶ Fast set up of new keys with user specific templates.
- ▶ Copy groups in the user manager.

(continued Build 1.3.0.0)

- ▶ Data base import from csv-file.
- ▶ New data type *BitString*.
- ▶ New data type *StringBlankFilled*. Filling characters with value 20_{hex} (ASCII space) for *OnKey* data.
- ▶ Data base export and enabling of conversion into user specific format.
- ▶ Common notation of data contents after export in csv-file, independent from language and country settings on the PC. The output of date and time is according to the formats *DateAscii* and *TimeAscii*. The output key active or locked is done in the column *Locked* with 0 or 1. Data fields containing numbers, e. g. *Byte* or *Word*, are displayed in decimal notation.
- ▶ Optional definition of the memory area used for calculation of the check sum (CRC).

Build 1.3.1.0 - July 2006 - Demo version, Single-user version, Full version

- ▶ Optimization of takeover from data in the form for data entry for special applications, if the same content of a data field shall be displayed parallel in several form components (e. g. on multilingual designed forms).

Build 1.3.2.0 - November 2006 - Demo version, Single-user version, Full version

- ▶ Correction for operating the demo version and single-user version under Windows® 98.
- ▶ Correction for the export of the data type *StringBlankFilled* into csv-file. If the data field in the EKM data base is completely empty, the csv-file will be filled with ASCII space for the defined number of characters.

Build 1.3.3.0 - January 2008 - Demo version, Single-user version, Full version

- ▶ Correction on call data type *BitString* in *Database viewer*.
- ▶ Correction of display data type *StringPassword* in *Database viewer*.
- ▶ Correction of the content of *support information* displayed in Windows®.
- ▶ Correction at COM port selection when language change-over at the same time.
- ▶ Intermittent disturbance (error at opening COM port) when switching between different display modes eliminated.

Build 1.4.1.0 - September 2010 - Demo version, *Light* version, Single-user version, Full version

- ▶ Introduction of the EKM *Light* version.
- ▶ Introduction snapshot module in the EKM server for supervision of the system state. Possibility of automated start of the EKM server as service after exceptional situations.
- ▶ Enable renaming of *Fieldname* in *Database Designer* without data loss.
- ▶ New data type *Nibble* (half byte).
- ▶ Checksum, data type *CRC*, can be located flexibly with freely selectable start byte.
- ▶ Single data set (accordant key) can be exported and important in csv-file format.
- ▶ Consequent sorting of data sets (according keys) in *Database viewer* according to serial number.

Build 1.5.2.0 - October 2011 - Demo version, *Light* version, Single-user version, Full version

- ▶ Enhancement of the data-export routine in SmartCard files by optimization of the synchronization of the data content between the EKM data base and the SmartCard export archive.
- ▶ Optimization of the data-export routine in csv-file.
- ▶ Enhancement to compatibility with new operating systems:

Windows® 7 32-Bit
Windows® 7 64-Bit
Windows® Server 2008 32-Bit
Windows® Server 2008 64-Bit
Windows® Server 2008 R2 64-Bit

The default installation path for these operating systems is C:\Euchner\EKM. When this installation path is changed, a message notes the possible loss of the auto-update function of the EKM clients.

- ▶ Correction when copying a *GroupBox* with contained *ComboBox*.
- ▶ Establishment of the program call EKM-Admin for access to the EKM server when the EKM server icon is not visible in the notification area. This is possible on Windows® Server operating systems, when the EKM server is executed as a service.

Build 1.5.3.0 - September 2013 - Full version

- ▶ Enhancement of the data-export routine. The DB-content of a column with data type *StringPassword* gets exported as encrypted Hash value (SHA-1 encryption) into the csv-file (before no export).

Build 1.5.4.0 - June 2015 - Full version

- ▶ Enhancement for historisation of key data sets in order to be able to trace back changes. The function *History protocol* is to be activated in the EKM server. The access right to view the records is to be given through the user management. A *History protocol* can be displayed within the EKM client.
- ▶ The size of the server window can be changed (before fixed size). In the views *Logger*, *Key-Logger* and *Users* hereby through enlargement more data can be displayed.

Build 1.5.5.0 - 2015 - Full version

- ▶ Optimization of the data-export routine into csv-file. Compilation of the csv-file swapped into a separate thread. The access of the client to the data base for data input and the export function run in parallel without interference. If a failure occurs during storage of the csv-file (e. g. due to access from outside), the storage process will be regularly repeated after a waiting period.

Build 1.5.6.0 - 2016 - Full version

- ▶ New data type *DateAuto*. When placing the key, a date in the *DateAuto* field gets automatically calculated new and written without additional EKM operating action. Basis is the system date of the EKM server. The new date can be the current date or a date in the future (e. g. expiration date).
- ▶ An EKM client can be established as *Automatic station*, where no operation possibilities are available. There, popup windows, which are generated when reading/writing a key, get suppressed. The popup window *Key data written* appears after automatic writing of a *DateAuto* field and gets then automatically closed.

