

## Assembly Code Example<sup>(1)</sup>

```

USART_MSPIM_Transfer:
    ; Wait for empty transmit buffer
    sbis UCSRnA, UDREN
    rjmp USART_MSPIM_Transfer
    ; Put data (r16) into buffer, sends the data
    out UDRn,r16
    ; Wait for data to be received
USART_MSPIM_Wait_RXCn:
    sbis UCSRnA, RXCn
    rjmp USART_MSPIM_Wait_RXCn
    ; Get and return received data from buffer
    in r16, UDRn
    ret

```

## C Code Example<sup>(1)</sup>

```

unsigned char USART_Receive( void )
{
    /* Wait for empty transmit buffer */
    while ( !( UCSRnA & (1<<UDREN)) );
    /* Put data into buffer, sends the data */
    UDRn = data;
    /* Wait for data to be received */
    while ( !(UCSRnA & (1<<RXCn)) );
    /* Get and return received data from buffer */
    return UDRn;
}

```

Note: 1. See "Code Examples" on page 7.

### 18.6.1 Transmitter and Receiver Flags and Interrupts

The RXCn, TXCn, and UDREN flags and corresponding interrupts in USART in MSPIM mode are identical in function to the normal USART operation. However, the receiver error status flags (FE, DOR, and PE) are not in use and is always read as zero.

### 18.6.2 Disabling the Transmitter or Receiver

The disabling of the transmitter or receiver in USART in MSPIM mode is identical in function to the normal USART operation.