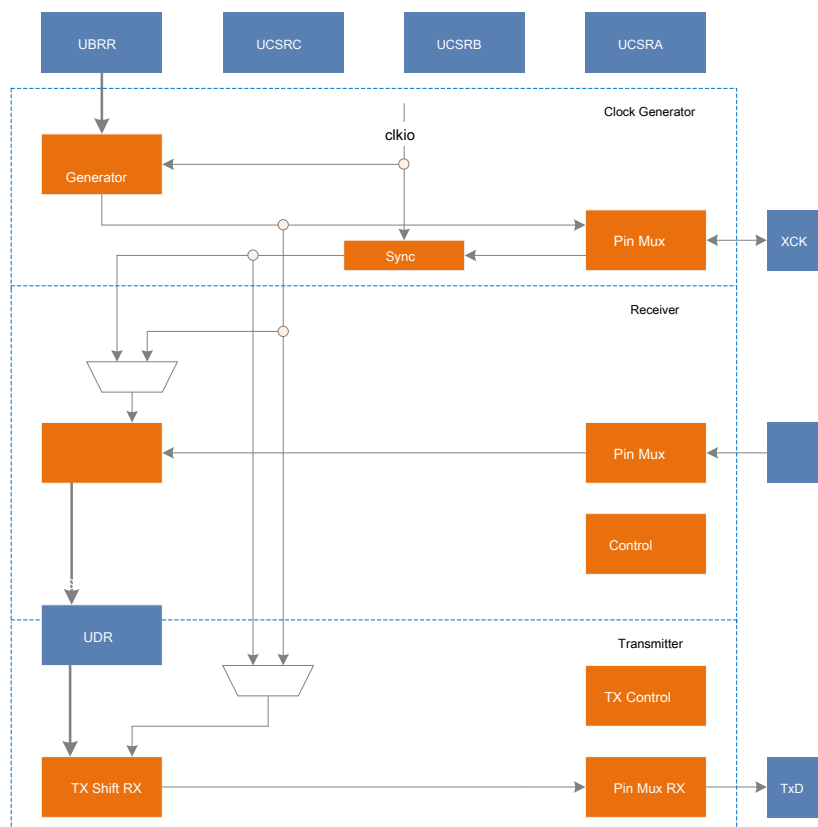## USART0 - SPI Operating mode

- Full-duplex operation, Three-wire synchronous data transfer

- Master or slave operation

- **It supports all four operating modes (Mode 0 , 1 , 2 with 3)**

- First, low or high transmission (transmission order data configurable)

- Queue operation (double buffer)

- High-resolution baud-rate generator

Overview

When set USCRC of UMSEL1 Bit "1" , Enable SPI Mode of operation, with USPI To represent. this SPI Three-wire module SPI Operating modes, and four-wire SPI Compared mode select line missing from the other three lines are consistent. USPI Occupancy

USART Resources, including transmit and receive shift register and a buffer, and the baud rate generator. Parity generation and checking logic, data and clock recovery logic are invalid. Address control and status registers is the same, but will function register bits with SPI Need to work patterns and change.

USART in SPI Structure chart

Clock Generation

when SPI Operating in master mode, it is necessary to provide communication with the clock, multiplexing USART The baud rate generator to generate the clock. The clock from XCK Pin output, XCK Pin data direction register (DDR_XCK) Must be set