



M-TRACK

Intelligent Robotic Path Planning and Guiding System

An Intelligent Wireless Solution for Precise Robotic Path Planning



SCANTECH (HANGZHOU) CO., LTD (HQ.)

Building 12, No.998, West Wenyi Road, Yuhang District, Hangzhou, Zhejiang Province, China

Tel : 0086-571-85852597 Fax : 0086-571-85370381

E-mail : info@3d-scantech.com

Website : www.3d-scantech.com

SCANTECH DIGITAL GmbH.

Dieselstrasse 18, 70771 Leinfelden-Echterdingen, Echterdingen industrial park

Tel : 0711 31013901

E-mail : info@3d-scantech.com

SCANTECH DIGITAL Inc.

611 Gateway Blvd. Suite # 120, South San Francisco, CA 94080

E-mail : info@3d-scantech.com



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M-TRACK

Intelligent Robotic Path Planning and Guiding System

Scantech's M-Track is intelligent path planning and guiding system consisting of 3D tracking system, a tool simulator, and path planning software. It serves as robots' eyes and brains by allowing visual perception, target recognition, and path planning.

The system is compatible with different robots and can be widely applied in various sectors with high precision, reliability, and safety. It is capable of planning paths for multiple tasks ranging from object transporting to grinding, coating, and welding for flexible and automatic production.

By tracking the path of a tool simulator and obtaining the 6D poses of its TCP, M-Track can achieve quick path planning so that robots can reach the goal position and execute specified tasks. It breaks through the limits posed by high labor costs, inefficient human-machine interaction, and low efficiency, thus greatly enhancing product quality. It is a great helper for manufacturers to overcome challenges and fulfill daily operations.



6D Pose Recognition



Automatic Path Planning



Intelligent and Efficient



Highly Safe and Reliable

Intelligent and Efficient Path Planning

M-Track is an optimal solution for manufacturers to plan robotic paths as it is flexible, reliable, and highly adaptive to environmental changes. It helps robots reach the target position accurately to complete the preset task.

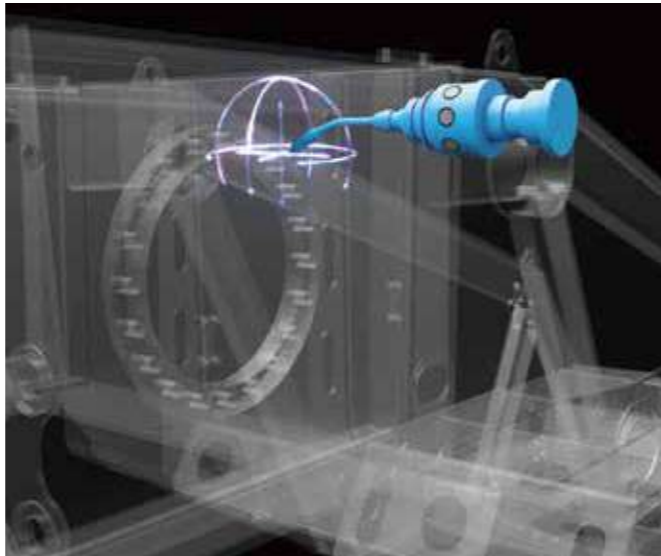
By identifying the positions and orientations of a tool simulator in the workspace, M-Track's tracking system can transmit the information to path planning software. Its path planning software can automatically devise a safe and effective path ready for execution.



Accurate 6D Pose Tracking

Based on stereoscopic vision technology, the tracking system can accurately and efficiently capture the path of the tool simulator. It supports the accurate output of 6D poses of the simulator and comprehensively captures the pose of the tool center point.

M-Track's high-precision tracking ensures appropriate path planning and safe operation of robots. Its accuracy reaches 0.064 mm when the tracking range is 10.4 m³ and 0.078 mm when the tracking range is 18 m³.



Convenient and User-friendly Operation

The system can be used directly without complex programming. Its tool simulators 3D printed in the form of actual tools are easy to use. Whether you are a professional engineer and a novice, you can know how to use it regardless of your level of expertise.

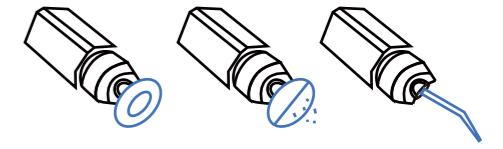
It can simulate the motion of human operations in a real workspace. Its behaviour-based simulation allows path planning more adaptive to real-world working conditions and production needs. The path can be saved for future use with just a few clicks.



