**SPI** **HDL Module Documentation**

SPI module transmits a byte with the following settings:

* Most significant bit first.
* SCLK frequency = CLK frequency.
* Idle MOSI is low.
* Idle SCLK is low.

**Signals**

|  |  |  |  |
| --- | --- | --- | --- |
| **Signal** | **Direction** | **Width (bits)** | **Description** |
| SPI | IN | 1 | Clock signal |
| NRST | IN | 1 | Synchronous reset. Active low |
| D | IN | 8 | Next byte to transmit |
| DS | IN | 1 | Data set. This signal commands the module to transmit the next byte only if the ongoing transmission has finished |
| SCLK | OUT | 1 | SPI clock output |
| MOSI | OUT | 1 | SPI data output |
| TI | OUT | 1 | Transmission indication |