SDK Integration Document

For

Stealth Mouse

Version 1.0

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Revision History

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| **Name** | **Date** | **Reason For Changes** | **Version** |
| Bilal Ahmad | January14,2023 | Initial Draft | 1.0 |
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# Introduction

## Purpose

Purpose of this document is to describe the process to integrate StMouse C++ SDK files into existing C++ applications to receive StMouse position updates.

# Overall Description

StMouse SDK consists of following subdirectories.

* Code
* Dev
* Docs
* Drivers

These are described as following,

## Code

Code directory contains two sub directories which are C++ sample console applications.

* ConsoleSampleD2XX
* ConsoleSampleVCP

StMouse devices use FTDI chips. FTDI chips allow two ways to connect to them i.e. USB or V-COM. For each connection method, a sample application is prepared.

Details for each sample application are provided in following sections (, ).

## Dev

Dev directory contains FTDI driver’s package. These drivers can be shipped as installation package with existing applications. More details in section .

## Docs

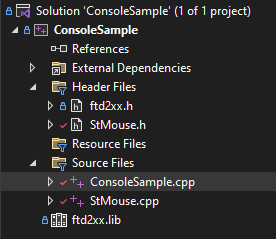
Doc’s directory contains reference documents about FTDI D2XX API and FTDI library integration guide. More details in section .

## Drivers

Driver’s directory has standalone driver’s installation setup. These can be installed directly on host machine. More details in section .

# ConsoleSampleD2XX

D2XX sample application is built in Visual Studio 2022 as C++ Console Application.

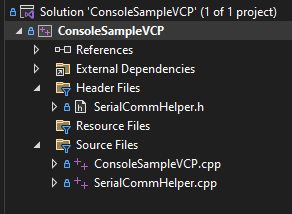


This sample uses FTDI D2XX direct drivers. This method does not require any driver installation but the developer has to add following files to their app to talk to StMouse.

* **ftd2xx.lib** [Static library that handles all the communication with FTDI]
* **ftd2xx.h** [Header file that contains definitions of all the methods provided by the static lib.]
* **StMouse.h** [Header file that contains definitions for StMouse wrapper that encapsulates the communication part with FTDI static lib and parsing of data received.]
* **StMouse.cpp** [CPP file that defines necessary methods required to communicate with FTDI static lib and provides a callback interface to subscribe to data updates.]

# ConsoleSampleVCP

VCP console sample is also built in Visual Studio 2022 as C++ Console Application.



This sample uses Virtual Serial COM port interface to connect to FTDI devices. For FTDI drivers see section .

For communicating with StMouse on V-COM interface, the developer has to add following files to their app to

* **SerialCommHelper.h** - [Header file that contains definitions for StMouse wrapper that encapsulates the communication part with FTDI serial COM port and parsing of data received.]
* **SerialCommHelper.cpp** – [CPP file that defines necessary methods required to communicate with FTDI serial COM port and provides a callback interface to subscribe to data updates. It also defines a method to auto detect FTDI COM port from the registry.]

# Drivers

For FTDI devices to appear as virtual serial COM ports, FTDI drivers need to be installed. These drivers are present in folder [**\Drivers\CDM212364\_Setup.zip**]. This zip contains an exe file which the host computer has to run in order to install the drivers.

These drivers are also available as INF/SYS files which can be included in existing driver installation setup of applications which should not require the host computer to explicitly run driver installation exe file. These are present in folder [**\Dev\CDM v2.12.36.4 WHQL Certified.zip**].

# Reference Documents

There are two reference documents which are included in the SDK. These are provided by the FTDI.

* **D2XX\_Programmers\_GuideFT\_000071.pdf** – This document provides the super set of methods that D2XX API interface provides. D2XX Sample application only uses few of these.
* **TN\_153-Instructions-on-Including-the-D2XX-Driver-in-a-VS-Express-2013-Project.pdf** – This document provide details about how to add the static lib (.**lib**) or dynamic lib (.**dll**) to C++ application for communicating with FTDI devices on USB interface.