

GUANGZHOU AIMOOE TECHNOLOGY CO.,LTD.

AI+ Surgery Navigation Solution



Founded in 2017, Guangzhou Aimooe Technology Co., Ltd, as a high-tech company integrating with R&D, production and sales, is committed to the research of technologies related to precise positioning and control, Aimooe provides navigation products including "software + hardware + consumables + solutions" and ODM services to clients around the world.

Aimooe has developed the first near-infrared optical positioning system in China and formulated national relevant industry certification standards. With the mature surgical navigation technology and surgical robotic solutions, Aimooe has cooperated with many medical companies, hospitals, scientific research institutes and industrial manufacturers, providing the advanced precision measurement products, integration solutions and services.

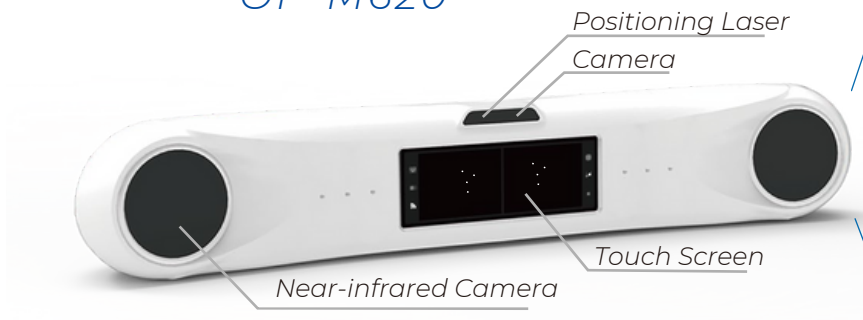
Thanks to our strong R&D team, Aimooe has obtained over 100 patents. Meanwhile, Aimooe has also obtained the Permits for Medical Device Operation Enterprise, ISO9001, CE, EMC and RoHs and many other certifications.

Product Center

Aimooe has completed the intelligent surgical product line layout of "AI + surgical robot", and has made every effort to create a closed-loop product matrix covering the entire surgical process, including optical positioning system, optical navigation consumables, positioning tools and other products. With these efforts, Aimooe gradually forms an overall solution for intelligent surgery covering multiple professional fields such as orthopedics, neurosurgery, radio treatment and dentistry etc.

AimPosition

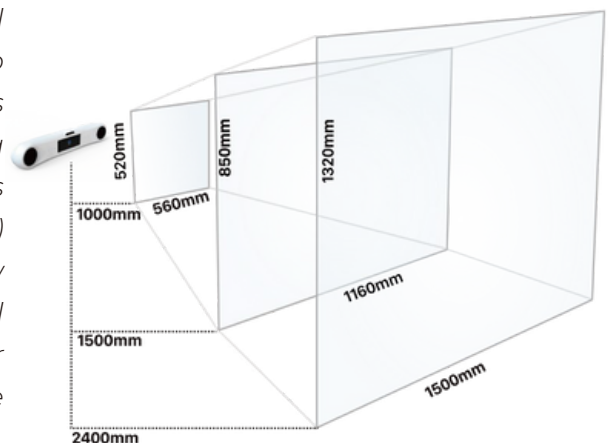
OP-M620



Specifications

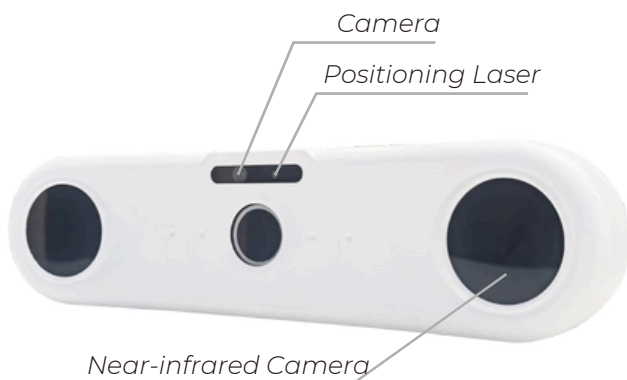
Positioning Accuracy	0.08~0.12mm (RMS)
Measurement Rates	60~300Hz for options
Hardware Interface	Ethernet,USB,Serial Port,12V Power Input
Transmission Rate	Ethernet: 1000Mbps; USB 2.0: 480Mbps; Wi-Fi: 460.8Kbps
Data	Color Image,Binocular Image,Marker 3D Coordinates, Tool 6D Information
Marker	Marker Types: active, passive; Max Marker Records: 200 pcs
API Function	1. API Control Function, easy to use; 2. API cases
Dimension	608.5mm*118.34mm*103.5mm (L*W*H)

