

# GOGGLES X EXTENSION MODULE

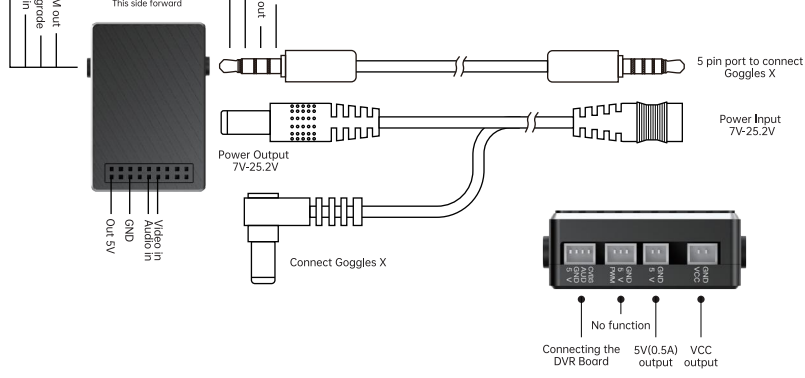
## QUICK START GUIDE

V1.1

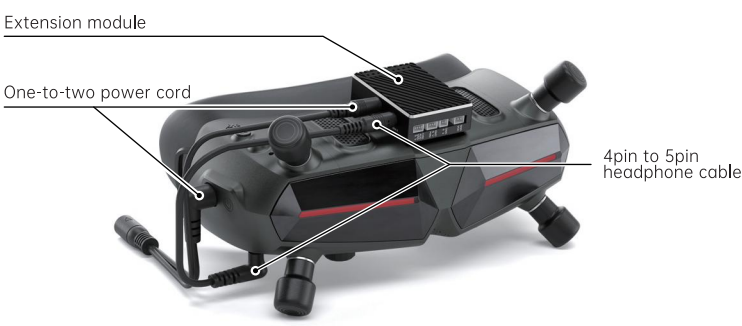
### 1 Introduction

This extension module is only applicable to the Avatar goggles X version without built-in head tracking. This module integrates head tracking function and fixes the compatibility of some analog receivers. How to determine whether Goggles X has built-in head tracking? Upgrade to firmware version 38.43.4 or above, menu selection: Settings > Device > Head Tracking, if the option is grayed out, it does not have built-in head tracking, otherwise it has built-in head tracking.

### 2 Connection

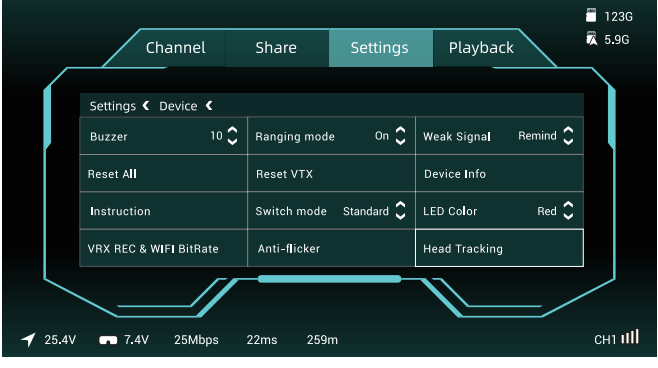


### 3 Installation



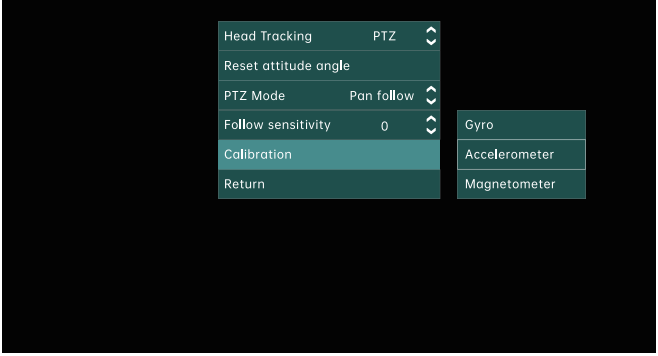
### 4 Head tracking function

The expansion module can be used with Avatar V2 VTX and GM gimbal to realize head tracking function. To use this function, you need to upgrade Goggles X and Avatar V2 VTX to version 38.43.4 or above. In the Goggles menu, select "PTZ" for head tracking, Settings > Head Tracking > PTZ. After the setting is completed, the gimbal will follow the Goggles posture movement. Click the return key three times quickly to return the gimbal to the center.

