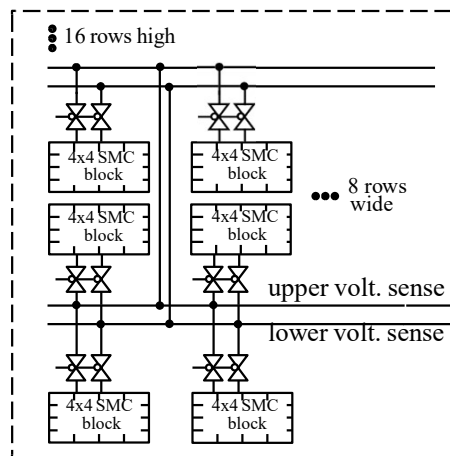
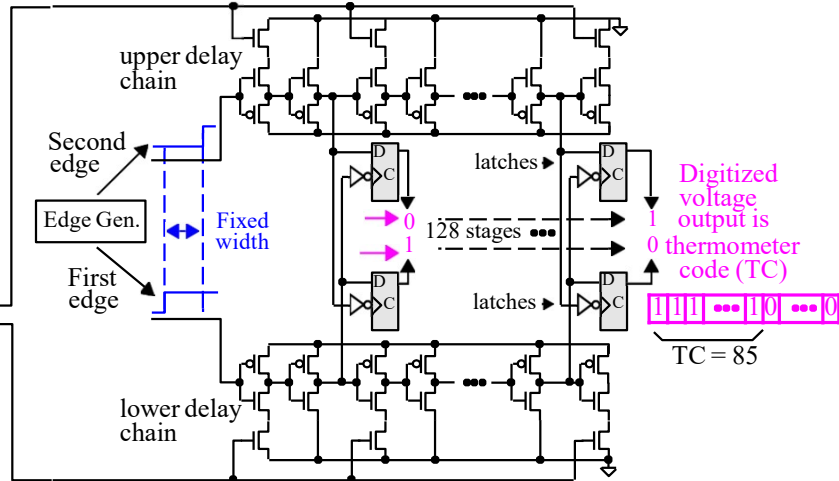


SMC array of 2048 elements

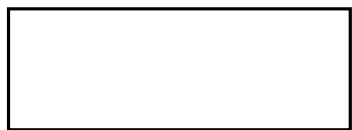
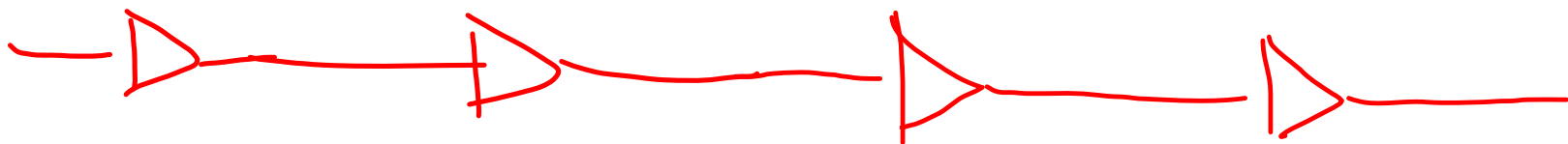


Voltage-to-digital-converter (VDC)

