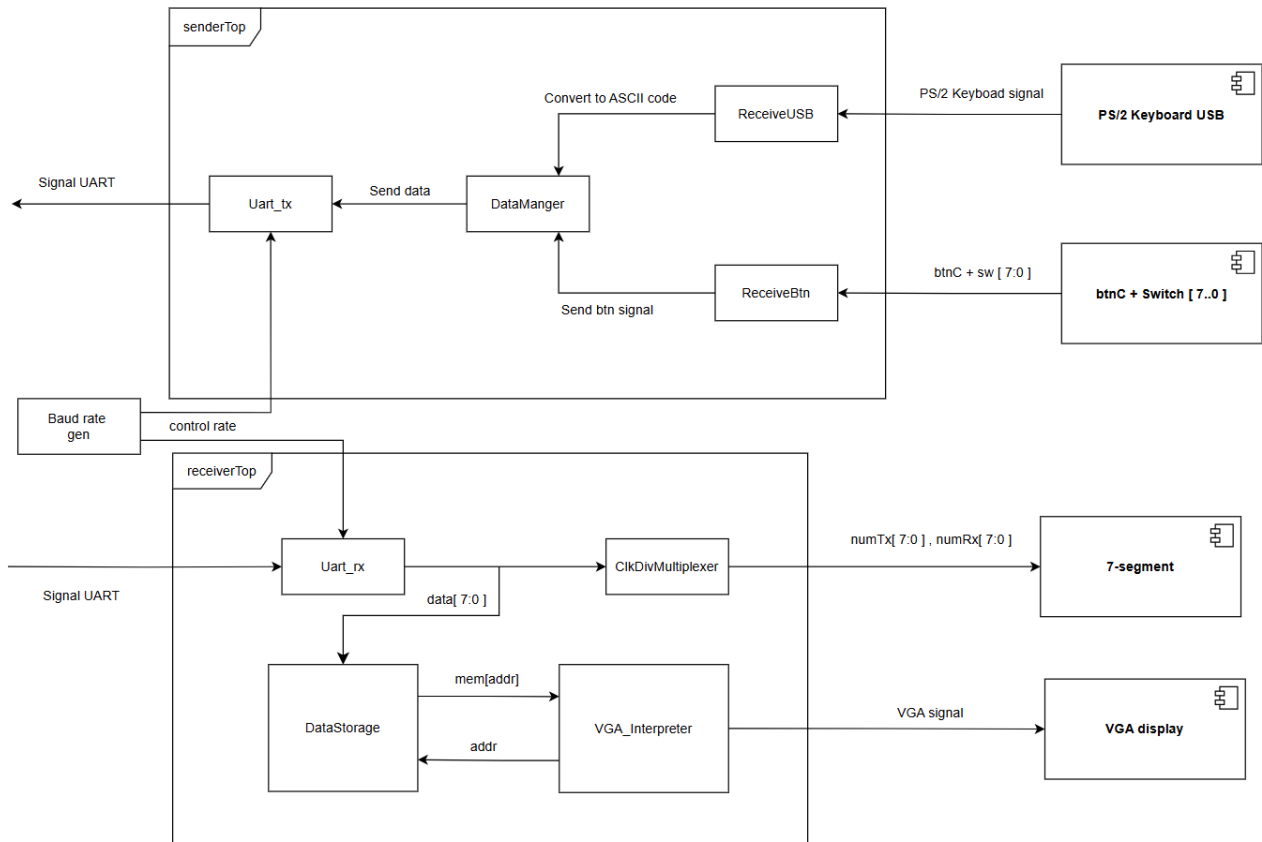


HwSynLab1 - Final Project Report

Members

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System Diagram & Modules



senderTop :

- 1.) ReceiveUSB: decodes PS/2 keyboard signals to 8-bit parallel data.
- 2.) ReceiveBtn: receive data 8-bit switch and generates a singlepulse when btnC is pressed by **singlepulser** module and debounce by **D-flipflop** module.
- 3.) DataManager: manages data inputs from a keyboard by converts 8-bit PS/2 keyboard scan codes to 8-bit ASCII code.
- 4.) Uart_tx: convert 8-bit parallel data to serial data stream and send data.

receiverTop :

- 1.) Uart_rx: receive serial data stream and convert to 8-bit parallel data, store to DataStorage and display on 7-segment display.
- 2.) DataStorage: store incoming data in a buffer and keep the latest data for use.
- 3.) VGA_Block: use data from storage to display on vga screen by using **vga-sync** which generate timing, **vga_text** to display alphabet.

sevenSegmentInterpreter :

Display on 7-segment display with 2-digit numTx and 2-digit numRx respectively.

Baudrate_gen :

generate baud rate = 9600