

System HMX



Handheld XRF Analysis Tool



matrix
METROLOGIES

Matrix Metrologies System HMX

Take the Lab to the Process

**Rapid, precise, non-destructive XRF analysis.
Now on your tool belt.**

Matrix Metrologies introduces **System HMX**, the world's first handheld XRF film thickness and composition analysis tool.

System HMX puts the speed and power of a full-size laboratory XRF system into a compact, lightweight, battery-powered design.

The HMX is specifically engineered to provide rapid coating thickness measurement and material analysis of plated parts. It is the ideal tool for analysis of large bulk samples where placement in a benchtop instrument may be difficult, impractical, or impossible.

Fully portable, and requiring no special setup or operator experience, the HMX excels at both in-factory and in-field testing, eliminating the expensive and time consuming need to transport samples to a lab.

With a single tool you can now perform at-sample measurement for quality control of incoming inventory, pre-process verification of substrate materials prior to plating, at-process measurement at the plating tank, and final testing of your plated parts.

The HMX is the only XRF tool that lets you measure the plating thickness of a handful of small parts simultaneously. Simply "point and shoot" and the analyzer automatically generates an average thickness for the entire lot.

Today, customers who want the speed, power and precision of XRF analysis, wherever and whenever they need it, finally have a choice.

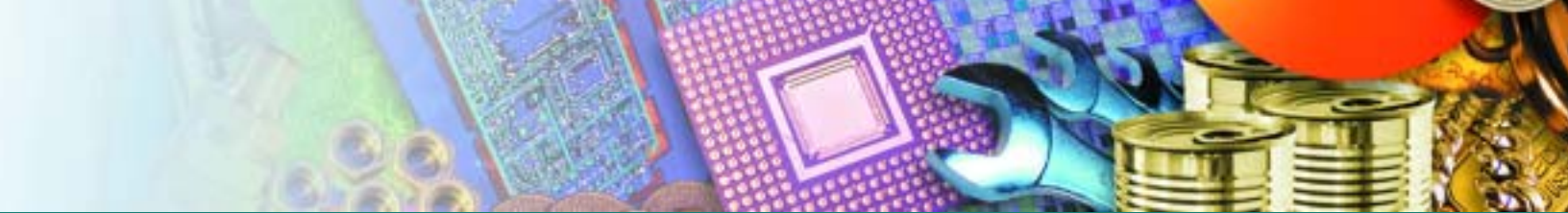
The choice is **Matrix Metrologies**.
The choice is **System HMX**.

Take the Lab to the Process.



**Matrix Metrologies
System HMX**





System HMX Key Benefits:

- Ideal solution for measurement of large (even giant) samples.
- At-process measurement for QC, plating line, and analysis lab applications.
- At-sample analysis in the factory or in the field.
- Alloy sorting and alloy identification for substrate materials management.
- Unique “Batch Measurement” mode lets you calculate the average thickness of a batch of small parts with a single measurement.

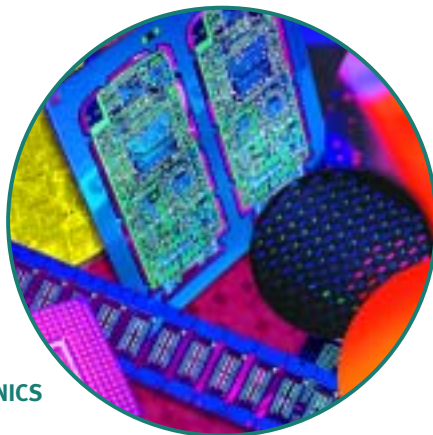


State of the art X-ray spectrometer housed in a lightweight, pistol-grip enclosure no larger than a typical cordless drill.

