



## Technical Note

### **TN\_186**

# **C# Examples Using Microsoft Visual Studio**

**Version 1.0**

**Issue Date: 21-11-2023**

The purpose of this Technical Note is to show how to use the C# library and example projects for them to be used with the latest versions of Microsoft Visual Studio.

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## 1 Introduction

This Technical Note is for the purpose of showing how to use the FTDI C# .NET wrapper and examples on newer versions of [Microsoft Visual Studio](#), specifically Visual Studio 2022 and later on Windows OS.

The C# examples provided by FTDI may include previous versions of the FTDI .NET wrapper, which is needed to use C# with FTDI devices. This technical note shows how to use these examples with the latest .NET wrapper provided by FTDI as new versions of the wrapper are released. This wrapper can be used with all FTDI USB 2.0 devices that use the [D2xx Driver](#).

If you are looking for more instructions on setting up a project on Visual Studio, please see the following Technical Note:

TN\_153 [Instructions on Including the D2XX Driver in a Visual Studio Express 2013 Project](#)

The FTDI C# .NET wrapper (.dll and source) and examples can be found at the following link:

<https://ftdichip.com/software-examples/code-examples/csharp-examples/>

C# support for FT260, FT4222H, and FT60x products is also available but is not covered by this Technical Note as these products do not use the C# .NET wrapper referenced in this document. Please visit the respective product pages of these products for specific C# support.

## 2 What is C# and .NET?

C# is a high-level general purpose programming language and is derived from other programming languages such as C and C++. The C# language is object-based, meaning that, when using it, you define objects and their behavior.

C# applications are made to run on .NET, this is why there is a need for the FTDI .NET wrapper. This wrapper allows the FTDI D2XX driver API to be used with C#.

.NET is a software development framework developed by Microsoft. It provides a platform for building and running various types of applications, including web applications, desktop applications, mobile apps, gaming applications, and more.

The main goal of .NET is to provide a consistent and comprehensive programming model that allows developers to create applications that can run on different platforms and devices.

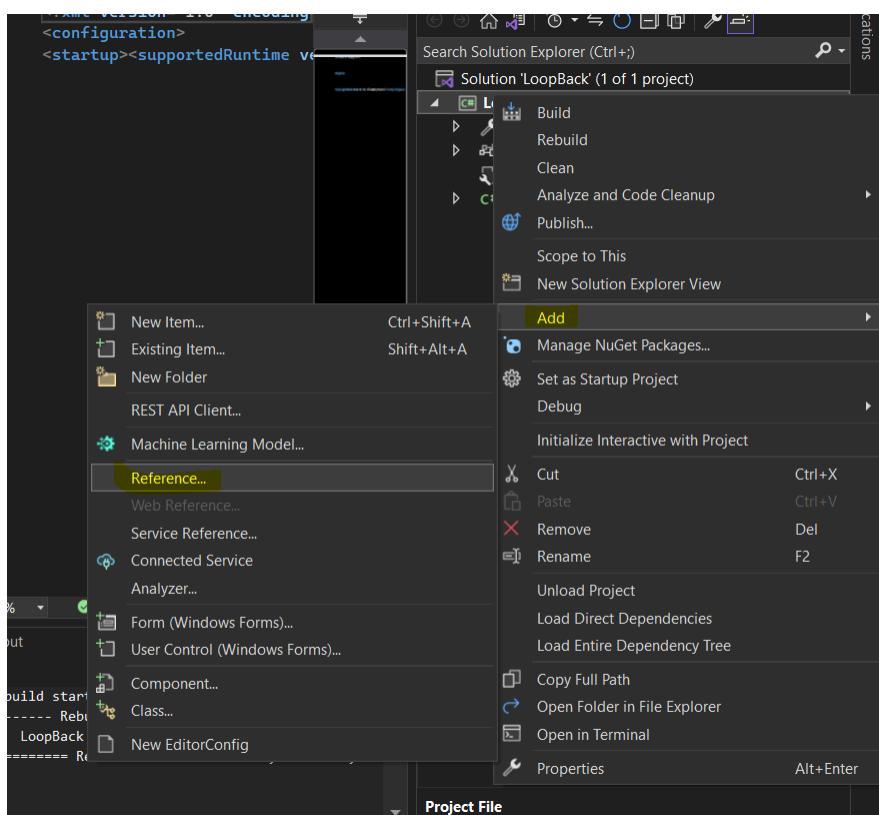
### 3 Implementation

This section goes over the steps that are needed to run the C# examples on Visual Studio 2022.

