

# accuTrack

+ PRECISION SWISS ENGINEERING

## OUTSTANDING PRECISION



• only 53cm long and under 1.4kg

## accuTrack

SUPERIOR TRACKING IN A COST EFFECTIVE AND EASILY INTEGRATED UNIT

### MAXIMUM PRECISION

<0.10\*

UP TO 1M

<0.20\*

UP TO 2.5M

<0.25\*

UP TO 3M

\*mm RMS

### UNMATCHED ACQUISITION SPEED

up to **4000**Hz

IDEAL FOR MULTIPLE TOOLS AND HIGH SPEED TRACKING

## DEFINING PRECISION

- Two sizes for all applications
- Extra large tracking volumes
- Convenience of a active system—wired/wireless tools
- Instant on—temperature controlled with dynamic precision adjustment
- True open source system



COMPACT DESIGN WITH LARGE TRACKING VOLUME

## accuTrack COMPACT

### PRECISION & SIZE

<0.10\*

UP TO 1M

<0.20\*

UP TO 2.0M

<0.30\*

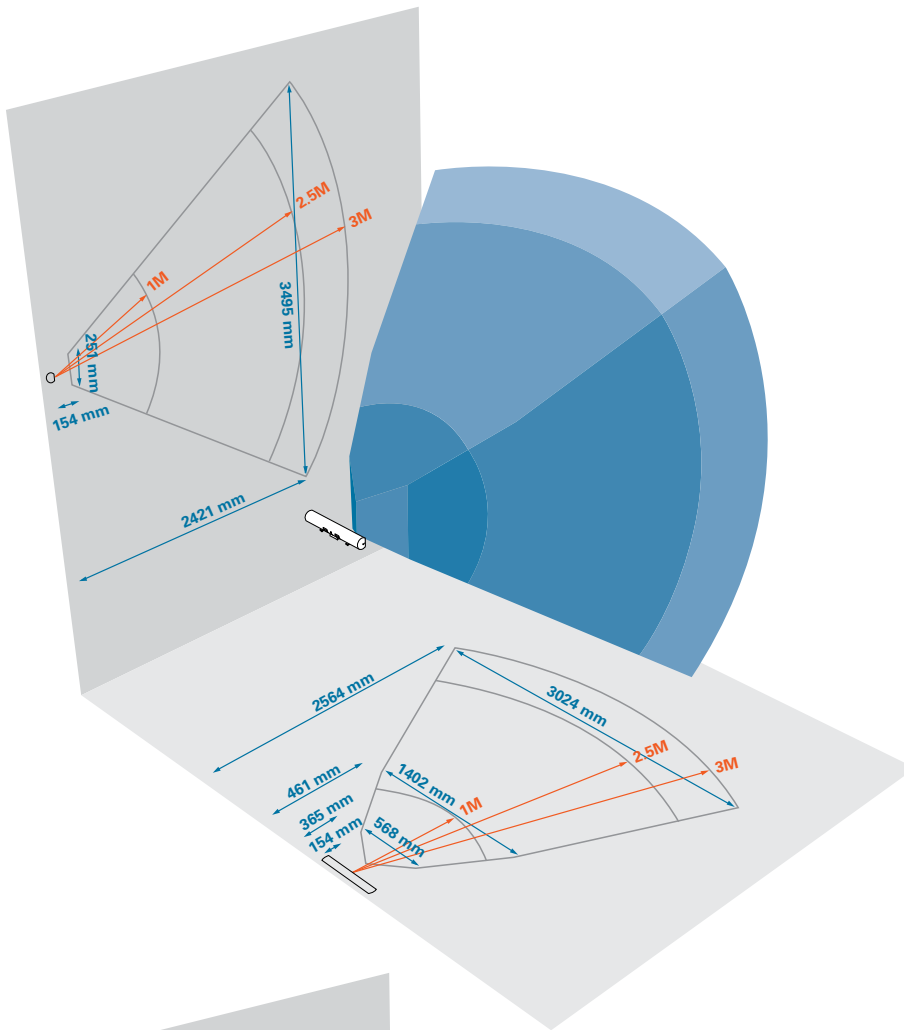
UP TO 3M

\*mm RMS

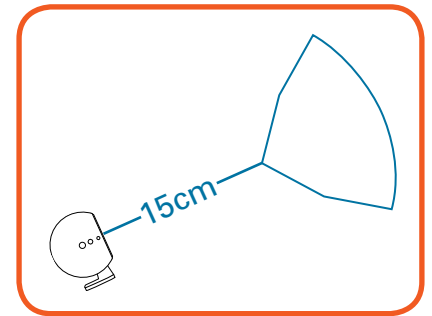


• only 29cm long and under 1.0kg

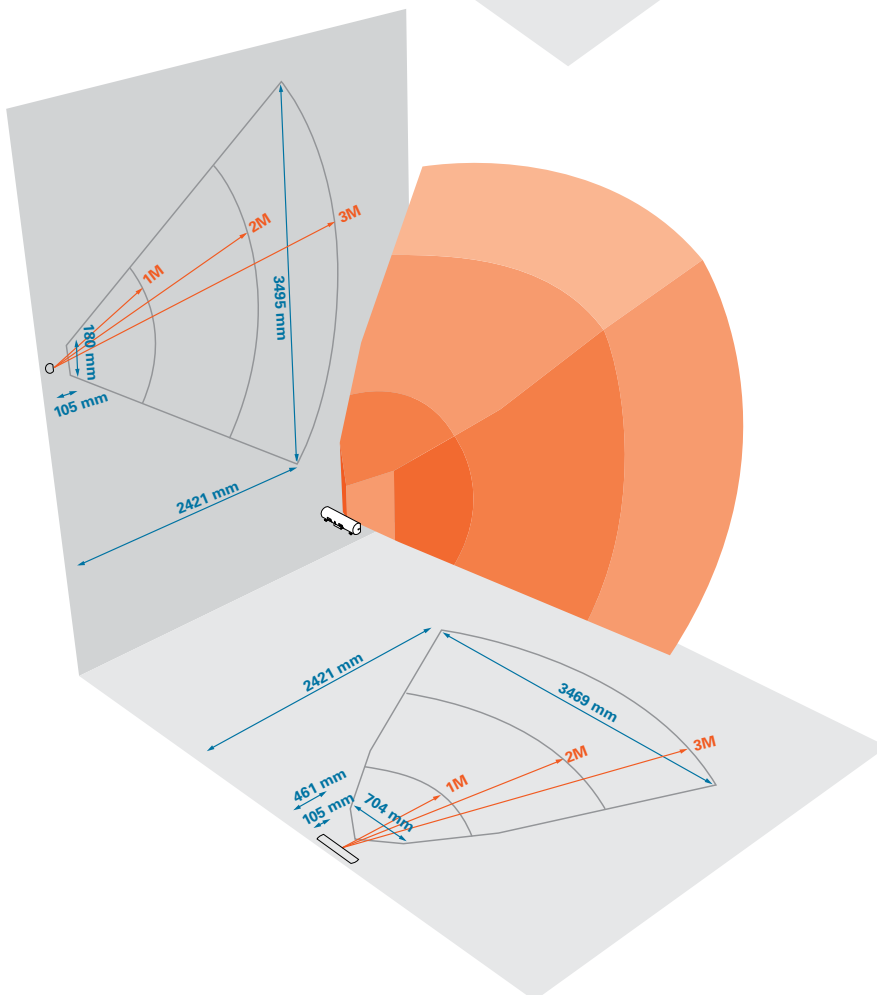
# OUTSTANDING PRECISION AND LARGE WORKING VOLUME. THE PERFECT COMBINATION.



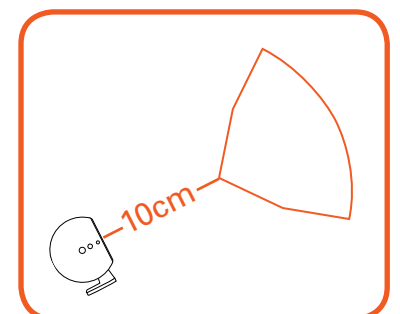
## accuTrack



Start of tracking volume



## accuTrack COMPACT



Start of tracking volume

# TRACKING MADE EASY

## accuBox

WORK WITH WIRED TOOLS AND SYNCHRONIZE SEVERAL MACHINES.



- For up to 4 wired tools
- Can be placed up to 2.9m from the tracker
- Powered directly from the accuTrack

|                             |  |
|-----------------------------|--|
