香港科技大学（广州）
THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY (GUANGZHOU)

动态重建及应用元实验室
DYNAMIC RECONSTRUCTION AND APPLIED META STUDIO

香港科技大学（广州）
动态重建及应用元实验室
设备借用指引
HKUST(GZ) DREAMS Lab
Device Borrow Guidance

2026.01

一、【须知】

1. 动态重建及应用元实验室为香港科技大学（广州）的中央实验室之一，专注于为全校师生提供三维重建领域的设备和服务，同时使用重建能力为下游应用（XR，机器人）提供支持与验证。

2. 实验室设备均为国有资产。实验室允许部份设备进行外借使用，但使用范围仅限学校范围内。若需带出学校，必须提前与实验室负责人进行沟通，否则发生的一切后果（丢失、损坏）由借用者及其导师承担。借用者需要落实定期检查，保证实验设备的安全完整。

3. 部份设备允许长期借用开发，具体情况请查看第五项“设备列表及允许借用情况“。实验室设备定价根据使用时长进行浮动，设备长期租用可享受优惠折扣。具体定价请参考”DREAMS 实验室收费标准及条例“

4. 设备借出后即视为使用人及导师对此设备尽保管义务。实验室设备均为国有资产，如发生资产损失，请第一时间做好记录（图片/视频），并与实验室负责人进行报备。隐瞒不报的应承担相应赔偿责任。针对资产损失的赔偿事项，均经过会议集体决策进行责任认定。由于借用者使用不当造成的损失，借用者及其导师应承担全部维修成本。

5. 设备的借用流程请参考后续内容。若对借用规则有任何疑问，请及时联系 dreamscrf@hkust-gz.edu.cn。若对实验室技术能力和相关设备有更细致的了解，可查看实验室官网 dreamscrf.hkust-gz.edu.cn。

I【Note】

1. Dynamic Reconstruction and Applied Meta Studio (DREAMS Lab) is one of the Central Research Facilities at the Hong Kong University of Science and Technology (Guangzhou). It specializes in providing equipment and services in the field of 3D reconstruction for students and faculty across the university, while also leveraging reconstruction capabilities to support and validate downstream applications(XR, robotics).

2. All laboratory equipment are state-owned property. The lab allows certain devices to be borrowed for use within the campus. If equipment needs to be taken out of campus, prior communication with the laboratory director is mandatory. Otherwise, the borrower and their academic supervisor shall bear all consequences (e.g., loss or damage). Borrowers are required to conduct regular inspections to ensure the safety and integrity of the equipment.

3. Some equipment may be borrowed long-term for development purposes. For specific details, please refer to Section 5: "Equipment List and Borrowing Policies." Laboratory equipment pricing varies based on usage duration, and long-term rentals are eligible for discounted rates. For specific pricing, please refer to our "DREAMS Lab Charging Standards and Regulations."

