Immersion®

MicroScribe® X Portable CMM

High quality, accuracy, and precision at reduced cost of ownership

The new MicroScribe® X portable CMM combines a robust, performance-engineered design with high-quality materials to provide industry-leading accuracy, precision, and ergonomic operation.

Key Operational Benefits

- Industry-leading accuracy and precision
- Ease of data collection with SmartCapture™ trigger for continuous or single-point data collection with a variety of tips
- Electromechanical brake to help prevent arm damage
- Application-specific calibration available for increased accuracy
- Convenient verification kit for accuracy self-check included with system

Lower Total Cost of Ownership

- Standard three-year warranty
- Customer choice of compatible third-party software
- Choice of certification procedure:
  - Authorized center
  - On-site, for reduced down time and no shipping risk or expense

Balanced joints

Widely spaced, billet-machined (not cast), and symmetrical (not cantilevered) for increased rigidity, enhanced accuracy

Large diameter bearings

For stiffness and durability

Strong, performance-engineered, lightweight construction

Specially designed alignment of carbon fibers for higher strength, minimum temperature expansion

Counter balanced linear springs

For smooth maneuverability over the full range of motion

Smart, dual-mode electromechanical safety brake

- Helps prevent damage by automatically braking when high joint acceleration is detected or when arm is home for longer than 30 seconds
- Takes weight off the upper arm with lock button ergonomically located near the stylus
- Remains on, even without power, to prevent falling out of home position
- Won't break if strength is exceeded

SmartCapture trigger

- Coil triggers with easy deflection in any direction to help eliminate inconsistent pressure that adversely affects accuracy
- Red and green LEDs provide pressure guidance, helping the user gather data with greater precision
- Spring coil helps isolate the probe from the user's hand to maintain constant temperature

Easy to grip base

For more secure handling

Automatic temperature compensation

Adjusts data relative to temperature change for enhanced accuracy

How to Buy a Portable CMM

Choosing the right portable CMM for your unique situation requires an analysis of more than just a single value for accuracy and the initial purchase price.

Accuracy vs. accuracy. Your buying challenge is that each vendor applies different tests to determine accuracy and repeatability and then often promotes only one accuracy number prominently in marketing materials. Focusing only on a single value for one accuracy test does not give a complete picture of a portable CMM's capability; working performance is best defined using several tests. Immersion thoroughly explains its accuracy and repeatability tests (www.immersion.com/accuracy.php), so you can evaluate how well the MicroScribe X portable CMM will perform in your applications. Evaluating each vendor's specifications and test procedures before attempting to compare accuracy values can help you match actual performance to your needs.

Purchase price vs. lifecycle cost. Comparing the lifetime cost of various systems provides a better indication of their relative value. Our standard warranty included in the purchase price is three years. The MicroScribe X system's electromechanical safety brake is designed to help you avoid the most common cause of damage, dropping the arm. The versatility of our standard SmartCapture trigger provides a cost-effective alternative to expensive scanning probes. And a field verification kit included with the system contains a bar gauge and software to verify accuracy of the MicroScribe X system at any time.

While some other vendors require you to send your portable CMM back to the factory for re-certification, the MicroScribe X system can be re-certified at your location by a local authorized technician. This saves shipping costs and can significantly reduce machine downtime for your operation. Should your MicroScribe X system require re-calibration, it may be possible to perform that service at your site, as well. These alternatives for certification and calibration can save many thousands of dollars over the product's lifetime.

When choosing a portable CMM, compare the entire package.

Specifications

Complete system	Six-axis MicroScribe X portable CMM with electromechanical brake; serial communications cable; USB-to-serial cable; power supply; three-year warranty; MUS-X software; transit case; verification kit with a bar gauge, certified length certificate, and software; and two ruby sphere probe tips: 3 mm (0.12 in) and 6 mm (0.24 in)
Optional accessories	• Mobile tripod • Magnetic base • Wide variety of probe tips
Workspace	2.5 m (8.2 ft)
Volumetric Accuracy*	0.040 mm (0.00157 in)
Sphere Center Repeatability*	0.015 mm (0.00059 in)
Effective Diameter	0.012 mm (0.00047 in)
Degrees of freedom	6 axis
System requirements, MicroScribe Utility Software (MUS-X)	Windows XP (SP2 SBCS) Intel Pentium/Celeron or AMD K6/Athlon/Duron (300 MHz or higher recommended) 128 MB memory 1024 X 768 video resolution
Weight	9.3 kg (20.5 lb)
Operating temperature	5° to 40°C (41° to 104°F)
Humidity	95% noncondensing
Angular acceleration	Maximum 100 rad/sec^2
Power supply	100 to 240 VAC 50/60 Hz
Certifications:	• FCC Part 15 Class A Report using EN 55022 Class A test data • CE compliant: EN55022 Class B, EN61000-3-2, EN61000-3-3, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61010-1

MicroScribe X accuracy tests are based on a practical application of ASME B89.4.22 (April 4, 2004 draft), ISO 10360-2 standards, and other tests. Review complete testing methodology at www.immersion.com/accuracy.php.

* Test results are reported at a two sigma confidence level.

Visit: www.MicroScribe.Ghost3D.com

For enquiries & orders, please contact:

GHOST 3D, LLC
17155 Robey Drive
Castro Valley, CA 94546
Web: http://www.ghost3d.com
E-mail: g3dsystems@ghost3d.com
Authorized Immersion Distributor & OEM Partner

Immersion Corporation

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