**Bytes\_Transmitter HDL Module Documentation**

Bytes\_Transmitter module transmits a sequence of bytes via SPI.

To use this module, the top module reads the current byte index and outputs back the information about:

* the next byte value;
* the length of the sequence.

**Parameters**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Default value** | **Type** | **Description** |
| CLK\_divider | 50 | Integer | Specifies the source CLK frequency division factor for SCLK signal. Can be in range of 1…65535 |

**Signals**

|  |  |  |  |
| --- | --- | --- | --- |
| **Signal** | **Direction** | **Width (bits)** | **Description** |
| CLK | IN | 1 | Clock signal |
| NRST | IN | 1 | Synchronous reset. Active low |
| SCLK | OUT | 1 | SPI clock output |
| MOSI | OUT | 1 | SPI data output |
| ST | IN | 1 | Start transmission |
| TI | OUT | 1 | Transmission indication |
| TX\_COUNTER\_MAX | IN | 16 | How many bytes to transmit |
| TX\_COUNTER | OUT | 16 | The index of the current byte being transmitted via SPI |
| NEXT\_BYTE | IN | 8 | The next byte to transmit |