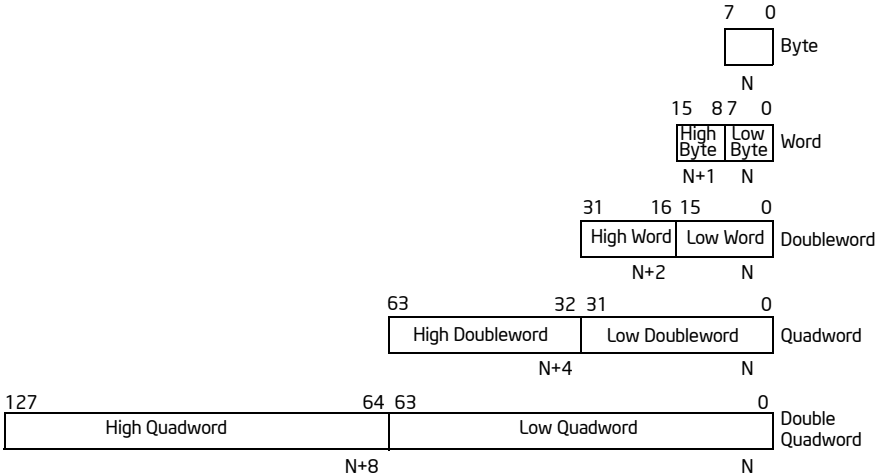

Figure 4-1. Fundamental Data Types

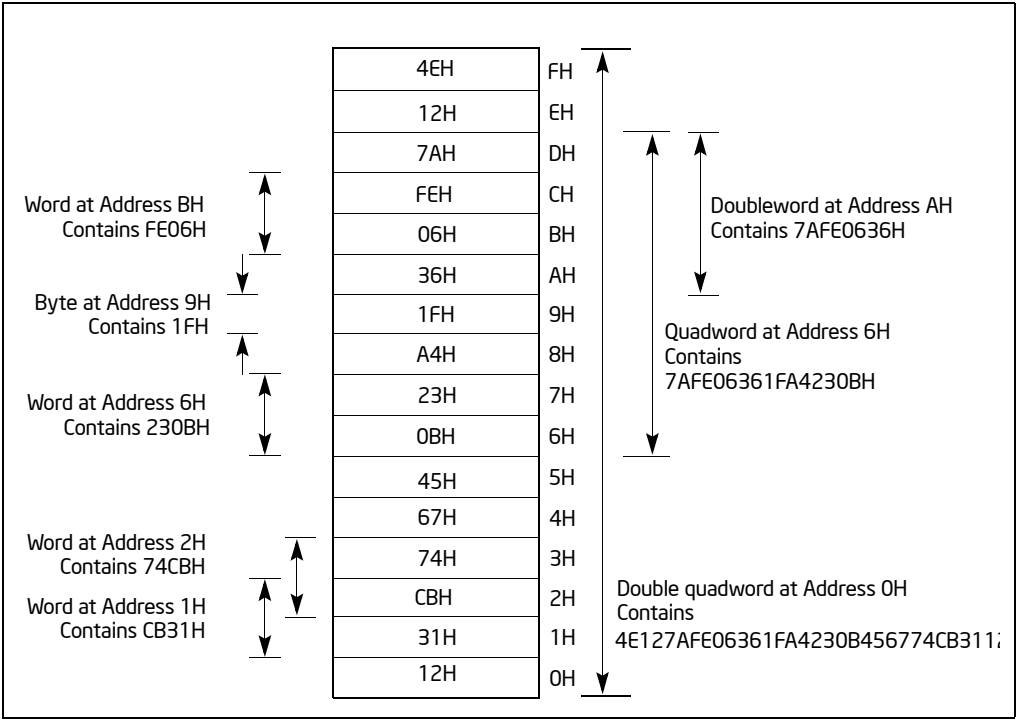

Figure 4-2. Bytes, Words, Doublewords, Quadwords, and Double Quadwords in Memory

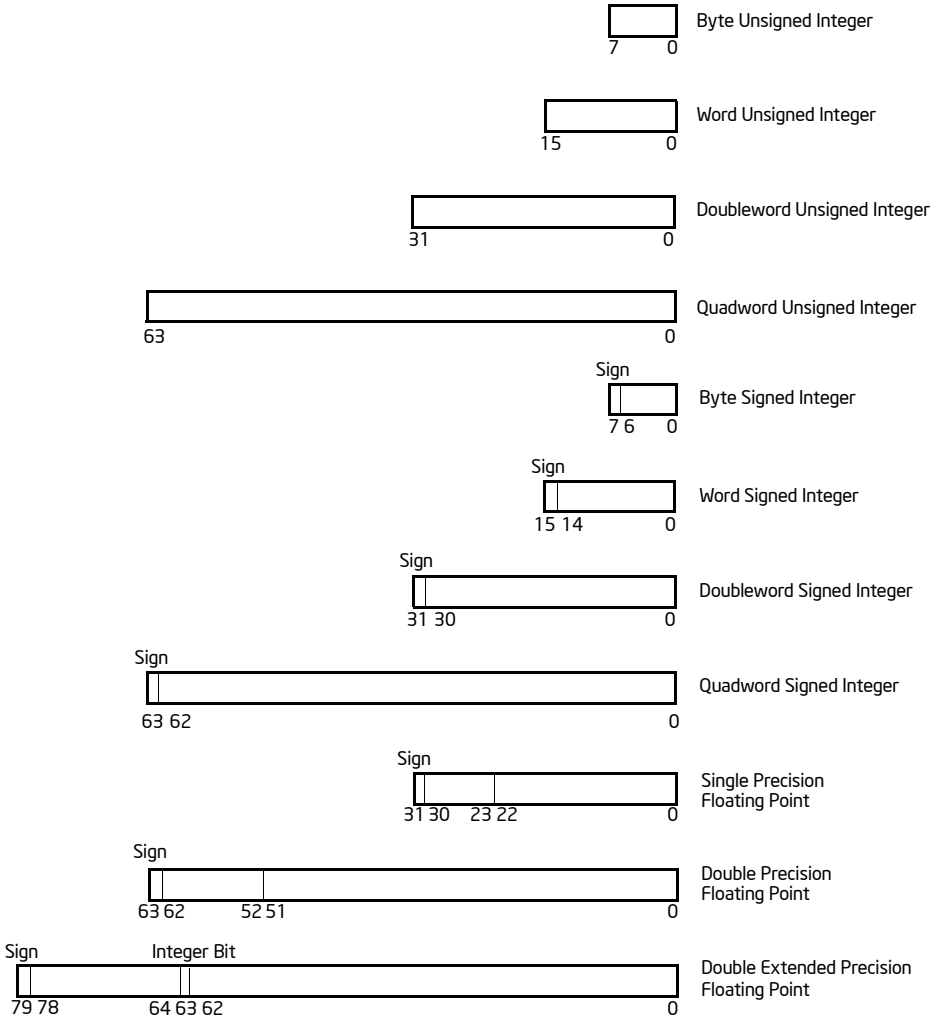

Figure 4-3. Numeric Data Types

Table 4-1. Signed Integer Encodings

Class		Two's Complement Encoding	
		Sign	
Positive	Largest	0	11..11
		.	.
		.	.
	Smallest	0	00..01
Zero		0	00..00
Negative	Smallest	1	11..11
		.	.
		.	.
	Largest	1	00..00
Integer indefinite		1	00..00
		Signed Byte Integer:	← 7 bits →
		Signed Word Integer:	← 15 bits →
		Signed Doubleword Integer:	← 31 bits →
		Signed Quadword Integer:	← 63 bits →

Table 4-2. Length, Precision, and Range of Floating-Point Data Types

Data Type	Length	Precision (Bits)	Approximate Normalized Range	
			Binary	Decimal
Single Precision	32	24	2^{-126} to 2^{127}	1.18×10^{-38} to 3.40×10^{38}
Double Precision	64	53	2^{-1022} to 2^{1023}	2.23×10^{-308} to 1.79×10^{308}
Double Extended Precision	80	64	2^{-16382} to 2^{16383}	3.37×10^{-4932} to 1.18×10^{4932}

