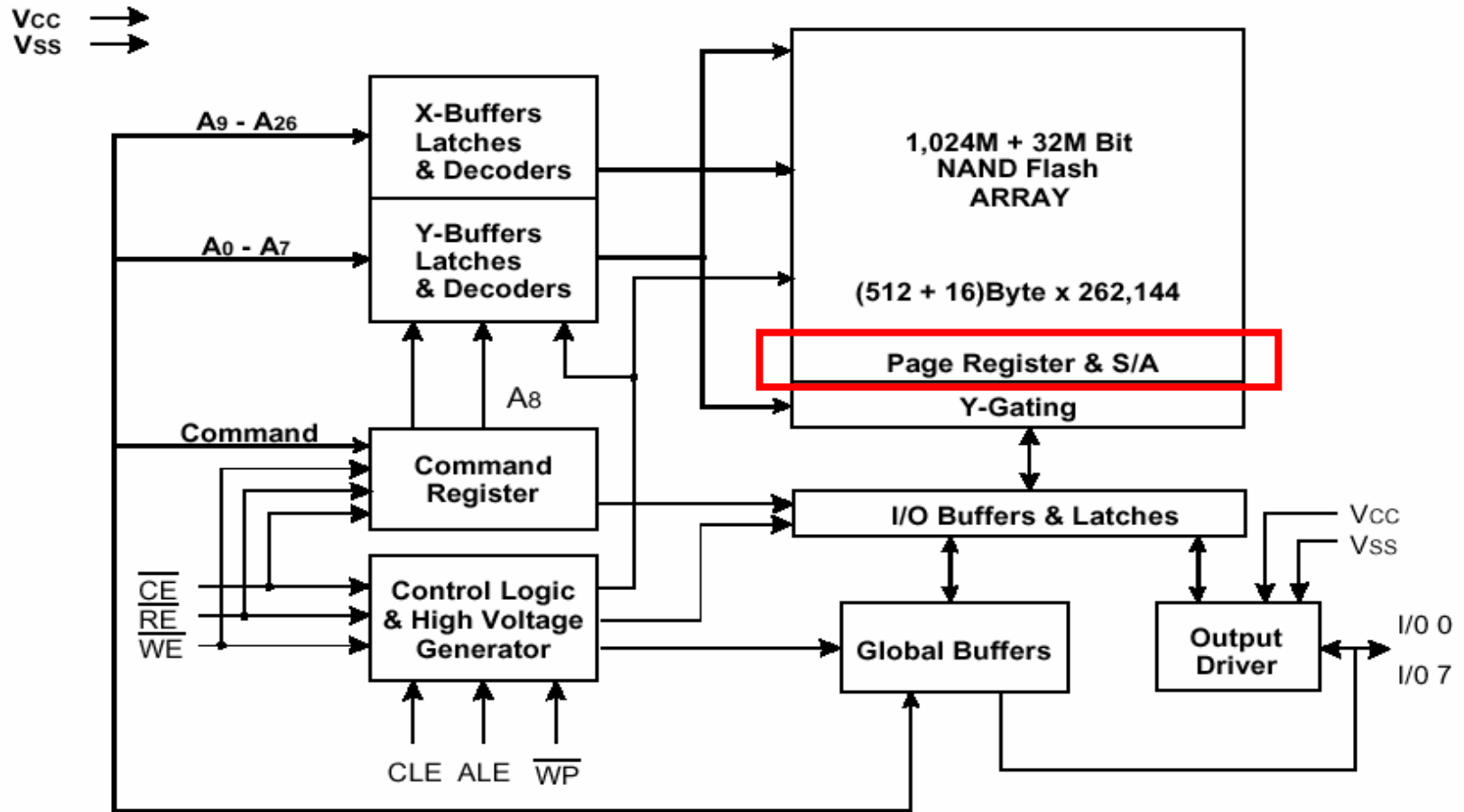


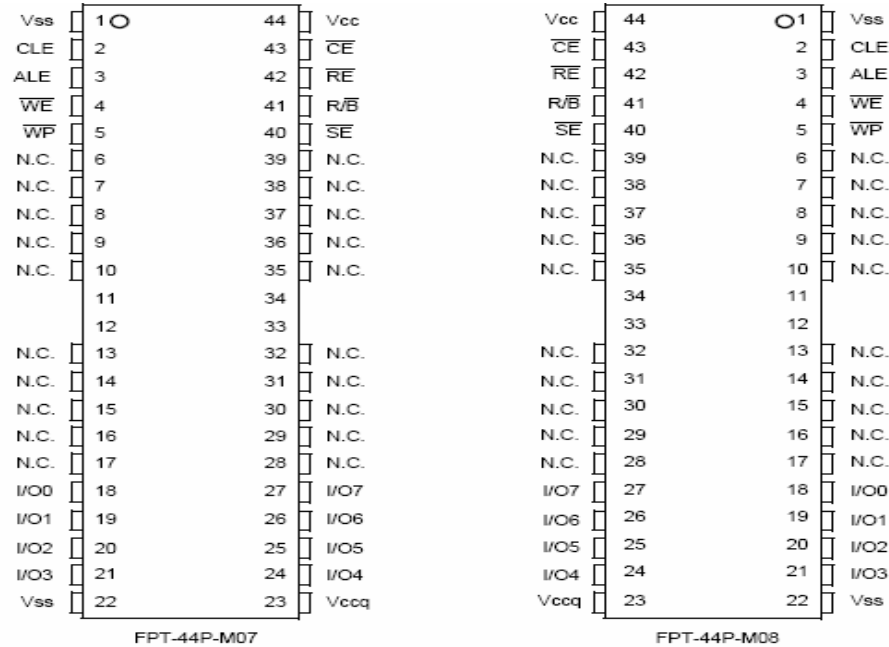


NAND Operation - Detail's

Functional Block Diagram



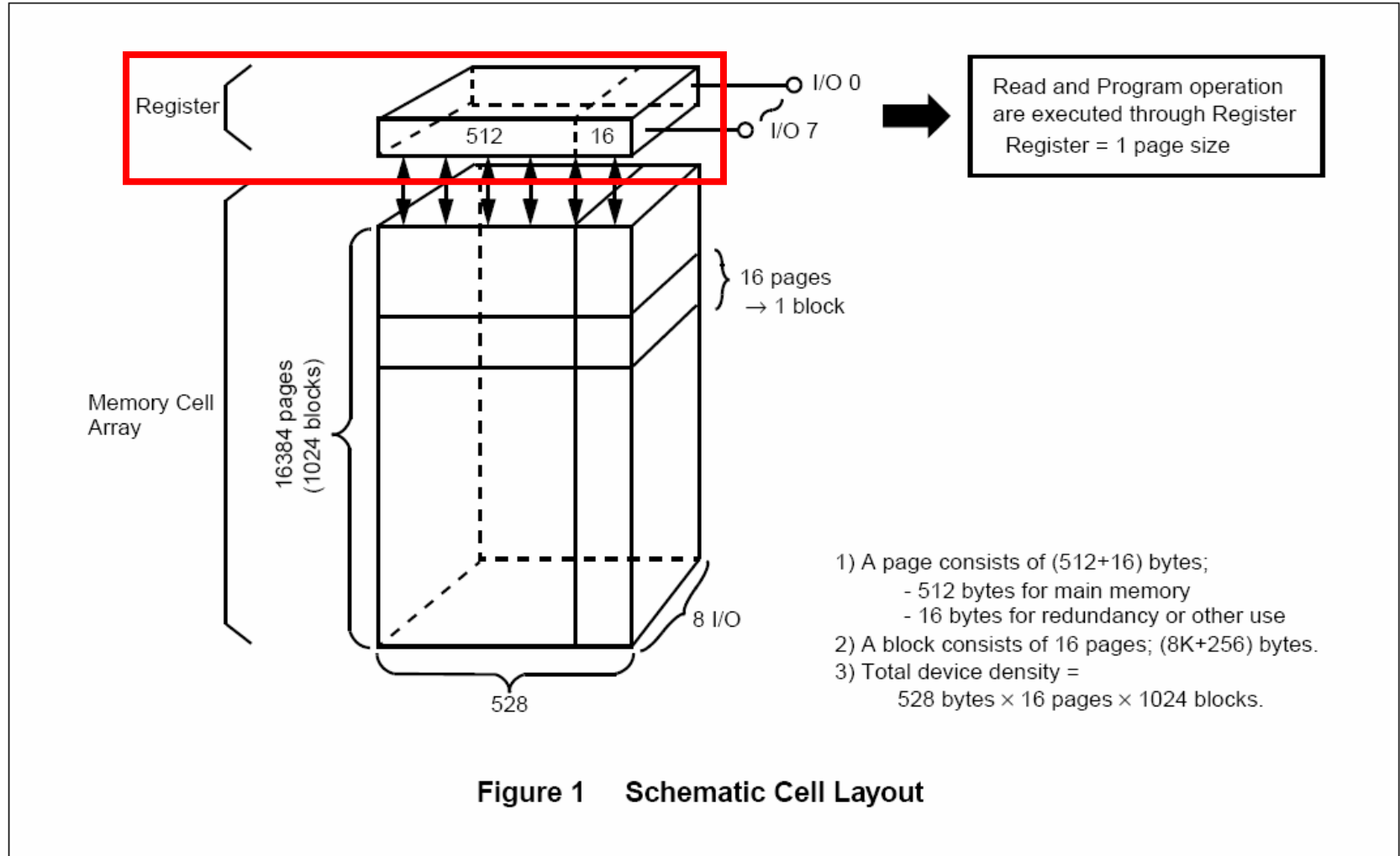
Pin Assignments



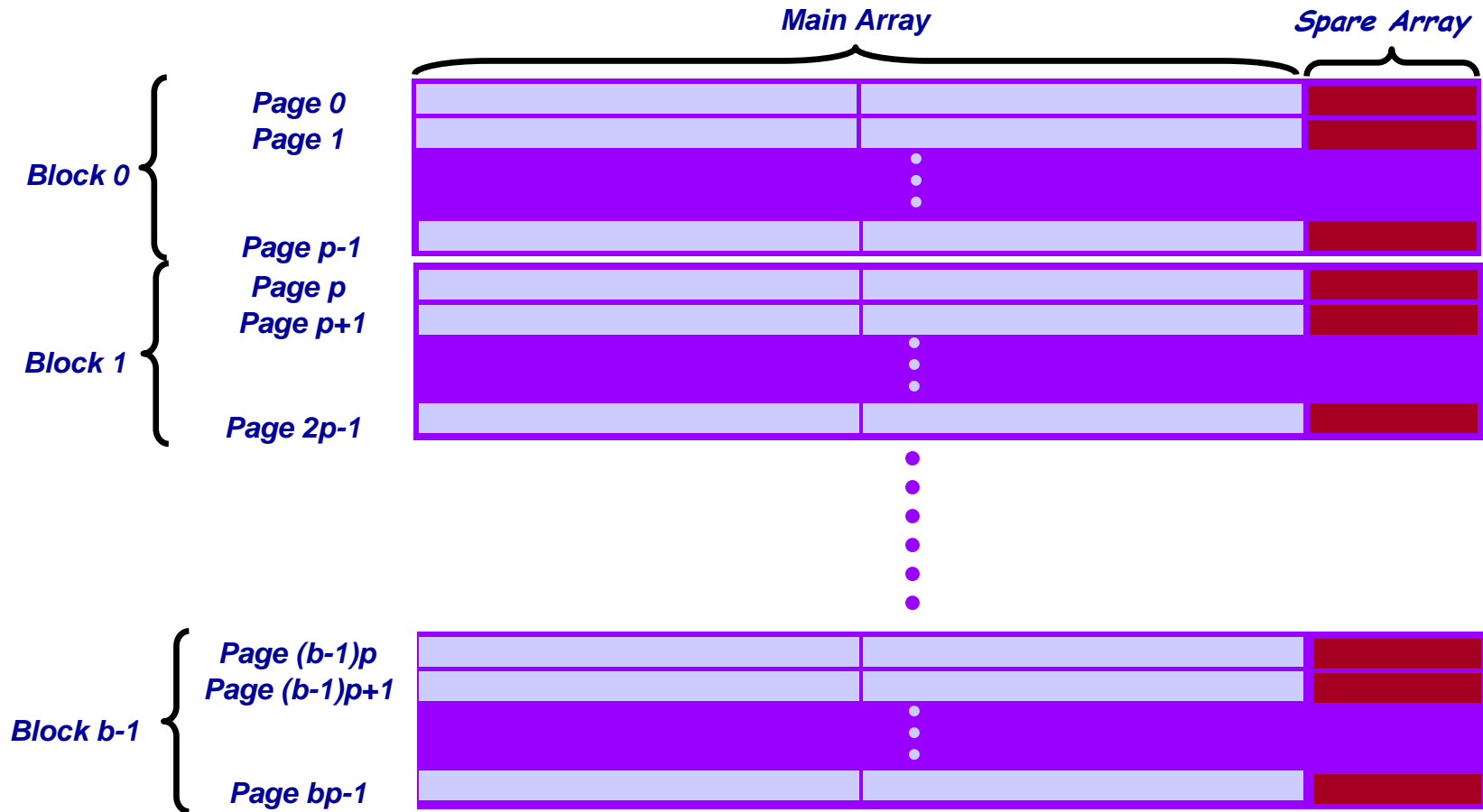
Pin Name	Pin Function
I/O0 to I/O7	Data Input/Output
CLE	Command Latch Enable
ALE	Address Latch Enable
\overline{CE}	Chip Enable
