

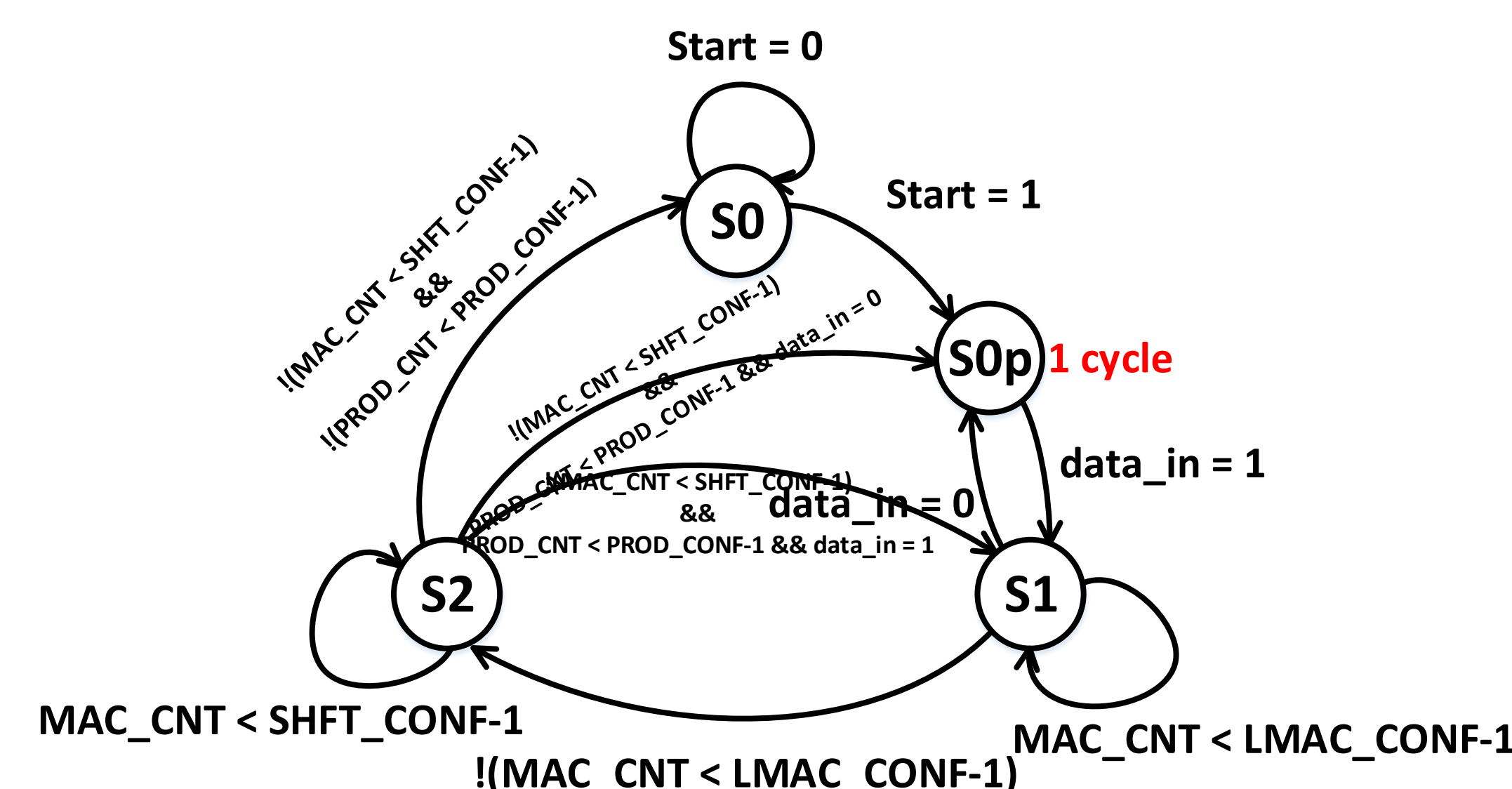
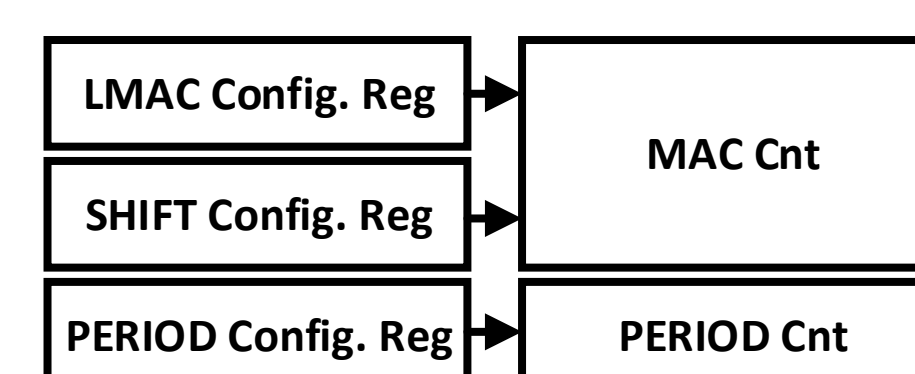
### Programmable State Machine

conv\_mm = 1 (mm mode)

