

Application Note: AN10052

# How to input data accompanied by a data valid signal

This application note is a short how-to on programming/using the xTIMEcomposer tools. It shows how to input data accompanied by a data valid signal.

---

## Required tools and libraries

This application note is based on the following components:

- xTIMEcomposer Tools - Version 14.0.0

## Required hardware

Programming how-tos are generally not specific to any particular hardware and can usually run on all XMOS devices. See the contents of the note for full details.

---

## 1 How to input data accompanied by a data valid signal

A clocked port can interpret a “ready-in” strobe signal that determines the validity of the accompanying data. For example, you can setup a program to only input data from a clocked port only when an associated signal is high.

The following statement configures the input port `inP` to be sampled only when the value sampled on the port `inReady` equals 1. The port used as a data valid signal must be 1-bit wide.

```
configure_in_port_strobed_slave(inP, inReady, clk);
```

Data is sampled on the rising edge of the clock whenever the signal on the port `inReady` is high.

```
inP :> void;
```