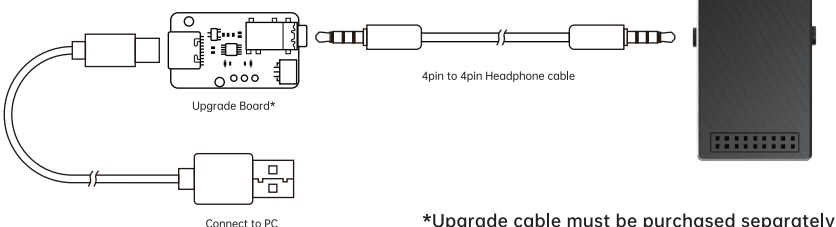


### Menu Settings

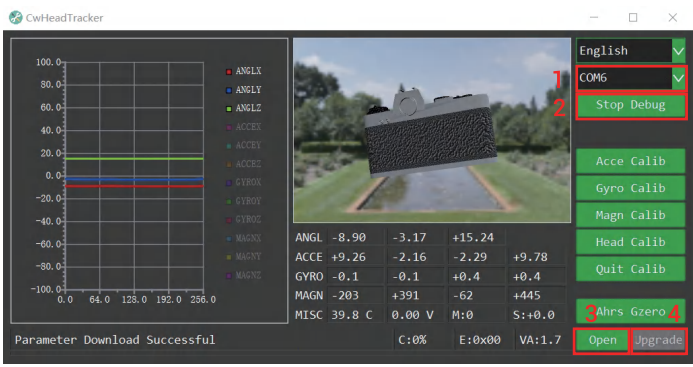
- Head tracking:** Output signal selection, you can choose ppm or PTZ.
- Reset attitude angle:** Click to reset the gimbal to the neutral point.
- PTZ Mode:** The gimbal has 3 working modes to choose from.
  - Pitch and roll keep level, yaw axis follows.
  - Pitch axis keeps level, roll axis and yaw axis follow.
  - Three-axis follow.
- Follow sensitivity:** Adjust the gimbal response speed.
- calibration:** Do not perform calibration under normal circumstances. If the gimbal has an angle deviation for a long time, please complete the calibration of the gyroscope, accelerometer, and magnetometer according to the prompts.
- Return:** Exit the head tracking menu.



### 5 Upgrade



- Use the upgrade board to connect the upgrade port of the expansion module and the PC. Please go to [www.caddxfpv.com](http://www.caddxfpv.com) to download the CwHeadTracker.exe software and firmware.
- Open the CwHeadTracker.exe software and power on the expansion module.
- Select the correct COM port, click Start Debug, click Open, and select the CwHeadTracker\_V\*.ughf firmware in the same file.



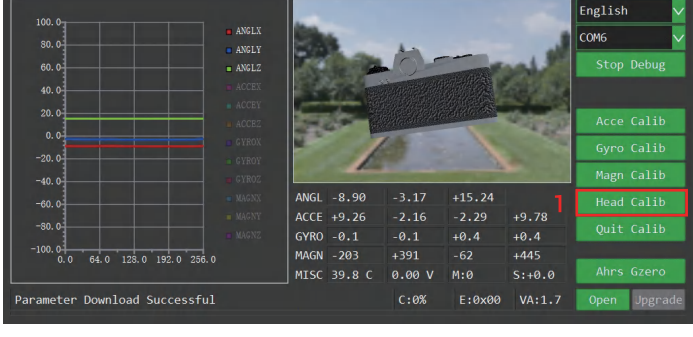
- Click Upgrade and wait for the progress bar to complete before the upgrade is successful.

