

## PEM and PEM Companion Specifications

Specifications	PEM (for phones and tablets)	PEM Companion (for desktop/ laptop)
Operating system (OS)	Android	Windows, Linux, Mac OS (not tested)
OS version	2.3 (Gingerbread) to 5.1 (Lollipop)	Win XP, Vista, 7, 8, 10 (tested) Could work on other versions of Windows (not tested) Ubuntu
Encryption algorithm	AES-256	AES-256
Public key cryptography	RSA, key length= 4096	RSA, key length= 4096
Hashing algorithm	SHA-256	SHA-256
Compatibility with encrypted messages and files	100% cu PEM Companion	100% cu PEM
Compatibility with encrypted messages and files used for communications	100% cu PEM Companion	100% cu PEM
Backup and restore compatibility	100% cu PEM Companion	100% cu PEM
Required installing	yes	not required, works on USB flash drive or hard disk
Optimized view	Phone and tablet	Resize window or full screen
Data collected from your device	NO data	NO data
Backwards compatibility with Magic Password vers1	Password and message	Password and message
Price	Free - Offers in-app purchases	

Password management:	PEM (for phones and tablets)	PEM Companion (for desktop/ laptop)
Creates strong and unique, non-guessable passwords	✓	✓
Users can generate passwords creating and using their desired alphabet	✓	✓
Increases password version (creates a new, strong password)	✓	✓
Retains all previous versions of the password	✓	✓
Partial deletion of password versions (keeps the last 5)	✓	✓
Shows password masked or clear	✓	✓
Passwords can vary between 4 and 32 characters in length	✓	✓
Passwords can contain digits, lowercase/uppercase letters and/or symbols	✓	✓
Possibility to eliminate some symbols from the password	✓	✓
Passwords can be defined as 'normal' or 'very important'	✓	✓
Recommended periodic password change date can be set (only warns the user)	✓	✓

Shows last modified date of the password and warns the user when it should be changed	✓	✓
Magnifying effect (for the password)	-	✓
Fast search of the password in database through 3 methods: Select from ComboBox, select by nickname, select by site and username	✓	✓
Passwords can have an attached image	✓	✓
Passwords can be organized into groups	✓	✓
Password parameters can be edited (length, symbols, importance etc)	✓	✓
<b>Random password</b>		
<ul style="list-style-type: none"> <li>• Generate random password</li> </ul>	✓	✓
<ul style="list-style-type: none"> <li>• Passwords can be set between 4 and 32 characters in length</li> </ul>	✓	✓
<ul style="list-style-type: none"> <li>• Passwords contain digits, lowercase/uppercase letters and/or symbols</li> </ul>	✓	✓

<b>Securing information:</b>	<b>PEM (for phones and tablets)</b>	<b>PEM Companion (for desktop/ laptop)</b>
Encrypts / decrypts messages	✓	✓
Encrypts / decrypts files	✓	✓
Edits and modifies the content of messages	✓	✓
Encrypted message length	4000 chars	4000 chars
Modifies encryption key for an existing message (increases version)	✓	✓
Unique association between a record from the database and encrypted message or file.	✓	✓

<b>Securing communications:</b>	<b>PEM (for phones and tablets)</b>	<b>PEM Companion (for desktop/ laptop)</b>
Generates the pair of unique, private and public keys for each partner in a communication	✓	✓
Manoeuvres encrypted / decrypted text in bloc (copy, paste, clear)	✓	✓
Saves encrypted message as a file for easy communication	✓	✓
Opens email client automatically (sending encrypted message)	-	✓
Each message or file used for communication is encrypted with a unique key and signed to ensure confidentiality and authenticity	✓	✓
Every encryption key is unique to each partner and for each transmission	✓	✓
Compares/verifies public keys between partners in a communication	✓	✓

<b>More features:</b>	<b>PEM (for phones and tablets)</b>	<b>PEM Companion (for desktop/ laptop)</b>
Auto-close to protect the app from prying eyes	✓	✓
<b>Self-destruction of ALL DATA</b> (of this application) in case of hacker attempts to guess your master password	✓	✓
<b>Permanent deletion</b> of certain files on disk	✓	✓
Backup and restore	✓	✓
Sync between app database and backup database	✓	✓
Extra security (by confirmation password) for certain passwords, messages and files encrypted.	✓	✓
Right-to-Left Language Support	✓	✓
“Learning mod” Option	✓	✓
Modify font (most important fields)	✓	✓
Clean clipboard – manually (communication passwords and messages)	✓	✓
Clears backup directory (security option)	✓	✓
Resets application	✓	✓
Set time until autoclose, 2-9 min	✓	✓
Set time until automatic deletion of confirmation password from clipboard, 30-120 sec	✓	✓
Set time until automatic deletion of clipboard, 30-120 sec	✓	✓
Set time until automatic deletion of generated password from password field, 30-120 sec	✓	✓
Set maximum number of attempts to enter the Master Password, 3-15 attempts	✓	✓
Set number of days until the recommended periodic password change date (default value)	✓	✓
Set password length (default value)	✓	✓
Set backup and restore directory or create a new one	✓	✓
Creates, edits, saves and restores own alphabet	✓	✓
Zip/unzip for easy manoeuvring (encrypt, send thorough Bluetooth)	✓	✓

<b>User friendly:</b>	<b>PEM (for phones and tablets)</b>	<b>PEM Companion (for desktop/ laptop)</b>
Learning mode	✓	✓
Easy selection of different password versions	✓	✓
Rapid creation of a new password version	✓	✓
Intuitive interface thus the application is easy to use.	✓	✓
The application is highly customizable	✓	✓
Well structured help	✓	✓