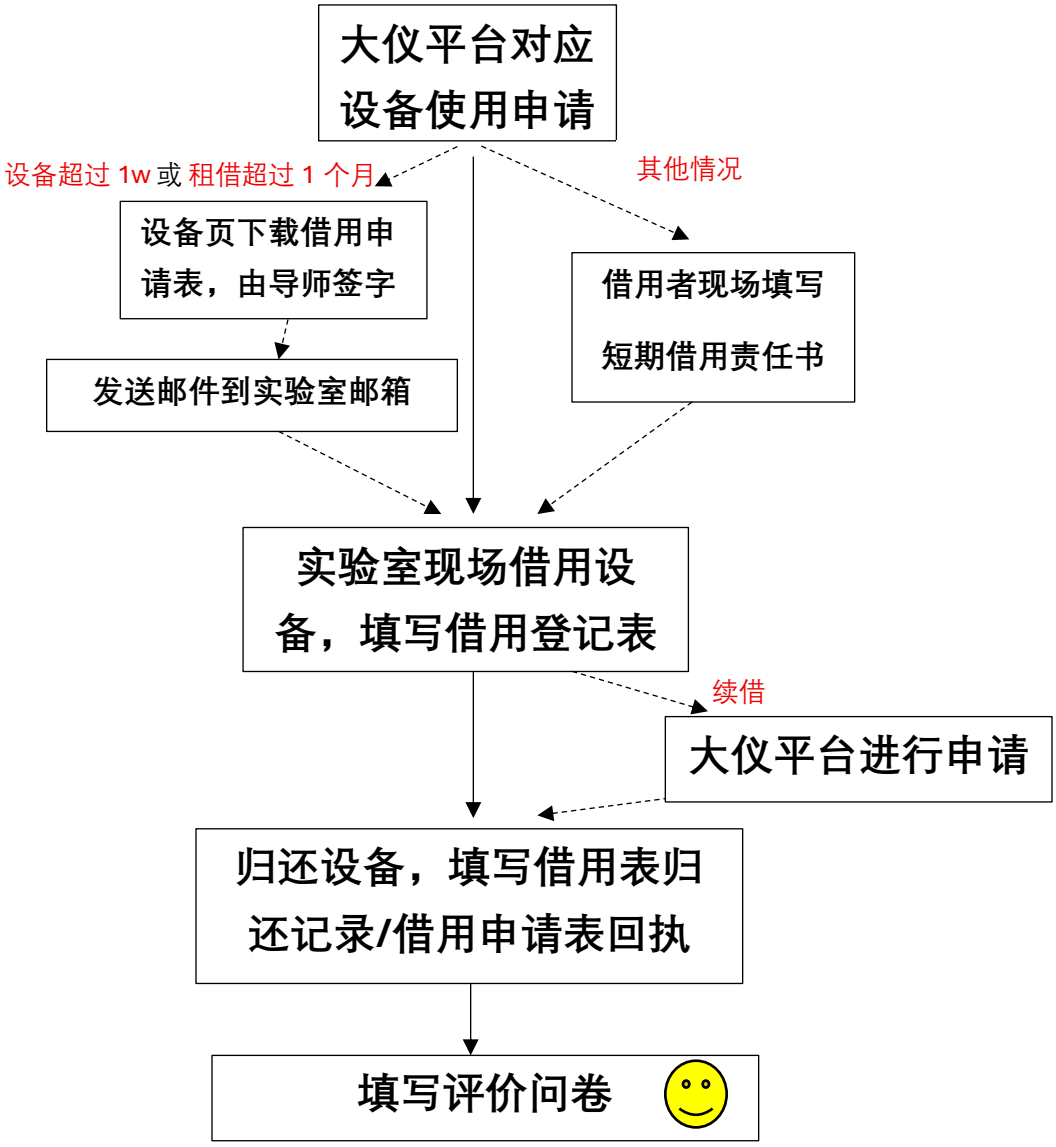
4. Once the equipment is borrowed, the borrower and their advisor have full responsibility for it. All laboratory equipment is state-owned property. If any damage or loss happen, please document the incident immediately (with photos/videos) and report it to the laboratory director. Failure to report may result in liability for compensation. Matters regarding compensation for asset loss are determined through collective decision-making in meetings. If damage is caused by improper use, the borrower and their academic supervisor shall bear all repair costs.

5. For the equipment borrowing process, please refer to the subsequent sections. If you have any questions regarding borrowing rules, please contact dreamscrf@hkust-gz.edu.cn. For more detailed information about the laboratory's technical capabilities and related equipment, please visit the lab's official website: dreamscrf.hkust-gz.edu.cn.

