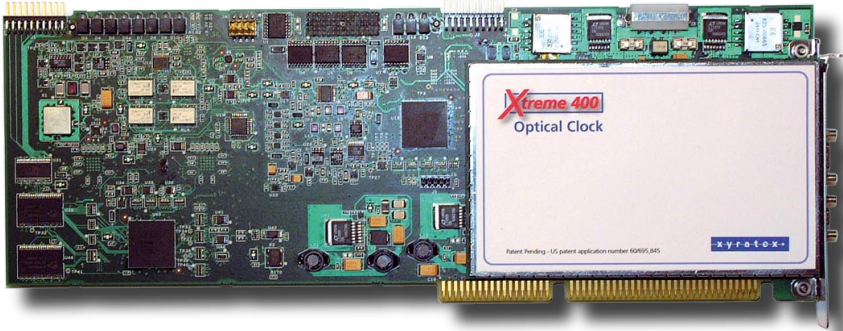


## Optical Clock



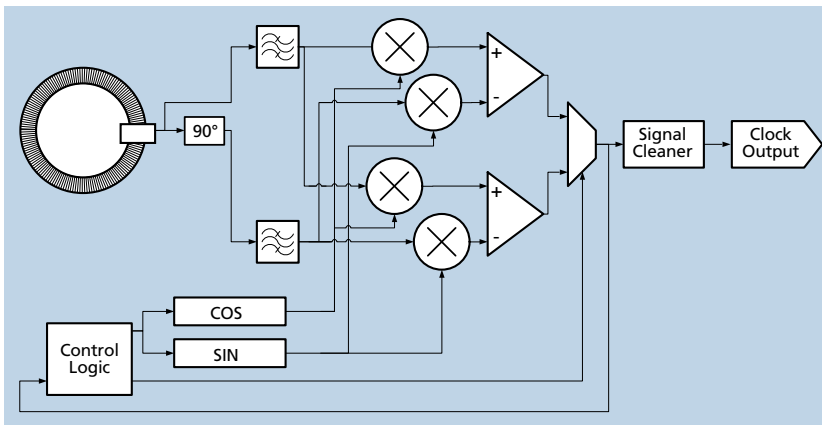
### Key Features

- Accurate – 25 ps 1 sigma jitter
- Flexible – contiguous selection of clock cycles per rev
- Repeatable – eliminates clock head variability
- Reliable – eliminates clock head replacement
- Stable – dynamic compensation for encoder errors and mounting eccentricity
- Configurable – multi-encoder support via daughter board option

Xyratex is strengthening its Servo Writing Technology by introducing a high performance Optical Clock function to its product offerings. This technology combines a high sensitivity optical encoder with an intelligent interpolator (Patent Pending - US patent application number 60/695,845) which provides any desired frequency with dynamic run-out correction. The board architecture comprises a common main board with an encoder specific daughter board which enables the use of a wide range of optical encoders and upgrade without the cost of full replacement. The Optical clock will integrate seamlessly into the Xtreme 400 range of products or operate independently by providing a clock source locked to the magnetic disk.

Xtreme 400 product range includes a Pattern Generator board, a companion Channel board supported by comprehensive system software. Xyratex has a motor driver board to complete suite.

### High Level Specification



- Spindle speed range 3,000-15,000 rpm
- Clock output frequency 1 MHz-25MHz
- Any integer number of clock pulses/rev between 4096 & 1310172
- Output clock jitter < 150ps 6 sigma
- Run out compensation resolution down to Ts/1024 (with companion Xtreme 400 Pattern Generator board)

[www.xyratex.com](http://www.xyratex.com)

**USA** Outside CA: Ray Pecharich  
E-mail: ray\_pecharich@us.xyratex.com  
Tel: +1 303 485 5131  
Fax: +1 303 774 8295

**USA** CA: Tom Holtzinger  
E-mail: tom\_holtzinger@us.xyratex.com  
Tel: +1 408 828 6936  
Fax: +1 408 879 0492

**SE Asia** Mike Wong  
E-mail: mike\_wong@singapore.xyratex.com  
Tel: +65 6483 1070  
Fax: +65 6483 0170

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