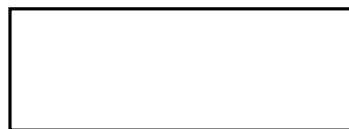
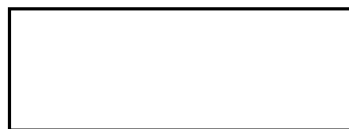
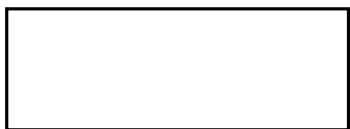
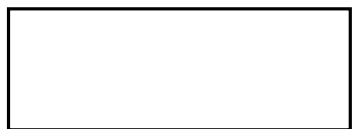
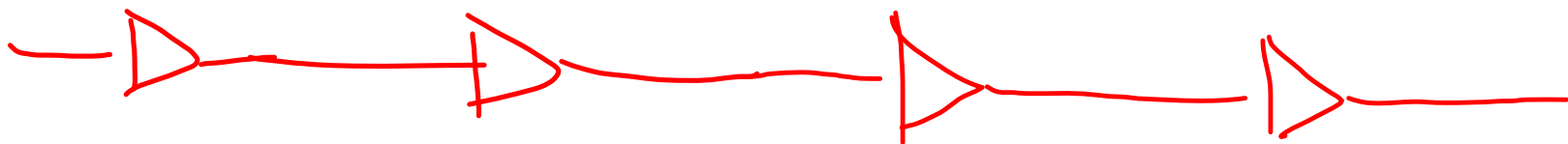


D. Ismari and J. Plusquellic, "IP-Level Implementation of a Resistance-Based Physical Unclonable Function", HOST, 2014.

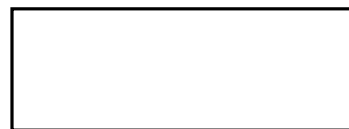
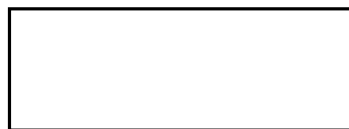
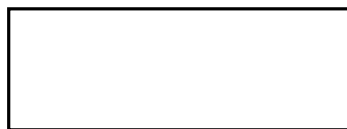
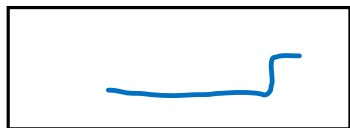
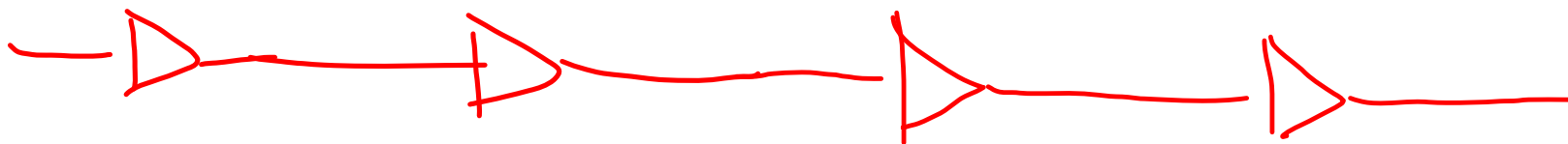
$$\neg \Delta = \neg \Delta \circ \neg \Delta$$



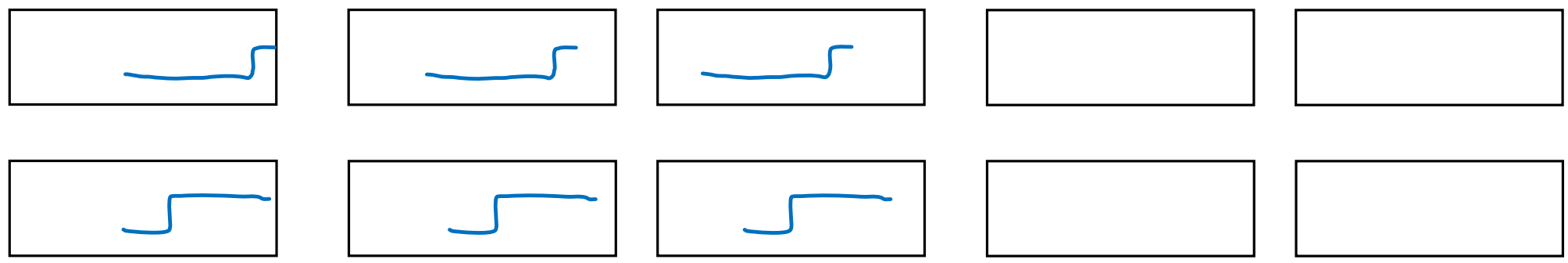
$$\neg \Delta = \neg \Delta \circ \neg \Delta$$