二、【整体流程】

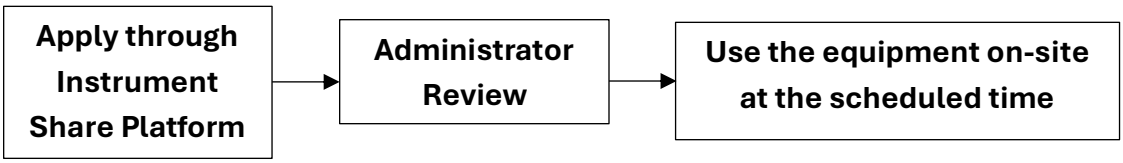
（1）现场使用流程

（2）借用流程

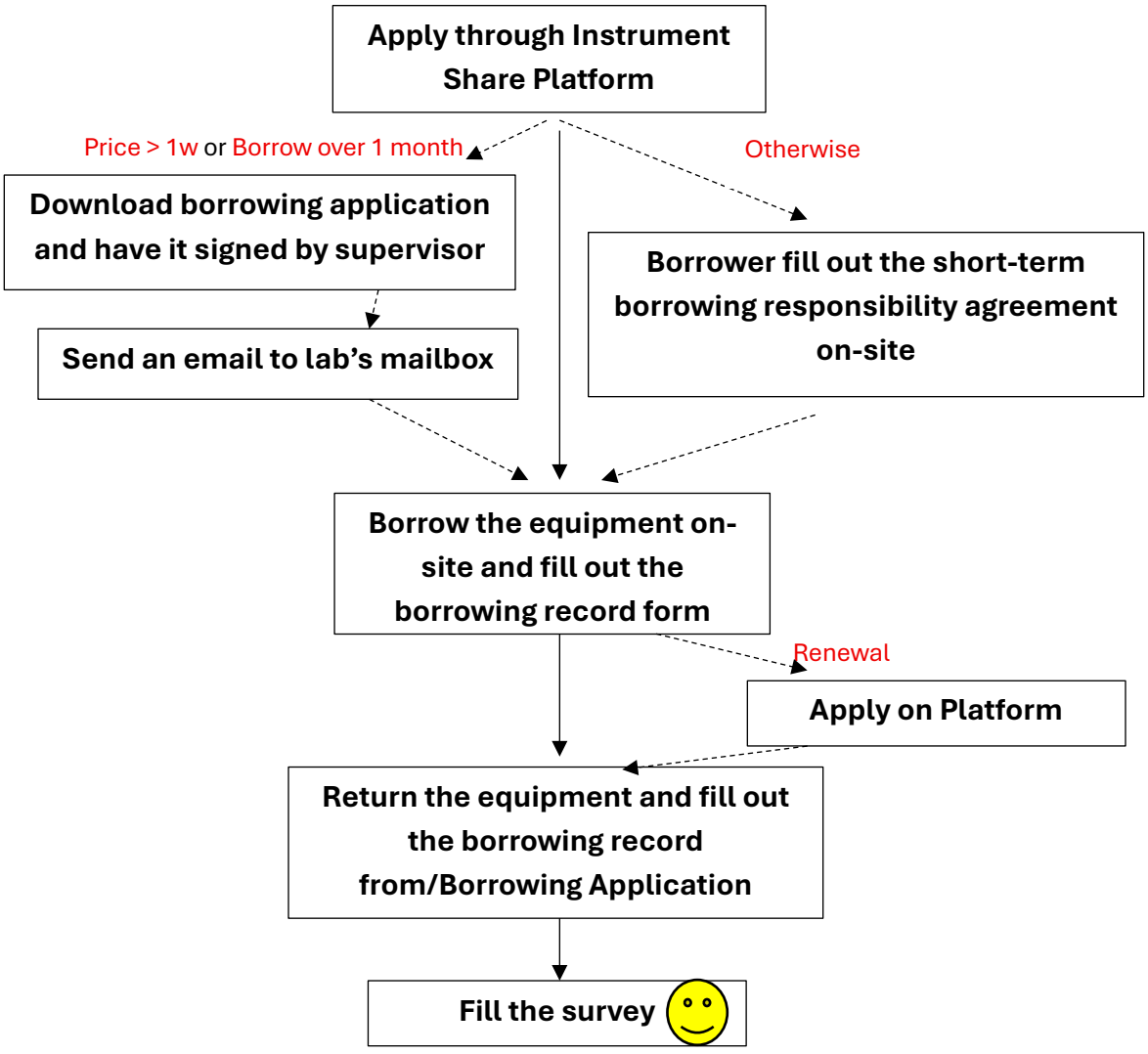


II【Overall Process】

(1) On-Site Usage

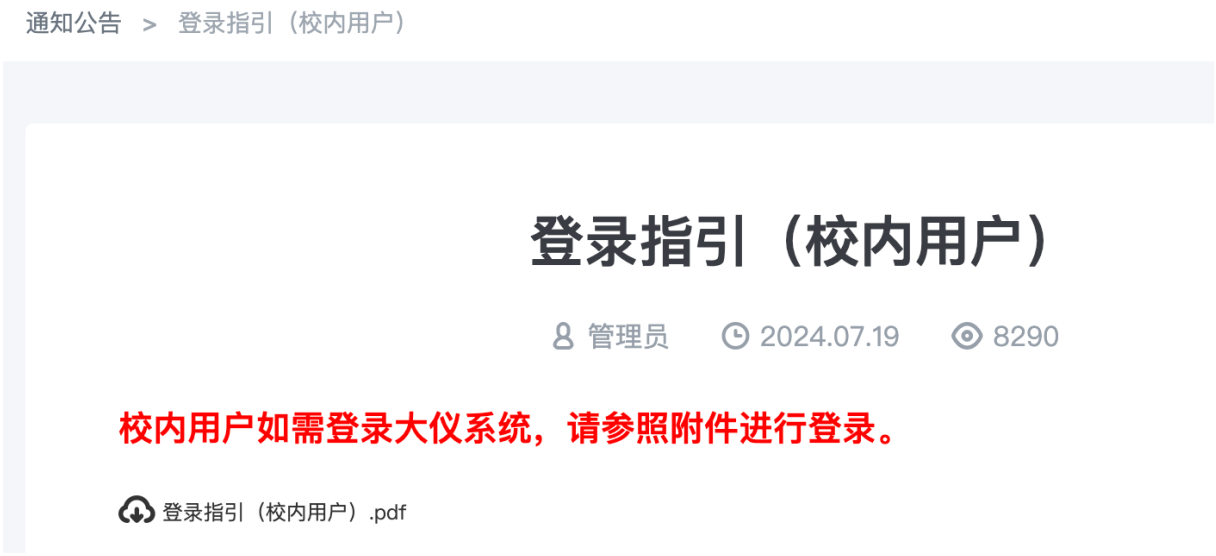