Build 1.5.7.0 - June 2017 - Full version

- ▶ Selective view on data fields in *Database viewer* established. The display of the columns in the *Database viewer* occurs according to the rights of the user group. In the in *Database viewer* only those values respectively columns are still displayed, which the logged in user also sees on the form (input mask). New right *AllColumns* established in the *User manager*. If the right *AllColumns* is available, the view on all columns in the *Database viewer* is given (as before).
- ▶ New data type *UInt* (32 bit unsigned).
- ▶ Solved display problem in *Database viewer*. Buttons *OK* and *Cancel* are displayed independently of the Windows setting for text size (in %).

Build 1.5.X.0 - August 2018 - Demo version, Light version, Single-user version, Full version

- ▶ Test on compatibility with new operating systems:

Windows® 10 32-Bit
Windows® 10 64-Bit
Windows® Server 2012 64-Bit
Windows® Server 2012 R2 64-Bit
Windows® Server 2016 64-Bit

Build 1.5.8.0 - November 2018 - Full version

- ▶ Correction on entry of data in *Database viewer* (when data not *OnKey*) with data type *Byte*. Failure was with setting of *DisplayType* on *Hex* in *Database Designer*.

Build 1.5.9.0 - April 2019 - Full version

- ▶ EKM server start via service with different accounts. Der EKM server can now be started via service through different accounts (beside local system account) with administrator rights.
- ▶ Selection of data sets for export into the csv file. In the *Database viewer* within the EKM client a filter can be set for every column. Via the new button *CSV Export View* within the *Database viewer* an export into a csv file gets initiated, in which only the filtered key data sets of the present view get exported.
- ▶ Correction in display of data type *StringPassword* in the *Database viewer* under special circumstances. The problem is not present up to and including Build 1.5.2.0.
- ▶ Correction on function *Delete* within the *Database viewer*. If within the *User manager* for a group only the right *Button_Database_Visible* is available, the button *Delete* gets deactivated and it is not possible to delete key data sets any more.

Build 1.5.10.0 - April 2019 - Full version

- ▶ Visualisation problem in *Database Designer* partially fixed, further update required.

Build 1.5.11.0 - June 2019 - Full version

- ▶ Visualisation problem in *Database Designer* completely fixed. The buttons *OK* and *Cancel* get always displayed completely, independent from settings within the system environment.
- ▶ On Build 1.5.10.0 the automatic update of the EKM client did not work with this state. Bug fixed.

Build 1.5.12.0 - October 2019 - Full version

- ▶ On the historisation of key data sets introduced with Build 1.5.4.0, in addition the logged in user within an EKM client gets recorded. For this, on the very right side of the *History protocol* a column *User* is added, in which the registered user gets entered. The recording respectively viewer gets expanded accordingly. For files, which were created with an older EKM build, the new column *User* remains empty.

Build 1.5.12.0 - March 2020 - Full version

- ▶ Test on compatibility with new operating systems:

Windows® Server 2019 64-Bit

Build 1.6.x.0 - October 2021 to Juli 2025 - Full version

- ▶ Porting to a new Unicode-based development environment with a slightly different appearance of the user interface.
- ▶ Fulfilment of current requirements regarding data security.
- ▶ Bug fixing plus introduction of new functions.
- ▶ Release of several intermediate versions of the full version with build 1.6.* for customer-specific application.

Build 1.7.0.0 - August 2025 - Demo version, *Light* version, Single-user version, Full version

- ▶ Release of all EKM versions for general sales based on Build 1.6 with new Unicode-based development environment, with a slightly different appearance of the user interface including compliance with current requirements regarding data security, details below.
- ▶ Previous EKM applications created up to build 1.5*, can be brought to a new version from build 1.6* without data loss. All application specific data are hereby migrated from the *DB* folder to the *ServerDatabase* folder.
- ▶ New installation files (Setup_...exe) for all EKM versions after Build 1.5.2.0 established.
- ▶ All bug fixes of the incremental intermediate versions from Build 1.5.3.0 to Build 1.5.12.0 included in all versions. All new functions of the incremental intermediate versions from build 1.5.3.0 to build 1.5.12.0 included in the full version. The restrictions of the other versions partly changed. The demo version with limited runtime is now functionally oriented to the full version (previously to the single-user version). For details on the different versions, see EKM manual doc. no. 2093336.
- ▶ REST API integrated within the EKM server (Full version only). This allows an external application to communicate with the EKM server of the full version on an HTTP or HTTPS basis via SQL-like syntax to access key data sets and hereby reading and writing data. The EKM ActiveX® module is eliminated in this context.
- ▶ Data transfer between EKM server and EKM Client components in the full version is now switched to HTTP or HTTPS based communication. The following 3 levels of connections can be operated in conjunction with state-of-the-art data encryption (previously proprietary encryption). The three levels are carried out with ascending security as follows and visualised in the footer of the EKM Client as follows.

Level 1) Operation via HTTP. With AES-256 encrypted response from the server. Requires no action on a permanent basis. Symbol: Lock open in orange colour.

Level 2) Operation via HTTPS. Completely TLS-encrypted communication via 'untrusted' certificate. The highest version of the TLS protocol available on the PC or operating system is used. The certificate file can be created by the user. Symbol: Lock closed in grey colour.

