

VXtrack™

DYNAMIC TRACKING MODULE

The VXtrack™ dynamic tracking module is a key component of VXelements™, Creaform's fully integrated 3D software platform. VXtrack also comes with a C-Track™, which together forms a complete portable 3D measurement solution.

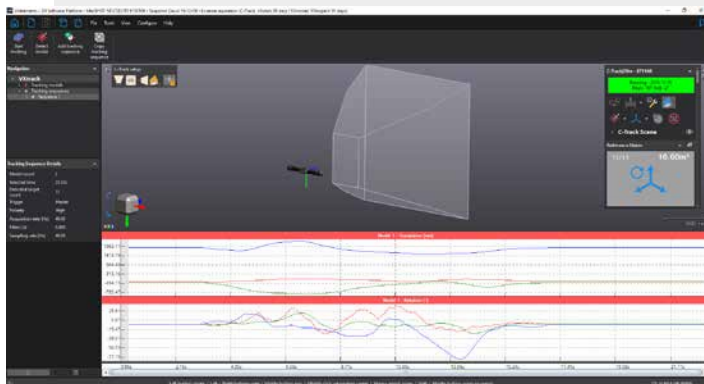
Thanks to VXtrack, you will accelerate your manufacturing and quality control processes—from assembly control and monitoring to crash-test dummy applications. It accurately and efficiently measures the positions and orientations of reflectors in space; all measurements can be taken simultaneously and accurately. This makes it possible to control displacements, drive assembly processes or measure deformations.



HandyPROBE™

VXtrack can also be combined with the HandyPROBE™ portable CMM to provide a complete portable 3D measuring solution offering both probing and dynamic measurement capabilities. Furthermore, the probing stylus is very useful for aligning parts with respect to a reference system that is “locked” to the part. The system enables the part to be moved during measurement and eliminates the impact of vibrations on the measurement process and results.

The VXtrack module has numerous applications, including robot calibration and guidance, monitoring of complex assembly processes, real-time compensation of machining tool-generated errors and deformations during testing.



BENEFITS OF THE VXtrack DYNAMIC TRACKING MODULE

- High accuracy in the lab or on the shop floor
- Simultaneous measuring of the set of reflectors for increased 6 DOF precision (position and orientation)
- A complete inspection and dynamic measurement solution compatible with the HandyPROBE portable CMM and the MetraSCAN 3D™ optical CMM 3D scanner
- Passive (wireless), low cost, and ultralight (<1 g) reflectors, available in adhesive or magnetic versions. 100% compatible with photogrammetric measures (for resetting with global measures in case of large equipment)

MAIN FEATURES

- Rate of up to 6,600 3D points per second
- 6 DOF measuring (position and orientation) of a rigid set of reflectors
- Synchronous measurement of the reflector set
- Measuring volume from 9.1 to 16.6 m³ (320 to 586 ft³)
- One unique system for 3D inspection and 3D dynamic measurement
- Real-time curve display in VXelements
- Export to .csv format
- API for interfacing with third-party applications
- Acquisition synchronization capability through external trigger input



APPLICATIONS BY INDUSTRY

AEROSPACE

- Assembly control and monitoring
- Deformation monitoring (wings, landing gears and tires)



AUTOMOTIVE

- Movement monitoring on running parts (engine, exhaust and wheels)
- Dynamic process control (doors and hood closing)
- Deformation monitoring (chassis and seats)
- Crash test preparation (prepositioning)



ROBOTICS

- On-site calibration and assessment
- Real-time course correction
- Computerized guidance of assemblies



BIOMECHANICS

- Motion capture



C-Track

TECHNICAL SPECIFICATIONS

	C-Track™		C-Track™ Elite	
	9.1 m ³	16.6 m ³	9.1 m ³	16.6 m ³
MEASUREMENT RATE (REFLECTORS/S)	Up to 6,600		Up to 6,600	
REPEATABILITY	0.013 mm (0.0005 in)	0.020 mm (0.0008 in)	0.010 mm (0.0004 in)	0.015 mm (0.0006 in)
VOLUMETRIC ACCURACY	0.068 mm (0.0026 in)	0.100 mm (0.004 in)	0.050 mm (0.002 in)	0.075 mm (0.003 in)

CREAFORM

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