(2) Borrowing Process



三、【借用平台指引】

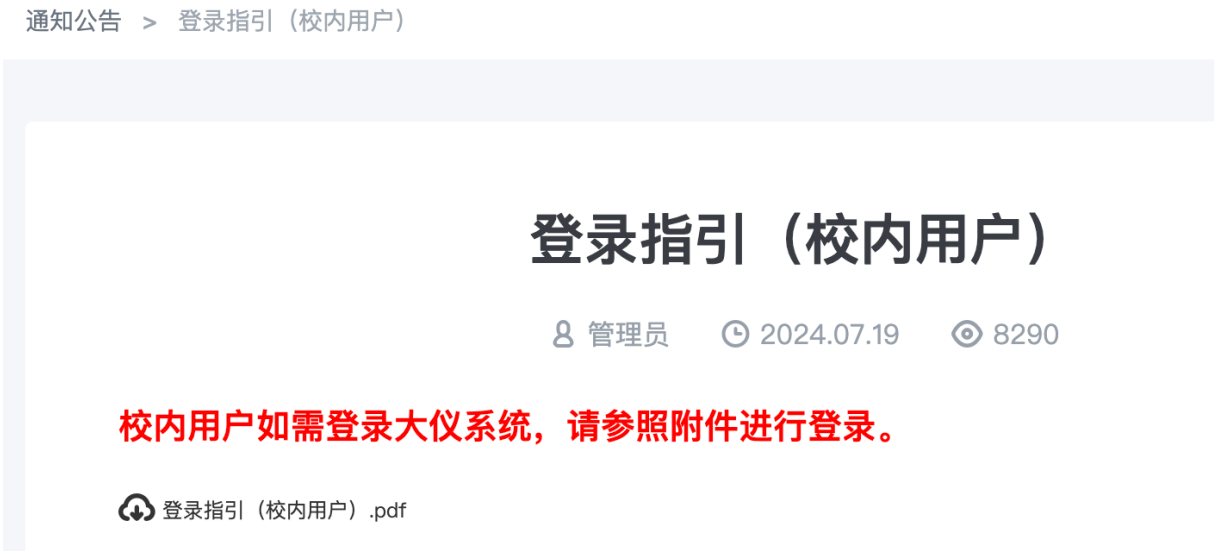
1. 实验室设备使用和借用使用香港科技大学（广州）大型仪器共享平台。具体地址为：https://instrumentsharelab.hkust-gz.edu.cn/.
2. 用户进行注册请参考平台内登陆指引：



