

Multiplexers

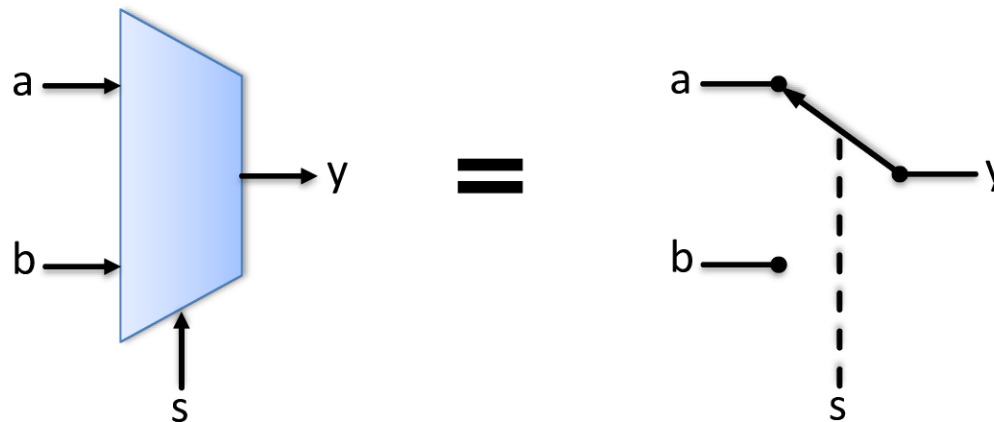
Networks and Embedded Software

Module 3.4.1

by Wolfgang Neff

Multiplexers (1)

- Data selector
- Multiple-input, single-output switch
 - Selects one of several input line
 - Forwards the selected input to an output line



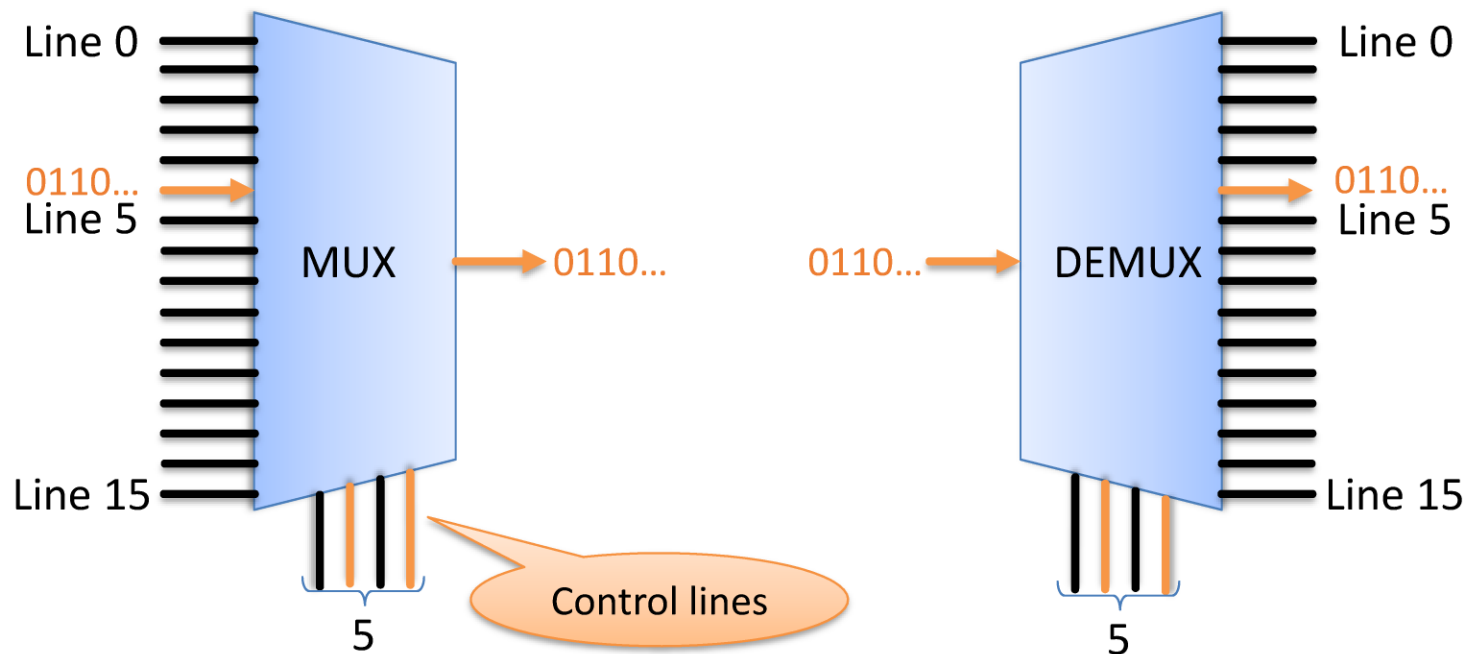
Multiplexers (2)