• The GM gimbal needs to upgrade its firmware simultaneously. Please refer to the manual of the corresponding product for the upgrade operation.

### 6 Head Calib

Under normal circumstances, there is no need to perform Head Calib operation. This function is only used in special installation situations.

- Power on the expansion module, connect the PC and the expansion module using the upgrade board, and open the CwHeadTracker.exe software.
- Select the correct COM port and click Start Debug.
- Place the extension module with its redefined pointing surface perpendicular to the horizontal plane.
- Click Head Calib and the calibration is completed.



### 7 Dimensions



unit: mm

# GOGGLES X 扩展模块

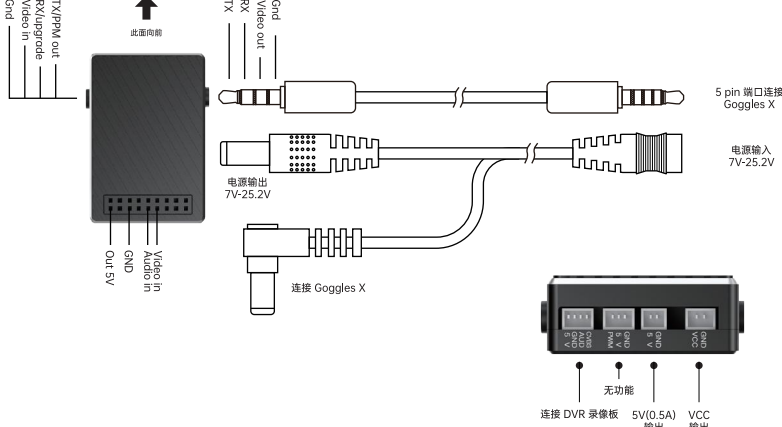
## 快速入门指南

V1.1

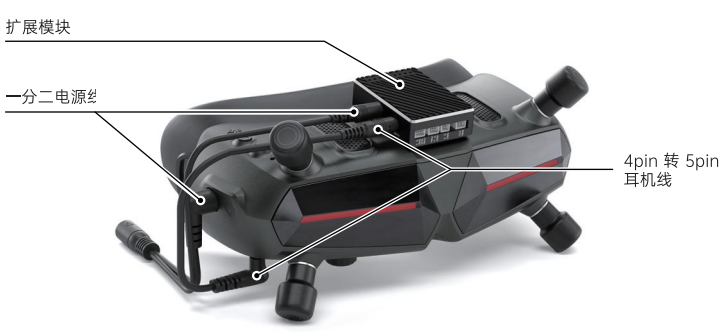
### 1 简介

此扩展模块仅适用于 Avatar goggles X 未内置头追版本，该模块集成头部跟踪功能，修复部分模拟接收机兼容性。如何判断 Goggles X 是否为内置头追版本，升级到 38.43.4 或以上固件版本，菜单选择：设置 > 设备 > 头部追踪，如选项灰选则未内置头追，反之则内置头追。

### 2 连接图



### 3 安装



### 4 头部跟踪功能

扩展模块搭配 Avatar V2 VTX 与 GM 云台 可实现头部跟踪功能，使用此功能需要将 Avatar X 眼镜和 Avatar V2 VTX 升级到 38.43.4 或以上版本，在眼镜菜单中将头部跟踪选择为“云台”，设置 > 头部追踪 > 云台，设置完成后云台将会跟随眼镜姿态动作，快速点击3次返回键可以使云台回中。