\overline{RE}	Read Enable
\overline{WE}	Write Enable
\overline{WP}	Write Protect
\overline{SE}	Spare Area Enable
R/B	Ready/Busy Output
Vcc	Power (3.3 V)
Vss	Ground
N.C.	No Connection
Vccq	Output Buff. Power (3.3 or 5 V)

Schematic Cell Layout

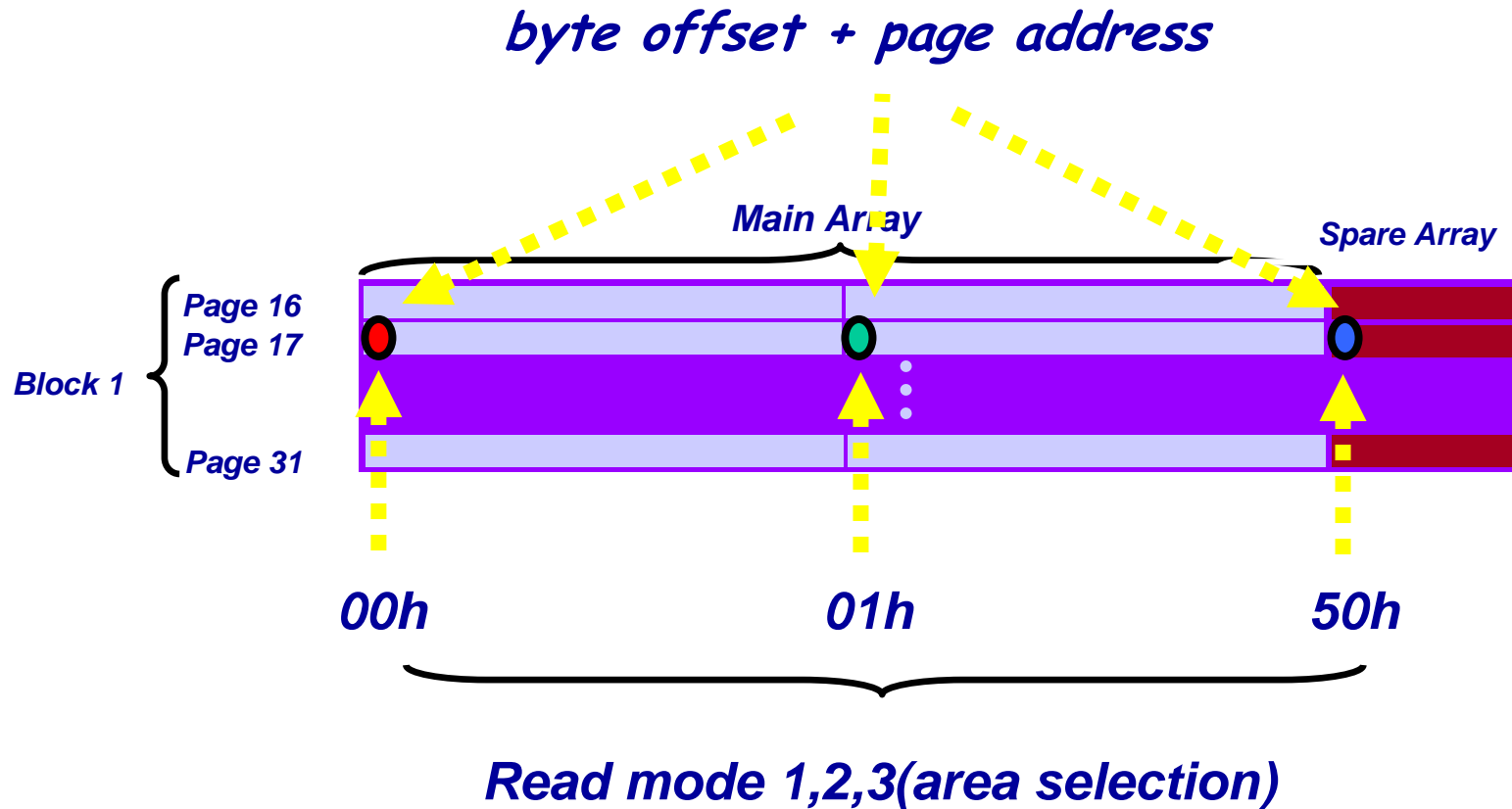
The Program operation is implemented in page units while the Erase operation is carried out in block units.



