

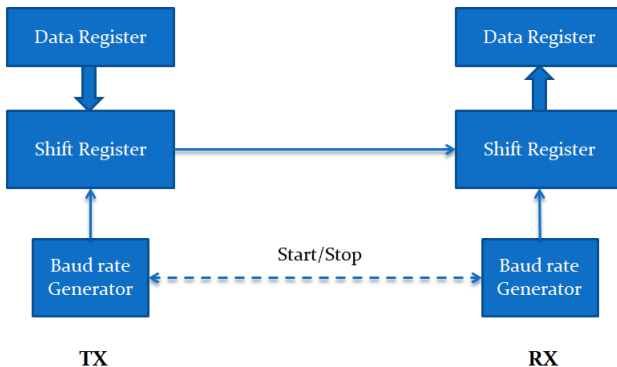
Module 7

UART interface (Part 1)

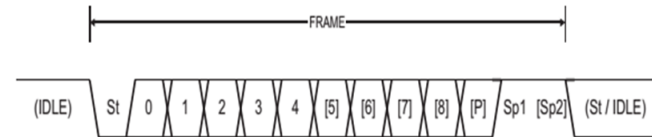
Serial data transmission

- There are two basic methods for data transmission:
 - Parallel (busses, parallel port, etc.)
 - Serial (serial port, SPI, I2C, etc.)
- U(S)ART – Universal Asynchronous (Synchronous) Receive Transmit
- Advantages:
 - Using only few lines (two, TX and RX, in the case of UART) for data transmission
 - Less prone to cross-talk
 - Longer cables (assuming that physical layer is adapted to handle environment noise)

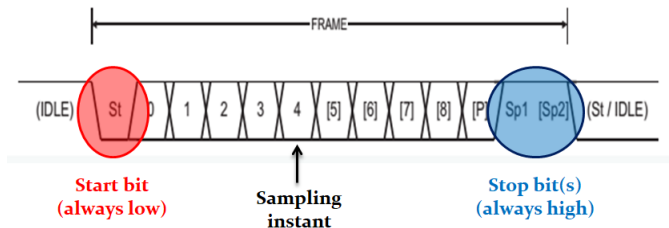
UART internals



UART working principle



UART working principle



Baud rate = Bits per second