

# Package: crc32c (via r-universe)

August 15, 2024

**Type** Package

**Title** Cyclic Redundancy Check with CPU-Specific Acceleration

**Version** 0.0.2

**Date** 2023-05-11

**Description** Hardware-based support for 'CRC32C' cyclic redundancy checksum function is made available for 'x86\_64' systems with 'SSE2' support as well as for 'arm64', and detected at build-time via 'cmake' with a software-based fallback. This functionality is exported at the 'C'-language level for use by other packages. 'CRC32C' is described in 'RFC 3270' at <https://datatracker.ietf.org/doc/html/rfc3270> and is based on 'Castagnoli et al' <[doi:10.1109/26.231911](https://doi.org/10.1109/26.231911)>.

**URL** <https://github.com/google/crc32c>,  
<https://github.com/eddelbuettel/crc32c>

**BugReports** <https://github.com/eddelbuettel/crc32c/issues>

**License** GPL (>= 2)

**LinkingTo** tidyCpp

**SystemRequirements** cmake

**Encoding** UTF-8

**RoxygenNote** 6.0.1

**Repository** <https://eddelbuettel.r-universe.dev>

**RemoteUrl** <https://github.com/eddelbuettel/crc32c>

**RemoteRef** HEAD

**RemoteSha** 1fb5c11662ae80c432e4d85498ac48326f5e5666

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`crc32c-package`*Cyclic Redundancy Check with CPU-Specific Acceleration*

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**Description**

Hardware-based support for 'CRC32C' cyclic redundancy checksum function is made available for 'x86\_64' systems with 'SSE2' support as well as for 'arm64', and detected at build-time via 'cmake' with a software-based fallback. This functionality is exported at the 'C'-language level for use by other packages. 'CRC32C' is described in 'RFC 3270' at <<https://datatracker.ietf.org/doc/html/rfc3270>> and is based on 'Castagnoli et al' <[doi:10.1109/26.231911](https://doi.org/10.1109/26.231911)>.

**Package Content**

Index: This package was not yet installed at build time.

**Maintainer**

Dirk Eddelbuettel

**Author(s)**

The CRC32C Authors for the 'crc32c' library; Dirk Eddelbuettel for the package.

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`crc32c`*Cyclic Redundancy Check with Hardware Support*

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**Description**

The `crc32c` implementation with hardware support via SSE2 instructions on 'x86\_64' platforms as well as on 'arm64' is provided by using the code from the repository at <https://github.com/google/crc32c>.

**Usage**

```
crc32c(x)
```

**Arguments**

`x`                      A character vector

**Value**

A character vector of the same length as the incoming vector, with a `crc43c` checksum in hexadecimal as a character value of length eight in each element.

## **References**

<https://datatracker.ietf.org/doc/html/rfc3720>, doi:10.1109/26.231911

## **See Also**

<https://github.com/google/crc32c>

## **Examples**

```
crc32c("abc")
```

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