

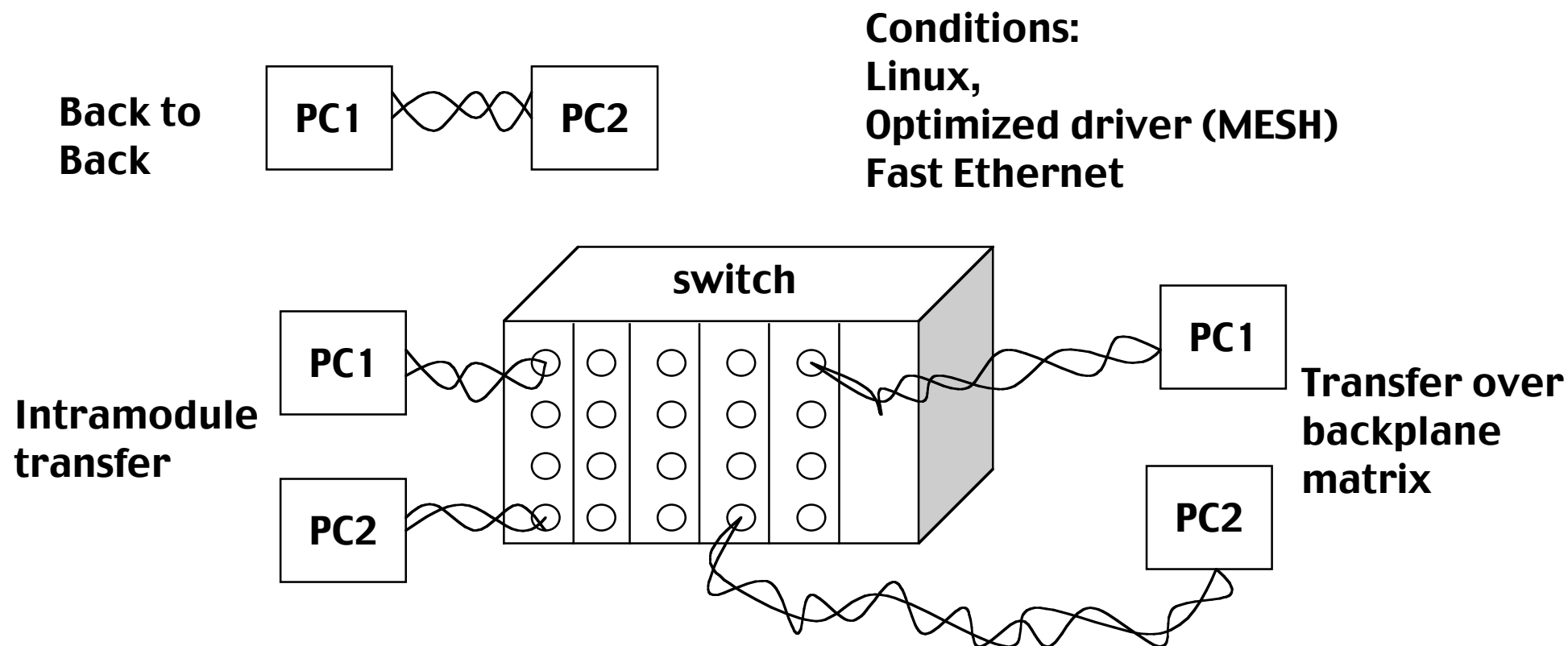


Measuring and Modeling Ethernet switches

