

```
1 1. cd x64/share/LHandProLib/examples/EtherCAT_cpp
2 2. mkdir build && cd build
```

```

3  3. cmake .. -G "Visual Studio 17 2022" -A x64 -DCMAKE_BUILD_TYPE=Release -
    DCMAKE_INSTALL_PREFIX=../install
4  4. cmake --build . --config Release
5  5. cmake --install . --config Release

```

After compilation, the executable LHandProLib_EtherCAT_Test.exe will be in the install/bin directory.

Install npcap-1.82.exe first to enable EtherCAT communication on Windows.

Use the sample project as a reference to build your custom application.

Linux Platform

Preparation Files

 LHandProLib-API-Linux-20250915.tar.gz

Project Structure

代码块

```

1  .
2  └─ x86_64                                # x86_64 platform SDK file
3  │   └─ bin                                # Test program
4  │       └─ LHandProLib_EtherCAT_Test
5  │           └─ setup.bash
6  │   └─ include                            # Header files
7  │       └─ LHandProLib
8  │           └─ LHandProLib.hpp            # C++ encapsulation
9  │           └─ LHandProLib.h              # C encapsulation
10 │   └─ lib                                # so files
11 │       └─ libLHandProLibd.so
12 │       └─ libLHandProLib.so
13 │   └─ share
14 │       └─ LHandProLib
15 │           └─ examples                    # Sample program
16 │               └─ EtherCAT_cpp            # EtherCAT C++ Sample Project
17 │               └─ EtherCAT_python         # EtherCAT Python Sample Project
18 └─ i386                                    # i386 platform SDK file
19 └─ aarch64                                # aarch64 platform SDK file

```

Note: The provided master station library is validated and tested exclusively on the x86_64 platform.

Usage Instructions

Compile the Sample Project

代码块

```
1  # Update system packages and install dependencies
2  1. sudo apt update
3  2. sudo apt install cmake
4  3. sudo apt install build-essential
5  # Enter the folder containing the LHandProLib API Linux compressed file
6  1. tar -xzf LHandProLib-API-Linux-xxxxxxx.tar.gz      # Extract the SDK package
7  2. cd x86_64/share/LHandProLib/examples/EtherCAT_cpp/
8  3. mkdir build && cd build
9  4. cmake .. -DCMAKE_BUILD_TYPE=Release -DCMAKE_INSTALL_PREFIX=../install
10 5. make
11 6. make install                                     # Install the compiled
    output to the install directory
12 7. cd ../install/bin
13 8. sudo cp libLHandProLib.so /usr/local/lib/         # Copy the shared
    library to the system library path (for global access)
14 9. sudo ldconfig                                    # Refresh the dynamic
    linker cache
15 10. sudo setcap cap_net_raw,cap_net_admin+ep ./LHandProLib_EtherCAT_Test #
    Grant required privileges (raw socket + network admin)
16 11. ./LHandProLib_EtherCAT_Test                     # Run the executable
```