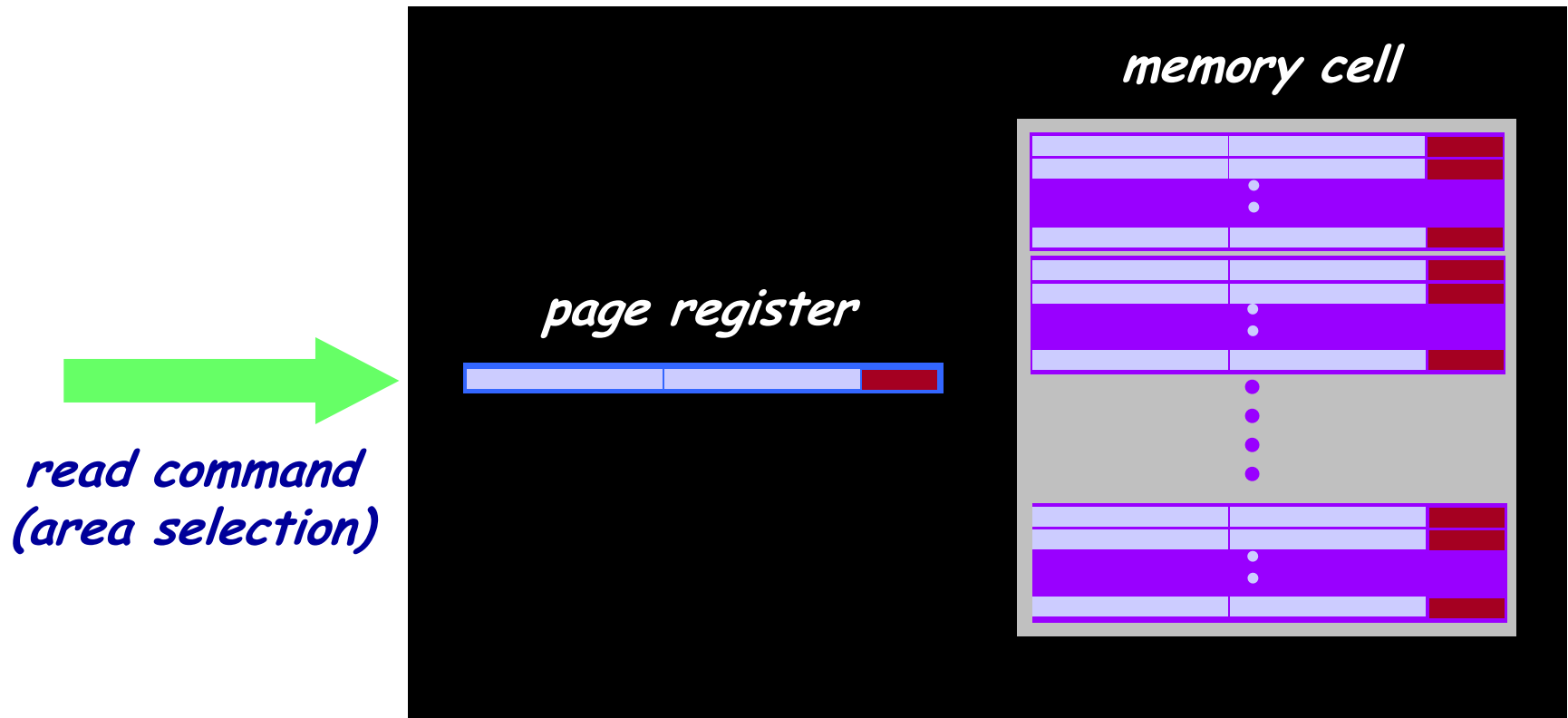
Block and Page Organization



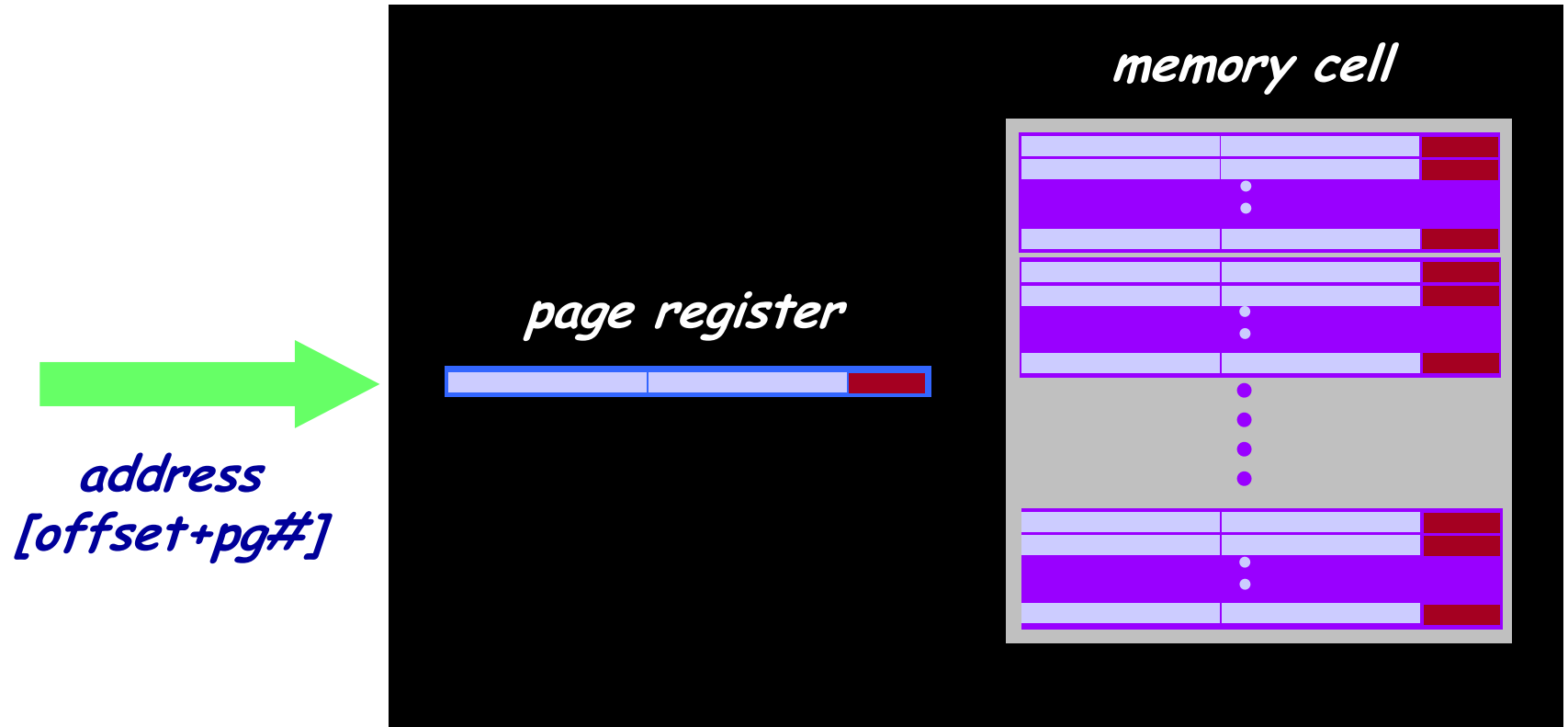
Addressing



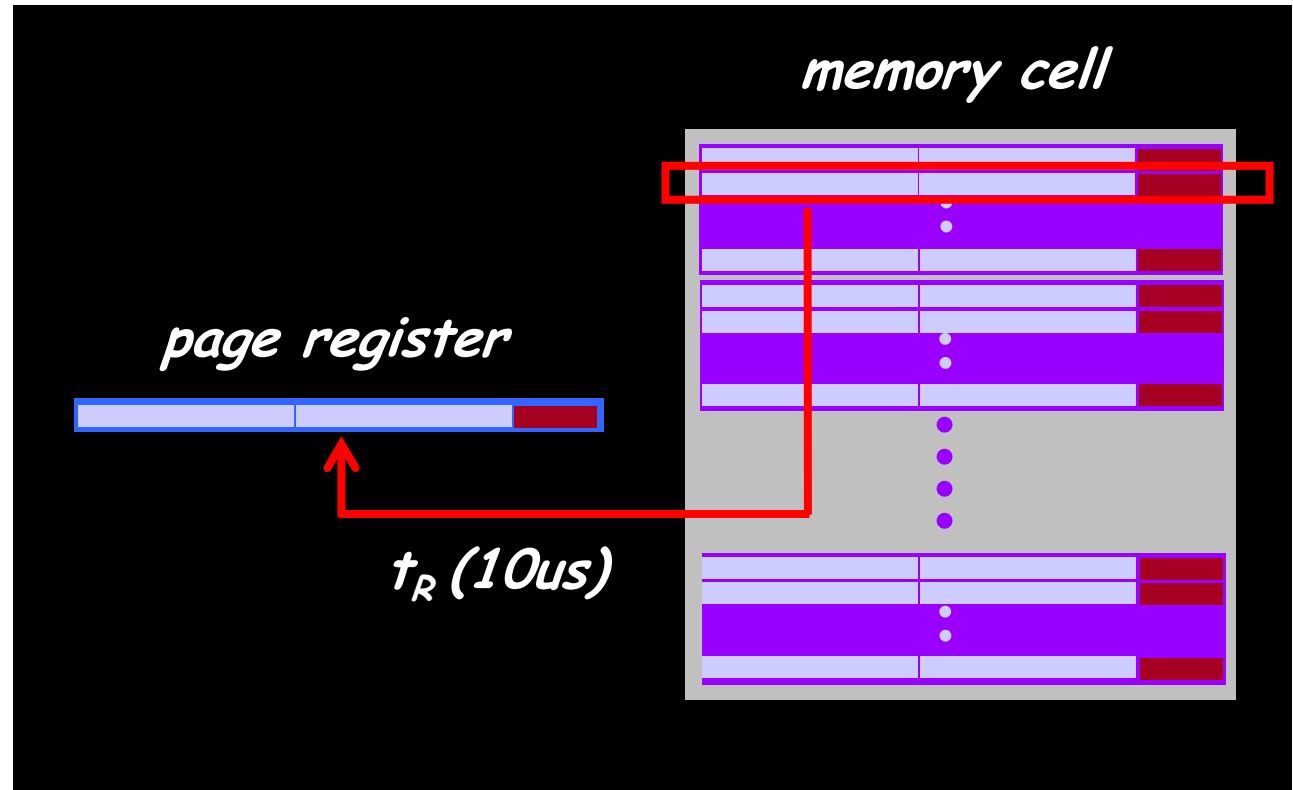
OPERATION – READ (1/4)



OPERATION – READ (2/4)

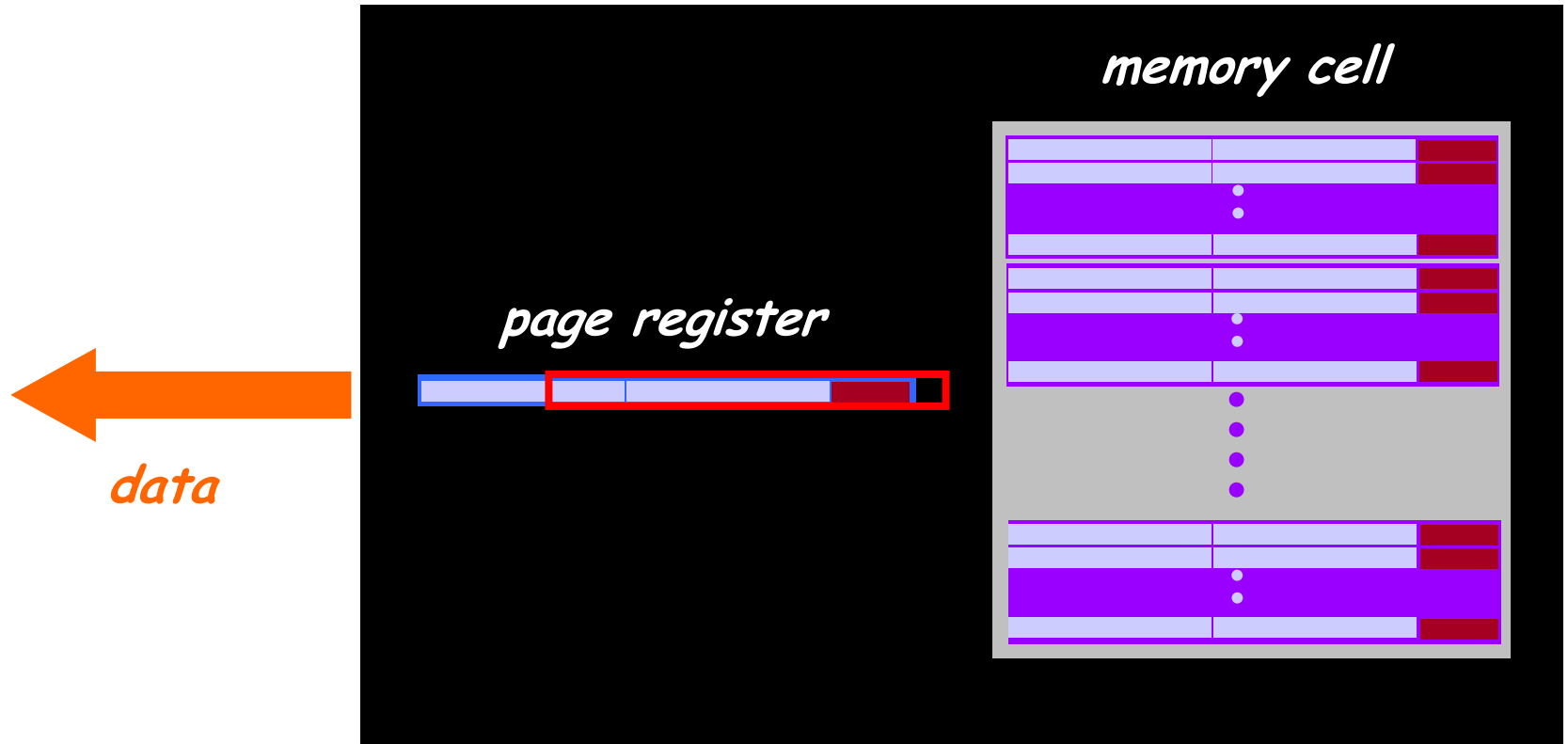


OPERATION – READ (3/4)



The offset byte “N” is usually set to 0 in order to start reading from the beginning of the page. It is possible to set N to any value between 0 and 255. Because the page is actually 528 bytes long, a different read command is