

Lower Energy Costs for Data Centres

Dajeil's technology reduces energy costs in large data centres. Each server is fitted with a Dajeil acceleration card allowing it to process over 5 times as much data. Thus the total number of servers required can be reduced by as much as a factor of 5, significantly reducing the annual power costs of the servers in question.



Example Energy Calculation

The table below indicates the cost savings for a data centre application processing XML documents. The application is reading and generating digital signatures for XML messages.

Data Centre Peak XML Throughput	2 Gbps	Annual Saving US	Annual Saving Ireland
Dajeil Saving over standard XML libraries	83%	\$24,388	€ 43,241

US Average (\$ per kW/Hr)	0.0965
Ireland (€ per kW/Hr)	0.1711

Dual 1U Quad-Core Server	Throughput	Power (Watts)	Servers Needed	Annual Cost US	Annual Cost Ireland
Standard XML Libraries	0.012 Gbps	208	167	\$29,364	€ 52,064
Dajeil Acceleration Hardware	0.075 Gbps	218	27	\$4,976	€ 8,822

The number of servers is selected to enable 2 Gbps of messages to be processed at peak throughput. 167 servers are required but using the Dajeil card this requirement is reduced to 27. This represents an annual saving of \$24,388 on power expenditure (or €43,241 at Irish kW/hr rate).

Special Purpose Hardware

Dajeil cards combine ASIC and FPGA technology to provide a solution optimised for performing security and processing operations on XML messages. Stable algorithms take advantage of ASIC performance whereas the latest FPGA technology allows flexibility

to tailor a solution addressing the message processing needs of the application. Industry standard software interfaces allow easy integration to software applications. See www.dajeil.com for more information.