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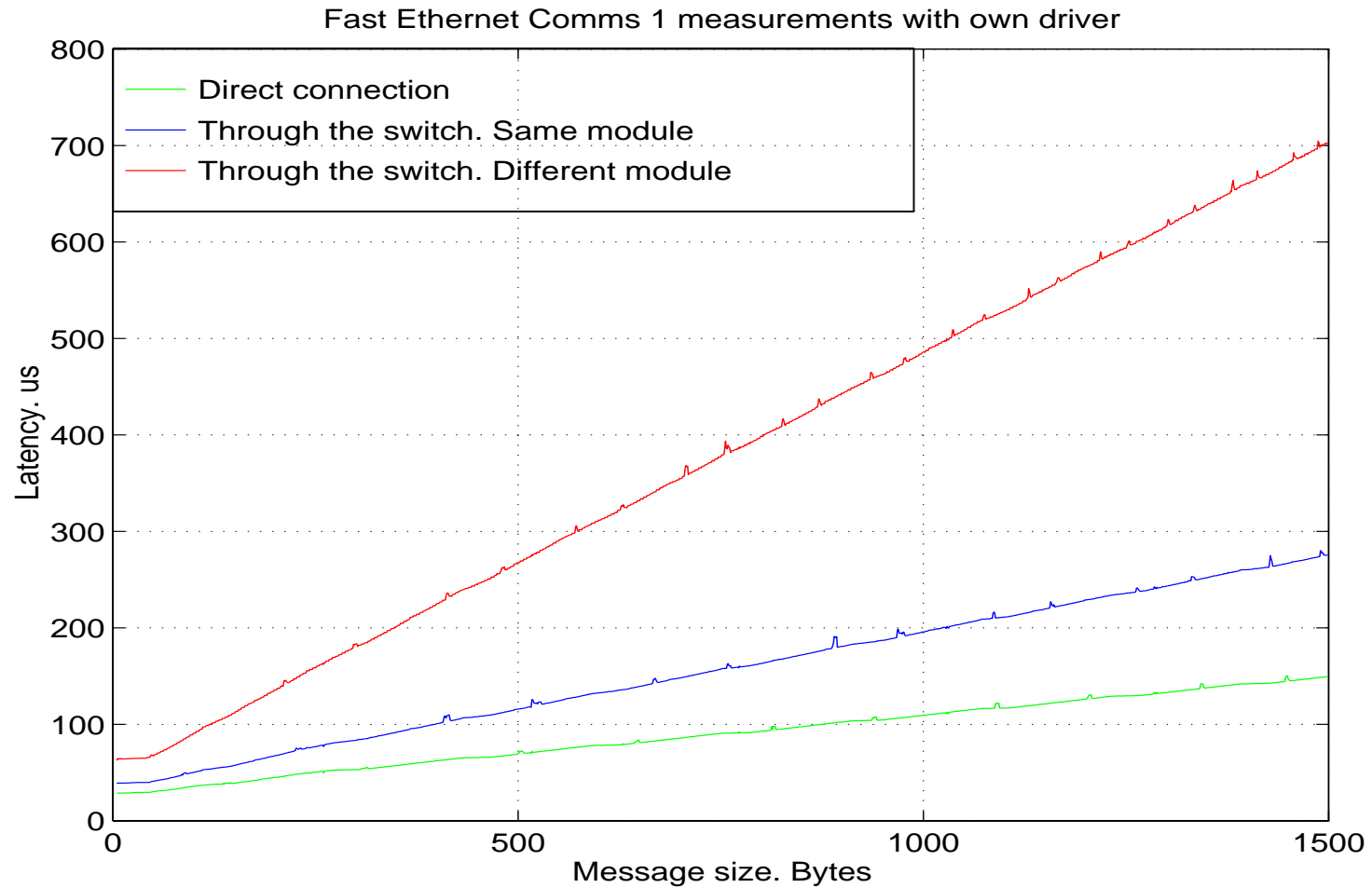
Calibration measurements: setup



