

JUMBO BLOCK ENGINEERING SUITE

Archive

User Manual · Version 1.0.0

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1. Overview

JUMBO BLOCK Archive is the JUMBO BLOCK Engineering Suite program for packing and unpacking files. It is deliberately simple: drag files or folders into the window, and the program recognises by itself whether an archive should be unpacked or new files packed. No expert knowledge is required.

Archive runs entirely locally in the browser. No files are uploaded, no user account is needed, and no internet connection is required once the page has loaded. The application is designed for desktop, tablet and smartphone and can be reached via the shared menu of the Engineering Suite.

2. Supported Formats

- Pack: ZIP (default, also with AES-256 password protection), TAR.GZ and TAR.
- Unpack: ZIP (also with password), 7z, RAR (versions 4 and 5), TAR, TAR.GZ or .tgz, TAR.XZ, TAR.BZ2 and single .gz files.
- ZIP is the best choice for sharing: Windows, macOS and Linux can open ZIP files without additional software. TAR.GZ is common on Linux; TAR only combines files without making them smaller.

ZIP, TAR and GZIP are entirely the Engineering Suite's own program code. For 7z, RAR, TAR.XZ and TAR.BZ2, Archive uses the freely licensed libarchive library (BSD licence). It is contained in the file vendor/libarchive/libarchive-wasm.js and is only loaded when such an archive is opened. RAR and 7z archives can only be unpacked, not created: RAR is a proprietary format, and creating 7z is not included in this version.

3. Packing Files and Folders

There are three ways to pack: the “Pack files” button, the “Pack folder” button, or dragging files and folders into the window. The folder structure is preserved, including empty folders.

- The list shows all selected files and folders with their size. “X” removes an entry, “+ Add files” and “+ Add folder” add more. Further files can also be dragged into the window at any time.
- “Archive name” is prefilled sensibly, for example with the name of the packed folder, and can be changed. Next to it you choose the format; ZIP is recommended.
- “Pack and save” creates the archive. In Chrome and Edge a save dialog appears; in other browsers the file goes to the download folder. Archive then reports the size and the saving.

Compression is performed by the browser (Deflate method). Files that are already compressed, such as photos, videos, music, archives or Office documents, are stored without recompression because they would not get smaller. Under “Advanced”, compression can be turned off entirely for ZIP; this is faster, but the file becomes larger. File names are stored in UTF-8, so special characters are kept; modification date and time are preserved. Archives larger than 4 GB or with more than 65,535 entries are written automatically in ZIP64 format.

4. Password Protection (AES-256)

For ZIP, “ Protect with password” can be selected. The password is entered twice; “Show password” displays it for checking. Encryption uses AES-256 following the WinZip method. At least 12 characters are recommended.

- Such archives can be opened by Archive itself, 7-Zip, WinZip, WinRAR, Keka and The Unarchiver, among others. Windows' built-in ZIP folder cannot open AES-encrypted archives.
- The content of the files is encrypted. File names, folder structure and sizes remain visible without the password, as is usual with ZIP. Confidential information should therefore not appear in file names.
- Without the password, the content cannot be recovered. Archive does not store passwords. Keep the password separate from the archive, for example in JUMBO BLOCK Vault, and do not send it through the same channel as the archive.

5. Unpacking Archives

Select an archive with “Unpack archive” or drag it into the window. Archive then shows the format, the number of files, the total unpacked size and the complete list of contents.

- “Unpack all”: in Chrome and Edge you choose a target folder; Archive creates a new folder named after the archive inside it and extracts all files with their folder structure. If the folder already exists, a new name such as “Name (2)” is used; existing files are not overwritten.
- In browsers without folder access (for example Firefox and Safari), the files are downloaded one by one to the download folder. Subfolders are indicated in the file name with “_”. With many files, Archive asks first; the browser may additionally ask whether multiple downloads are allowed.
- “Save” next to a file extracts only that one file. If an archive contains only a single file, “Unpack all” saves it directly.
- “Save as ZIP” converts 7z, RAR and TAR archives into a ZIP file that any operating system can open without additional software.

When unpacking, Archive checks every file with its checksum (CRC-32, or an authentication code for AES). If an archive is damaged, a clear message appears. For security reasons, paths are sanitised: no entry can be written outside the chosen folder, characters not allowed on Windows are replaced with “_”, and symbolic links and special entries are skipped.

6. Opening Password-Protected Archives

If a ZIP archive is password protected, “ This archive is password protected” appears. After entering the password and clicking “Continue”, Archive checks the password immediately; a wrong password is reported. AES-encrypted ZIP archives (128, 192 and 256 bit) and the older ZIP method (“ZipCrypto”) are supported.

Encrypted 7z and RAR archives cannot be unpacked; Archive points this out. Please open such archives with 7-Zip or WinRAR.

7. Progress and Cancelling

For longer operations, a window shows the progress in percent and the file currently being processed. “Cancel” or Esc stops the operation. When unpacking into a folder, files already written are kept.

8. Language and Display

The interface is bilingual. The language is selected with DE and EN in the shared menu of the Engineering Suite. “” switches between light and dark display; the choice is remembered locally in

the browser. On smartphones the large buttons are stacked. Packing whole folders is not possible on some mobile devices (for example iPhone); the button is then hidden.

9. Privacy

All files are processed exclusively on your own device. No content, file names or passwords are transmitted or stored. Only the light/dark setting is stored locally.

10. Limitations and Notes

- The possible amount of data depends on the device's memory. ZIP, TAR and GZIP are largely processed in pieces; several gigabytes are possible depending on the device. 7z, RAR, TAR.XZ and TAR.BZ2 archives are loaded completely into memory; archives up to about 1–2 GB are recommended here.
- For 7z, RAR, TAR.XZ and TAR.BZ2, the modification dates of the files are not preserved; extracted files get the current date.
- Single .xz and .bz2 files without a TAR archive and multi-part archives (for example .001, .z01 or .part1.rar) are not supported.
- Rarely used ZIP methods (for example Deflate64, BZIP2 or LZMA inside ZIP) are extracted via libarchive, provided the archive is not encrypted.
- If the file vendor/libarchive/libarchive-wasm.js is missing, ZIP, TAR and GZIP continue to work; for 7z, RAR, TAR.XZ and TAR.BZ2 a notice appears.
- Important files should be backed up independently of the archive program.

11. Quick Reference: Buttons

Button	Meaning
Pack files	Select files and pack them
Pack folder	Pack a whole folder including subfolders
Unpack archive	Select and open an archive
Drag and drop	Archive → open; other files or folders → pack
×	Remove entry from the list
+ Add files / + Add folder	Add further files or folders
.zip / .tar.gz / .tar	Format of the new archive (ZIP recommended)
 Protect with password	Encrypt ZIP with AES-256
Advanced: Without compression	Faster packing, larger file (ZIP only)
Pack and save	Create and save the archive

Button	Meaning
Unpack all	All files into a new folder or as downloads
Save	Extract only this one file
Save as ZIP	Convert 7z, RAR or TAR to ZIP
Continue	Confirm the password for a protected archive
Close / Cancel	Back to the start page
Cancel in the progress window / Esc	Stop the running operation
☐	Light / dark display