

# TFE4101

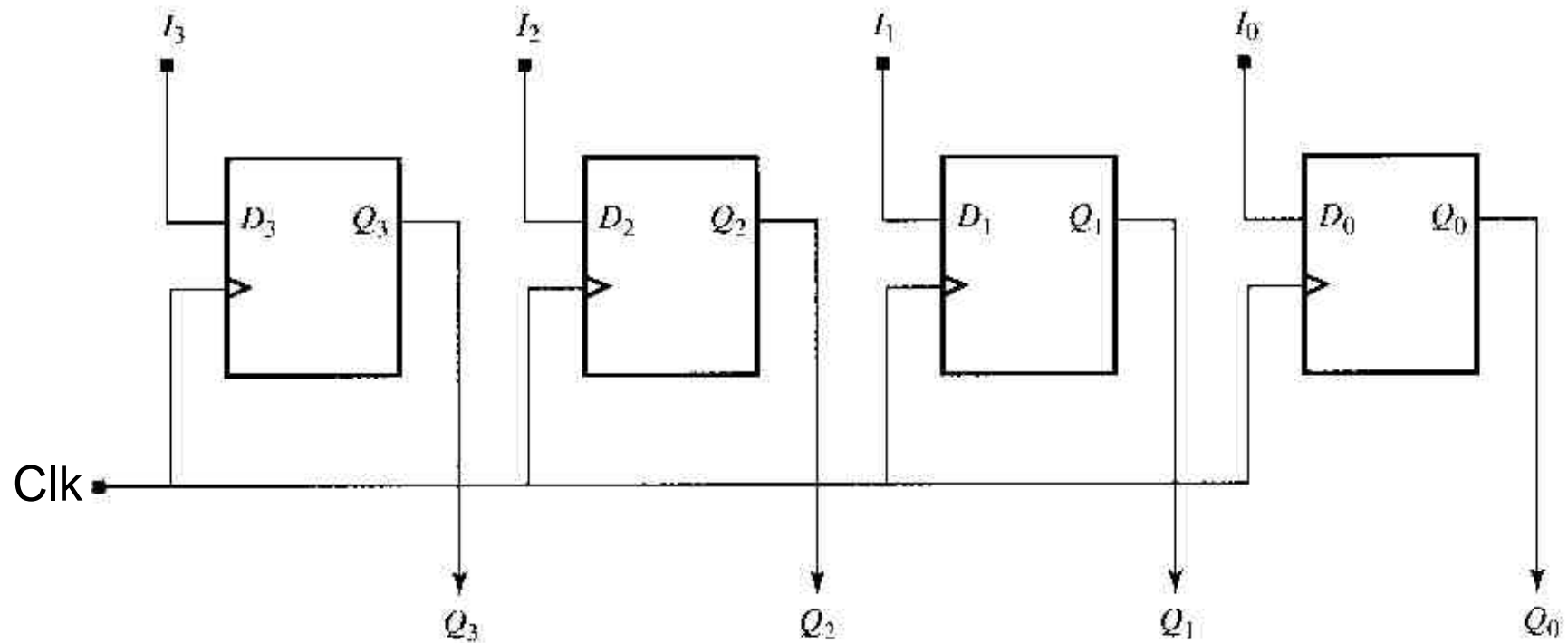
## KRETS- OG DIGITALTEKNIKK

### Større designeksempel

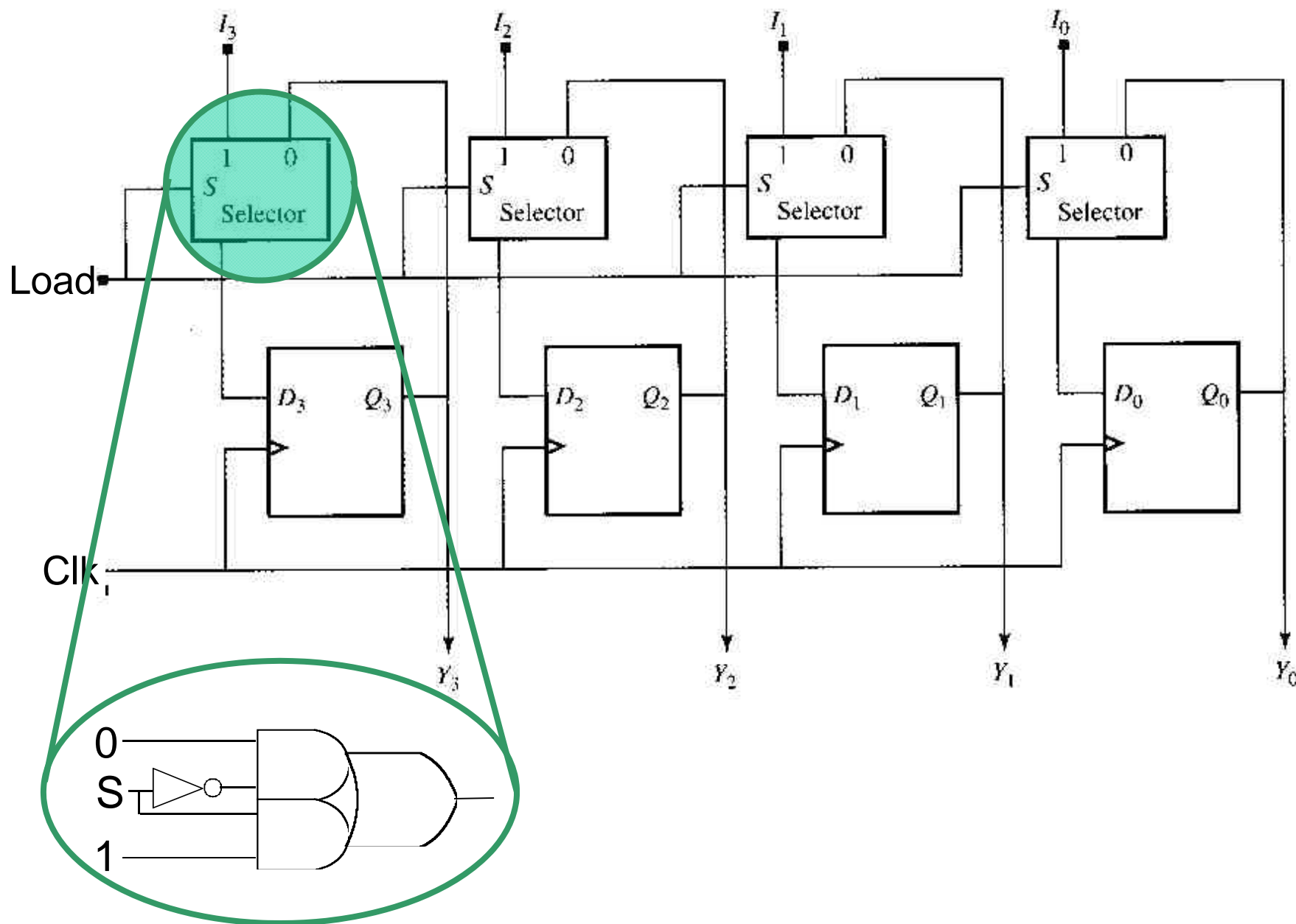
Gajski:

- Kap 7: Utvalgte minnekomponenter **(les resten selv)**
- Større designeksempel: Multiplikasjonskrets