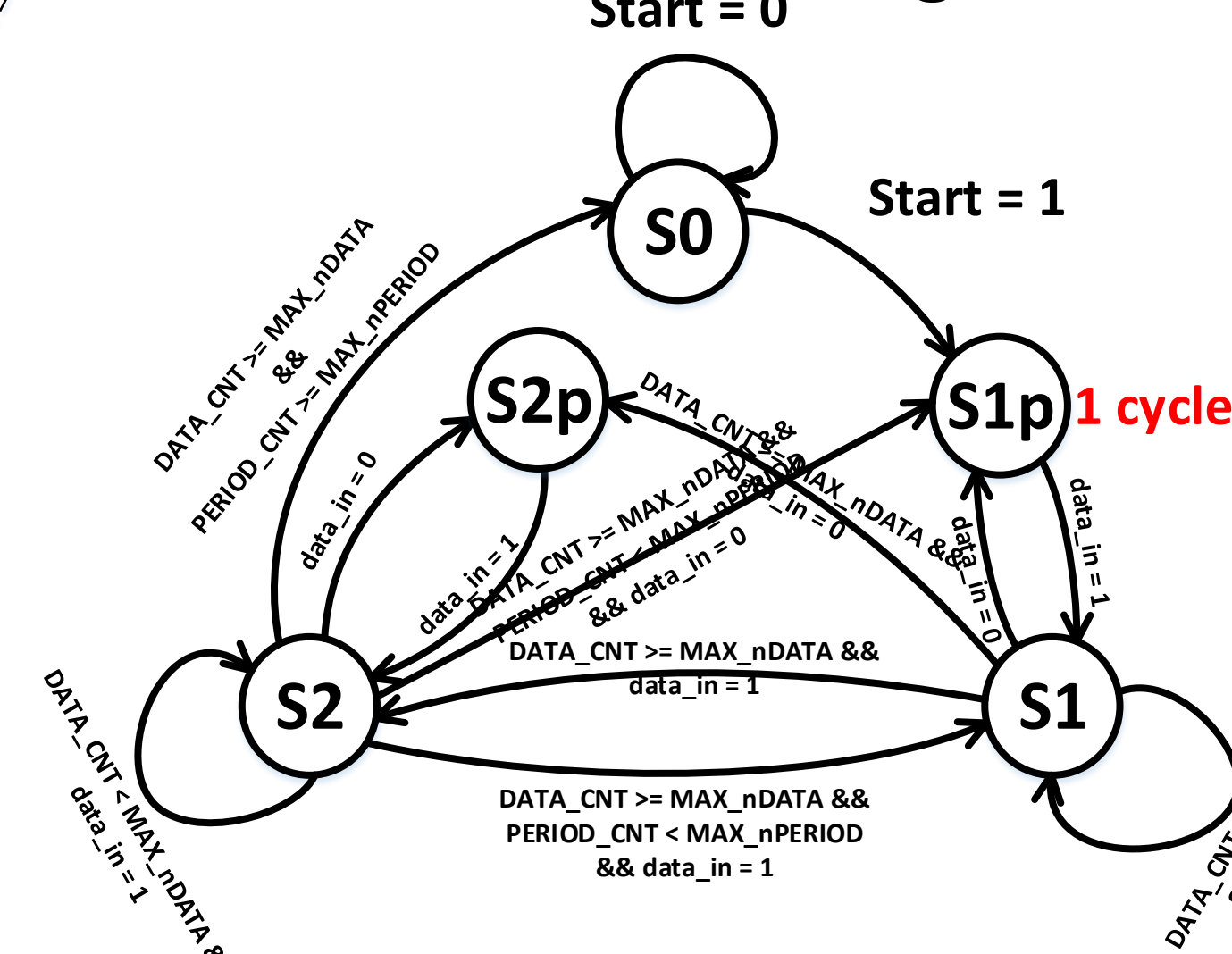
S0: IDEL	S1: MAC	S2: SHIFT	S0p: LOAD
A = 0	A = 1	A = 0	A = 1
B = 0	B = 1	B = 0	B = 1
C = 0	C = 1	C = 0	C = 1
D = 0	D = 1	D = 0	D = 0
E = 0	E = 0	E = 1	E = 0
F = 0	F = 0	F = 0	F = 0
G = 0	G = 0	Out_en = 1	Out_en = 0
H = 0	G = 1	H = 0	G = 0
Out_en = 0	Out_en = 0	H = 0	H = 0

conv\_mm = 0 (conv. mode)

S0: IDEL	S1: MAC	S2: SHIFT	S0p: LOAD
A = 0	A = 1	A = 0	A = 1
B = 0	B = 1	B = 0	B = 1
C = 0	C = 1	C = 0	C = 1
D = 0	D = 1	D = 0	D = 0
E = 0	E = 0	E = 1	E = 0
F = 0	F = 0	F = 1	F = 0
G = 0	G = 0	Out_en = 1	Out_en = 0
H = 0	G = 1	H = 0	G = 0
Out_en = 0	Out_en = 0	H = 0	H = 0



### Programmable State Machine



S0: IDEL  
zero = 1  
we = 0  
re = 0  
data\_out\_en = 0

S1:  
zero = 1  
we = 0  
re = 0  
if (data\_cnt != 0 && data\_cnt == even)  
we = 1  
Else  
we = 0  
data\_out\_en = 0

S1p:  
zero = 1  
we = 0  
re = 0  
data\_out\_en = 1

S2:  
zero = 1  
we = 0  
if (data\_cnt == odd)  
re = 1  
data\_out\_en = 1  
Else  
re = 0  
data\_out\_en = 0

S2p:  
zero = 0  
we = 0  
re = 0  
data\_out\_en = 0

