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1 // Simple SPI interface example
2 // for now only supports Master->Slave communication for 2 devices
3 interface SPIbus;
4     logic mosi,sck;
5     wire miso;                // logic type won't allow multiple drivers
6     logic [1:0] ss;
7     modport Master (input miso, output mosi, sck, ss);
8     modport Slave (input mosi, sck, ss, output miso);
9 endinterface
10
11 interface SPIctrl;
12     logic [7:0] toXmit;      // value to be transmitted by master or slave
13     logic [7:0] Rcvd;        // data value recieved by master or slave
14     logic strobe;            // tell device that there is data on toXmit available
15     logic Ready;             // slave or master indicates data on Rcvd is ready to use
16     logic XmitFull;          // = 1 if input buffer already full, not ready for new data
17     logic [1:0] ss;          // tell master how to set slave select lines
18     logic busy;              // 1 if master or slave already busy transmitting current
byte
19     modport Master (input toXmit, strobe, ss, output Rcvd, Ready, XmitFull, busy);
20     modport Slave (input toXmit, strobe, output Rcvd, Ready, XmitFull, busy);
21     modport System (output toXmit, strobe, input Rcvd, Ready, XmitFull);
22 endinterface
```