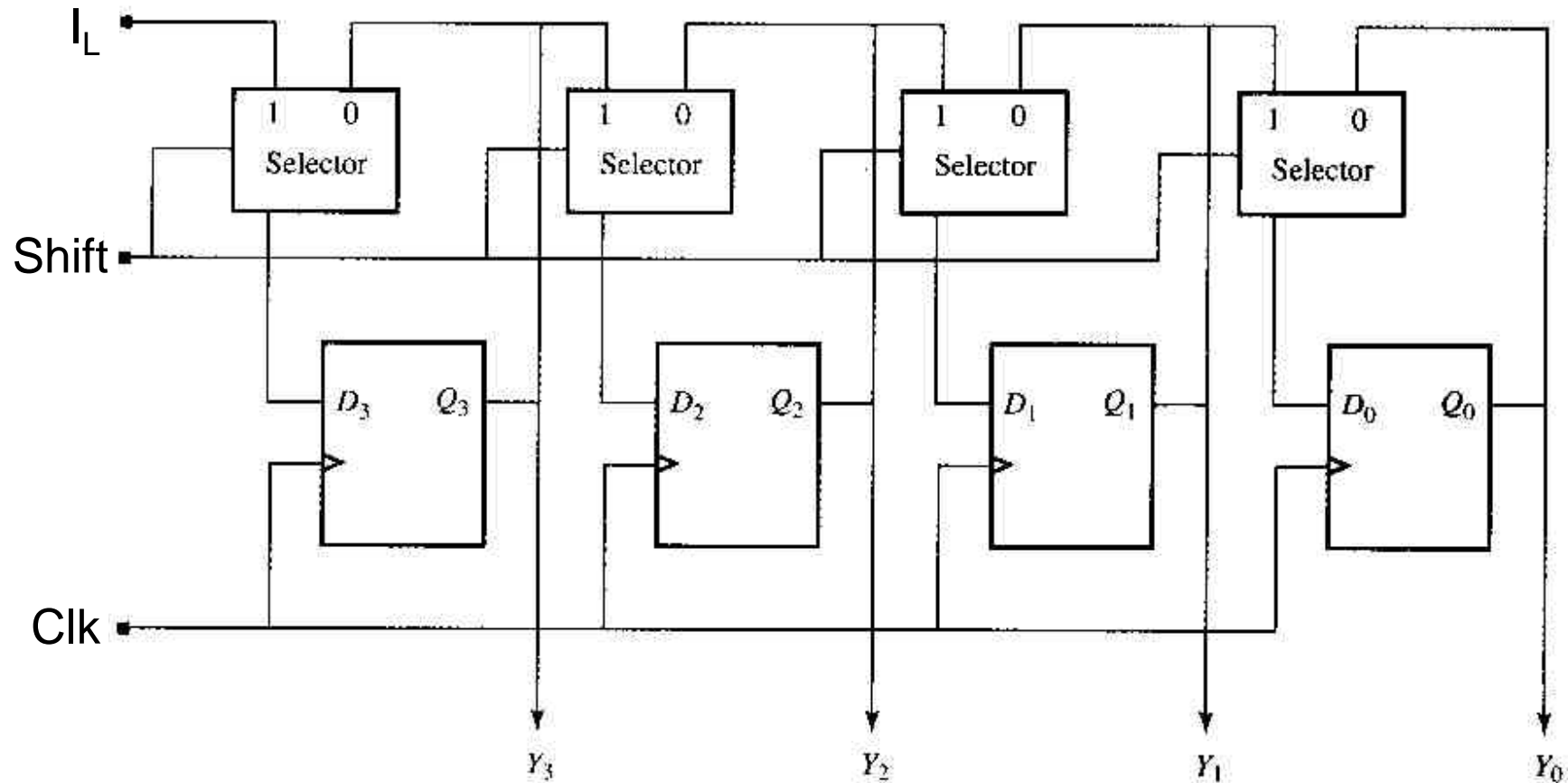
# Register