| <b>Size (LxWxH)</b>         | 122mm x 84mm x 75mm  |
| <b>Weight</b>               | 0.7 kg   |
| <b>Data interface</b>       | accuCable  |
| <b>Extension interface</b>  | Interface for accuCable (accuBox, external trigger, multi-device sync.)                        |
| <b>Serial interface</b>     | RS-232 (SUB-D 9 pin) for custom signals (trigger signal, LED number etc.)                      |
| <b>Tools</b>                | Four Redel 10-pin plugs for active markers (with up to 20 LEDs per marker and up to 3 buttons) |
| <b>Tool detection Power</b> | Automatic and/or software controlled<br>No power needed; powered by accuCable                  |

## wireless boomerang marker

EASILY AFFIXED TO ALL PROBES AND TOOLS. FOR USE WITH REGULAR AND RECHARGEABLE BATTERIES.



|                       |  |
|-----------------------|--|
| <b>Size (LxWxH)</b>   | 72mm x 75mm x 20mm   |
| <b>Weight</b>         | only 40g with battery  |
| <b>Material</b>       | black PEEK   |
| <b>LEDs</b>           | 4 infrared LEDs per marker   |
| <b>Calibration</b>    | factory calibrated   |
| <b>Battery</b>        | 3V Li-Ion (regular and rechargeable)   |
| <b>Battery Life</b>   | Minimum: 3h (with one marker at 4000Hz)<br>Typical: 10h (with three markers at 4000Hz) |
| <b>Custom Markers</b> | available in other shapes and colours  |

## wired 8-LED pointer

IDEAL FOR REGISTRATION AND 3D SCANNING. MULTIPLE TIPS OFFER MAXIMUM FLEXIBILITY.

