

## Library Components List

Block Name	Input	Output	Config variable name, Default value [valid range]	Config variable name, Default Value [valid range]
xup_and_vector	a[SIZE-1:0], b[SIZE-1:0]	y[SIZE-1:0]	SIZE, 4, [1 to 8]	DELAY, 3, [0 to 5]
xup_and2	a, b	y		DELAY, 3, [0 to 5]
xup_and3	a, b, c	y		DELAY, 3, [0 to 5]
xup_and4	a, b, c, d	y		DELAY, 3, [0 to 5]
xup_and5	a, b, c, d, e	y		DELAY, 3, [0 to 5]
xup_and6	a, b, c, d, e, f	y		DELAY, 3, [0 to 5]
xup_or_vector	a[SIZE-1:0], b[SIZE-1:0]	y[SIZE-1:0]	SIZE, 4, [1 to 8]	DELAY, 3, [0 to 5]
xup_or2	a, b	y		DELAY, 3, [0 to 5]
xup_or3	a, b, c	y		DELAY, 3, [0 to 5]
xup_or4	a, b, c, d	y		DELAY, 3, [0 to 5]
xup_or5	a, b, c, d, e	y		DELAY, 3, [0 to 5]
xup_or6	a, b, c, d, e, f	y		DELAY, 3, [0 to 5]
xup_nand_vector	a[SIZE-1:0], b[SIZE-1:0]	y[SIZE-1:0]	SIZE, 4, [1 to 8]	DELAY, 3, [0 to 5]
xup_nand2	a, b	y		DELAY, 3, [0 to 5]
xup_nand3	a, b, c	y		DELAY, 3, [0 to 5]
xup_nand4	a, b, c, d	y		DELAY, 3, [0 to 5]
xup_nand5	a, b, c, d, e	y		DELAY, 3, [0 to 5]
xup_nand6	a, b, c, d, e, f	y		DELAY, 3, [0 to 5]
xup_nor_vector	a[SIZE-1:0], b[SIZE-1:0]	y[SIZE-1:0]	SIZE, 4, [1 to 8]	DELAY, 3, [0 to 5]
xup_nor2	a, b	y		DELAY, 3, [0 to 5]
xup_nor3	a, b, c	y		DELAY, 3, [0 to 5]
xup_nor4	a, b, c, d	y		DELAY, 3, [0 to 5]
xup_nor5	a, b, c, d, e	y		DELAY, 3, [0 to 5]
xup_nor6	a, b, c, d, e, f	y		DELAY, 3, [0 to 5]
xup_inv_vector	a[SIZE-1:0]	y[SIZE-1:0]	SIZE, 4, [1 to 8]	DELAY, 3, [0 to 5]
xup_inv	a	y		DELAY, 3, [0 to 5]
xup_tri_buf0_vector	a[SIZE-1:0], enable	y[SIZE-1:0]	SIZE, 4, [1 to 8]	DELAY, 3, [0 to 5]
xup_tri_buf0	a, enable	y		DELAY, 3, [0 to 5]
xup_tri_buf1_vector	a[SIZE-1:0], enable	y[SIZE-1:0]	SIZE, 4, [1 to 8]	DELAY, 3, [0 to 5]
xup_tri_buf1	a, enable	y		DELAY, 3, [0 to 5]
xup_xor_vector	a[SIZE-1:0], b[SIZE-1:0]	y[SIZE-1:0]	SIZE, 4, [1 to 8]	DELAY, 3, [0 to 5]
xup_xor2	a, b	y		DELAY, 3, [0 to 5]
xup_xnor_vector	a[SIZE-1:0], b[SIZE-1:0]	y[SIZE-1:0]	SIZE, 4, [1 to 8]	DELAY, 3, [0 to 5]
xup_xnor2	a, b	y		DELAY, 3, [0 to 5]
xup_2_to_1_mux_vector	a[SIZE-1:0], b[SIZE-1:0], sel	y[SIZE-1:0]	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_2_to_1_mux	a, b, sel	y		DELAY, 3, [0 to 5]
xup_4_to_1_mux_vector	a[SIZE-1:0], b[SIZE-1:0], c[SIZE-1:0], d[SIZE-1:0], sel	y[SIZE-1:0]	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_4_to_1_mux	a, b, c, d, sel	y		DELAY, 3, [0 to 5]
xup_dff_vector	d[SIZE-1:0], clk	q[SIZE-1:0]	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_dff	d, clk	q	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_dff_en_vector	d[SIZE-1:0], en, clk	q[SIZE-1:0]	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_dff_en	d, en, clk	q	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_dff_en_reset_vector	d[SIZE-1:0], en, reset, clk	q[SIZE-1:0]	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_dff_en_reset	d, en, reset, clk	q	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_tff_vector	t[SIZE-1:0], clk	q[SIZE-1:0]	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]

xup_tff	t, clk	q	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_tff_en_vector	t[SIZE-1:0], en, clk	q[SIZE-1:0]	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_tff_en	t, en, clk	q	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_tff_en_reset_vector	t[SIZE-1:0], en, reset, clk	q[SIZE-1:0]	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_tff_en_reset	t, en, reset, clk	q	SIZE, 2, [1 to 8]	DELAY, 3, [0 to 5]
xup_clk_divider	clkin	clkout	DIVISOR, 2	