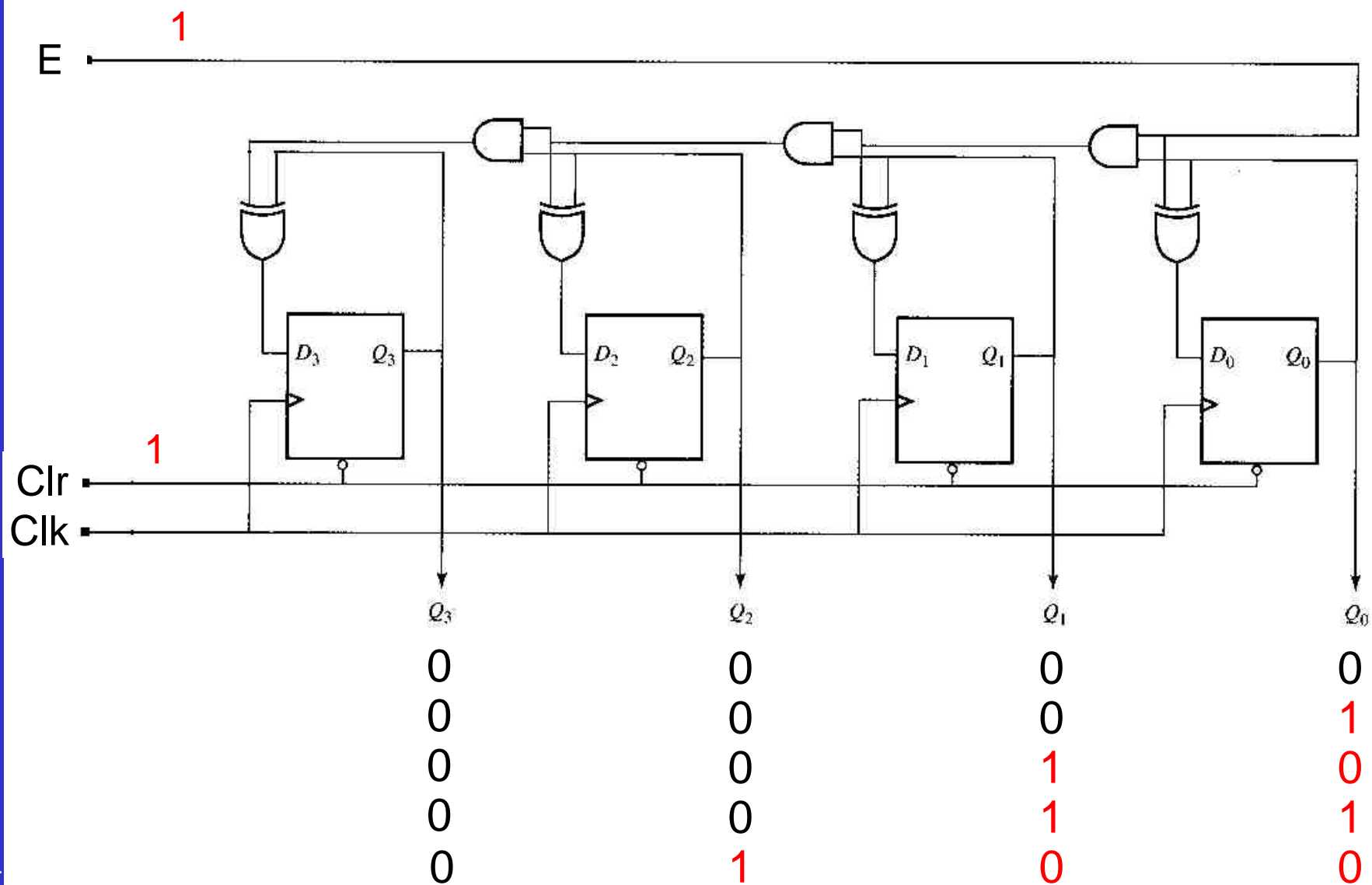
# Register med parallell innlasting



