

# BINARY NOTATION CHEAT SHEET

## The 8-Bit Place Values

$2^7 = 128$   
 $2^6 = 64$   
 $2^5 = 32$   
 $2^4 = 16$   
 $2^3 = 8$   
 $2^2 = 4$   
 $2^1 = 2$   
 $2^0 = 1$

**Quick Rule:** To find a number, add up the values where the bit is "1". Keep "0" for values you don't need.

DECIMAL	BINARY (8-BIT)	CALCULATION
0	00000000	All Off
1	00000001	1
2	00000010	2
5	00000101	4 + 1
10	00001010	8 + 2
25	00011001	16 + 8 + 1
50	00110010	32 + 16 + 2

**DECIMAL**

**BINARY (8-BIT)**

**CALCULATION**

100

01100100

$64 + 32 + 4$

255

11111111

$128+64+32+16+8+4+2+1$

Base-2 Number System Reference Page