

Table 1: IEEE Single Format

\pm	$a_1 a_2 a_3 \dots a_8$	$b_1 b_2 b_3 \dots b_{23}$
-------	-------------------------	----------------------------

If exponent bitstring $a_1 \dots a_8$ is	Then numerical value represented is
$(00000000)_2 = (0)_{10}$	$\pm(0.b_1 b_2 b_3 \dots b_{23})_2 \times 2^{-126}$
$(00000001)_2 = (1)_{10}$	$\pm(1.b_1 b_2 b_3 \dots b_{23})_2 \times 2^{-126}$
$(00000010)_2 = (2)_{10}$	$\pm(1.b_1 b_2 b_3 \dots b_{23})_2 \times 2^{-125}$
$(00000011)_2 = (3)_{10}$	$\pm(1.b_1 b_2 b_3 \dots b_{23})_2 \times 2^{-124}$
↓	↓
$(01111111)_2 = (127)_{10}$	$\pm(1.b_1 b_2 b_3 \dots b_{23})_2 \times 2^0$
$(10000000)_2 = (128)_{10}$	$\pm(1.b_1 b_2 b_3 \dots b_{23})_2 \times 2^1$
↓	↓
$(11111100)_2 = (252)_{10}$	$\pm(1.b_1 b_2 b_3 \dots b_{23})_2 \times 2^{125}$
$(11111101)_2 = (253)_{10}$	$\pm(1.b_1 b_2 b_3 \dots b_{23})_2 \times 2^{126}$
$(11111110)_2 = (254)_{10}$	$\pm(1.b_1 b_2 b_3 \dots b_{23})_2 \times 2^{127}$
$(11111111)_2 = (255)_{10}$	$\pm\infty$ if $b_1 = \dots = b_{23} = 0$, NaN otherwise