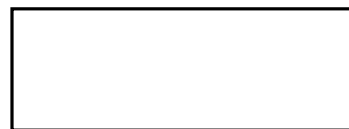
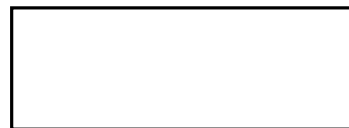
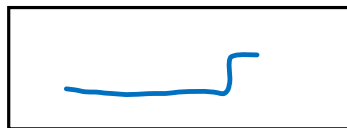
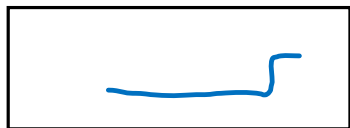
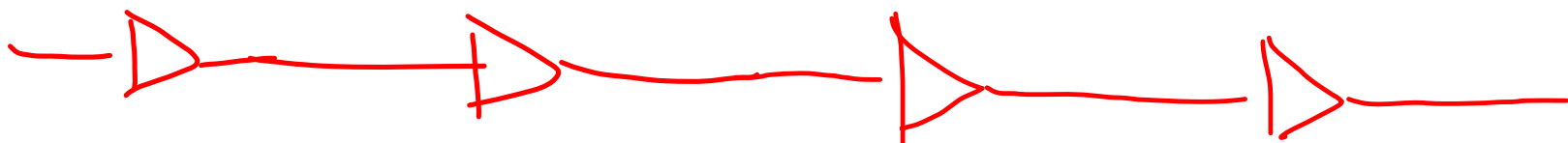
$$\neg \Delta = \neg \Delta \circ \neg \Delta$$



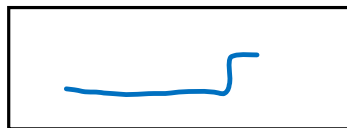
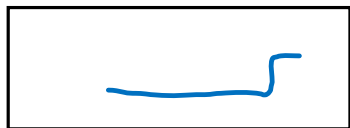
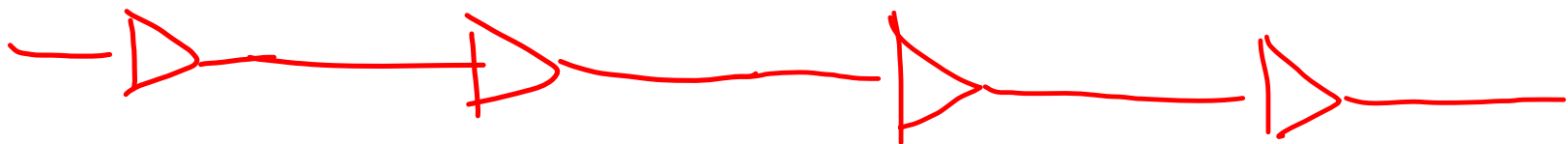
$$\neg \Delta = \neg \Delta \circ \neg \Delta$$



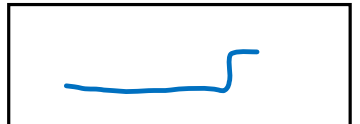
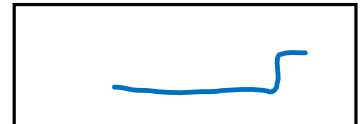
$$\text{---} \triangle \text{---} = \text{---} \triangle \circ \text{---} \triangle \circ \text{---}$$



