UART Receiver

tx_next

D flip-flop

clk

tx

tx_done_tick

s_tick

clk

reset

UART Transmitter
FSM

sbc_tick16

sbc_tick08

sbc_clr

sbc_inc

clk

reset

Sample Bit
Counter

tx_data_reg_clr

tx_data_reg_shift

tx_data_reg[0]

din

clk

reset

UART Transfer
Data register

UART Transmitter