Measure the time needed to transfer a message from PC1 to PC2

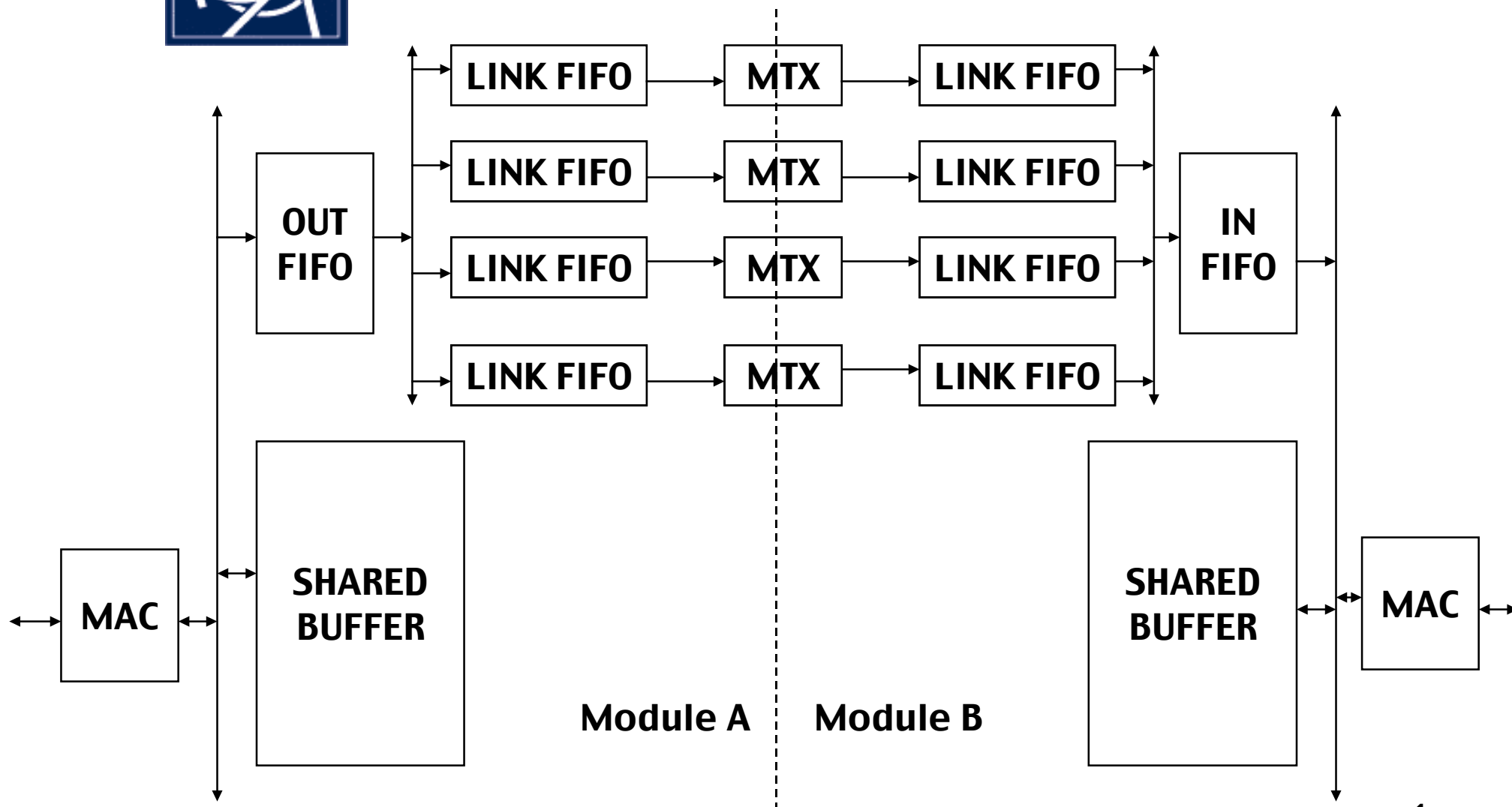


Calibration measurements: results