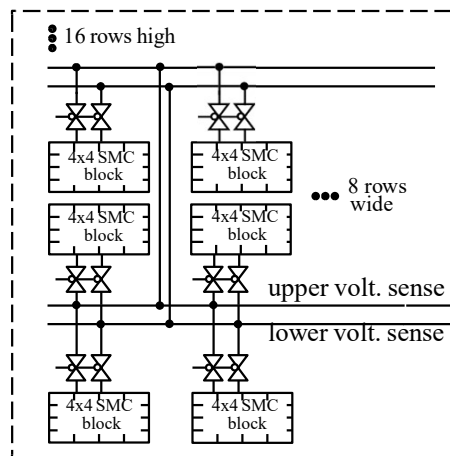
$$\text{---} \triangleright \text{---} = \text{---} \triangleright \circ \text{---} \triangleright \circ \text{---}$$



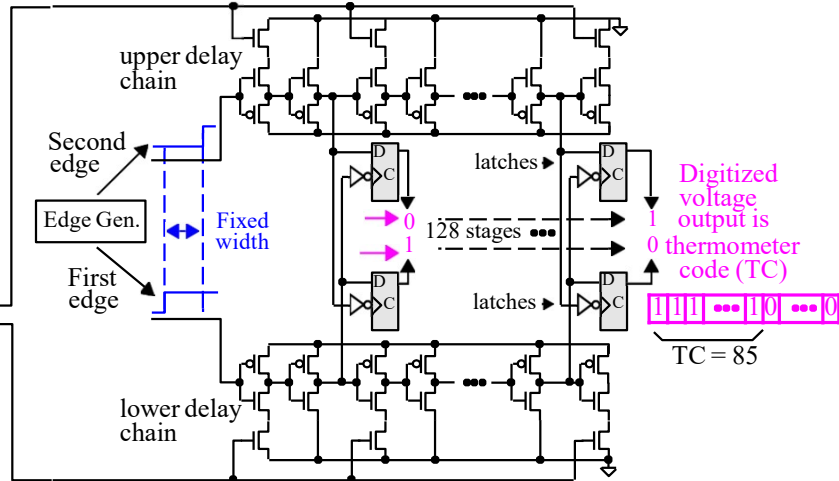
$$\text{---} \triangle \text{---} = \text{---} \triangle \circ \text{---} \triangle \circ \text{---}$$



SMC array of 2048 elements

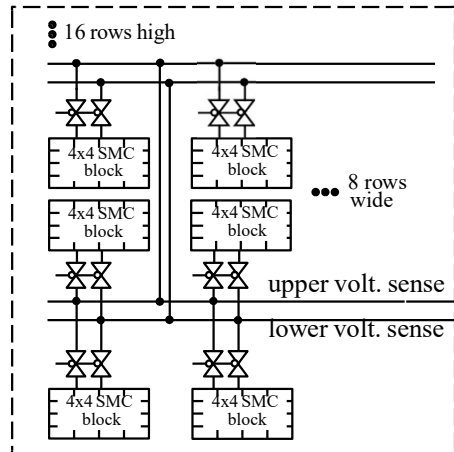


Voltage-to-digital-converter (VDC)

