

MULTITRACE

▶ HIGH-DEFINITION AND HIGHLY ACCURATE 3D MEASUREMENTS IN REAL-TIME

ABOUT MULTITRACE

Multitrace is a system for high definition and highly accurate recording of spatial paths and single points in real time. The measurements are performed by four electronically coupled LaserTRACER. By the sole use of displacements to a reflector centre, the principle of Multilateration will be realized directly. The system is self calibrating and thanks to pure interferometry directly traceable. Multitrace can be configured individually and applied mobile.



POSSIBLE FIELDS OF APPLICATION

- ▶ Mapping of any three dimensional courses (including 3D standstill)
- ▶ Calibration of robots and machines with parallel kinematic.
- ▶ The detection of large surfaces by 3D lines.

FEATURES

- ▶ Down to submicron accuracy, accuracy estimation by simulation of the planned measurement.
- ▶ Resolution of 0.001 μm
- ▶ Sampling rate: online up to 1000 Hz continuously, time limited up to 50 000 Hz
- ▶ Working range up to 15 m
- ▶ Simple self calibration of LaserTRACER positions and dead paths of the interferometer by measurements of 10 (unknown) points
- ▶ Measurement of single points or scanning (On-The-Fly)
- ▶ Measurement with machine connection (from Trac-CAL library) or manually
- ▶ Measurement to nominal or new points
- ▶ Output of uncertainties and residual for every single point
- ▶ Consideration of machine temperature possible
- ▶ Output of the results in text format (further formats on request)
- ▶ Matlab-interface routines available
- ▶ Further functions on request

Order number 3150

As of May 2013. Subject to change!

ETALON

APPLIED TRACEABILITY

HINTER DEM TURME 20. D-38114 BRAUNSCHWEIG.

TEL. +49 (0)531-70228-00. FAX +49 (0)531-70228-99.

www.etalon-ag.com

SYSTEM REQUIREMENT

- ▶ 4 Etalon LaserTRACERs
- ▶ Hardware: processor ≥ 1 GHz, RAM ≥ 1024 MB, free HD memory ≥ 500 MB, graphic card resolution: $\geq 1024 \times 768$, USB-ports ≥ 6 , ethernet port (RJ-45, ≥ 480 Mb/s)
Software: Microsoft Windows (XP, VISTA or 7), NET 4.0

SPECIFICATION

Feature	
Spatial resolution	0.001 μm
Measurement frequency continuously	Up to 1000 Hz
Time resolution offline (internal memory for 131072 or 32768 measurements)	Up to 16 000 Hz or 50 000 Hz
Working range	Up to 15 m