used if you want output data to start from byte 256–511 (read mode 2 – command byte 01h is used instead of 00h). A third read command is used if you want output data to come from bytes 512–527 (read mode 3 – command byte 50h is used instead of 00h).

OPERATION – READ (4/4)

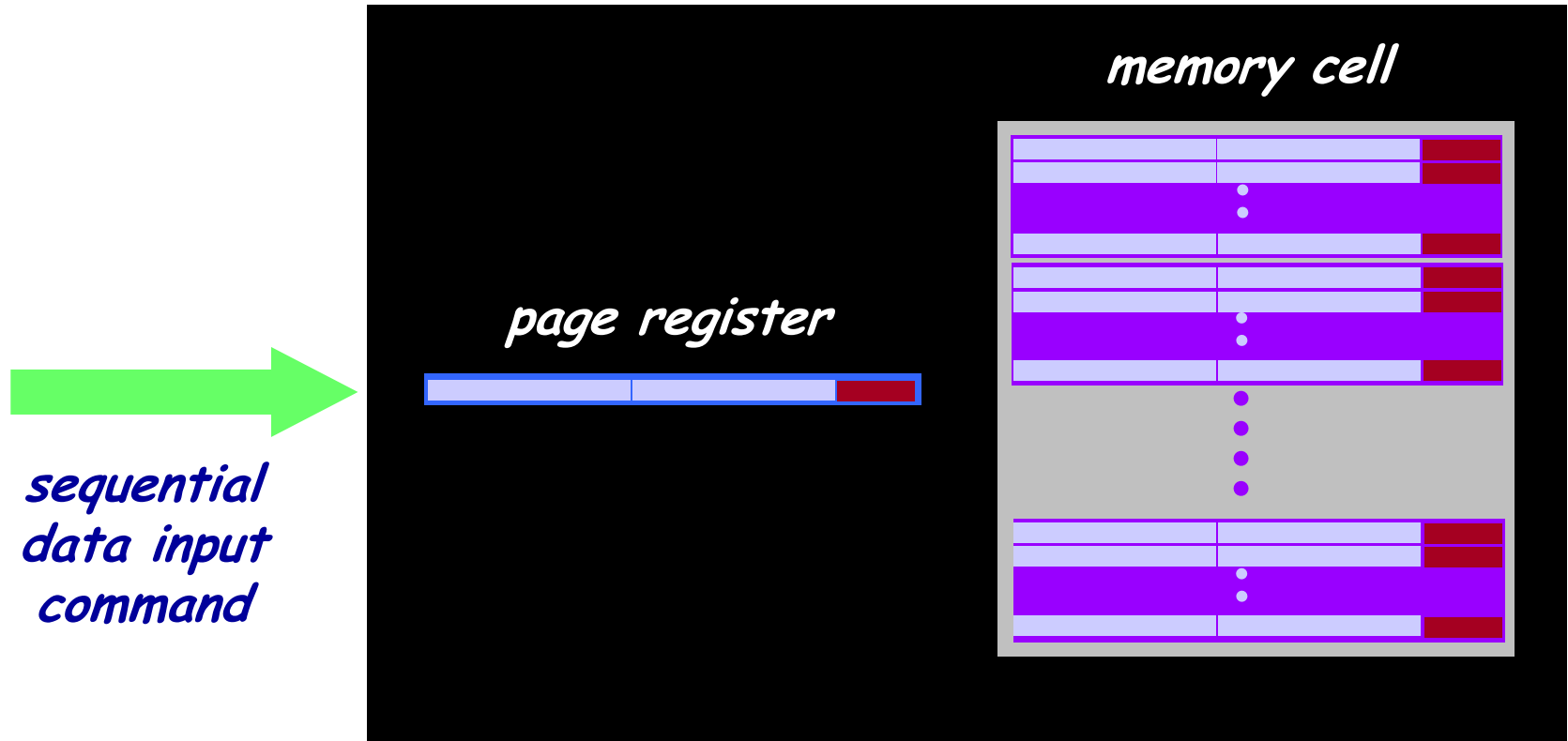


It should be noted that the full page is read from memory into the register. The offset value N, in conjunction with the read command used, simply sets the output data pointer within the register.

