

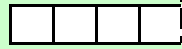
# Zahlensysteme der Digitaltechnik

## Bit (Binary Digit)



0 oder 1 Bin

## Nibble

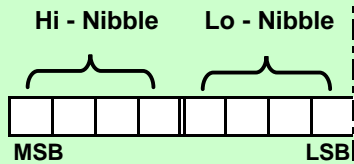


0 0 0 0 Bin

bis

1 1 1 1 Bin

## Byte

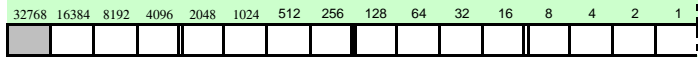


0 0 Hex

bis

F F Hex

## Word



0 0 0 0 Hex

bis

F F F F Hex

- Ohne Vorzeichen - - - 0 bis 65535 Dez
- Vorzeichenbit (0=positiv) - - - 0 bis +32767 Dez
- Vorzeichenbit (1=negativ) - - - 0 bis -32768 Dez

$$\begin{array}{cccc} 8 & 4 & 2 & 1 \\ 1 & 0 & 0 & 1 \\ \hline 8 + 0 + 0 + 1 & = & 9 & \text{Dez} \end{array}$$

$$\begin{array}{cccccc} 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1 \\ 1 & 0 & 0 & 1 & 1 & 0 & 1 & 0 \\ \hline 128 + 0 + 0 + 16 + 8 + 0 + 2 + 0 & = & 154 & \text{Dez} \end{array}$$

$$\underbrace{09 \text{ Hex}} \quad \underbrace{0A \text{ Hex}} \quad = 9A \text{ Hex}$$

$$\boxed{F \ 9 \ B \ 6} = 63926 \text{ Dez}$$

## Binär Dez Hex

Binär	Dez	Hex
0 0 0 0	= 0	= 0
0 0 0 1	= 1	= 1
0 0 1 0	= 2	= 2
0 0 1 1	= 3	= 3
0 1 0 0	= 4	= 4
0 1 0 1	= 5	= 5
0 1 1 0	= 6	= 6
0 1 1 1	= 7	= 7
1 0 0 0	= 8	= 8
1 0 0 1	= 9	= 9
1 0 1 0	= 10	= A
1 0 1 1	= 11	= B
1 1 0 0	= 12	= C
1 1 0 1	= 13	= D
1 1 1 0	= 14	= E
1 1 1 1	= 15	= F