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## Nomenclature

AMCLA Array multiplier with CLA

AMCLEBC Array multiplier with CLEBC

BE Booth encoder

BE-new New Booth encoder

BS Booth selector

BS-new New Booth selector

CLA Carry look ahead adder

CLEBC Carry look ahead equivalent bit converter

Cp Code polarity

CPA Carry propagate adder

EBC Equivalent bit converter

EBCA Equivalent binary conversion algorithm

EDA Electronic design and automation

EDP Energy delay product

ENI Input carry of RB to NB converter based on EBCA

ENO Output carry of RB to NB converter based on EBCA

GDSII Graphic data system for information intercgange

LSB Least significant bit

 $\mu_p$  Electron mobility

 $\mu_p$  Hole mobility

MBE Modified Booth's Encoding

MSB Most significant bit

MUX Multiplexer

NB Natural binary

PPRB RB partial product row

psec Pico second

Radix 64 multiplier with CLA

Radix 64 multiplier with CLEBC

RB Redundant binary

RBA Redundant binary adder

RBAA RB adder with all code input

RBAL RB adder with limited input

RTL Resister transfer logic

SD Signed digit

SERF Static energy recovery full adder

Sgr S group

T Delay of a two input XOR gate

T<sub>AND2</sub> Delay of a two input AND gate

Tgr T group

T<sub>OR2</sub> Delay of a two input OR gate

T<sub>XOR</sub> Delay of a two input XOR gate

VHDL Very high-density hardware description language

WM32CLA Wallace tree multiplier using 3:2 compressors with CLA

WM32CLEBC Wallace tree multiplier using 3:2 compressors with CLEBC

WM42CLA Wallace tree multiplier using 4:2 compressors with CLA

WM42CLEBC Wallace tree multiplier using 4:2 compressors with CLEBC

WMRBCLA Wallace tree multiplier using RB adder with CLA

WMRBCLEBC Wallace tree multiplier using RB adder with CLEBC