- Multiplexer

One input line is selected

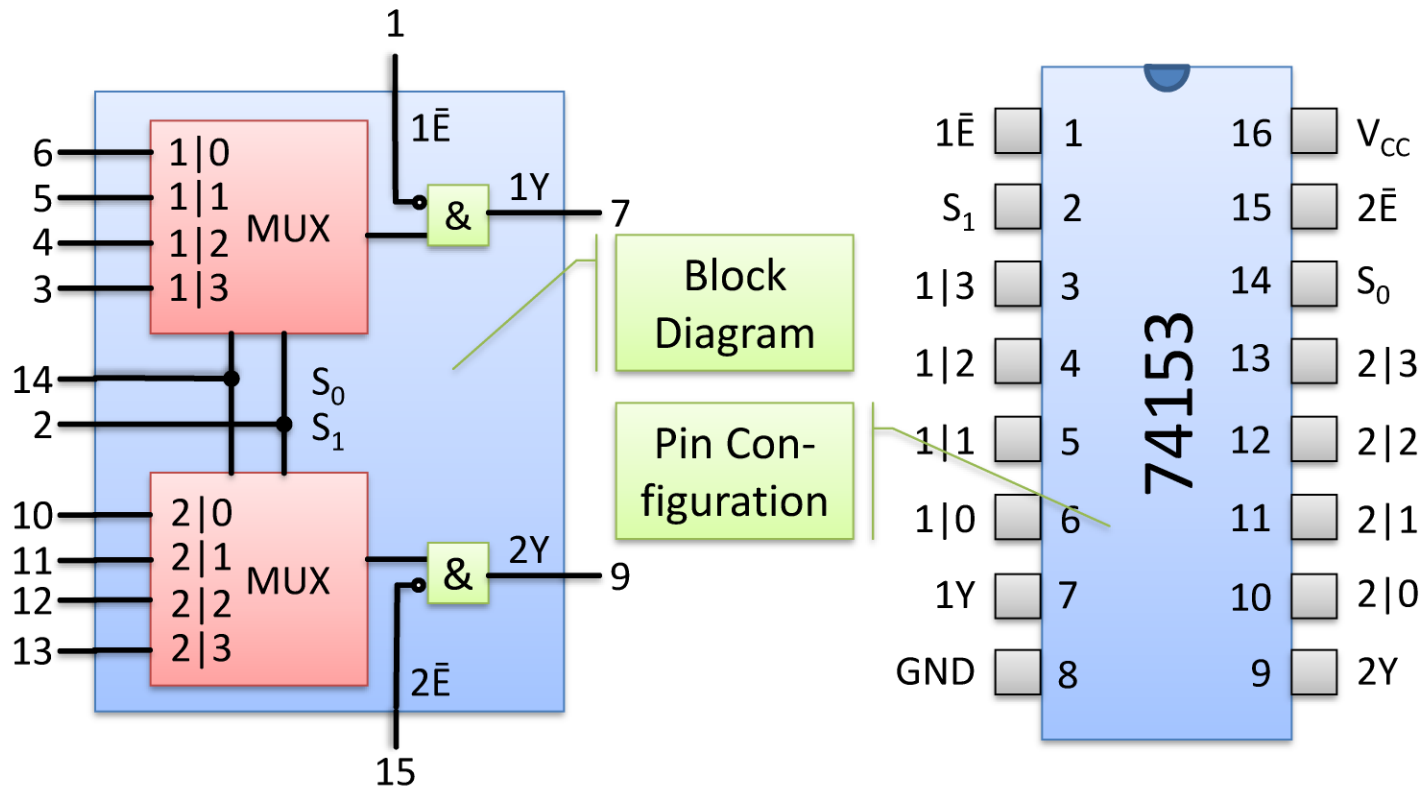
- Demultiplexer

One output line is selected



Multiplexers (3)

- 74153 – Dual 4-input multiplexer



Multiplexers (4)

- 74153 – Dual 4-input multiplexer (continued)

Symbol	Pin	Description
$1\bar{E}, 2\bar{E}$	1, 15	output enable inputs (active LOW)
S_0, S_1	14, 2	data select inputs
$1 0, 1 1, 1 2, 1 3$	6, 5, 4, 3	data inputs source 1
1Y	7	multiplexer output source 1
GND	8	ground (0 V)
2Y	9	multiplexer output source 2
$2 0, 2 1, 2 2, 2 3$	10, 11, 12, 13	data inputs source 2
V_{CC}	16	supply voltage