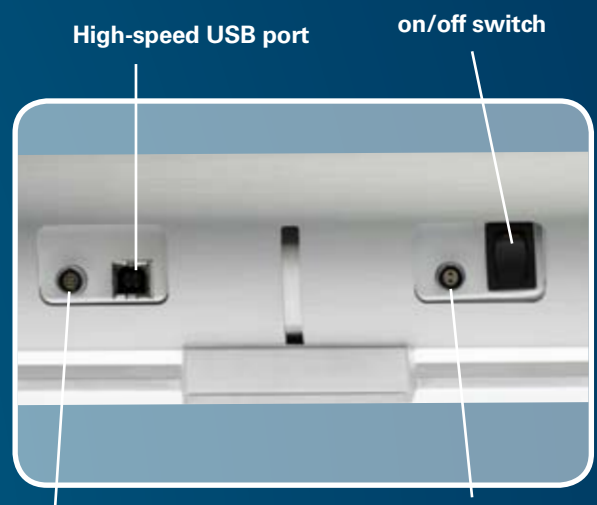


- Enhanced precision and visibility
- Two programmable buttons

|                    |   |
|--------------------|---|
| <b>Length</b>      | 16 cm without probe (probe normally 7 cm)   |
| <b>Weight</b>      | only 150g with cable and plug   |
| <b>Material</b>    | black PEEK  |
| <b>Probes</b>      | large choice of interchangeable tips (pointed probe in stainless steel, 1-5mm diameter ruby ball probe tips and custom made probes) |
| <b>Powered</b>     | via the accuBox   |
| <b>Calibration</b> | factory calibrated  |
| <b>Interface</b>   | 10-pin Redel plug   |

## accuTrack connectivity

ALL CONNECTIONS CONVENIENTLY LOCATED ON THE BACK OF THE MACHINE.



High-speed USB port      on/off switch  
accuCable portv      Power input

- Other wired markers available in 9 pin and 10 pin Redel versions. Please see our website [www.atracsys.com](http://www.atracsys.com) for details.

# SPECIFICATIONS

## PERFORMANCE

Accuracy (RMS)<sup>1</sup>

## ACCUTRACK

<0.1 mm up to 1 m  
<0.2 mm up to 2.5 m  
<0.25 mm up to 3 m

## ACCUTRACK COMPACT

<0.1 mm up to 1 m  
<0.2 mm up to 2 m  
<0.3 mm up to 3 m

Maximum acquisition speed<sup>2</sup>

4000Hz (LEDs per second)

4000Hz (LEDs per second)

Measurement volume

see diagram

see diagram

Start of volume

15cm from face of machine

10cm from face of machine

1. Based on more than 2,000 positions uniformly distributed in the measurement volume at 20°C.

2. May vary with marker distance and ambient illumination

## MECHANICAL DETAILS

Dimensions (LxWxH) (without foot)

530mm x 70mm x 95mm

290mm x 70mm x 95mm

Weight

1.4 kg

1.0 kg

Mounting

Pivoting plate with: 4xM4 screws, ¼" 20-thread tripod mount.  
Additional foot for desktop use

## COMMUNICATION INTERFACE

Data interface

USB 1.1 and 2.0 compatible

Extension interface

Interface for accuCable  
(accuBox, external trigger, multi-device synchronization)

## TOOLS

Tool types

Active wireless, active wired (with accuBox)

Maximum number of tools

16 active wireless markers (4 LEDs per marker),  
8 wired markers (each with max 20 LEDs and max 3 Buttons)

Tool detection

Automatic and/or software controlled

## WARM-UP TIME

No warm-up time thanks to active temperature compensation

## CERTIFICATION

CE Certification

EN 61326. Medical certification planned

CE Electrical safety

EN 61010-1:2001

## POWER ADAPTER

Dimensions (LxWxH)

132mm x 58mm x 30mm

Weight

300g

Power requirements

100-240V AC, ~50-60Hz, 1.5A

## SOFTWARE

Drivers (open source)

Win32, UNIX, Linux

Programming SDK

C/C++, C#, MATLAB

Environment

Borland C++ Builder 5.0 / 6.0, Visual C++ 6.0 / 7.x, GCC

Code portability

Easily transferred to any C++ compiler and other environments (i.e. Mac OS X)

 atracsys

ADVANCED TRACKING SYSTEMS

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Due to continuous improvements, specifications are subject to change without notice.  
Suitability of use for a particular application must be determined by the user.

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