util helper math.vh

AUTHORS

JAY CONVERTINO

DATES

2022/08/19

INFORMATION

Brief

helper functions for verilog relating to math.

License MIT

Copyright 2022 Jay Convertino

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

FUNCTIONS

clogb2

function integer clogb2

Copied from the IEEE 1364-2001 Standard, int clogb2(value) will return the log base 2 of the argument (value), rounded up to the nearest integer.

cmax

function integer cmax

int cmax(max1, max2) ... will return the number that is the max of the arguments max1, max2.

abs

function integer abs

int abs(value) \dots will return the absolute value of the argument passed.