First, the .NET wrapper that is included in example projects should be deleted and replaced with the latest version from our website which can be found here:

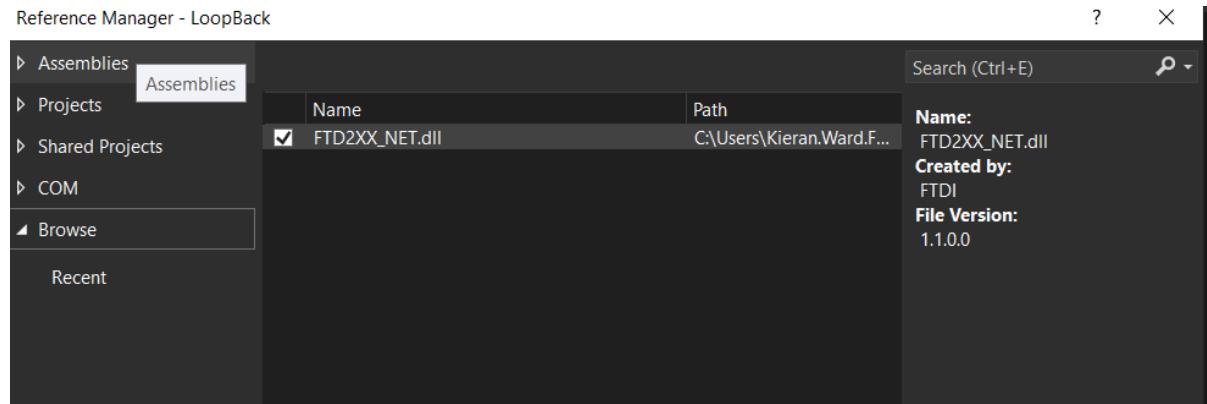
<https://ftdichip.com/software-examples/code-examples/csharp-examples/>

The second step to add the latest .NET wrapper as a reference to the project in Visual Studio. This is done by right clicking on the project and navigating to the add drop down menu and then selecting reference as shown in Figure 1.



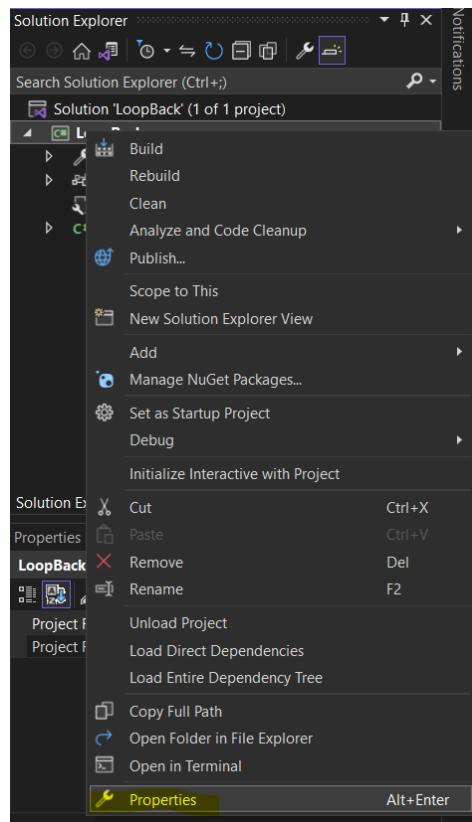
**Figure 1 Adding .NET Wrapper to Project as a Reference**

When in References, select the FT2DXX\_.NET.dll which you can browse for as shown in Figure 2.