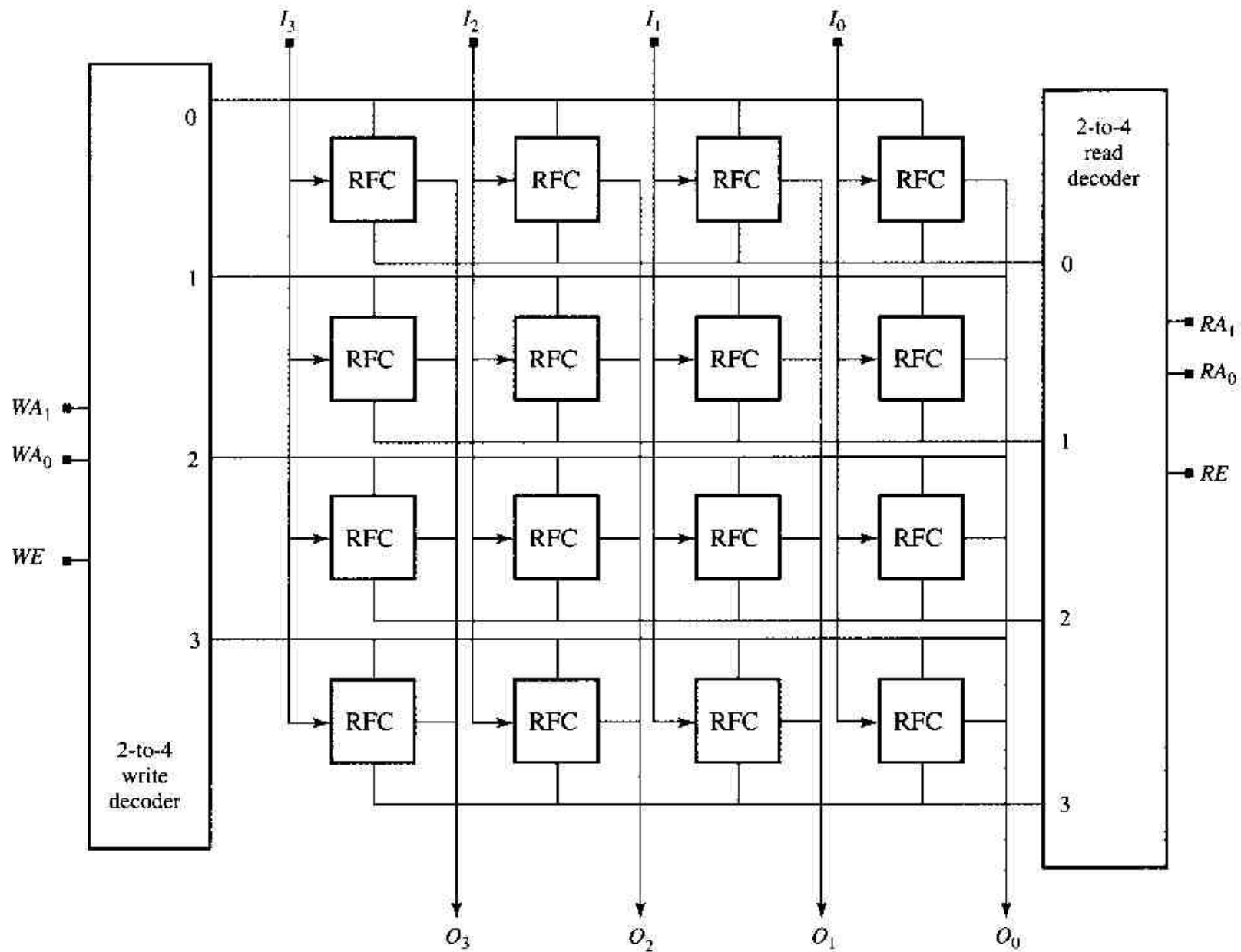
# Serielt inn / parallelt ut skiftregister