3. 本实验室的大仪平台主页为 https://instrumentsharelab.hkust-gz.edu.cn/Portal?XPath=000000003055.进入主页后，根据需要的设备按时间进行预约。

III【Borrowing Platform Guidelines】

1. Laboratory equipment usage and borrowing shall be conducted through the Hong Kong University of Science and Technology (Guangzhou) Instrument Sharing Platform. The specific website address is: https://instrumentsharelab.hkust-gz.edu.cn/.
2. For user registration, please refer to the login guide within the platform:

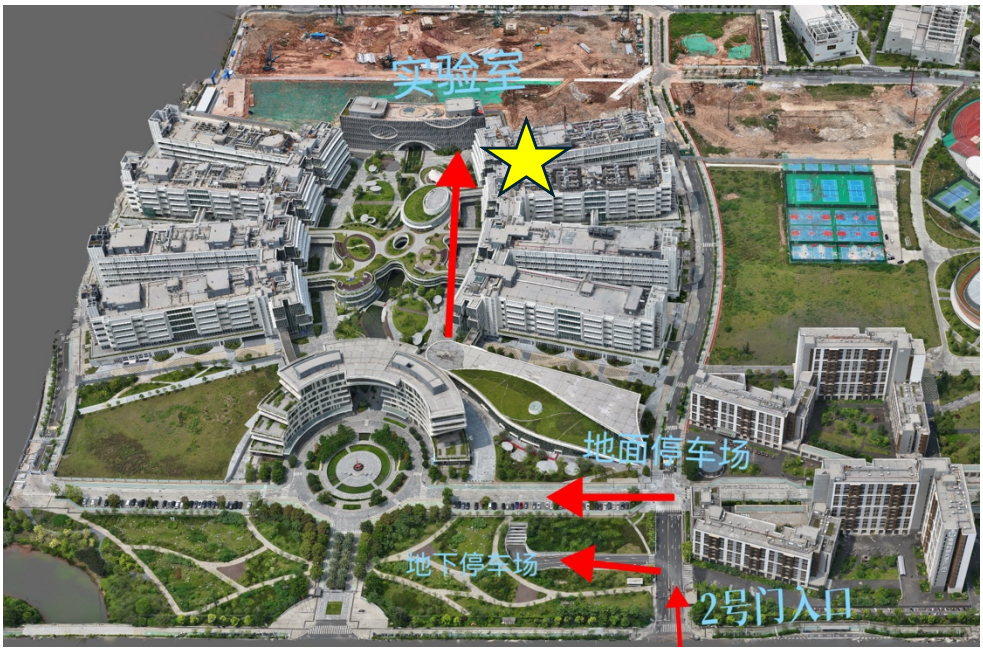


3. The laboratory's platform homepage is: https://instrumentsharelab.hkust-gz.edu.cn/Portal?XPath=000000003055. After accessing the homepage, make reservations for required equipment based on availability and time slots.

