

C++ Integer Limits

Microsoft Specific

The limits for integer types are listed in Table 2.6. These limits are also defined in the standard header file `LIMITS.H`.

Table 2.6 Limits on Integer Constants

Constant	Meaning	Value
CHAR_BIT	Number of bits in the smallest variable that is not a bit field.	8
SCHAR_MIN	Minimum value for a variable of type signed char .	-128
SCHAR_MAX	Maximum value for a variable of type signed char .	127
UCHAR_MAX	Maximum value for a variable of type unsigned char .	255 (0xff)
CHAR_MIN	Minimum value for a variable of type char .	-128; 0 if /J option used
CHAR_MAX	Maximum value for a variable of type char .	127; 255 if /J option used
MB_LEN_MAX	Maximum number of bytes in a multicharacter constant.	2
SHRT_MIN	Minimum value for a variable of type short .	-32768
SHRT_MAX	Maximum value for a variable of type short .	32767
USHRT_MAX	Maximum value for a variable of type unsigned short .	65535 (0xffff)
INT_MIN	Minimum value for a variable of type int .	-2147483647 - 1
INT_MAX	Maximum value for a variable of type int .	2147483647
UINT_MAX	Maximum value for a variable of type unsigned int .	4294967295 (0xffffffff)
LONG_MIN	Minimum value for a variable of type long .	-2147483647 - 1
LONG_MAX	Maximum value for a variable of type long .	2147483647
ULONG_MAX	Maximum value for a variable of type unsigned long .	4294967295 (0xffffffff)

If a value exceeds the largest integer representation, the Microsoft compiler generates an error.

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