

Proyecto 1

Circuitos Digitales II

Alejandro Rojas, Andrés Alvarado, Fernando González

Universidad de Costa Rica

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Estudio de Mercado

Modelo	Precio \$	Frecuencia de Operación
xio1100	5.25	100 MHz- 125 MHz
PX1011B	5	100 MHz
PTN5100D	1.96	100kHz- 1MHz
TUSB1210	0.92	60 MHz
MPC8308EC	12	400 MHz

Byte Striping Tx

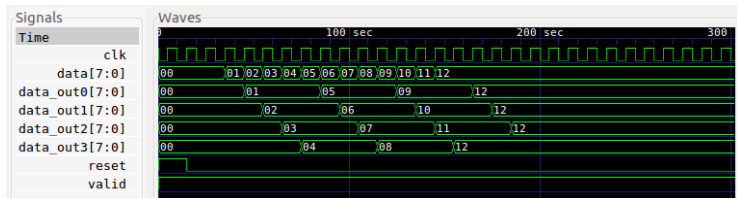


Figura: Tx GtkWave

Byte Striping Rx

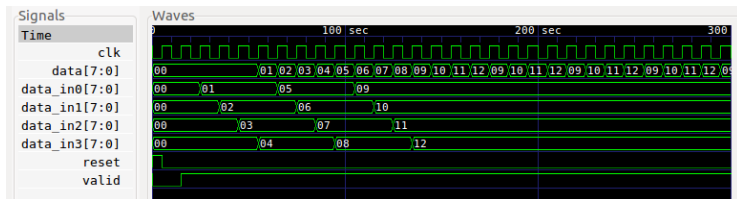
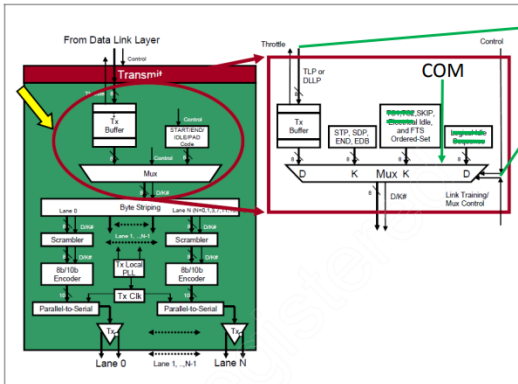


Figura: Rx GtkWave

Multiplexor de Control

Figure 11-5: Transmit Logic Multiplexer

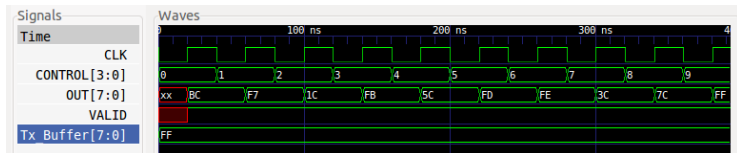


Manejados desde el testbench/ probador

Multiplexor de Control (cont.)

- ▶ Entradas de 8 bits, 9 entradas en total.
- ▶ Línea de selección de 5 bits.
- ▶ Salida a siguiente módulo de 8 bits en paralelo.

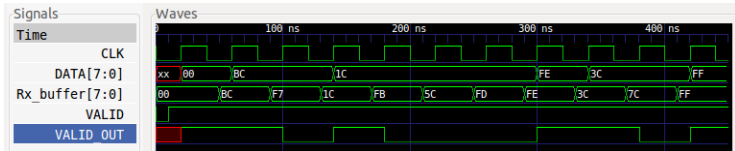
Multiplexor de Control (cont.)



De-mux

- ▶ Entradas de 1 byte.
- ▶ Elimina ciertas palabras
- ▶ Salida a siguiente módulo de 8 bits en paralelo y un bit de válido.

De-mux (cont.)



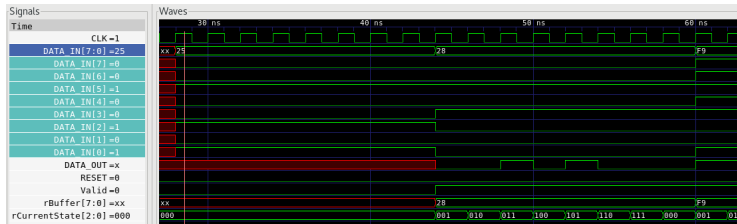
Parallel to Serial

Input

- ▶ CLK
- ▶ Reset
- ▶ Data in (8 bits)

Output

- ▶ Data out



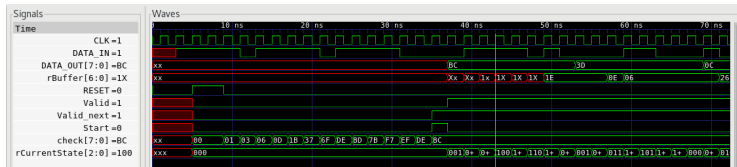
Serial to Parallel

Input

- ▶ CLK
- ▶ Reset
- ▶ Data in (1 bit)

Output

- ▶ Data out (8 bits + valid bit)



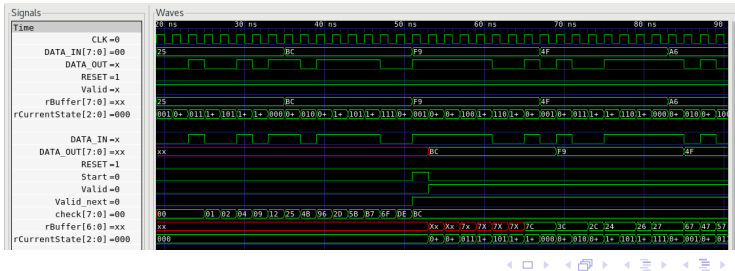
Parallel to Serial to Parallel

Input

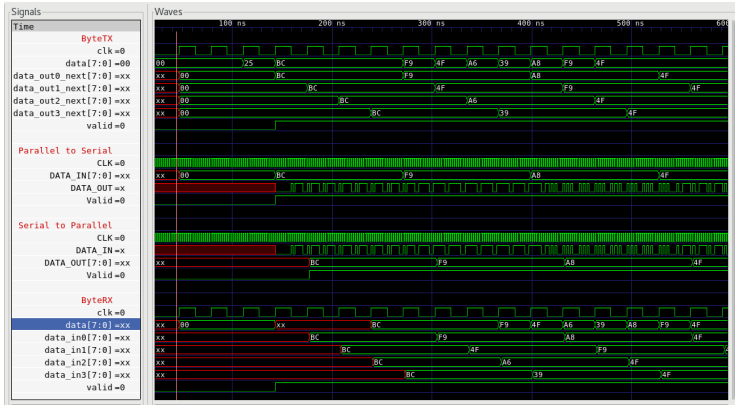
- ▶ CLK
- ▶ Reset
- ▶ Data in (8 bits)

Output

- ▶ Data out (8 bits + valid bit)



ByteTx to ByteRx



PCIe

Input

- ▶ CLK
- ▶ Reset
- ▶ Data in (8 bits)
- ▶ Control (4 bits)

Output

- ▶ Data out (8 bits)