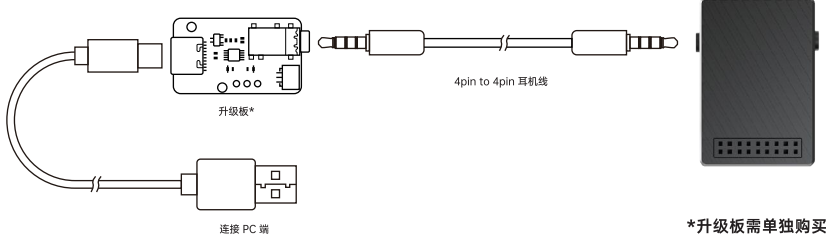


### 菜单设置

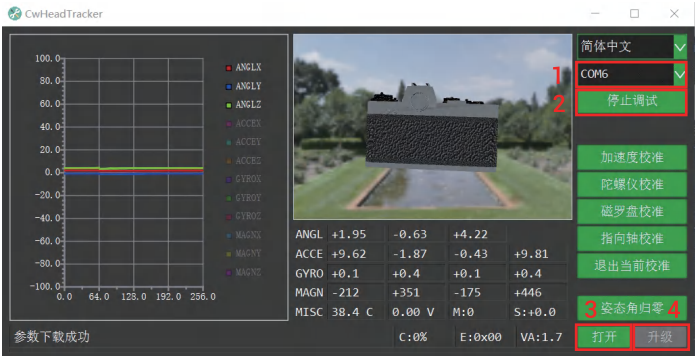
- 头部追踪**：输出信号选择，可以选择 ppm 或云台。
- 复位姿态角**：点击后可以使云台方向恢复默认中立点。
- 云台模式**：云台共有三个工作模式选择，
  - 俯仰及横滚保持水平，方向轴跟随
  - 俯仰轴保持水平，横滚轴及方向轴跟随
  - 三轴跟随
- 跟随灵敏度**：调整云台动作响应速度。
- 校准**：正常情况下请勿做校准操作，如果云台在长时间出现角度偏移，请根据提示完成陀螺仪、加速度计、磁强计的校准。
- 返回**：退出头部追踪菜单。



### 5 升级



- 使用升级板连接扩展模块升级口，另一端连接 PC 端，请到 [www.caddxfpv.com](http://www.caddxfpv.com) 官网下载 CwHeadTracker.exe 软件和固件。
- 打开 CwHeadTracker.exe 软件，扩展模块通电。
- 选择正确 COM 口，点击开始调试，点击打开，选择同文件下的 CwHeadTracker\_V\*.\*.ughf 固件。



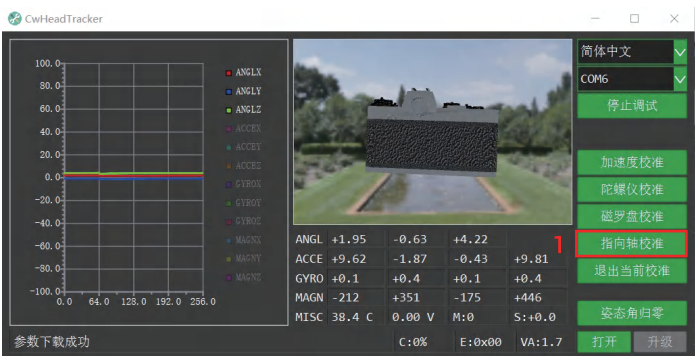
- 点击开始升级，等待进度条完成后升级成功。

⚠️ • GM 云台需要同步升级文件夹内的头追固件，升级操作请浏览对应产品的说明书

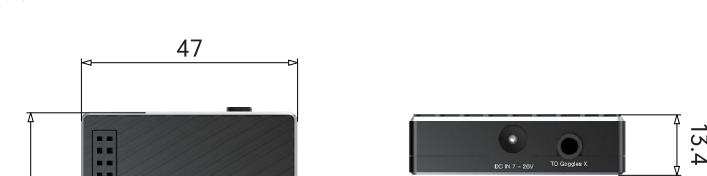
### 6 指向轴校准

正常情况下无需做指向轴校准，仅在特殊安装情况下使用此功能。

- 扩展模块通电，使用升级线连接PC，打开 CwHeadTracker.exe 软件。
- 选择正确 COM 口，点击开始调试。
- 将扩展模块重新定义的指向面垂直水平面放置。
- 点击指向轴校准，校准完成。



### 7 外形尺寸



单位：mm