OPERATION – WRITE (1/8)



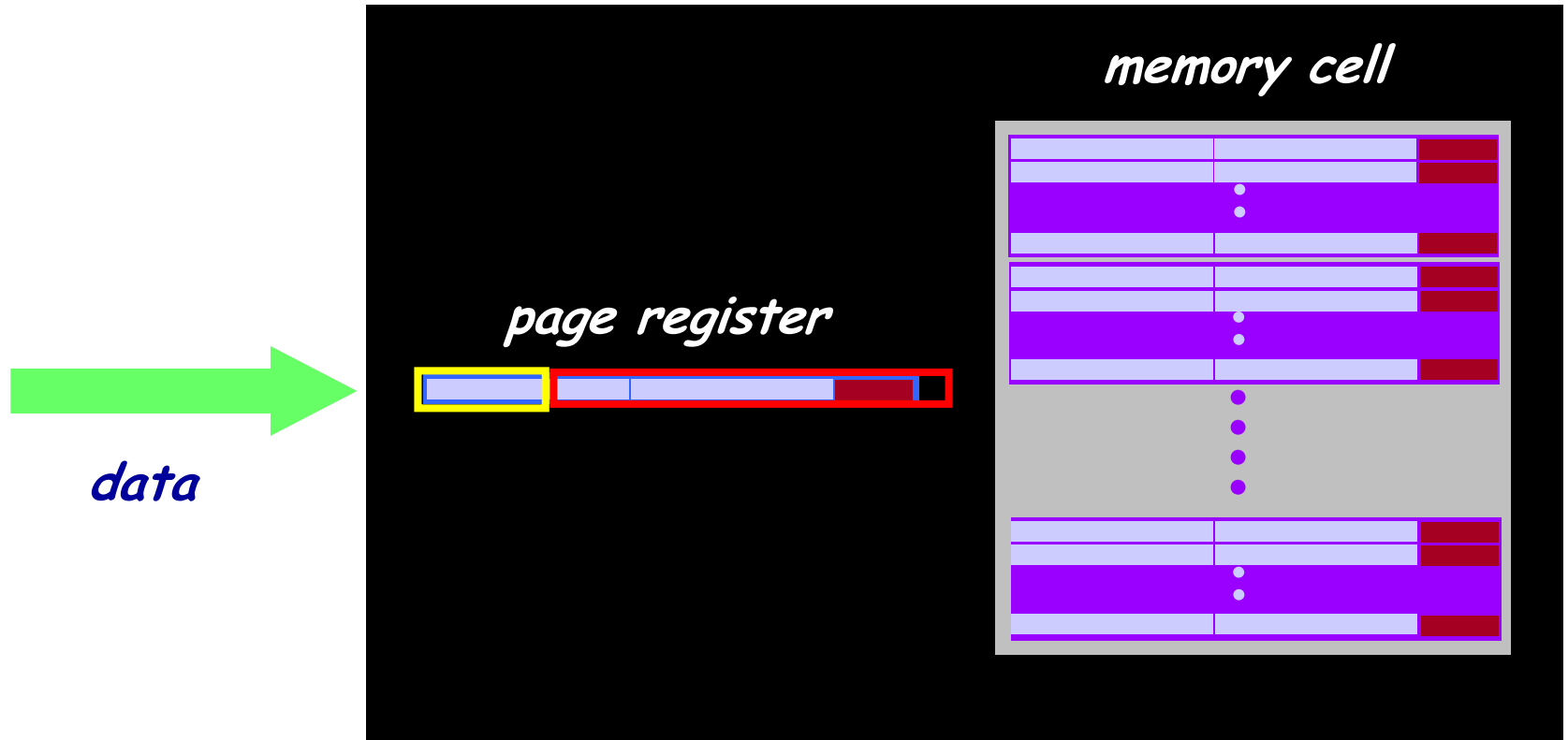
OPERATION – WRITE (2/8)



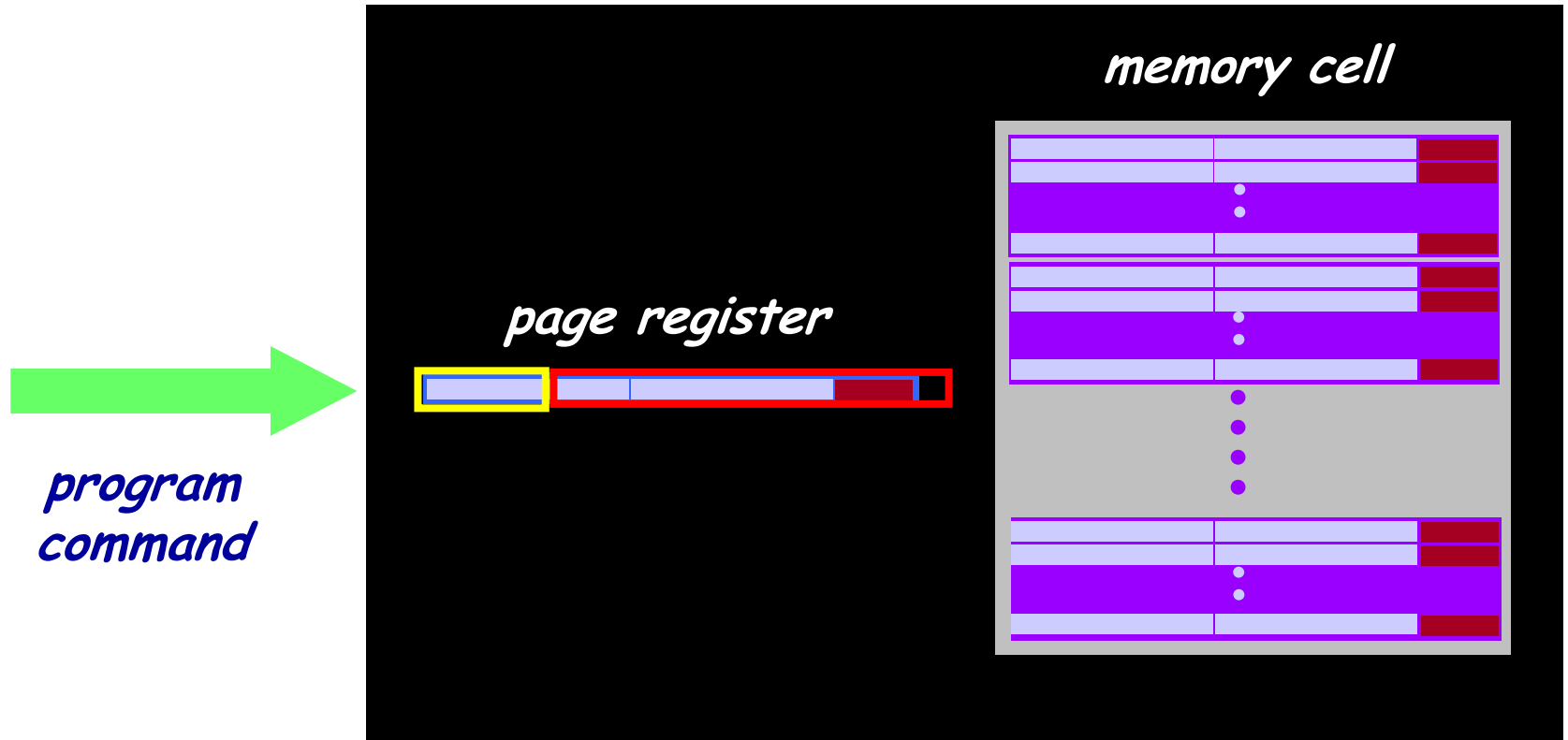
OPERATION - WRITE (3/8)