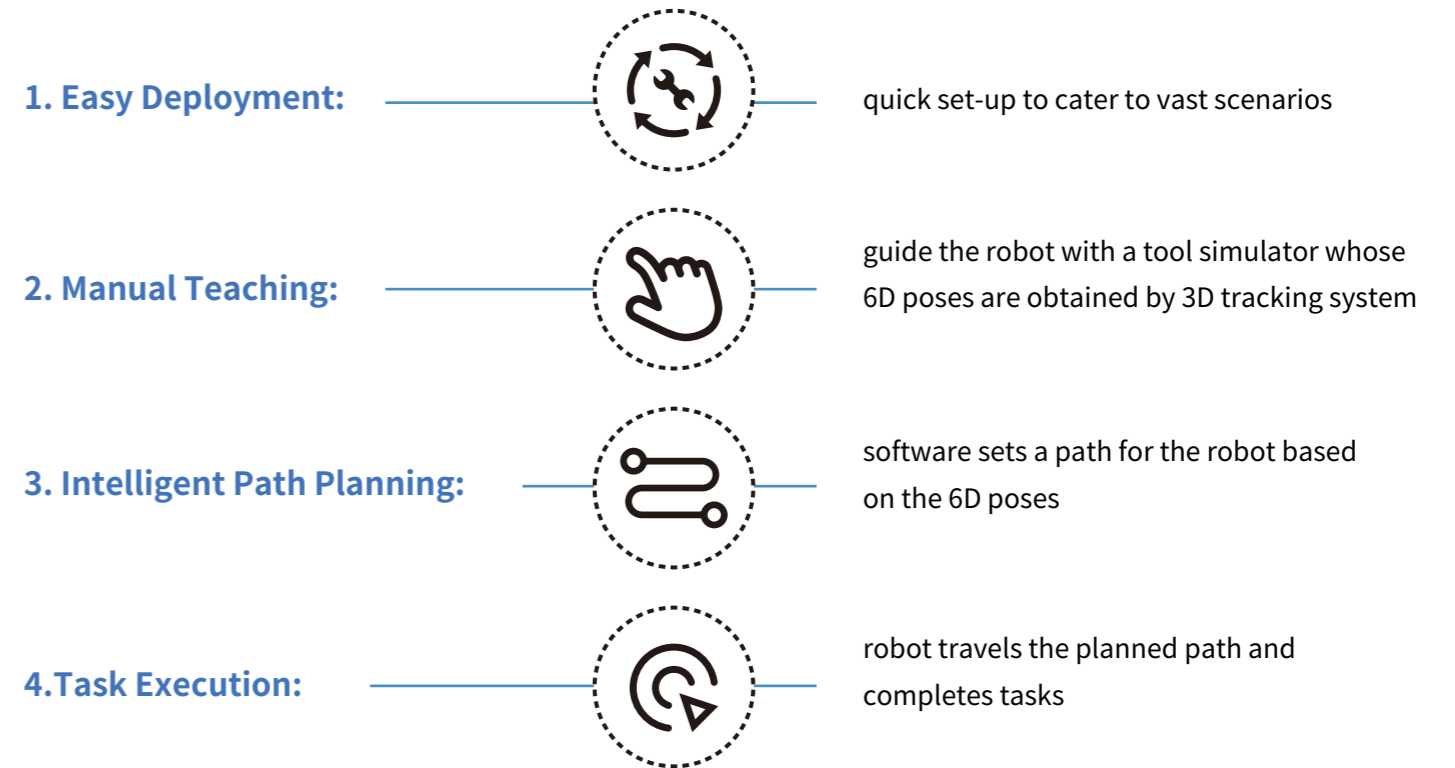
Highly Adaptive for Vast Applications

The automated smart robot path planning system comprises perception, planning, and execution modules, which cater to different applications such as grinding, coating, welding, and more.

The robotic path planning software is compatible with various robots, including ABB, KUKA, FANUC, and EFFORT. It supports the planning of lines, curves, etc. Be it indoor or outdoor, structured or unstructured environment, it is capable of meeting different requirements for different industrial scenarios.



Workflow



Technical Specification

Type		M-Track Intelligent Robotic Path Planning and Guiding System	
Tracking accuracy	10.4 m ³	0.064 mm	
	18 m ³	0.078 mm	
Robot models supported		ABB/KUKA/FANUC/EFFORT, etc	
Tracking frequency		60 Hz	
Tool simulator		Custom	
Operating temperature		-10 °C-40 °C	