



# STM-2

## USB Thin Film Thickness / Rate Deposition Monitor

### SMALL IN SIZE AND PRICE, BIG IN PERFORMANCE

STM-2 combines the simplicity of USB connectivity with the accuracy of a precision measurement engine, all in a compact, inexpensive package. The size and simplicity of STM-2 help make setup and operation easy and efficient.

#### SUPERIOR PERFORMANCE

STM-2 is the most accurate USB powered thin film monitor in the industry. Ten measurements are taken per second while achieving a resolution of 0.037 Å per measurement (density of 1).

#### EASY AND FLEXIBLE INSTALLATION

STM-2 comes with everything you need to connect your QCM sensor/feedthrough to a Windows® PC. Simply connect the included BNC cable from the feedthrough to STM-2, then connect the STM-2 to your PC using a standard mini USB cable (included). No external oscillator or power supply is required.

STM-2 features an internal oscillator that allows for simple and cost effective installation when STM-2 is located within 1 m (40 in.) of the quartz crystal. A standard INFICON oscillator kit can be used for applications where STM-2 must be located farther away from the feedthrough.

#### STM-2 SOFTWARE

STM-2 includes LabVIEW™ software, capable of simple operation and data logging. Windows software is also included for operation and data logging of up to eight STM-2s simultaneously (each STM-2 requires a powered USB port).

#### FEATURES AT A GLANCE

- Low cost instrument
- USB connection
- Internal oscillator
- High accuracy at 10 measurements per second
- Compatible with an external oscillator

#### STM-2—A SIMPLE QCM

Figure 1 shows a typical thin film deposition system. A complete QCM system consists of STM-2, a sensor and feedthrough, and a computer.

Typical STM-2 system:

- STM-2
- Sensor
- Feedthrough
- Crystals

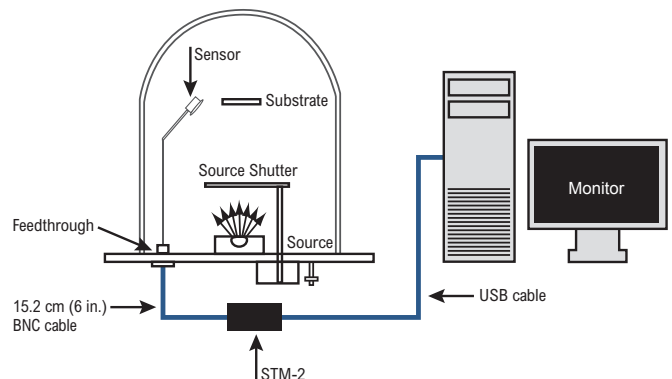


Figure 1: Typical STM-2 installation

## SPECIFICATIONS

Compatible sensors	Non-shuttered single QCM sensor
Sensor inputs	One
Sensor input	Female BNC
Crystal compatibility	6 MHz
Frequency resolution	0.03 Hz at 6 MHz
Measurement Interval	0.10 s
Reference frequency stability	$\pm 2$ ppm
Thickness and Rate resolution/measurement	0.037 Å @ tooling/density = 100/1, fundamental frequency = 6 MHz
Thickness display resolution	1 Å (display on software only)
Interface	USB, v1.1 or later capable of providing 400 mA, 5 V (dc)
Size	11.4 x 7.6 x 2.5 cm (4.5 x 3 x 1 in.)
Weight	57 g (2 oz.)
Computer requirements	Any PC running Windows 2000, Windows XP, Windows Vista, or Windows 7 with one available USB 1.1 (or later) port for each STM-2

## ORDERING INFORMATION

STM-2	STM-2 Deposition Monitor, includes:
	<ul style="list-style-type: none"> <li>• Software application</li> <li>• 15.2 cm (6 in.) BNC cable (connects STM-2 to the feedthrough)</li> <li>• 5 m (16.4 ft.) USB cable (connects STM-2 to your PC)</li> <li>• 5.5 MHz test crystal</li> </ul>

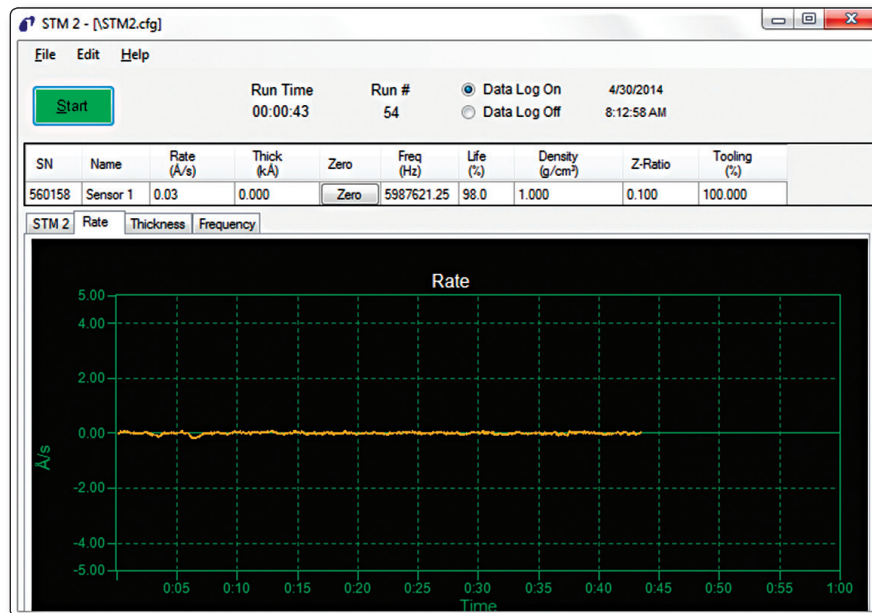


Figure 2: STM-2 Windows software



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Due to our continuing program of product improvements, specifications are subject to change without notice.

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