四、【实验室位置与指引】

1. 实验室位于图书馆东翼一楼（从 E4 一楼出来即可到达），如图所示：

在校园中的位置可参考：



2. 因为图书馆东翼一楼的门需要权限申请，无法直接打开，推荐同学从图书馆二楼进入实验室，具体可参考如下路线

E4 二楼往图书馆走廊

图书馆东翼

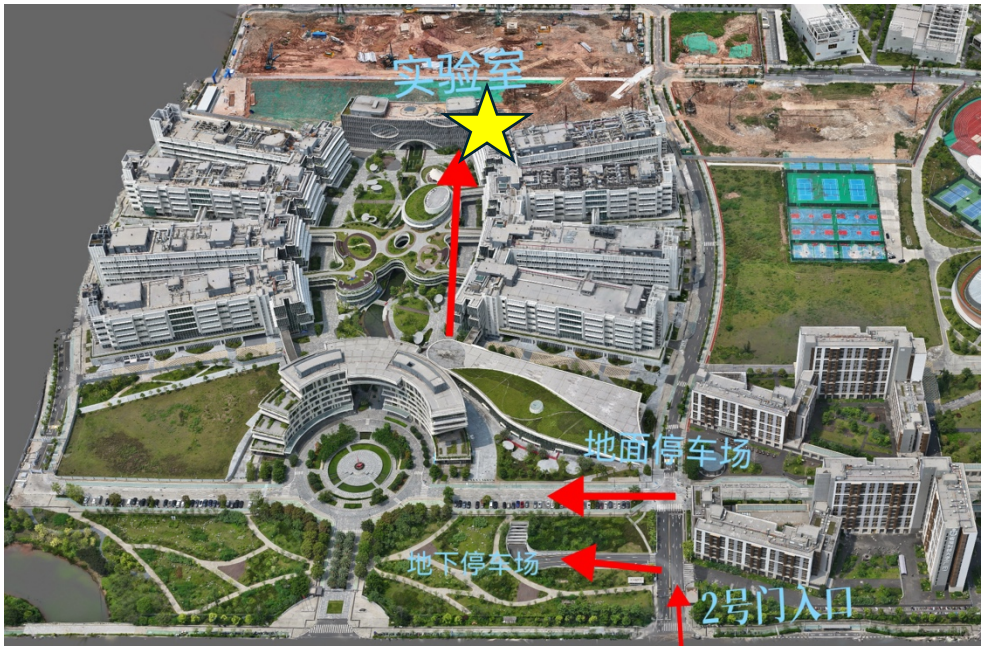
左手边第一个走廊下来

3. 到达借用期时，如果下一天无人借用，可在第二天上午归还设备。如果第二天有人租借设备，请提前一天，或在第二天租借时段开始前归还设备。
4. 若需要在非工作时间借用或归还设备，可以提前与实验室管理员沟通，于实验室门口放置的储物箱内进行设备的借用和归还。借用和归还时请同时签署箱内相关借用申请材料。

IV、【Laboratory Location and Directions】

1. The laboratory is located on the first floor of the Library East Wing (accessible via Exit E4-1F), as shown in the image below.

For location in campus, please see below (Yellow Star Point)



2. As the first-floor entrance of the Library East Wing requires access authorization and cannot be opened directly, students are advised to enter the laboratory via the library's second floor. Please follow this route:

E4 Second Floor Library Corridor

Library East Wing

First corridor on the left

3. When the borrowing period ends: If no one has reserved the equipment for the next day, it may be returned by the following morning. If the equipment is reserved for the next day, please return it one day in advance or before the start of the next borrower's scheduled time slot.
4. For equipment borrowing or returns outside of working hours: Coordinate with the laboratory administrator in advance. Use the storage bin placed at the laboratory entrance for equipment pick-up and return. Complete and sign the relevant borrowing forms provided inside the bin during both borrowing and return.