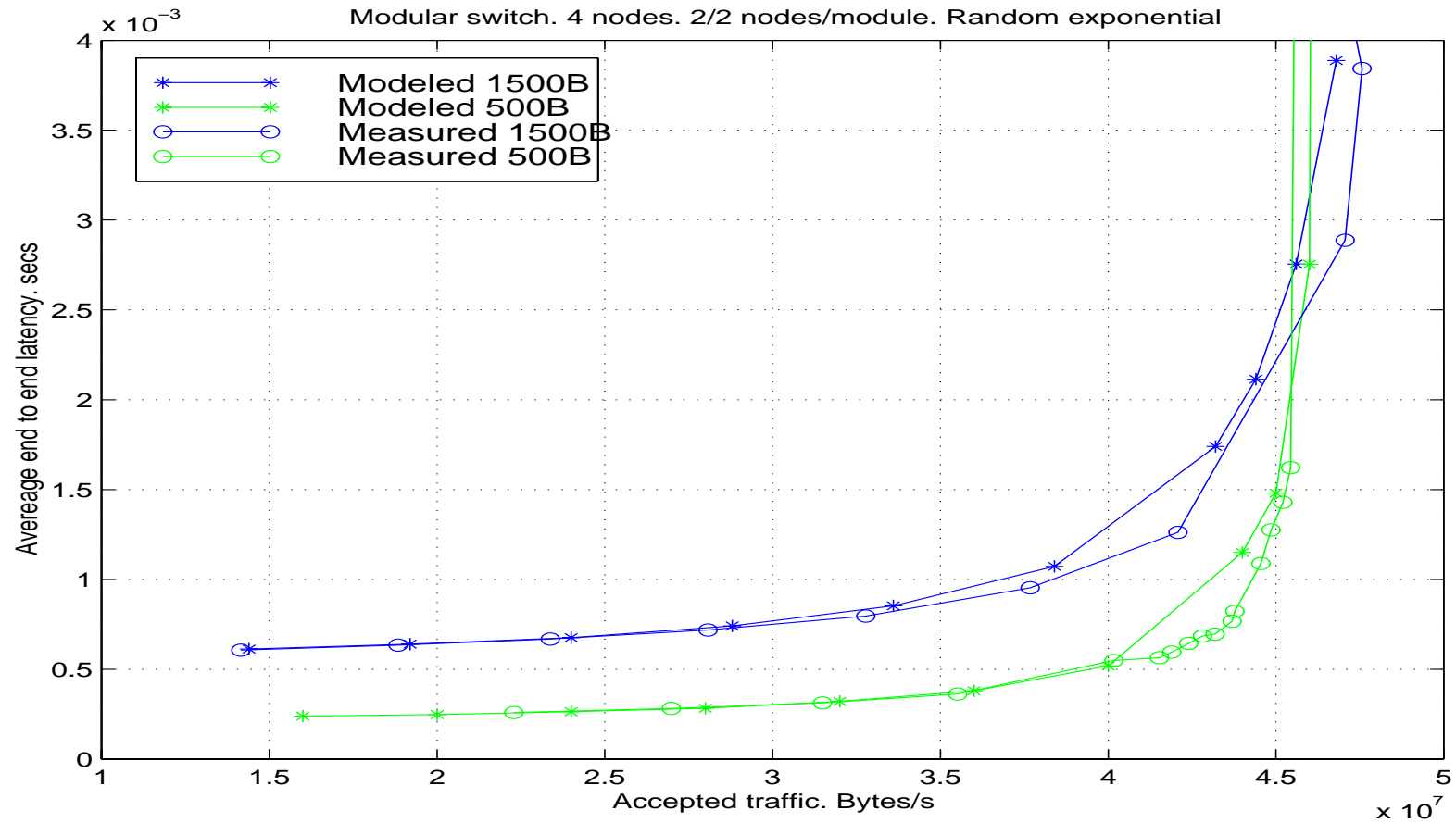


Switch internals



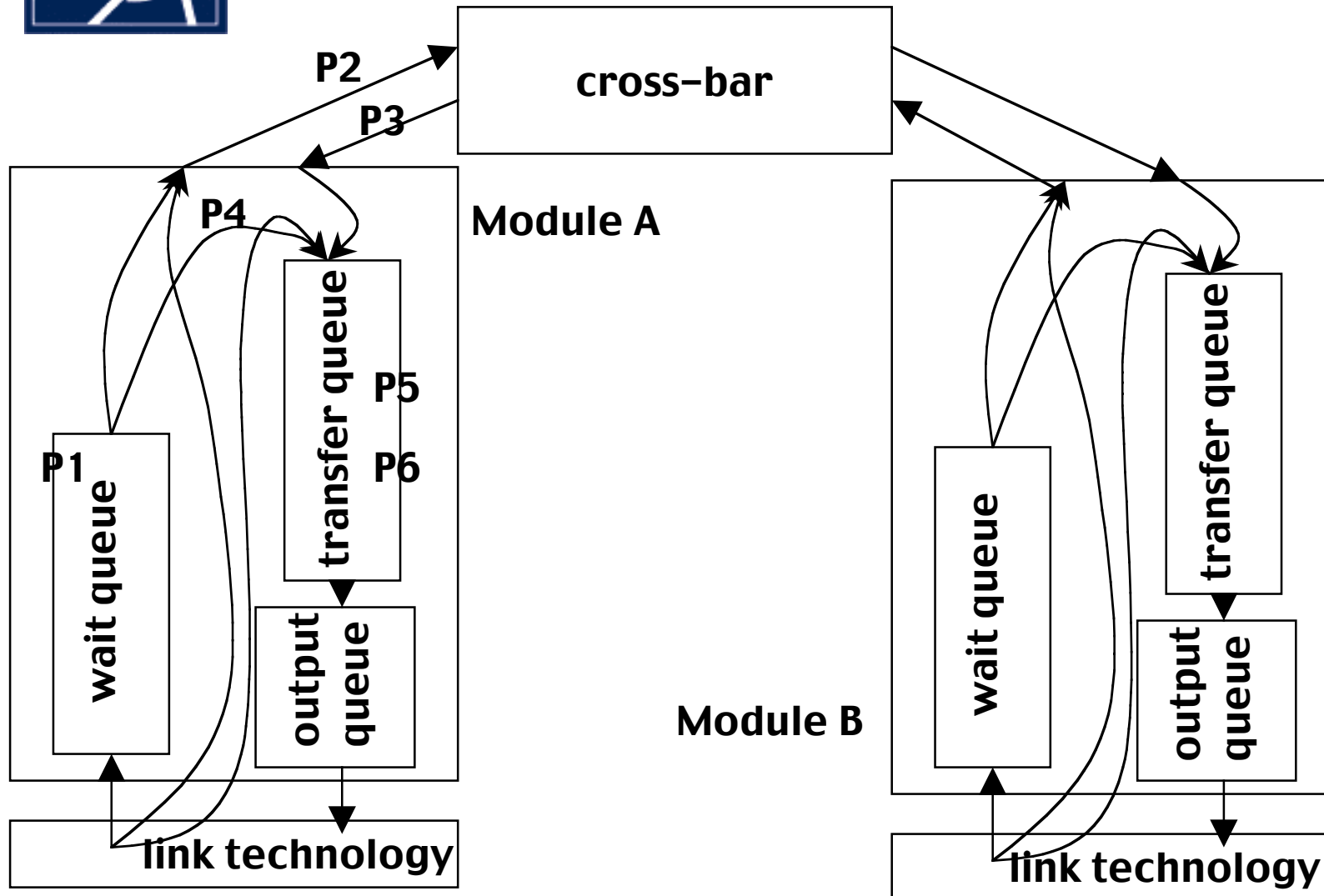


Detailed model vs measurements





Parametrized switch





Parameters of the parametrized model

P1: nb of slots in memory buffers (wait queue length)

