

Table 9.3 IEEE 754 Format Parameters

Parameter	Format			
	Single	Single Extended	Double	Double Extended
Word width (bits)	32	≥ 43	64	≥ 79
Exponent width (bits)	8	≥ 11	11	≥ 15
Exponent bias	127	unspecified	1023	unspecified
Maximum exponent	127	≥ 1023	1023	≥ 16383
Minimum exponent	-126	≤ -1022	-1022	≤ -16382
Number range (base 10)	$10^{-38}, 10^{+38}$	unspecified	$10^{-308}, 10^{+308}$	unspecified
Significand width (bits)*	23	≥ 31	52	≥ 63
Number of exponents	254	unspecified	2046	unspecified
Number of fractions	2^{23}	unspecified	2^{52}	unspecified
Number of values	1.98×2^{31}	unspecified	1.99×2^{63}	unspecified

* not including implied bit