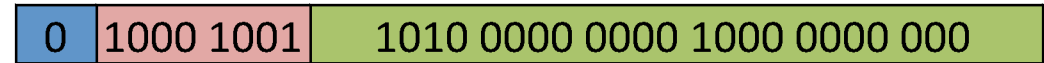


# Convertir en simple précision: 1664.125



1

8

23

b = 0x7F  
= 127

$1664 / 2 = 832$  reste **0**  
 $832 / 2 = 416$  reste **0**  
 $416 / 2 = 208$  reste **0**  
 $208 / 2 = 104$  reste **0**  
 $104 / 2 = 52$  reste **0**  
 $52 / 2 = 26$  reste **0**  
 $26 / 2 = 13$  reste **0**  
 $13 / 2 = 6$  reste **1**  
 $6 / 2 = 3$  reste **0**  
 $3 / 2 = 1$  reste **1**  
 $1 / 2 = 0$  reste **1**

$0.125 * 2 = 0.25 < 1$     **0**  
 $0.25 * 2 = 0.5 < 1$     **0**  
 $0.5 * 2 = 1 \geq 1$     **1**

$$0.125_{10} = 0.001_2$$

$$1664.125_{10} = 110\ 1000\ 0000.001_2$$

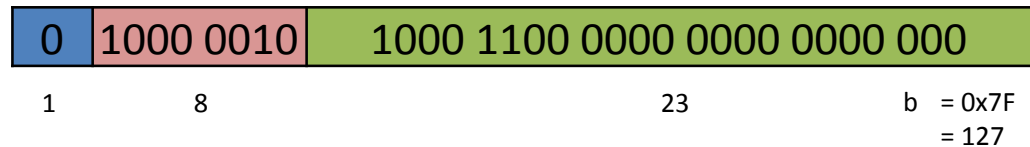
$$110\ 1000\ 0000.001_2 = 1.1010\ 0000\ 0000\ 1 \times 2^{10}$$

$$17_{10} = 110\ 1000\ 0000_2$$

$$e = 10 + 0x7F = 0x89 = 1000\ 1001_2$$

# Convertir en décimal

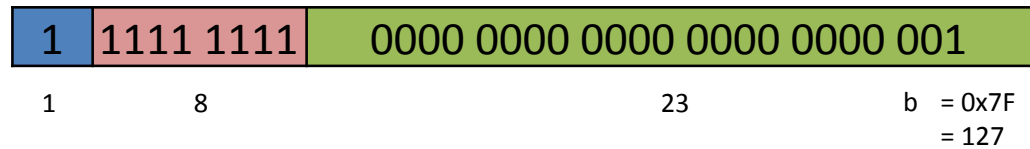
- Exemple: 0100 0001 0100 0110 0000 0000 0000 0000



- signe = 0 → positif
- exposant = 0x82 →  $0x82 - 0x7F = 3$
- mantisse =  $1.100011_2$
- Résultat =  $1.100011_2 \times 2^3 = 1100.011$   
 $= C.6_{16}$   
 $= 12 + 6 * 16^{-1}$   
 $= 12.375$

# Convertir en décimal

- Exemple: 1111 1111 1100 0000 0000 0000 0000 0000



- signe = 1 → négatif
- exposant = 0xFF → cas spécial
- mantisse != 0 → NaN