# 4-bit binær teller

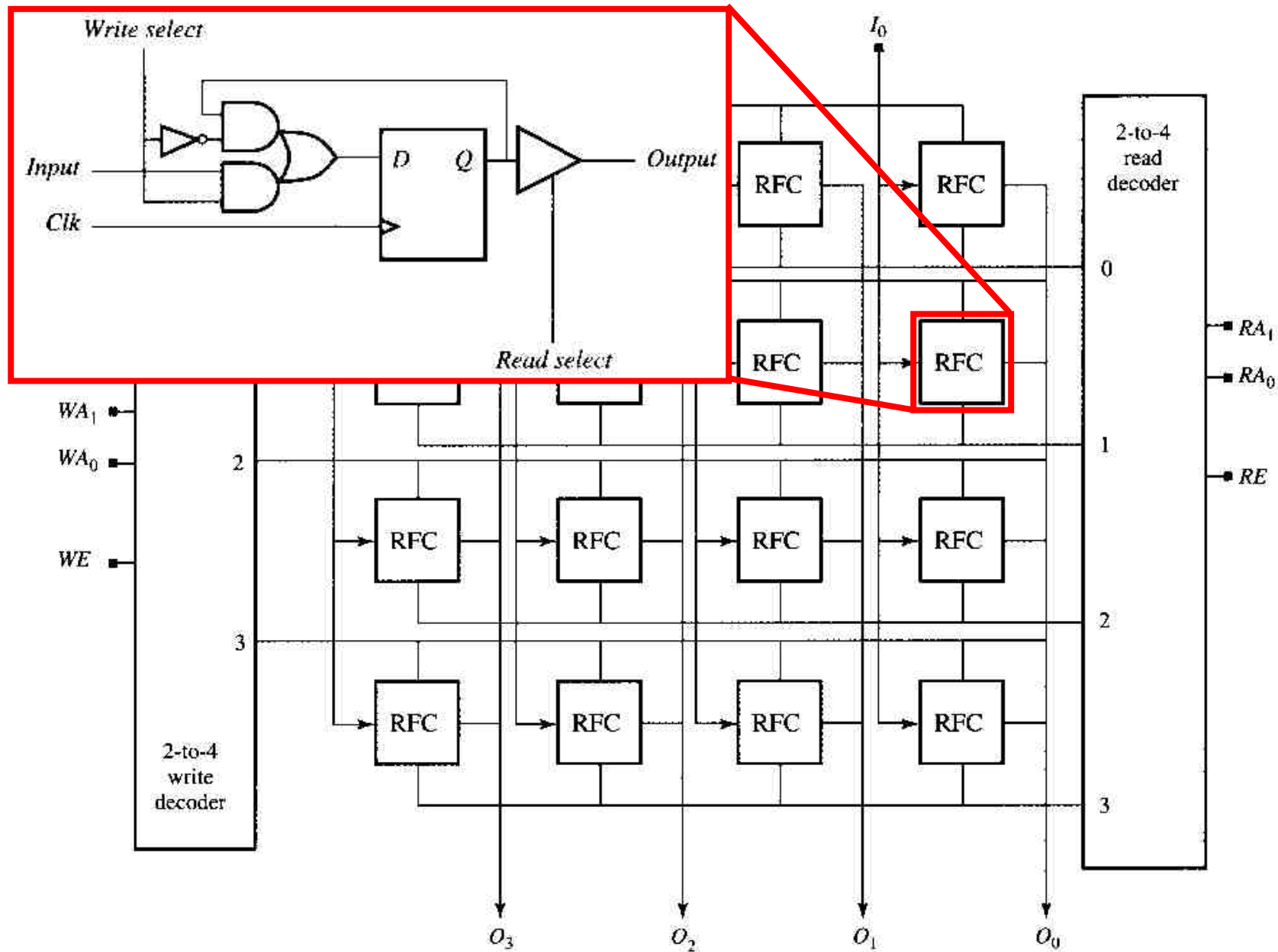


# Registerfil

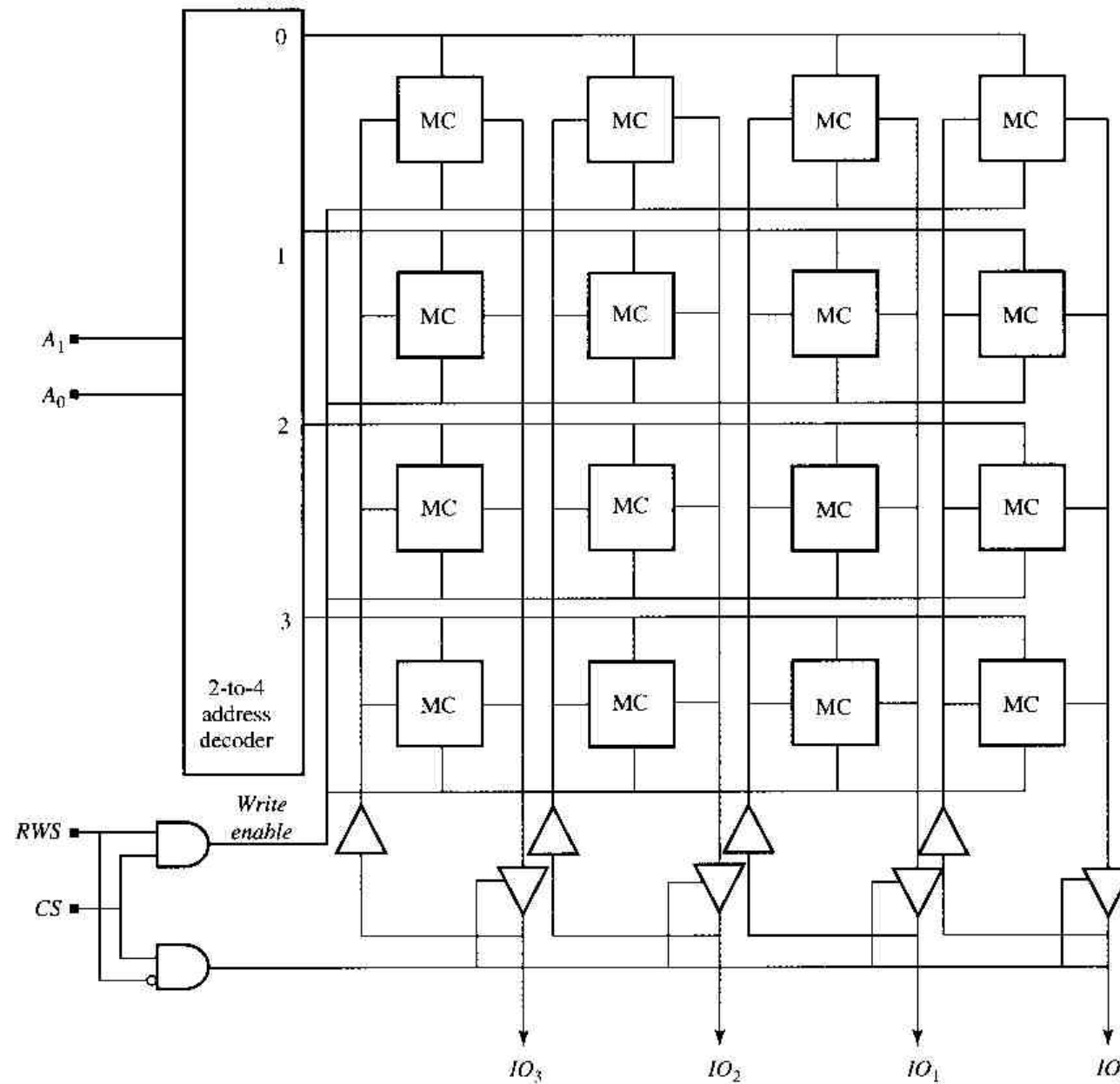




# Registerfil

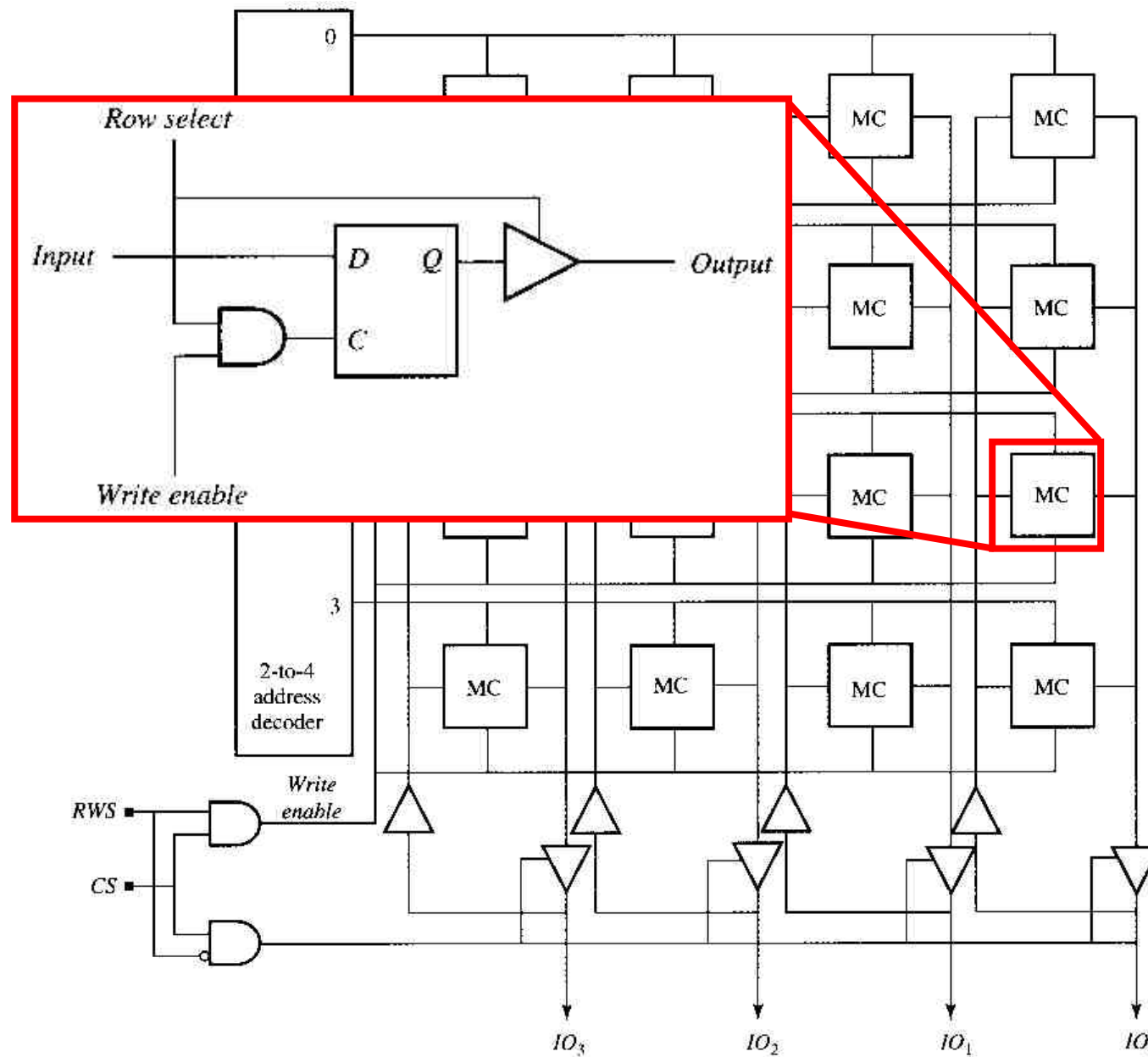


# Random Access Memory





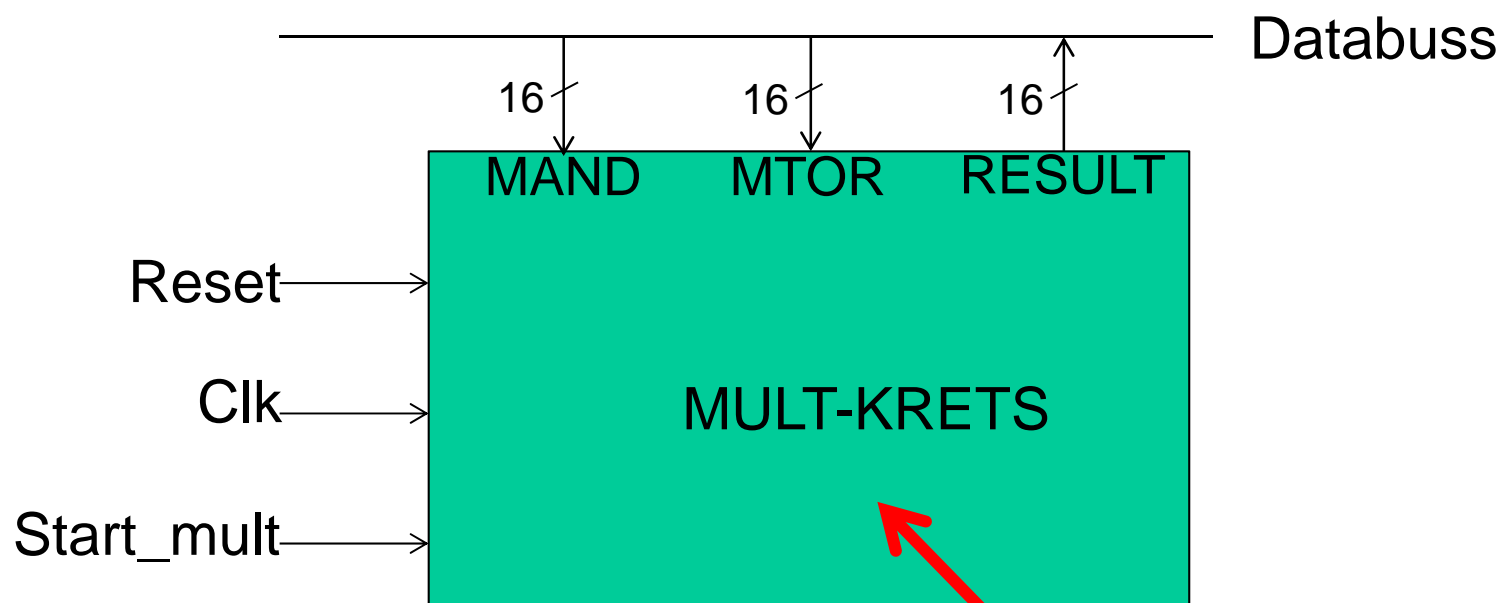
# Random Access Memory



# Binær multiplikasjon med 2's kompl.

<u>1111110010</u>	x	<u>10011</u>	((-14) x (-13))
0000000000			(utvidet nullstilt pp)
1111110010			(md x 2 <sup>0</sup> x 1)
1111110010			(pp)
1111100100			(md x 2 <sup>1</sup> x 1)
1111010110			(pp)
0000000000			(md x 2 <sup>2</sup> x 0)
1111010110			(pp)
0000000000			(md x 2 <sup>3</sup> x 0)
1111010110			(pp)
0011100000			(invertert md x 2 <sup>4</sup> x 1)
<del>1</del> 0010110110			(182 <sub>10</sub> )

# Multiplikasjonskrets



**La oss se hva som er inni**