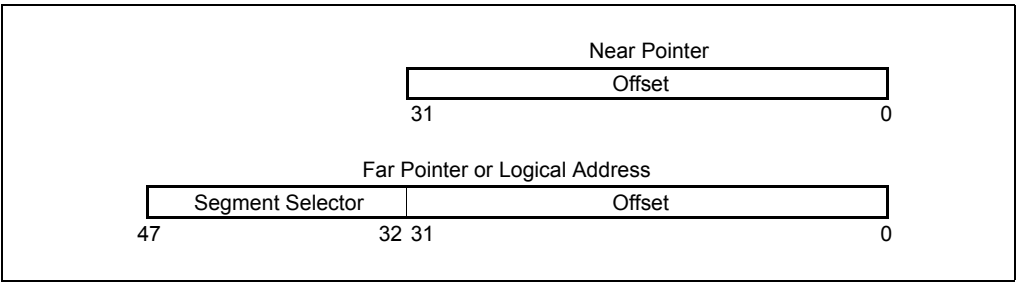

Figure 4-4. Pointer Data Types

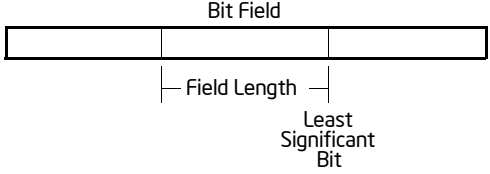

Figure 4-6. Bit Field Data Type

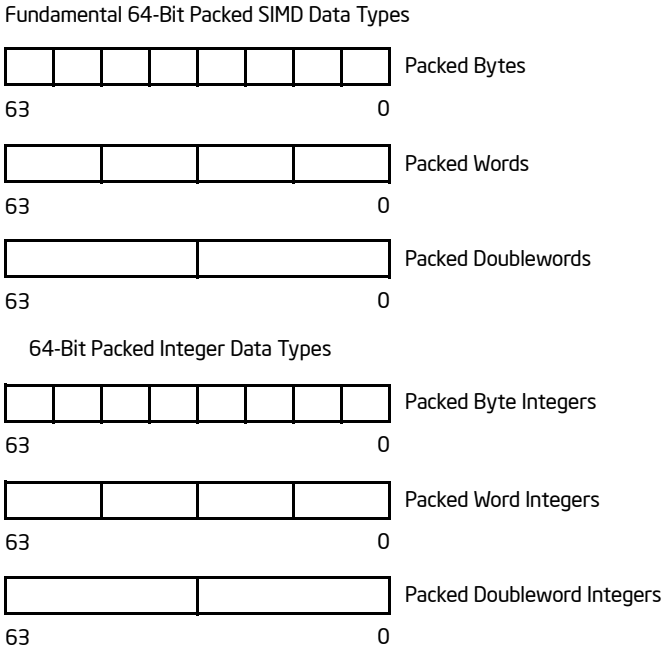

Figure 4-7. 64-Bit Packed SIMD Data Types

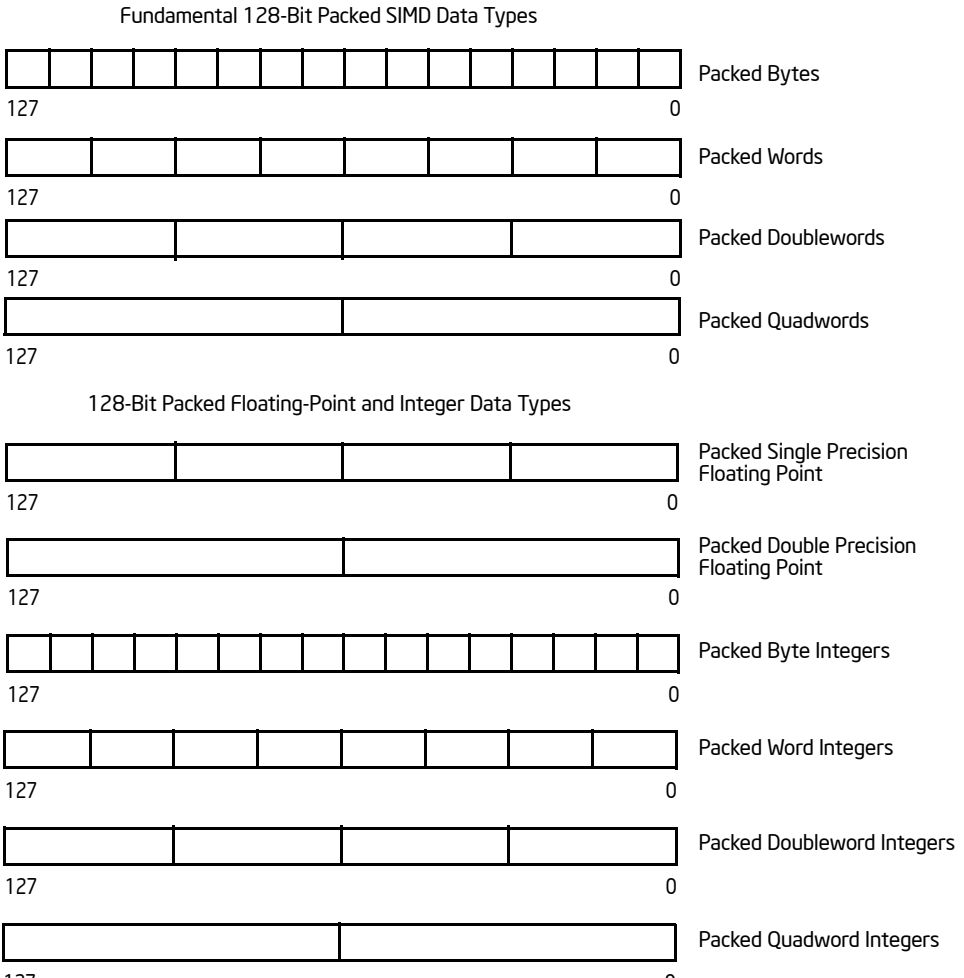