五、【设备列表及允许借用情况】

设备名	主要用途	是否允许借用	是否允许长期借用	备注
数字人重建拍摄系统	人体动态/静态重建（含 unity/ue/小程序开发支持，Mesh/Gaussian 多种格式），多视角原数据获取，可驱动数字人开发、手办打印	NA	NA	场地光源可用于提供给物体重建相关需求
4090 主机（Windows）	VR 开发，深度学习	是	是	14900KF+128G 内存+2T SSD
4090 主机（Linux）	机器人开发，深度学习	是	是	14900KF+128G 内存+4T SSD
4090 主机（Windows）	VR 开发，深度学习	否	否	14900KF+128G 内存+4T SSD
5090 主机（Windows）	数据处理（Xsens，其域，artec，RealityScan 多种软件重建需求），开发	否	否	9950x3d+19G2 内存+8T SSD
MacBook Pro	VR 开发（Vision Pro）	是	是	M3 Max，64G 内存 + 2T SSD
Windows 笔记本	数据处理，研发	是	是	9955HX3D + 5070Ti + 1T SSD
Apple Vision Pro	VR 开发，机器人遥操	是	是	1TB
Quest 3	VR 开发，机器人遥操	是	是	512GB
Pico 4 Pro/Ultra	VR 开发，机器人遥操	是	是	256GB
Rokid Glass	AR 开发，三维重建数据获取	是	是	
Mx Inx VR 笔	支持 Quest 3 进行开发（如绘画等）	是	是	
Vive Tracker	定位获取（主要用于手部动捕）	是	是	适合 Manus，Sensenova 手套
气味传感器 X-Scent3.0	可控制气味播放	是	是	
Insta 360 X4	全景视频拍摄	是	是	含各种配件
Insta 360 X5	全景视频拍摄	是	是	含各种配件
Osmo Action 5 Pro	视频拍摄（可用于三维重建）	是	是	含各种配件
Osmo Nano	视频拍摄（第一人称视角）	是	是	含各种配件
Sony A7R5 相机	扫描重建	是	是	配备 16mm / 20-70mm 镜头
Intel Realsense D435i	深度获取	是	是	近距离
Intel Realsense D455	深度获取	是	是	中远距离
Intel Realsense L515	深度获取	是	是	
Intel Realsense T265	动态追踪	是	是	SLAM
Intel Realsense D405	深度获取	是	是	
Zed 2i	深度获取，双目图像	是	是	精度较高
Zed Mini	深度获取，双目图像	是	是	
Odin1 SLAM Camera	场景建图	是	是	SLAM
DJI Mic 2	录音	是	是	
DJI RS4 稳定器	拍摄稳定器	是	是	适合单反
DJI Power1000 V2	移动电源	是	是	
DJI Mavic 4 Pro	无人机航拍	是	是	
拓竹 H2C 打印机	3D 打印	NA	NA	
Artec Leo 扫描仪	物体扫描	是	是	纹理好，精度最高可达 0.04mm
其域灵光 L2 Pro	场景扫描，点云获取，高斯重建	是	是	含原数据获取权限，配套 unity/ue/web 开发插件
Xsens 动捕服	数字人控制，机器人控制	是	是	含最高数据权限 Analyze Pro
Manus 数据手套	VR 开发，灵巧手操控	是	是	

SenseGlove 触觉手套	VR 开发，灵巧手操控	是	是	含触觉反馈
Omni One 万向走步机	VR 开发，机器人遥操	是	是	
宇树 G1	机器人开发	是	是	开发版，含五指手
星动纪元 Xhand	灵巧手开发	是	是	右手
星动纪元 Xarm7	机械臂开发	是	是	
32 卡服务器-4090（48G）	深度学习算法开发	NA	NA	通过实验室平台统一使用，需要申请