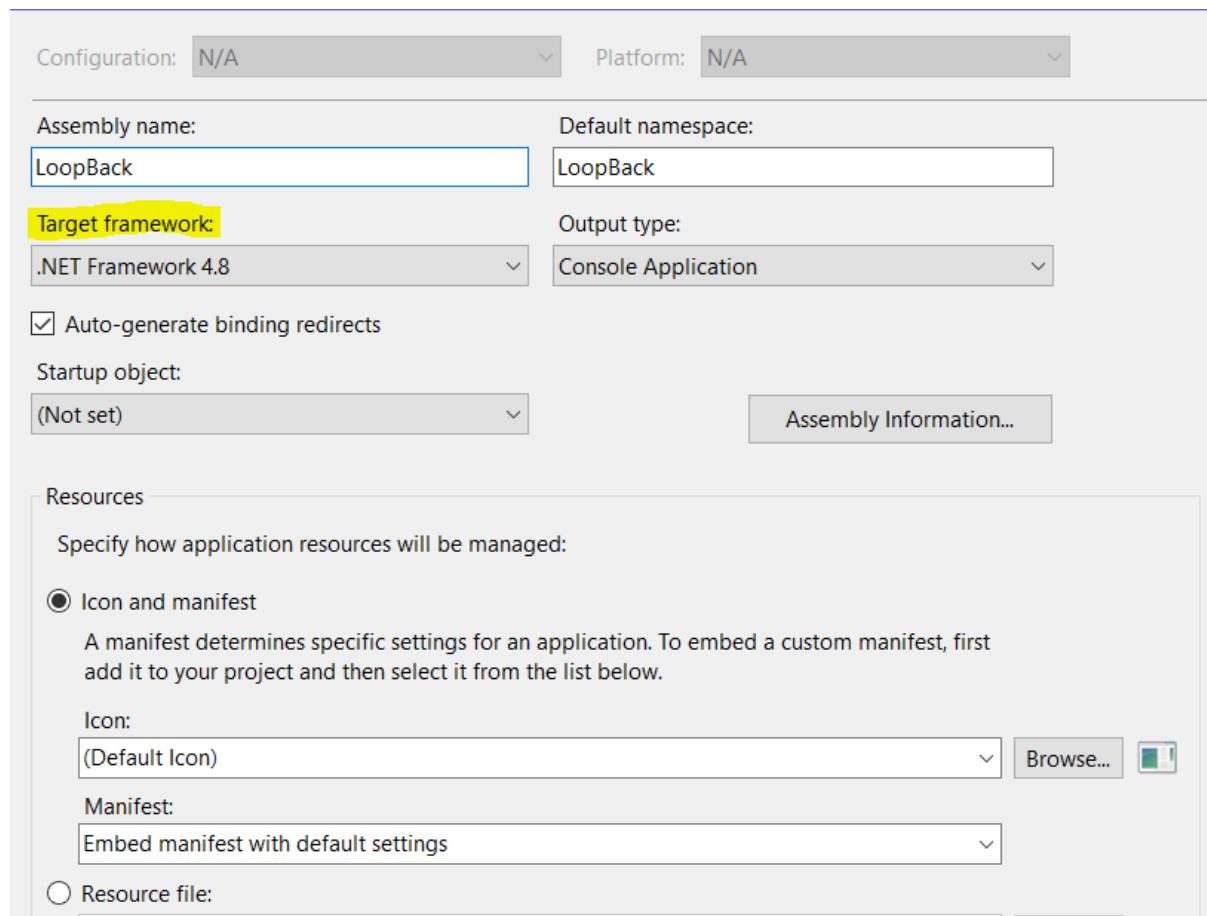
**Figure 2 Selecting Latest FTD2XX\_.NET.dll as Reference**

The next step is to make sure the project is targeting the .NET framework. To do this, right click on the project and select properties as shown in Figure 3.



**Figure 3 Project Properties**

When in the properties page, under the target framework, select the latest .NET framework available as shown in Figure 4.



**Figure 4 Selecting .NET Framework as target**

After these steps have been implemented, the C# example can be rebuilt which will allow the example to be successfully executed.

## 4 Conclusion

This document has outlined how to set up the FTDI C# example programs using Visual Studio 2022. As the C# examples were created some time ago, some adjustments need to be made to allow the examples to run properly on more modern Visual Studio versions. If followed correctly, the steps outlined in this document should allow the C# examples to run with no issues on the latest Visual Studio versions.



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## Appendix A – References

### Document References

TN\_153 [Instructions on Including the D2XX Driver in a Visual Studio Express 2013 Project](#)  
<https://ftdichip.com/software-examples/code-examples/csharp-examples/>  
[D2xx Driver](#)  
[Microsoft Visual Studio](#)

### Acronyms and Abbreviations

Terms	Description
API	Application Programming Interface
OS	Operating System
USB	Universal Serial Bus

## Appendix B – List of Tables and Figures

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## Appendix C – Revision History

Document Title: TN\_186 C# Examples Using Microsoft Visual Studio

Document Reference No.: FT\_001560

Clearance No.: FTDI#589

Product Page: <https://ftdichip.com/product-category/products/ic/>

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Revision	Changes	Date
1.0	Initial Release	21-11-2023