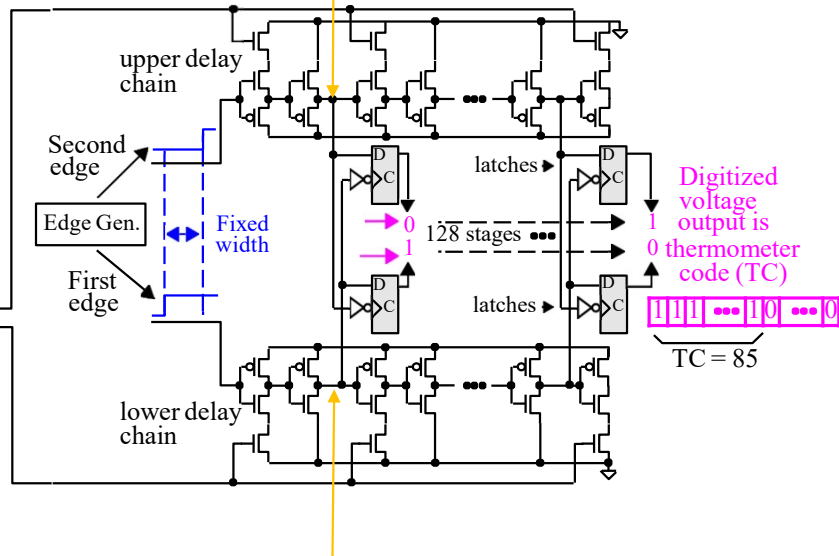


D. Ismari and J. Plusquellic, "IP-Level Implementation of a Resistance-Based Physical Unclonable Function", HOST, 2014.

SMC array of 2048 elements



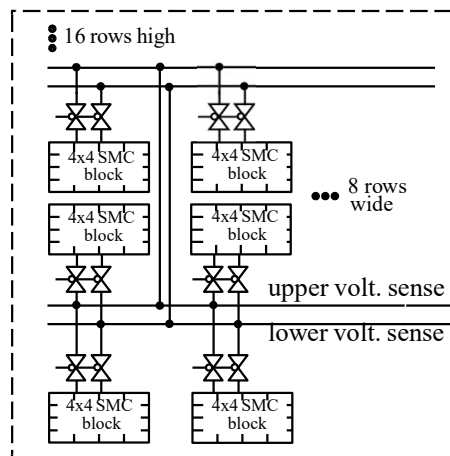
Voltage-to-digital-converter (VDC)



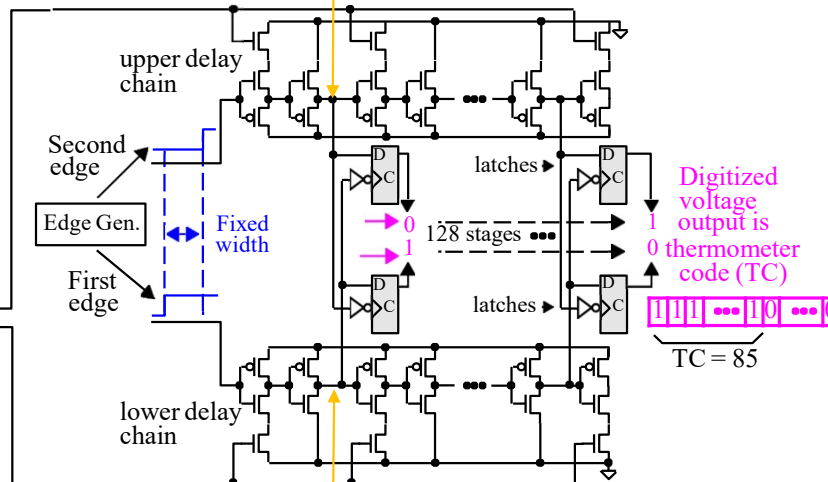
D. Ismari and J. Plusquellic, "IP-Level Implementation of a Resistance-Based Physical Unclonable Function", HOST, 2014.

0 to 1 second

SMC array of 2048 elements



Voltage-to-digital-converter (VDC)

