

STATES	SAM	LaM	SFL
00	0	1	-
01	1	1	1
10	1	1	0
11	-	0	-

Meaning of Output Signal

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SAM: Select Adder Operation First A-M or Last A-M

First A-M : When you are not press start button, You will be enter input A and M.

Last A-M : The logic circuit will be start and do the adder operation and this adder operation return result. This result Last A or Last Multip.

LAM: Load A and M at every state until last state.

SFL: Select Adder Number A OR M and -1 OR B. And Select New result or Last result for Loading.

$$SAM = N1' * N0 + N1 * N0'$$

$$LAM = N1' * N0 + N1 * N0' + N1' * N0'$$

$$SFL = N1' * N0$$

S1	S0	St	R	Acmp	N1	N0
0	0	0	-	0	0	0
0	0	0	-	1	0	0
0	0	1	-	0	0	0
0	0	1	-	1	0	1
0	1	-	-	0	0	0
0	1	-	-	1	1	0
1	0	-	-	0	1	1
1	0	-	-	1	0	1
1	1	-	0	-	1	1
1	1	-	1	-	0	0

Meaning of Input Signal

Acmp : This value means that A is greater than zero it will be return 1. Otherwise It will be return 0.

St : Start Button

R : Reset Buton

$$N0 = S1' * S0' * St * Acmp + S1 * S0' * Acmp' + S1 * S0' * Acmp + S1 * S0 * R'$$

$$N0 = S1' * S0' * St * Acmp + S1 * S0' + S1 * S0 * R'$$

$$N1 = S1' * S0 * Acmp + S1 * S0' * Acmp' + S1 * S0 * R'$$

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