

Package ‘crc32c’

May 11, 2023

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

NeedsCompilation yes

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Maintainer

Dirk Eddelbuettel

Author(s)

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

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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
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Value

A character vector of the same length as the incoming vector, with a `crc32c` 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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