*长期借用指的是超过 1 周

V. 【Equipment List and Borrowing Policies】

Equipment Name	Main Usage	Borrowing Allowed	Long-term Borrowing Allowed	Others
Digital Human Reconstruction System	Static/Dynamic Human Reconstruction (Include unity/ue/Mini Program dev, Mesh/Gaussian format), Multi-view Raw data, Animatable Avatar Reconstruction, 3D Avatar Printout	NA	NA	The space and light can be used for object reconstruction
4090 PC (Windows)	VR Development, Deep Learning	Yes	Yes	14900K + 128G Memory + 2T SSD
4090 PC (Linux)	Robot Development, Deep Learning	Yes	Yes	14900K + 128G Memory + 4T SSD
4090 PC (Windows)	VR Development, Deep Learning	No	No	14900K + 128G Memory + 4T SSD
5090 PC (Windows)	Data Process (Xsens, XGrid, artec, RealityScan and other), Development	No	No	9950x3d + 192G Memory +8T SSD
MacBook Pro	VR Development (Vision Pro)	Yes	Yes	M3 Max, 64GMemory + 2T SSD
Windows Laptop	Data Process, R&D	Yes	Yes	9955HX3D + 5070Ti + 1T SSD
Apple Vision Pro	VR Development, Robot Control	Yes	Yes	1TB
Quest 3	VR Development, Robot Control	Yes	Yes	512GB
Pico 4 Pro/Ultra	VR Development, Robot Control	Yes	Yes	256GB
Rokid Glass	AR Development, Data for 3D Reconstruction	Yes	Yes	
Mx Inx VR Pen	Support Quest 3 for Dev (e.g. Drawing)	Yes	Yes	
Vive Tracker	Localization (Mainly for hand)	Yes	Yes	Suitable for Manus, Sensenova Glove
X-Scent 3.0	Scent Player	Yes	Yes	
Insta 360 X4	Pano Video	Yes	Yes	Include accessory
Insta 360 X5	Pano Video	Yes	Yes	Include accessory
Osmo Action 5 Pro	Video Shooting (for 3D Reconstruction)	Yes	Yes	Include accessory
Osmo Nano	Video Shooting (first person angle)	Yes	Yes	Include accessory
Sony A7R5 SLR	Scan & Reconstruction	Yes	Yes	With 16mm / 20-70mm Lens
Intel Realsense D435i	Depth Camera	Yes	Yes	Short Distance
Intel Realsense D455	Depth Camera	Yes	Yes	Mid Distance

Intel Realsense L515	Depth Camera	Yes	Yes	
Intel Realsense T265	Motion Tracking	Yes	Yes	SLAM
Intel Realsense D405	Depth Camera	Yes	Yes	
Zed 2i	Depth Camera, Stereo Image	Yes	Yes	High Accuracy
Zed 2i	Depth Camera, Stereo Image	Yes	Yes	
Odin SLAM Cam	SLAM Camera	Yes	Yes	SLAM
DJI Mic 2	Voice Record	Yes	Yes	
DJI RS4 Stabilizer	Shooting Stabilizer	Yes	Yes	For SLR Camera
DJI Power1000 V2	Mobile Battery	Yes	Yes	
DJI Mavic 4 Pro	Drone Shooting	Yes	Yes	
Bambu H2C	3D Printing	NA	NA	
Artec Leo Scanner	Object Scanning	Yes	Yes	Good Texture, Accuracy can reach 0.04mm
XGrid L2 Pro	Scene Scanning, Point Cloud Obtain, 3DGS obtain	Yes	Yes	Include raw data obtain, with unity/ue/web Plugin
Xsens Suit	Avatar & Robot Control	Yes	Yes	Highest Data License
Manus Data Glove	VR Development, Dexterous Hand Control	Yes	Yes	
SenseGlove Haptic Glove	VR Development, Dexterous Hand Control	Yes	Yes	With Haptic Feedback
Omni One Treadmill	VR Development, Robot Control	Yes	Yes	
Unitree G1	Robot Development	Yes	Yes	Dev Version, Hand with 5 Fingers
Xhand	Dexterous Hand Development	Yes	Yes	Right Hand
Xarm7	Robotic Arm Development	Yes	Yes	
32 GPU Server-4090 (48G)	Deep Learning	NA	NA	Via Lab’s Platform, Need for Application

* Long-Term borrowing means over 1 week.