

Ranges of Data Types in C++

Data type modifiers available in C++ are:

- **Signed**
- **Unsigned**
- **Short**
- **Long**

The below table summarizes the modified size and range of built-in datatypes which also depends upon the compiler(i.e 32bits or 64bits) when combined with the type modifiers:

Data Type	Size (in bytes)	Range
short int	2	-32,768 to 32,767
unsigned short int	2	0 to 65,535
unsigned int	4	0 to 4,294,967,295
int	4	-2,147,483,648 to 2,147,483,647
long int	4	-2,147,483,648 to 2,147,483,647
unsigned long int	4	0 to 4,294,967,295
long long int	8	$-(2^{63})$ to $(2^{63})-1$
unsigned long long int	8	0 to 18,446,744,073,709,551,615
signed char	1	-128 to 127
unsigned char	1	0 to 255
float	4	-3.4×10^{38} to 3.4×10^{38}
double	8	-1.7×10^{308} to 1.7×10^{308}
long double	12	-1.1×10^{4932} to 1.1×10^{4932}
wchar_t	2 or 4	1 wide character