The present invention relates to a brokers market access system for use in processing orders for transmission to a market exchange. General purpose computing systems, with appropriate operating systems and application software typically implement brokers market access systems. In this invention, the market access system is implemented by dedicated hardware in the form of programmable logic devices, such as field programmable logic devices, for speeding processing of client orders. In an embodiment, the dedicated hardware comprises an architecture including order processing engines arranged to parallel process multiple client orders.