

Total Temperature Compensation (TTC™)

In re-imagining new levels of dependability and precision in the world of thin film deposition, Colnatec discovered that designing a revolutionary new sensor head would require a completely cutting-edge approach to monitoring and control. The Eon™ Film Thickness Controller was the natural result of the endeavor.

Unlike conventional systems that simply supply digital data to a personal computer through a modified oscillator, Eon™ is a combined software and hardware solution capable of real-time temperature measurement and heater control that works alongside the Mirage™ Air Cooling System to maintain stable temperatures in the Tempe™.

The Eon™'s revolutionary ability to measure frequency and temperature simultaneously allows for real-time correction of any natural frequency drift in the crystal during heating. Any process that requires heated crystals or high measurement accuracy will see exponential improvement, leading to the highest accuracy possible as well as enabling continuous crystal operation without cooling.

Combining the Eon™ PC-Based Film Thickness Controller with Colnatec's Tempe™ Self-cleaning Sensor Head, Mirage™ Air Cooling System, and HT™ (high temperature) crystal allows for a degree of monitoring or control never before imagined in the world of thin film, and is ideal for ALD, CVD, MBE, CIGS solar cell fabrication, and OLED manufacturing or deposition processes. (For less demanding applications, see Colnatec's Eon™ and Eon-Lt™ basic monitoring systems).



EON™ PC-BASED™ CONTROLLER

FILM THICKNESS CONTROL SYSTEM WITH THICKNESS MONITOR

Features

- Temperature measurement/control crystal measurement
- Shutter on/off support (relays)
- Heater status indicator on unit and in software
- Communicates with fully customizable Labview™-based software
- Widely expandable systems—up to 255 Eons™ can be networked

Specifications

- Drives crystals 1-10 MHz, 1-200 Ω, any type (Quartz, SuperQuartz™)
- Two type K thermocouple inputs; accurate to +/-0.25° C
- Two RTD inputs; accurate to +/-0.25° C
- Two high resolution sensor head input accurate up to .001 Hz
- One 15 volt 5A DC heater output
- 24 volt power (supplied)
- Industry Standard RS232 communication protocol
- 4.5" X 2.5" X 1.5"

Ordering Information

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| Eon-C™ | Temperature control with source control |
| Eon-M™ | Temperature control, monitoring only |