P2: max throughput for to-cross-bar traffic

P3: max throughput for from-cross-bar traffic

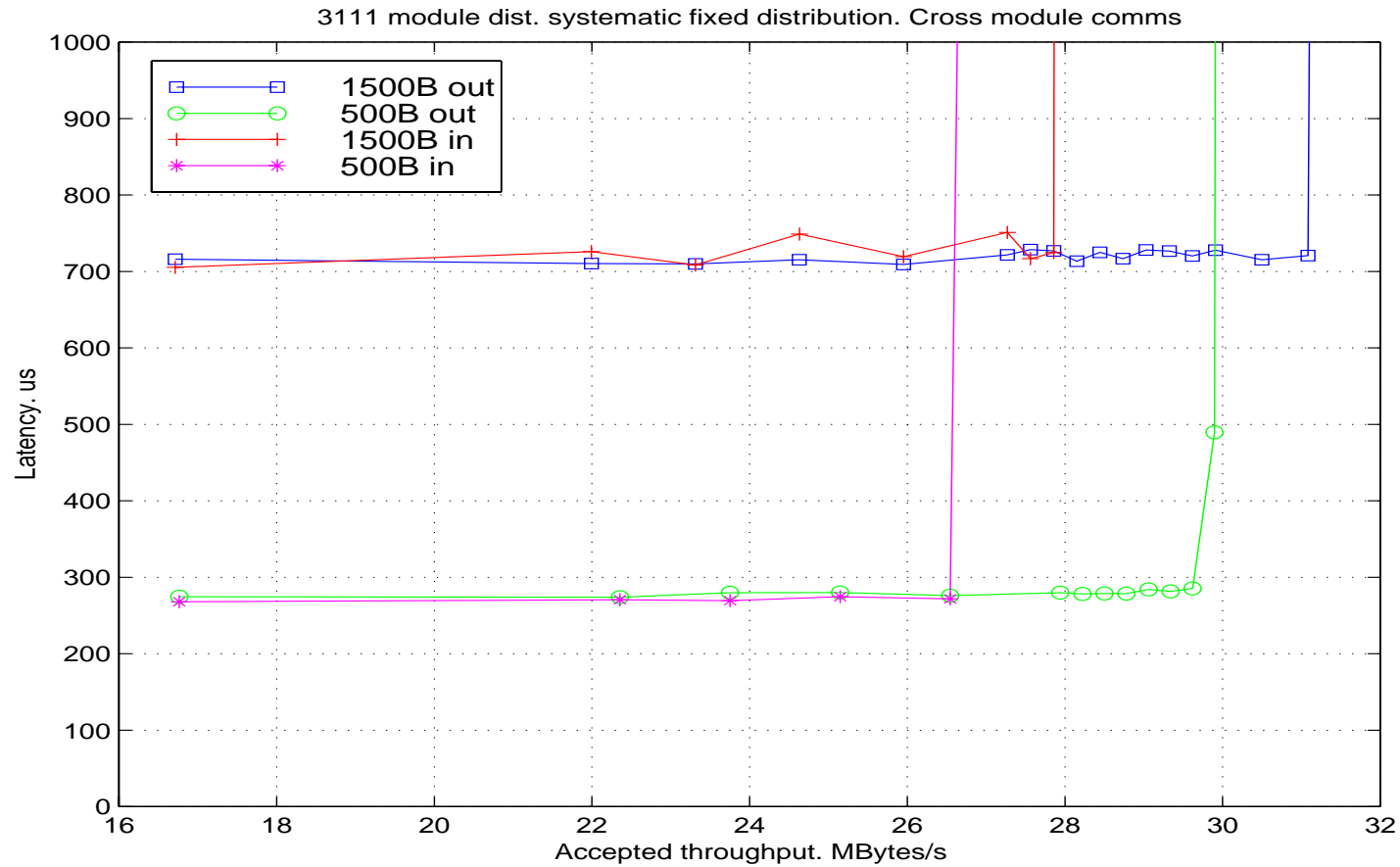
P4: max throughput for intramodule traffic

P5: PDF of latency for cross-bar transfer ($f(\text{packet_size})$)

P6: PDF of latency for intramodule transfer ($f(\text{packet_size})$)



Measuring limits for parametrized model





parametrized model vs measurements

