How to use nullable types

version	1.0.0
scope	Example. This code is provided as example code for a user to base their code on.
description	How to use nullable types
boards	Unless otherwise specified, this example runs on the SliceKIT Core Board, but can easily be run on any XMOS device by using a different XN file.

Resource types (e.g. ports, timers etc) and reference types can be made *nullable*. This means that their value could be a normal value or could be the special value null. The ? type operator creates a nullable type.

For example the following function has a nullable port argument:

```
void f(port ?p)
{
  if (!isnull(p)) {
    printf("Outputting to port\n");
    p <: 0;
  }
}
```

The isnull function tests whether a variable of nullable type is null or not.

Functions taking nullable arguments can either be passed a value or the null value:

```
void g() {
  f(null);
  f(p);
}
```

It is also possible to have nullable types in structures e.g.:

```
struct st {
  int x;
  port ?p;
};
```

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