A reconfigurable optical add-drop multiplexer (10) comprising an input (20), an output (22), drop outputs (30), add inputs (22), a demultiplexer (18), a cross-connect element (12), a drop element (34) and an add element (26). The cross-connect element (12) comprises cross-connect outputs (36), a bypass output (38), and optical switches (14) connected together as a first switch array. The drop element (34) comprises optical switches (14) connected together as a second switch array. The add element (26) comprises optical switches (14) connected together as a third switch array. Each optical switch (14) comprises a first input (13), a second input (15), a first output (17) and a second output (19). Each optical switch is arranged to deliver a first optical signal received at the first input to the first output. Each optical switch (14) is arranged to receive a respective control signal arranged to cause the optical switch to route a second optical signal received at its second input to a selected one of its first output and its second output.