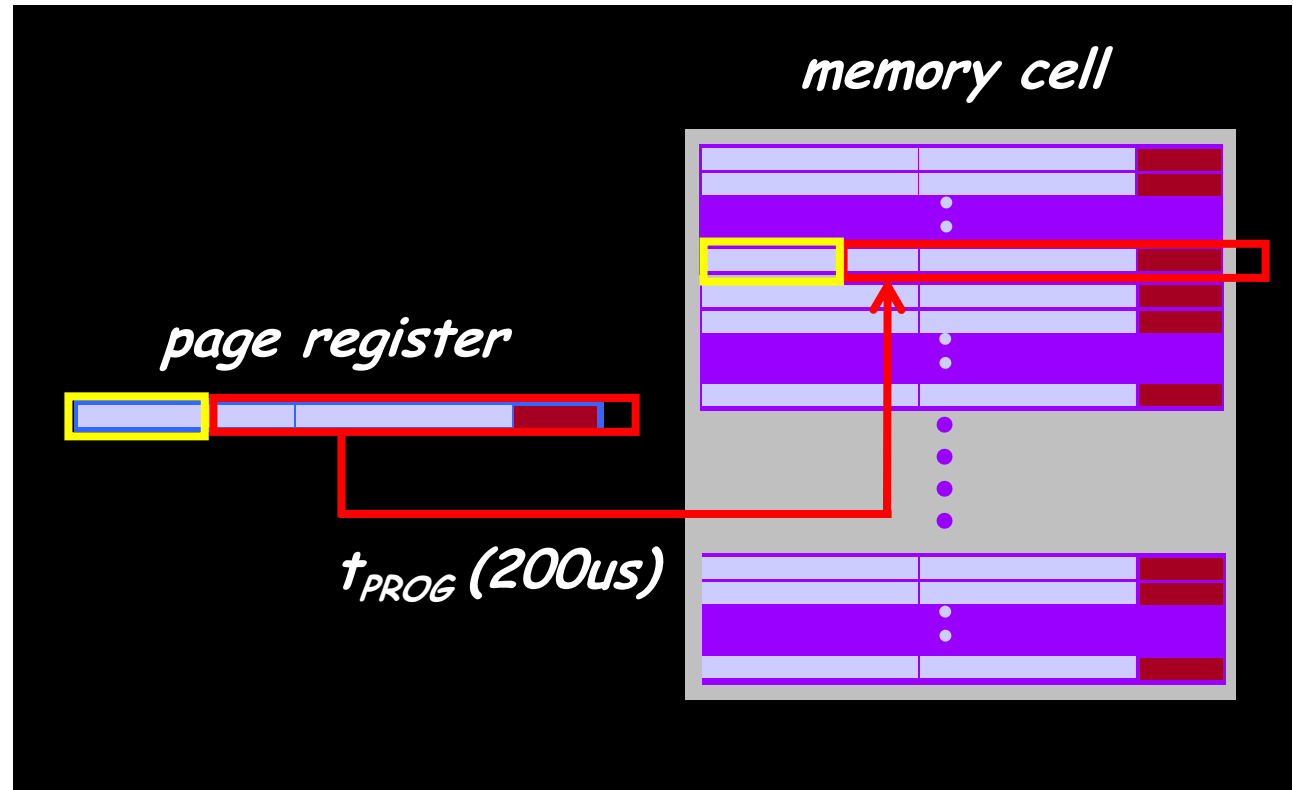
OPERATION - WRITE (4/8)



OPERATION - WRITE (5/8)

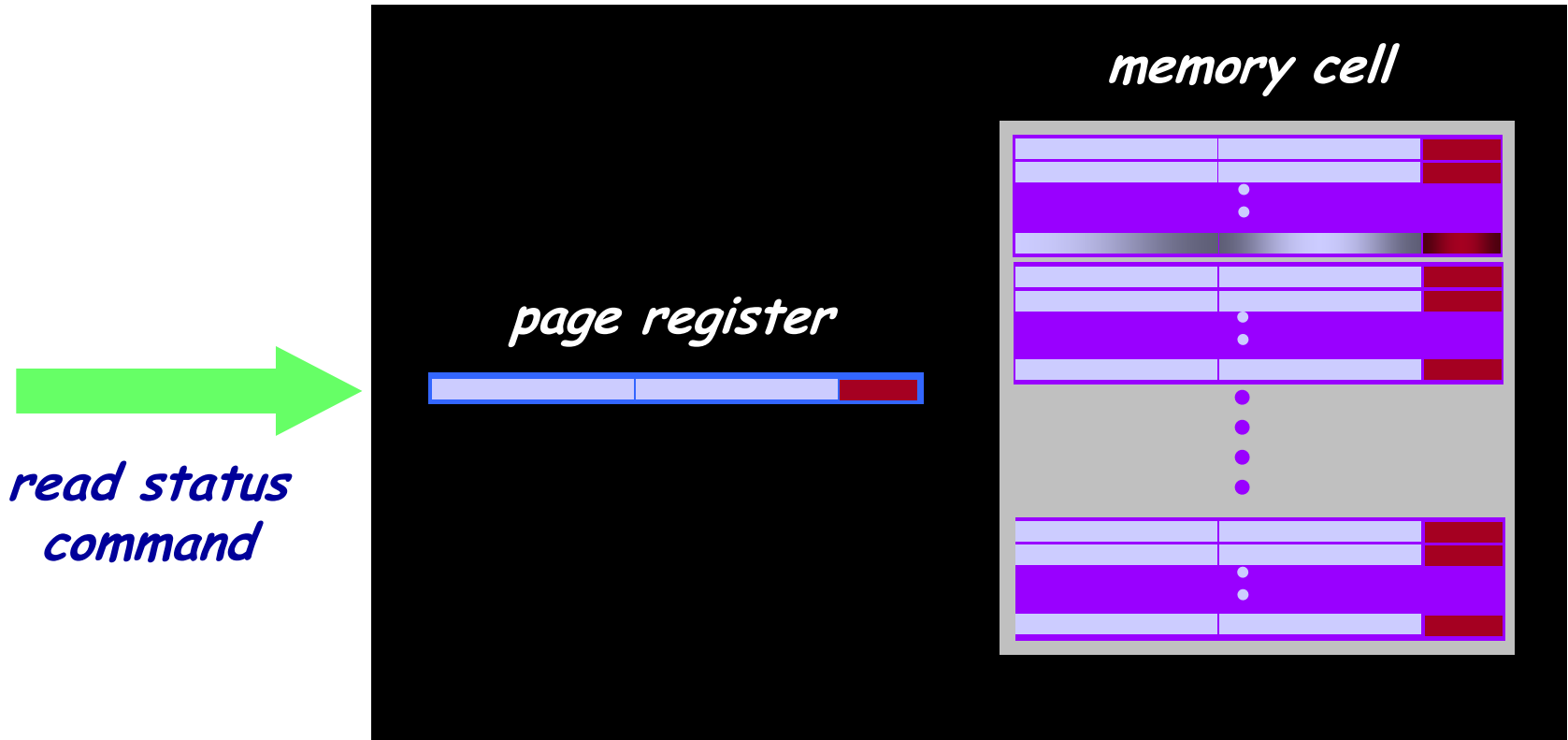


OPERATION - WRITE (6/8)

