Quadrant_Corrector

input [31:0] x

input [31:0] y

input [31:0] angle

input [1:0] mode

output [31:0] x_out

output [31:0] y_out

output [31:0] angle_out

Scaler

input [31:0] number

input [1:0] mode

output [31:0] answer

Z_Calculator

input [31:0] angle

input [1:0] lookup_table_amount

output [31:0] angle_out

Input clock

X_Calculator

input [31:0] x

input [31:0] y

input [31:0] angle

input [1:0] mode

input [31:0] y_shift

Input clock

output [31:0] x_out

Y_Calculator

input [31:0] x

input [31:0] y

input [31:0] angle

input [31:0] x_shift

Input clock

output [31:0] y_out

CORDIC_ROTATION

input [31:0] x

input [31:0] y

input [31:0] angle

input [1:0] mode

Input clock

output [31:0] rotated_x

output [31:0] rotated_y

output [31:0] angle_out

Parameter NUMBER_OF_ITERATIONS : Defualt(17)