Data Type Ranges

| **Type Name** | **Bytes** | **Other Names** | **Range of Values** |
| --- | --- | --- | --- |
| int | 4 | signed | –2,147,483,648 to 2,147,483,647 |
| unsigned int | 4 | unsigned | 0 to 4,294,967,295 |
| \_\_int8 | 1 | char | –128 to 127 |
| unsigned \_\_int8 | 1 | unsigned char | 0 to 255 |
| \_\_int16 | 2 | short, short int, signed short int | –32,768 to 32,767 |
| unsigned \_\_int16 | 2 | unsigned short, unsigned short int | 0 to 65,535 |
| \_\_int32 | 4 | signed, signed int, int | –2,147,483,648 to 2,147,483,647 |
| unsigned \_\_int32 | 4 | unsigned, unsigned int | 0 to 4,294,967,295 |
| \_\_int64 | 8 | long long, signed long long | –9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 |
| unsigned \_\_int64 | 8 | unsigned long long | 0 to 18,446,744,073,709,551,615 |
| bool | 1 | none | false or true |
| char | 1 | none | –128 to 127 by default  0 to 255 when compiled by using [/J](https://msdn.microsoft.com/en-us/library/0d294k5z.aspx) |
| signed char | 1 | none | –128 to 127 |
| unsigned char | 1 | none | 0 to 255 |
| short | 2 | short int, signed short int | –32,768 to 32,767 |
| unsigned short | 2 | unsigned short int | 0 to 65,535 |
| long | 4 | long int, signed long int | –2,147,483,648 to 2,147,483,647 |
| unsigned long | 4 | unsigned long int | 0 to 4,294,967,295 |
| long long | 8 | none (but equivalent to \_\_int64) | –9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 |
| unsigned long long | 8 | none (but equivalent to unsigned \_\_int64) | 0 to 18,446,744,073,709,551,615 |
| enum | varies | none | See Remarks later in this article |
| float | 4 | none | 3.4E +/- 38 (7 digits) |
| double | 8 | none | 1.7E +/- 308 (15 digits) |
| long double | same as double | none | Same as double |
| wchar\_t | 2 | \_\_wchar\_t | 0 to 65,535 |