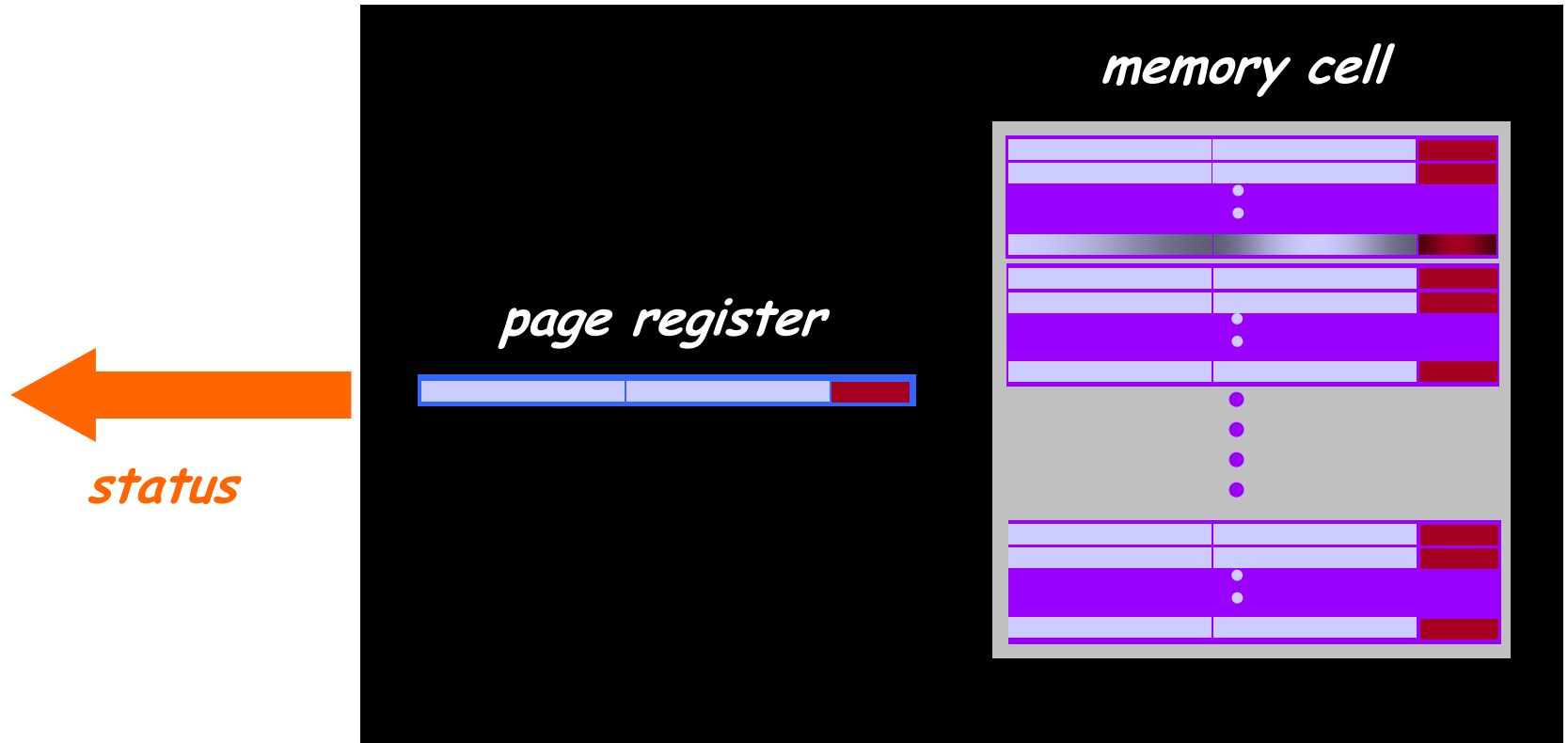


It should be noted that the full page is programmed from the register into the memory each time the program command (10h) is received. However, since the serial data input command (80h) resets the register to all “1”s, bytes in the register that are not overwritten with data will remain “1” and should not will not affect the memory.

OPERATION - WRITE (7/8)



OPERATION - WRITE (8/8)



OPERATION - ERASE (1/6)