Figure 4-8. 128-Bit Packed SIMD Data Types

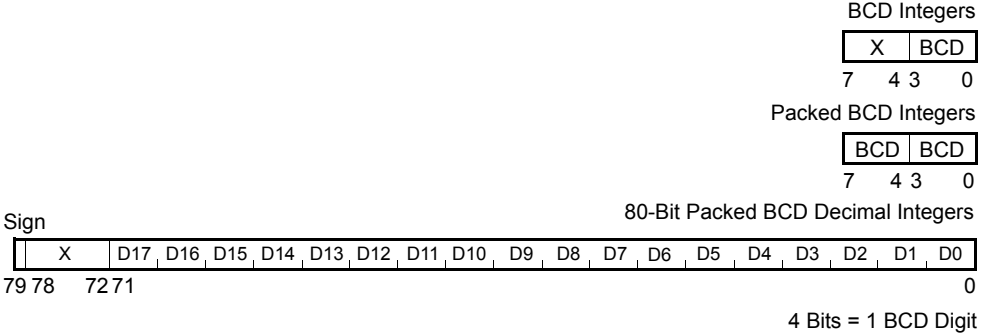

Figure 4-9. BCD Data Types

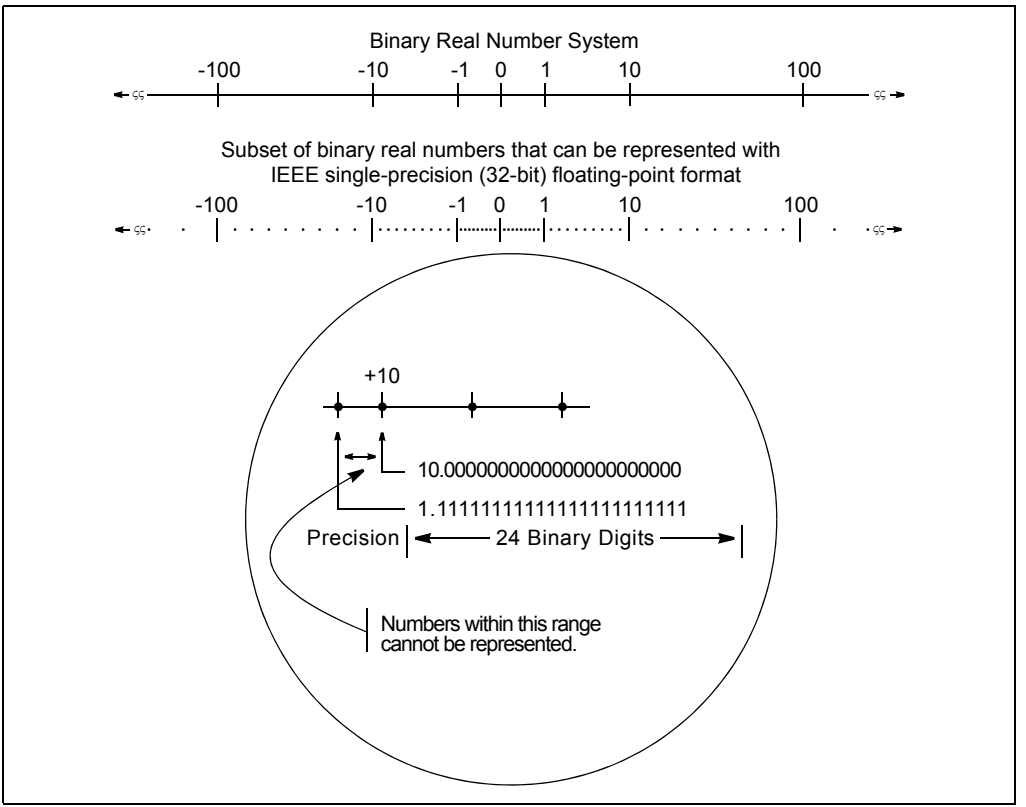

Figure 4-10. Binary Real Number System

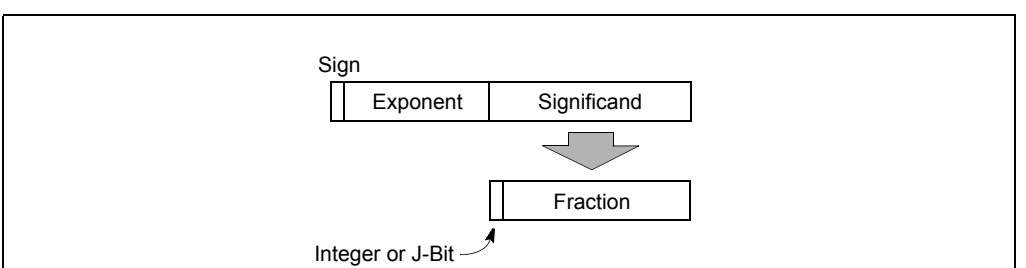

Figure 4-11. Binary Floating-Point Format