Level 3) Operation via HTTPS. Completely TLS-encrypted communication via 'trusted' certificate. The highest version of the TLS protocol available on the PC or operating system is used. The certificate file must be obtained from an internal or external certification authority. Symbol: Lock closed in green colour.

- ▶ Logging on to an EKM Client can optionally be set so that a password must be entered that meets high security requirements. A maximum length of 64 characters is possible.
- ▶ Forced waiting time introduced for EKM client and REST access after 10 failed logon attempts to protect against brute force attacks.
- ▶ All application specific files in the *ServerDatabase* folder (previously *DB* folder), which map the key data sets and EKM internal user administration, are now encrypted. The migration from a previously created EKM application with database in the old format to the new secured format from build 1.6 is unidirectional.
- ▶ Fixed bug with EKM login window sometimes invisible when operating on PC with multiple screens. The *Logon* window is now centred in the welcome window so that it is always visible, regardless of PC graphic settings.
- ▶ Introduction of the option of a higher-level manufacturer access *EuchnerAdmin* in the *User manager* to be able to support the user in solving access problems in a controlled manner, if necessary. This is a prominently and clearly displayed access. Factory settings have the *EuchnerAdmin* access activated and thus access by Euchner is possible in case of need. The execution *Activate* and *Deactivate* for the *EuchnerAdmin* access is possible at any time, but *EuchnerAdmin* access cannot be deleted or edited. The *EuchnerAdmin* account is generated when migrating from a previously created EKM application to the new format from build 1.7 or when creating a new EKM application from build 1.7. When trying to deactivate the *EuchnerAdmin* access, a warning message is displayed. If the user now deliberately decides for deactivation, he assumes full responsibility for access to the EKM software and thus any claim to support on this subject expires. This is not an optional remote access, which means that the EKM application would have to be sent to Euchner for support, if necessary.

(Continuation Build 1.7.0.0)

- ▶ Setting option for data synchronisation established. When a key is placed, the data stored on the key (*OnKey* data fields) are read and compared with the data in the database.

Up to Build 1.5 the data synchronisation between the key and the database only works with the key as master. If the data deviate, the corresponding entries in the database are overwritten with the data of the key. The *OnKey* data fields cannot be changed in the *Database viewer*.

As of Build 1.6 the setting *Key is Master* (function as before) or *Database is Master* (new function) can be selected in the EKM server for data synchronisation. With the new option *Database is Master*, the corresponding data of the key is overwritten with the entries from the database in case of a deviation. The update automatically takes place as soon as a key is placed for the first time after the change in the database, without confirmation by the operator. All data fields can be changed in the *Database viewer* at any time.

- ▶ Setting option for selective export of the data fields to the csv-file introduced. Established the parameterability in the *Database Designer* for each column for *CSV Export* with the following three options:
 - Selection *yes*: with field name in header of column and all data (as before).
 - Selection *no*: not at all (column is omitted completely)
 - Selection *Header*: only with field name in header of column (no content between separators, structure remains)Exception as before: the data types *Memo* and *Graphic* are still not exported. The selected setting has the same effect on the manual *CSV Export* respectively *CSV Export View* in the *Database viewer* as well as on the automatic *CSV Export* which can be activated in the EKM server.
- ▶ Deletion of multiple data records added. In the *Database Viewer*, several (consecutive/non-consecutive) data records can be selected via Shift/Ctrl + mouse button or all displayed data records via Ctrl + A and then deleted by clicking *Delete*.
- ▶ Introduction of automatic deletion of database entries that contain duplicate values in a field that is later being changed to *unique*.
- ▶ Filtering of data in the *Database Viewer* adapted: Setting via filter selection in the column header. After creating a user-defined filter, the selected expression is displayed in the filter status line.
- ▶ Combination of *Logger*, *Key Logger* and *Users* into one log file in the EKM server. The *Users* log is no longer relevant as there is no permanent connection between the client and server.
- ▶ Start of *EKMAdmin.exe* adjusted: The port no longer needs to be set in *EKMServer.ini*.
- ▶ SmartCard export: Setting the time for automatic data synchronisation between EKM database and SmartCard export directory to 1 h (cannot be changed). Up to build 1.5, this can be configured via an entry in *EKMServer.ini*.
- ▶ Eliminated the *Electronic-Key-Manager EKM Help* in the *Help* menu. The complete EKM description can be found in the manual doc. no. 2093336.
- ▶ Compatibility with the following operating systems:
 - Windows® 7 (32- und 64-Bit)
 - Windows® 10 (32- und 64-Bit)
 - Windows® Server 2008 R2 (64-Bit)
 - Windows® Server 2012 (64-Bit)
 - Windows® Server 2012 R2 (64-Bit)
 - Windows® Server 2016 (64-Bit)
 - Windows® Server 2019 (64-Bit)
 - Windows® 11 (64-Bit)
 - Windows® Server 2022 (64-Bit)
- ▶ Changeover of the provision of all EKM software versions from CD to download.

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