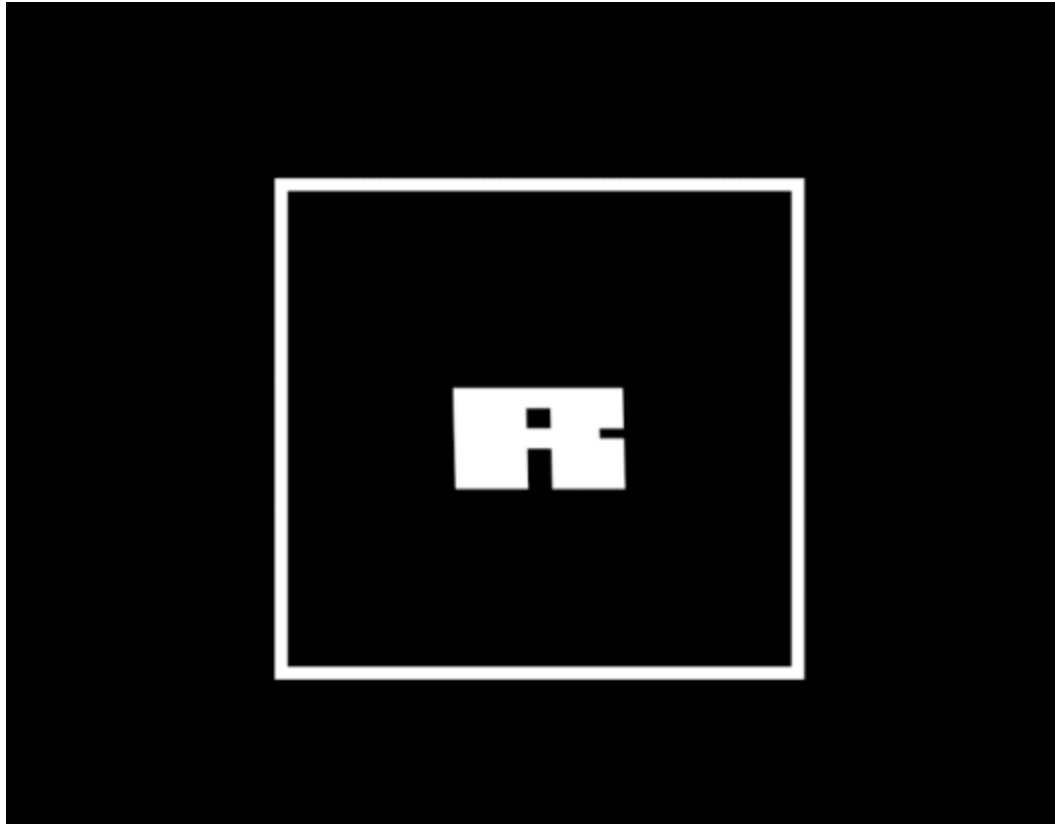


INTEL x86 DATA TYPES

انواع البيانات في x86 . يمكن لـ x86 التعامل مع انواع بيانات بطول 8 (بايت) و 16 (word) و 32 (doubleword) و 64 (quadword) و 128 (double quadword).
للسماح بأقصى قدر من مرونة هياكل البيانات والاستخدام الفعال للذاكرة لا يلزم محاذاة الكلمات عند العنوان ذات الارقام الزوجية. لا يلزم المحاذاة العناوين doublewords التي تقبل القسمة على 4 quadwords التي تقبل القسمة على 8. ومع ذلك عند الوصول الى البيانات عبر الناقل 32 بت تتم عمليات النقل بوحدات من doublewords بدءا من عناوين قابلة للقسمة على 4.

Data Type	Description
General	Byte, word (16 bits), doubleword (32 bits), quadword (64 bits), and double quadword (128 bits) locations with arbitrary binary contents.
Integer	A signed binary value contained in a byte, word, or doubleword, using twos complement representation.
Ordinal	An unsigned integer contained in a byte, word, or doubleword.
Unpacked binary coded decimal (BCD)	A representation of a BCD digit in the range 0 through 9, with one digit in each byte.
Packed BCD	Packed byte representation of two BCD digits; value in the range 0 to 99.
Near pointer	A 16-bit, 32-bit, or 64-bit effective address that represents the offset within a segment. Used for all pointers in a nonsegmented memory and for references within a segment in a segmented memory.
Far pointer	A logical address consisting of a 16-bit segment selector and an offset of 16, 32, or 64 bits. Far pointers are used for memory references in a segmented memory model where the identity of a segment being accessed must be specified explicitly.
Bit field	A contiguous sequence of bits in which the position of each bit is considered as an independent unit. A bit string can begin at any bit position of any byte and can contain up to 32 bits.
Bit string	A contiguous sequence of bits, containing from zero to $2^{23} - 1$ bits.
Byte string	A contiguous sequence of bytes, words, or doublewords, containing from zero to $2^{23} - 1$ bytes.
Floating point	See Figure 12.4.
Packed SIMD (single instruction, multiple data)	Packed 64-bit and 128-bit data types.

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