TECHNICAL DOCUMENTATION

Component name: HS102CCIT20208MBT11XQ
Family: Digital Filter
Type of circuit: Moore FSM
Number of inputs: 6
Number of outputs: 1
Reset type: asynchronous, active high
Maximum clock frequency: 850 MHz

Behavioral description:
HS102CCIT20208MBT11XQ is a digital filter that filters out the input stream incoming on 2 serial single-bit transmission lines, A and B, transmitted synchronously with respect to a clock signal CLK. The filter also gets in input two control signals, C1 and C0 and provides, in the following clock cycle, an output value O as specified as follows:

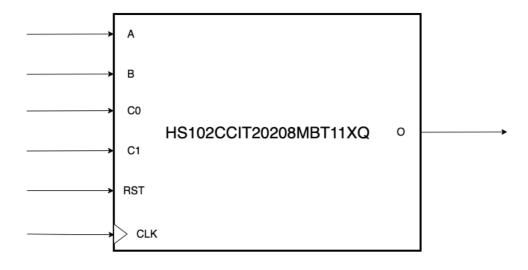| C1	C0	O
0	0	$A(t-8) + B(t-1)$
0	1	$A(t-6) - not(B(t-7))$
1	0	$O(t-4)$
1	1	unused / don't care

Figure 1 - HS102CCIT20208MBT11XQ top-level view