It is a an important component of surgical navigation systems, using near-infrared light to wirelessly detect and track reflective markers attached to OEM surgical instruments. Using triangulation, the position of each marker is calculated and translated into 3D(X-Y-Z) coordinates. When integrated into the workflow of surgical navigation systems, the optical camera provides reliable measurement data for real-time surgical tool tracking and precise positioning..



AimPosition

OP-M311



Specifications

Positioning Accuracy	0.2mm(RM S)
Measurement Rates	60Hz
Data interface	Gigabit Ethernet port
Maximum number of identification tools	50
Positioning laser	Second class laser
Marker	Marker Types: active, passive; Max Marker Records: 200 pcs
API Function	1. API case; 2. Use Demo
Dimension	260mm*80mm*65mm(L*W*H)

AimMarker

The marker surface is coated with a special reflective material which is composed of tens of thousands of microbeads reflecting infrared light during tracking.



Snap on



Screw



AimNavi System

The navigation module can automatically track intracranial lesions according to surgical planning and assist doctors in performing various minimally invasive puncture surgeries such as cerebral hemorrhage drainage and tumor biopsy.

Robot stereotaxy, precise puncture

The high-precision near-infrared optical camera can track and accurately guide surgical instruments according to surgical trajectories in real time to achieve safe operation.

The AimNavi system consists of

- ▶ Optical camera
- ▶ Cranial surgery head frame
- ▶ Navigation system monitor
- ▶ Tool positioning holder
- ▶ Neuronavigation software



Solutions

Aimooe provides customized surgical robotic solution for various surgeries, such as that for orthopedics, neuro and dentistry based on the core technology of surgical robot software and hardware developed by ourselves.

1. Optical Tracking System



1. Tooth division, implant plan design, etc.

1. Selection and design of positioning markers, etc.

dental implant robot

2. Craniotomy positioning and visualization, etc.

2. Mixed reality virtual reality fusion algorithm, etc.

neurosurgical robot

3. Following puncture strategy in breathing exercise, etc.

3. Force feedback device design and compensation control algorithm, etc.

Thoracoabdominal puncture robot

4. Acetabular rotation center fitting, etc.

4. Design of Lewinnek surgical safety zone, etc.

Hip replacement and other orthopedic robots

5. Cartilage segmentation and bone tunnel preparation scheme design, etc.

5. Isometric analysis and force feedback control algorithm, etc.

cruciate ligament reconstruction surgery robot

... ..

= more possible

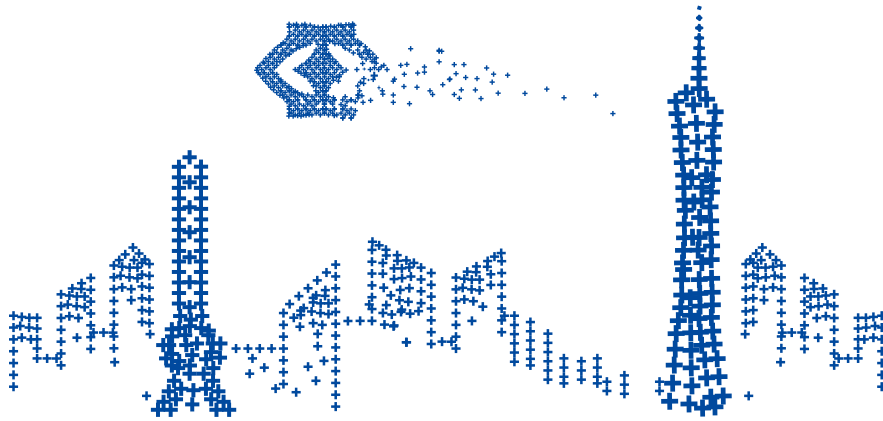
2. Surgical arm



3. General control software



Patents



☎ 0532 497 71 93
 ✉ umkahealth@outlook.com
 🌐 www.umkahealth.com
 📍 Korkutreis Mah.Cihan.Sok.
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