version 1.1.0
 scope Example. This code is provided as example code for a user to base their code on.
 description How to serialize output data to a port
 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.

A clocked port can serialise data, reducing the number of instructions required to perform an output. This example outputs a 32-bit value onto 8 pins, using a clock to determine for how long each 8-bit value is driven.

The following declares the port outP to drive 8 pins from a 32-bit shift register. The type port:32 specifies the number of bits that are transferred in each output operation (the transfer width). The initialisation XS1_PORT_8A specifies the number of physical pins connected to the port (the port width)

out buffered port:32 outP = XS1_PORT_8A;

By offloading the serialisation to the port, the processor has only to output once every 4 clock periods. On each falling edge of the clock, the least significant 8 bits of the shift register are driven on the pins; the shift register is then right-shifted by 8 bits.

```
int x = 0xAA00FFFF;
configure_clock_src(clk, inClock);
configure_out_port(outP, clk, 0);
start_clock(clk);
while (1) {
   outP <: x;
   x = f(x);
}
```

Publication Date: 2013/7/18

XMOS © 2013, All Rights Reserved

Xmos Ltd. is the owner or licensee of the information in this document and is providing it to you "AS IS" with no warranty of any kind, express or implied and shall have no liability in relation to its use. Xmos Ltd. makes no representation that the information, or any particular implementation thereof, is or will be free from any claims of infringement and again, shall have no liability in relation to any such claims.



REV A