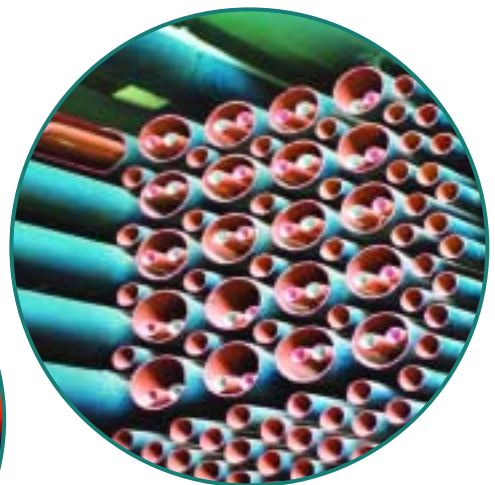
Dockable HP iPAQ™ system computer (with Windows CE™ OS) and advanced analytical software package provide accurate, lightning fast measurement of virtually any plating application.



**METAL
FINISHING**






ELECTRONICS



**SUBSTRATE
ALLOY IDENTIFICATION**



Specifications

General	
Weight	2.6 lbs. (1.2 kg) base; 3.4 lbs (1.6 kg) with batteries.
Dimensions	Length: 12" (30 cm); Height: 9" (23 cm); Width: 3" (7.5cm).
X-Ray Generation	Ag or W target miniature X-ray tube; 10-40 kV, 10-50 μ A.
Primary Filters	Five (5) filters.
Resultant Beam Size	310 mils (7.75 mm) for contact measurement at sample surface.
X-Ray Detection	Si-PIN high-resolution detector system. (<230 eV FWHM at 5.95 keV Mn Ka spectral line).
Operating Temp. Range	-10°C (14°F) to +50°C (122°F).
Power	Rechargeable Li-ion battery; two (2) batteries and charger included. AC adapter and multiple-battery power pack available.
Reference Adjust	Snap-on Stainless Steel 316 reference for standardization.
Film Thickness and Composition Analysis	
Standard Film Thickness Software Package	Film thickness and composition measurement, up to five (5) layers and four (4) elements per layer.
	Fundamental Parameters analysis (Standardless or Standard Corrected); " Point-and-Measure " turn-key applications.
	Batch Measurement function allows non-contact measurement of many small parts at once.
Available Alloy Analysis	
Fast ID Alloy Analysis Package	Spectral signature matching for alloy grade & chemical composition calculation; library editing & alloy matching capabilities.
Analytical Alloy Analysis Package	Fundamental Parameters (FP) analysis. Package includes 21* elements: Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Zr, Nb, Mo, Hf, W, Ta, Re, Pb, Ag, Sn, Bi, Sb. (*NOTE: Up to 25 elements can be installed in total; common additions and/or substitutions include Cd, Au, Pt, Pd, Se.)
Computer/Analyzer	
System Computer	Integrated HP iPAQ™ pocket PC. Analyzer can also be controlled via remote desktop PC when iPAQ is removed.
Operating System	Windows CE™.
Standard Accessories	Docking cradle for charging and connection to desktop PC. Heavy duty, waterproof carrying case.
Operator Interface	Touch-screen entry of sample information. Serial port and wireless data transfer capability.
Reporting and Data Sharing	ActiveSync™ to PC; Bluetooth to PC LAN; Parallel/USB and wireless printer options available.
<p><small>All specifications are subject to change without notice.</small></p> <p><small>Matrix Metrologies XRF systems comply with ASTM B568 and ISO 3497.</small></p> <p><small>Matrix Metrologies, the Matrix Metrologies logo and System HMX are trademarks of Matrix Metrologies, Inc. in the United States and/or other countries. All other marks are properties of their respective owners.</small></p>	
  	



Rugged, lightweight, ergonomic design. Rechargeable battery provides up to eight (8) hours continuous operation.



Simple iPAQ touchscreen interface; Bluetooth™ technology enables wire-free communication between your HMX, desktop PC, printer and other peripherals.



Front view of HMX with Standardization Clip attached.



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