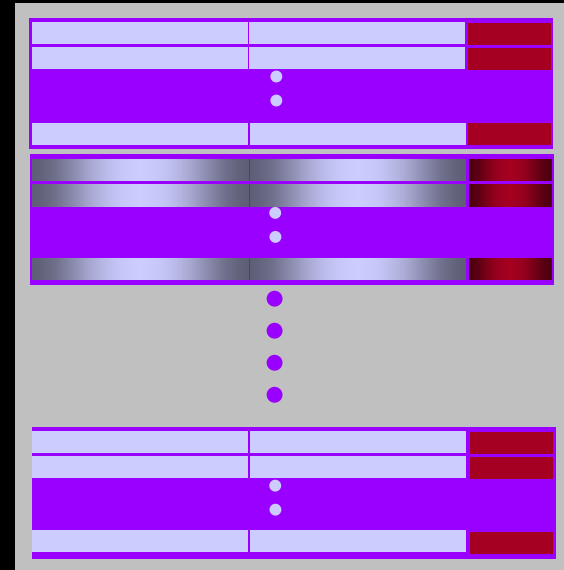


*auto block
erase setup
command*

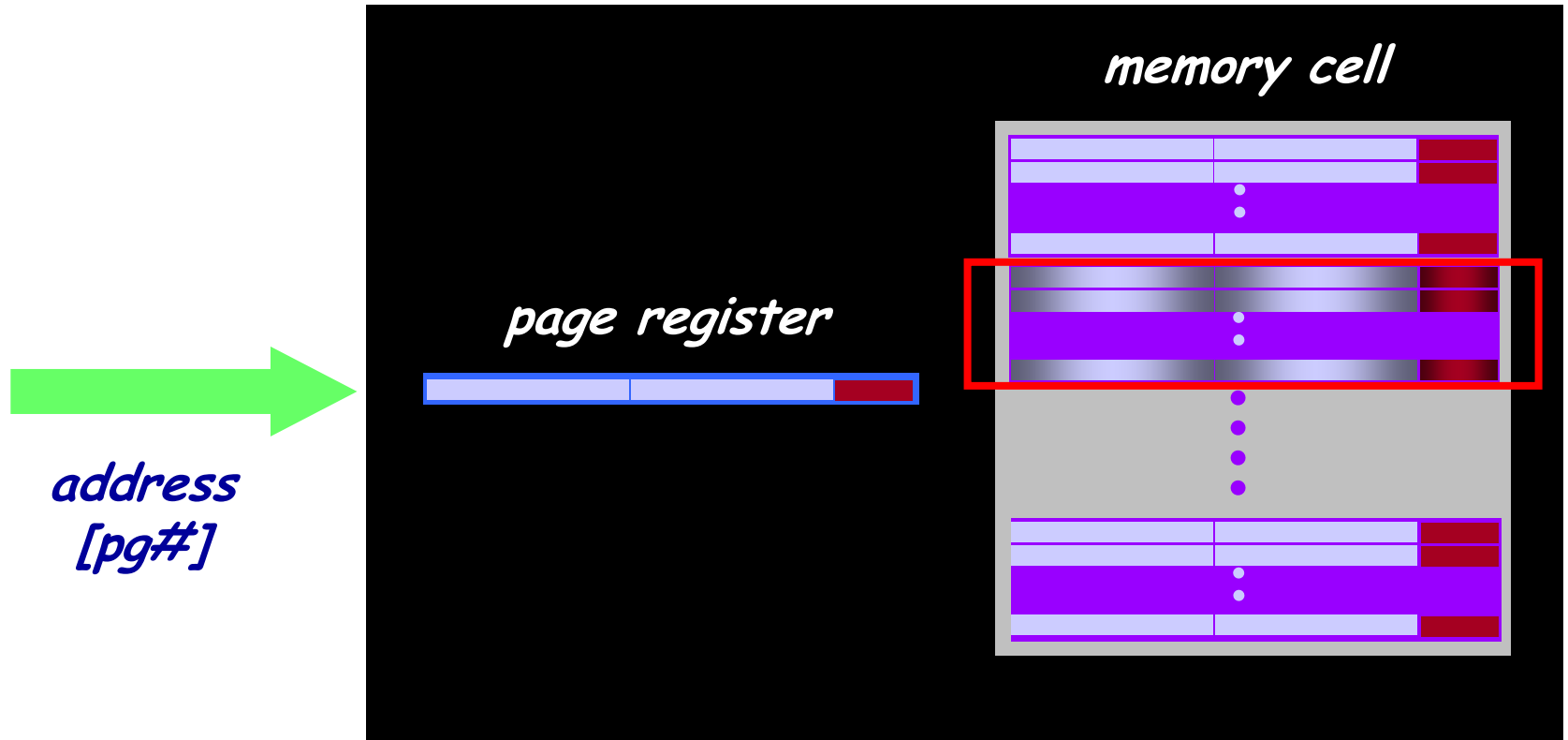
page register



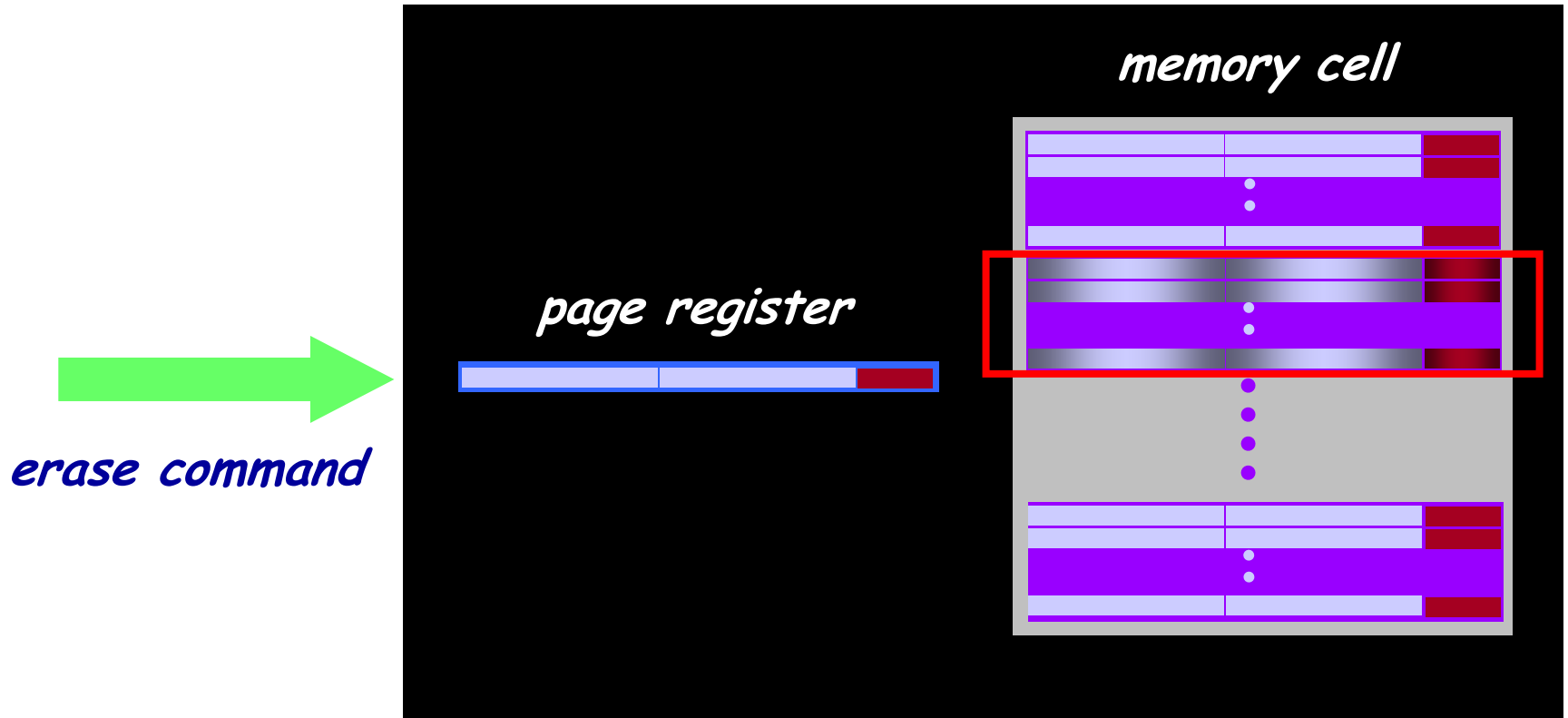
memory cell



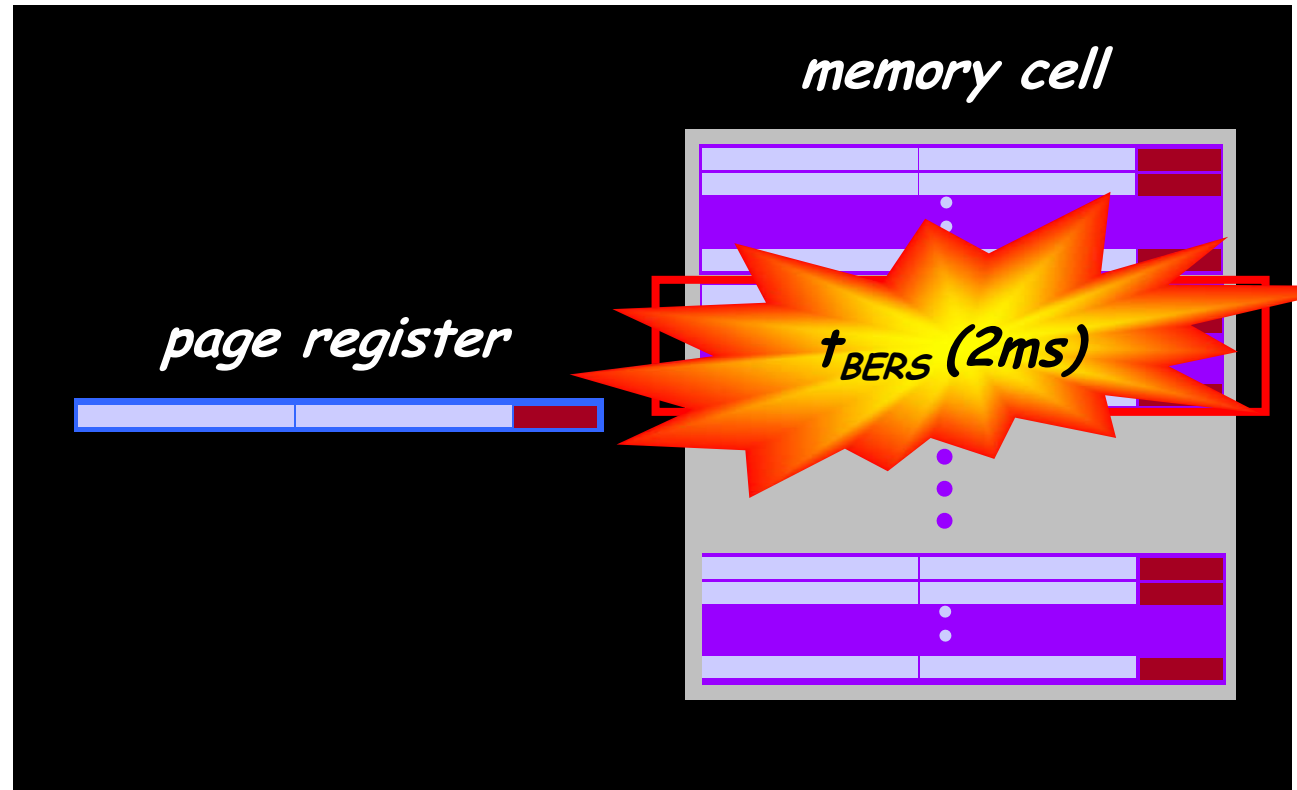
OPERATION - ERASE (2/6)



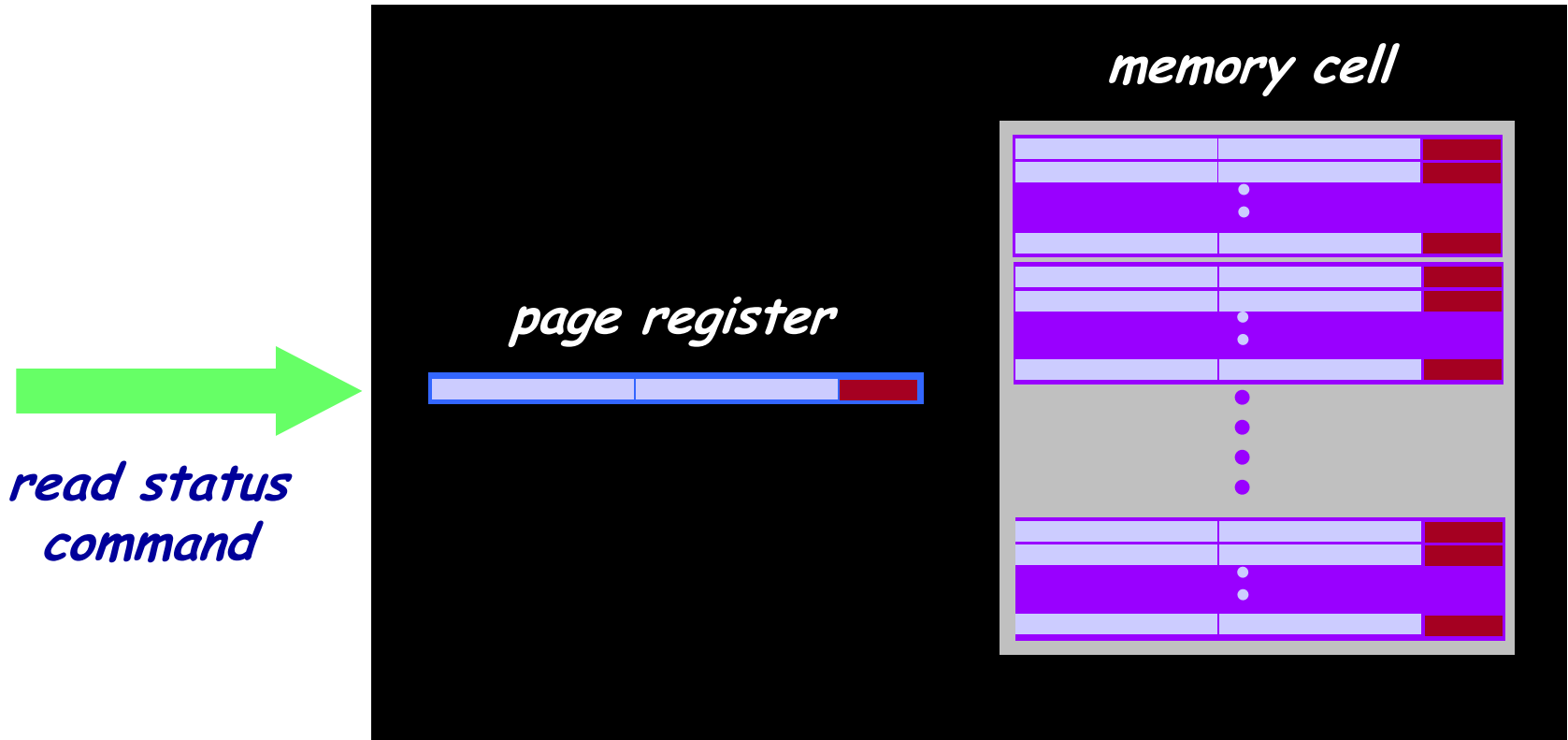
OPERATION - ERASE (3/6)



OPERATION - ERASE (4/6)



OPERATION - ERASE (5/6)



OPERATION - ERASE (6/6)