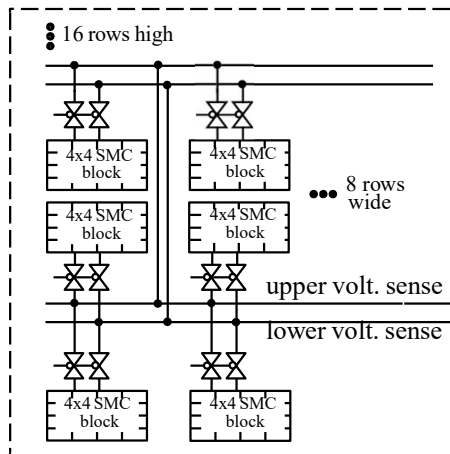


D. Ismari and J. Plusquellic, "IP-Level Implementation of a Resistance-Based Physical Unclonable Function", HOST, 2014.

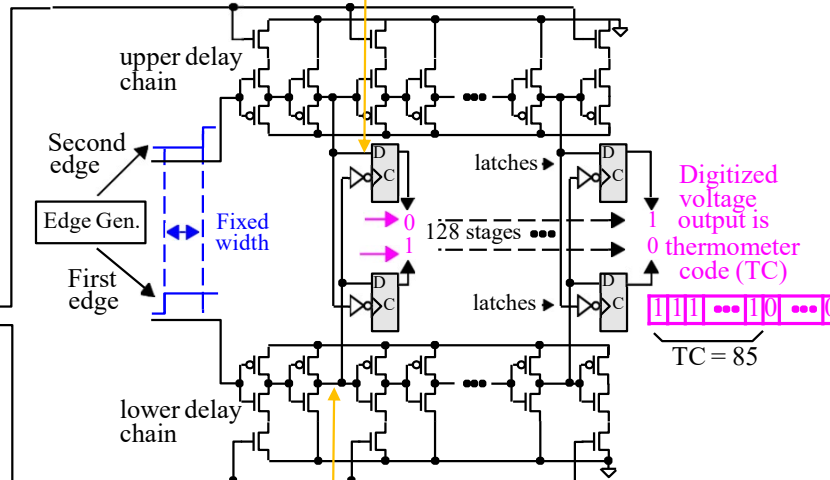
0 to 1 first

0 captured first

SMC array of 2048 elements



Voltage-to-digital-converter (VDC)

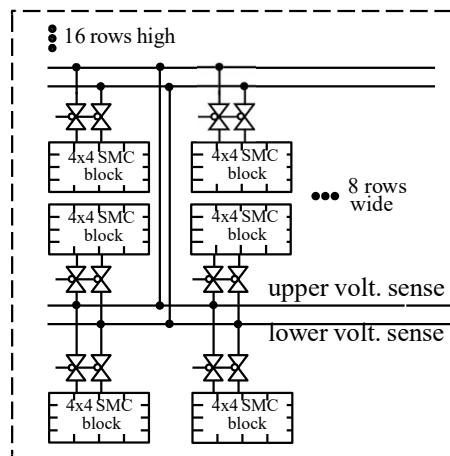


D. Ismari and J. Plusquellic, "IP-Level Implementation of a Resistance-Based Physical Unclonable Function", HOST, 2014.

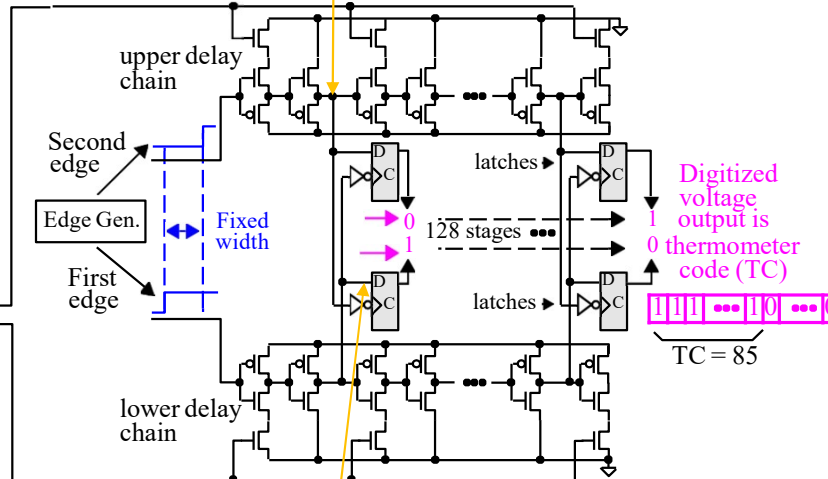
0 to 1 first

0 to 1 second

SMC array of 2048 elements



Voltage-to-digital-converter (VDC)



D. Ismari and J. Plusquellic, "IP-Level Implementation of a Resistance-Based Physical Unclonable Function", HOST, 2014.

1 captured second