

Complete system for sophisticated thin film monitoring & control

Featuring monitoring electronics and easy-to-use software that works in conjunction with the user's PC, Phoenix™ System ID provides a simple yet comprehensive solution capable of performing thin film measurement operations right out of the box. As an added benefit, Phoenix™ System ID possesses a highly-specialized, proprietary temperature measurement technology that drives film thickness measurement accuracy to amazingly precise levels.

In many high-temperature applications, sensors will regularly fail due to their low temperature rating. Phoenix™ System is capable of not only measuring temperature but of withstanding temperatures higher than any other thin film system on the market. This allows for monitoring processes up to 500°C (e.g., ALD, CVD, etc.).

As part of Phoenix™ system, Eon-ID™ is a film thickness monitor with control capability that packages an ultra-high resolution deposition measurement system into a compact, rackmountable enclosure. Featuring integrated display, intuitive GUI, and durable architecture, Eon-ID™ offers an all-inclusive design that adapts easily to a variety of settings - ranging from industrial to laboratory to clean room to research environments.

Incorporating Phoenix™ sensor head with the Eon-ID™ controller represents a quantum leap forward from existing thin film measurement technology.



PHOENIX SYSTEM ID™

COMPREHENSIVE THIN FILM MONITORING & CONTROL SYSTEM

Features

- Integrated touchscreen display for process programming and monitoring - easier than using a *smartphone!*
- Connectivity includes RS-232, USB, and WiFi
- Rackmount capable (1 or 2 Eon-IDs per slot)
- Dual sensor and source channels for expanded capability
- Sensor available in different lengths and with different flanges for flexibility
- Features built in temp monitoring and source control
- I/O Ports
 - Relays: 10 (programmable)
1 (abort only)
 - Inputs: 8 (programmable)

Applications

- Atomic Layer Deposition (ALD)
- Chemical Vapor Deposition (CVD)
- Molecular Beam Epitaxy (MBE)
- CIGS (thin film solar)
- OLED (display & lighting)
- Multi-Layer Optical Thin Film Deposition

Specifications

Measurement	
Frequency Resolution	0.001 HZ @ 6 MHz (1 sample per second)
Sample Rate	100 Hz - 10 Hz (10 ms - 100 ms)
Display Update Rate	10 Hz - 1 Hz (10 ms - 100 ms)
Sensor Crystal Frequency	6 MHz
Electronics	
Temperature	2x TC Type K
LED(s)	Dual status
Source Power Supply Signal	0-5v DC source controls (2)
Sensor Head Input(s)	High resolution inputs, accurate up to .001 Hz (2) BNC
Thermocouple Input(s)	Type K thermocouple inputs; resolution 0.1°C (2)
Display with Graphics	7" LCD-TFT display graphics; 800 x 480 VGA resolution; resistive touch (touchscreen)
DB37	<p>Relays* 9 Relays 6 SPST (programmable) 2 SPDT (programmable) 1 SPST (abort only)</p> <p>Inputs 8 Inputs Passive Type Digital 5v</p> <p>*Max 2A@30VDC</p>
DB9	<p>Relays* 2 Relays 2 SPST (programmable)</p> <p>*Max 2A@30VDC</p>
Sensor	
Sensor Communications	2 BNC connections
Temperature	K-type TC (2)
Sensor Composition	<ul style="list-style-type: none"> •Body: 304 SS (stainless steel) •Insulators: Alumina •Contact springs: Inconel •Screws: 304 SS (stainless steel)
Vacuum Rating	1X10E-8 Torr 1.32E-11 atm 1.33E-6 Pa

Communications	
RS-232 Communication Compatibility	Yes
RS-232 Baud Rate	115200 Baud
Communications Protocol	RS-232 standard (See "RS232 Commands" in the Eon-ID manual)
Software	
Thickness	Auto ranging: -999 to 9999.9 kÅ
Rate	Auto ranging -999 to 9999.9 Å
Power	00.00 to 100%
Crystal Health	00 to 100%
Number of Processes	100,000
Number of Layers	100,000
Manual Power Control	Yes
User Labeled Process (full touchscreen with alphanumeric entry)	Yes
User Labeled Films (full touchscreen with alphanumeric entry)	Yes
Shutter Delay	Yes
Software Control Loops	PID
Data Logging	Yes
User Language	English
Dimensions	
Phoenix™ Sensor	<ul style="list-style-type: none"> •Head: 0.56" X 1.18" x 1.18" •Body length: 4" to 30" depending on customer requirements •Head width: Can be passed through a KF or ConFlat port with an inner diameter larger than 1.377" (35 mm)
Eon-ID™ Controller	10" L X 8.25" W X 5.25" H
Rackmount Dimension	Standard 19" 3U high rack; 1 or 2 Eon-IDs per slot
Power	
24 volt power (supplied)	
Ordering Information	
Phoenix System ID™	Thin film QCM and electronics with integrated touchscreen and temperature measurement