Case Studies

1 Multi-Agent Cooperative Control   by Beijing Institute of Technology (BIT)

2 Supports with Exoskeleton Robots Design   by Beihang University

3 Optimization of Robotic Arm Control   by Wuhan University

4 Optimization of Hexapod Robot Algorithm   by Shanghai Jiaotong University
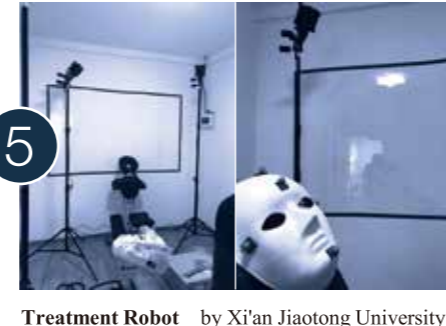
5 Treatment Robot   by Xi'an Jiaotong University

6 UGV Direction Control   by China Automotive Technology & Research Center (CATARC)

7 Optimizing Flapping-wing Aerial Robot in Super Space   by Harbin Institute of Technology

8 Inspection of Power Tower   by China Electric Power Research Institute (CEPRI)

System Functions

· **Data Acquisition** It can acquire data including 3D coordinates, 6Dof, joint angle, Yaw, Roll, Pitch and Euler angle, and provide consistent and smooth motion data for the pose control and motion planning of robotics/UAVs.

· **Development of Experimental Network Platform for Multi-agent Collaborative Control** As a positioning system, it can help devlop the Experimental Network Platform for Multi-agent Collaborative Control, and thus realize the large-scale multi-agent collaborative control.

· **Secondary Development** Data can be input into Matlab, C++ and other software in real time through SDK for secondary development and application.

Motion Capture Cameras
MARS Series
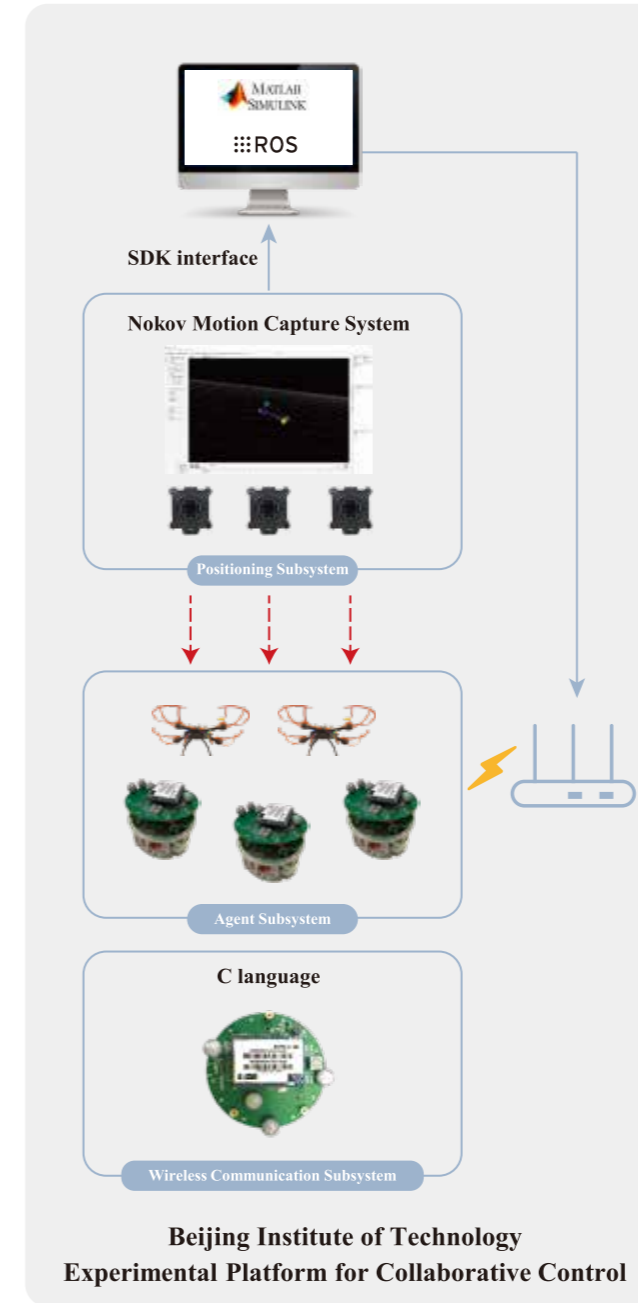### Specilized in the Core Performance of Motion Capture

126 mm   142 mm   104~124,5 mm   PoE+Pinterface
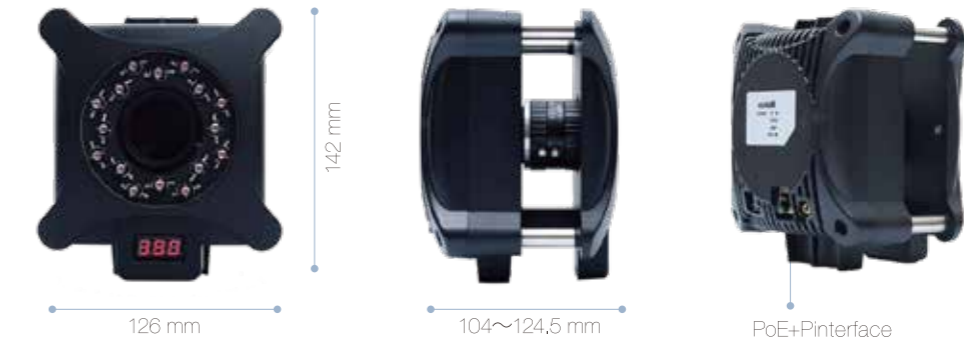
Model	Resolution	No. of Pixels	Frame Rate	Latency	FOV	Interface
Mars 1.3H	1280×1024	1.3MP	240HZ	4.0ms	57°×44°	GigE/PoE
Mars 1.3HW	1280×1024	1.3MP	240HZ	4.0ms	80°×70°	GigE/PoE
Mars 2H	2048×1088	2.2MP	380HZ	2.4ms	69°×40°	GigE/PoE
Mars 2HW	2048×1088	2.2MP	380HZ	2.4ms	104°×55°	GigE/PoE
Mars 4H	2048×2048	4.1MP	180HZ	5.2ms	52°×52°	GigE/PoE
Mars 12H	4096×3072	12MP	300HZ	3.0ms	67°×52°	GigE/PoE

We also offer customized models, please email us for more information.

NOKOV

Applications in Robotics & UAV

SDK interface

Nokov Motion Capture System

Positioning Subsystem

Agent Subsystem

C language

Wireless Communication Subsystem

Beijing Institute of Technology
Experimental Platform for Collaborative Control

Data Provided by NOKOV

- The position, orientation, etc.
- The Yaw, Roll, Pitch, Quaternion, Euler angle, etc.
- The Speed, acceleration and other basic motion information
- The 3D coordinates of any part of the Target Multi-Agent and its overall space location information
- The speed, acceleration of each agent, and its relative distance, speed, etc.
- The joint angle of a human, animal, or robot

Solutions

- Providing basic motion data for Data Driving and Control of UAVs and Robotics
- Providing truth values in the validation of motion planning and control methods for Robotics and UAVs
- Providing real-time feedback for the motion of multiple agents

Applicable to

- Control, navigation and guidance of space aircrafts
- Network Cluster and Network Control
- Multi-Agent Team Formation and Cooperation
- UAV Autonomous Obstacle Avoidance and Following
- UAV Motion Planning and Control