

int8\_t: 1 byte

uint8\_t: 1 byte

int16\_t: 2 bytes

uint16\_t: 2 bytes

int32\_t: 4 bytes

uint32\_t: 4 bytes

int64\_t: 8 bytes

uint64\_t: 8 bytes

Ranges of various data types:

char: -128 to 127 (signed)

unsigned char: 0 to 255

short: -32768 to 32767

unsigned short: 0 to 65535

int: -2147483648 to 2147483647

unsigned int: 0 to 4294967295

long: -9223372036854775808 to 9223372036854775807

unsigned long: 0 to 18446744073709551615

long long: -9223372036854775808 to 9223372036854775807

unsigned long long: 0 to 18446744073709551615

float: 1.17549e-38 to 3.40282e+38

double: 2.22507e-308 to 1.79769e+308

long double: 3.3621e-4932 to 1.18973e+4932

bool: 0 or 1

wchar\_t: -2147483648 to 2147483647

int8\_t: -128 to 127

uint8\_t: 0 to 255

int16\_t: -32768 to 32767

uint16\_t: 0 to 65535

int32\_t: -2147483648 to 2147483647

uint32\_t: 0 to 4294967295

int64\_t: -9223372036854775808 to 9223372036854775807

uint64\_t: 0 to 18446744073709551615

Sizes and ranges of various data types:

char:

Size: 1 byte

Range: -128 to 127 (signed)

Range: 0 to 255 (unsigned)

short:

Size: 2 bytes

Range: -32768 to 32767 (signed)

Range: 0 to 65535 (unsigned)

int:

Size: 4 bytes

Range: -2147483648 to 2147483647 (signed)

Range: 0 to 4294967295 (unsigned)

long:

Size: 8 bytes

Range: -9223372036854775808 to 9223372036854775807 (signed)

Range: 0 to 18446744073709551615 (unsigned)

long long:

Size: 8 bytes

Range: -9223372036854775808 to 9223372036854775807 (signed)

Range: 0 to 18446744073709551615 (unsigned)

float:

Size: 4 bytes

Range: 1.17549e-38 to 3.40282e+38

double:

Size: 8 bytes

Range: 2.22507e-308 to 1.79769e+308

long double:

Size: 16 bytes

Range: 3.3621e-4932 to 1.18973e+4932

bool:

Size: 1 byte

Range: 0 or 1

wchar\_t:

Size: 4 bytes

Range: -2147483648 to 2147483647

int8\_t:

Size: 1 byte

Range: -128 to 127

uint8\_t:

Size: 1 byte

Range: 0 to 255

int16\_t:

Size: 2 bytes

Range: -32768 to 32767

uint16\_t:

Size: 2 bytes

Range: 0 to 65535

int32\_t:

Size: 4 bytes

Range: -2147483648 to 2147483647

uint32\_t:

Size: 4 bytes

Range: 0 to 4294967295

int64\_t:

Size: 8 bytes

Range: -9223372036854775808 to 9223372036854775807

uint64\_t:

Size: 8 bytes

Range: 0 to 18446744073709551615