# RTSDK C# 3.0.0.L1

# INSTALLATION GUIDE

## 1 Overview

RTSDK packages are specific to the product language (C/C++, C#, or Java). This guide describes the procedures to install and build RTSDK CSharp, starting with RTSDK version 3.0.0.L1 and higher.

The RTSDK supports open sourcing and uses standards-based, freely-available open source tools to provide additional flexibility and benefit.

Solution and project files target the.NET 6.0 platform and Visual Studio 2022.

**Note:** RTSDK CSharp 3.0.0.L1 is the initial package release for the C# language.

## 2 Requirements and Limitations

- The RTSDK CSharp package uses XUnit in its unit tests.
- The RTSDK CSharp library may be built using the solution file provided with RRG package.

**Note:** RTSDK CSharp build does require access to the Internet to download necessary external dependencies from NuGet.

### 2.1 External Dependencies

- K4os.Compression.LZ4
- Microsoft.IdentityModel.Tokens
- System.IdentityModel.Tokens.Jwt
- XUnit (for unit testing)

Please check README in CSharp directory after obtaining the package (refer to Section 3) for specific versions and a complete list of dependencies.



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# 3 Obtaining the Package

You have the following options in obtaining the RTSDK:

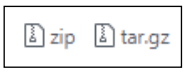
- You can download the package from the Developer Community Portal at the following URL: https://developers.refinitiv.com/en/api-catalog/refinitiv-real-time-opnsrc/refinitiv-real-time-csharp-sdk/downloads

  **Note:** RTSDK CSharp package downloaded from Developer Community Portal contains the necessary build files. Upon build, all external dependencies are expected to be downloaded.

- You can clone the RTSDK from the GitHub repository (at https://github.com/Refinitiv/Real-Time-SDK) by using the following command:

```
git clone https://github.com/Refinitiv/Real-Time-SDK.git
```

  **Tip:** You can also download the source from GitHub via the browser:

  - Browse to the URL https://github.com/Refinitiv/Real-Time-SDK/releases
  - Each release will have the following options listed beneath it's release name: 

  - To download a compressed package, click **zip** or **tar.gzip**.

- You can specify RTSDK libraries are external dependencies download-able from NuGet when building your application. Here are the dependencies to include in your **csproj** file:

```
<dependency>
<ItemGroup>
<PackageReference Include="LSEG.Eta.Ansi" Version="3.0.0" />
</ItemGroup>
</dependency>

<dependency>
<ItemGroup>
<PackageReference Include="LSEG.Eta.Core" Version="3.0.0" />
</ItemGroup>
</dependency>

<dependency>
<ItemGroup>
<PackageReference Include="LSEG.Eta.AnsiPage" Version="3.0.0" />
</ItemGroup>
</dependency>
```

```
<dependency>
<ItemGroup>
<PackageReference Include="LSEG.Eta.ValueAdd" Version="3.0.0" />
</ItemGroup>
</dependency>
```

# 4 Package Directory Changes

The following table illustrates the RTSDK package directory structure.

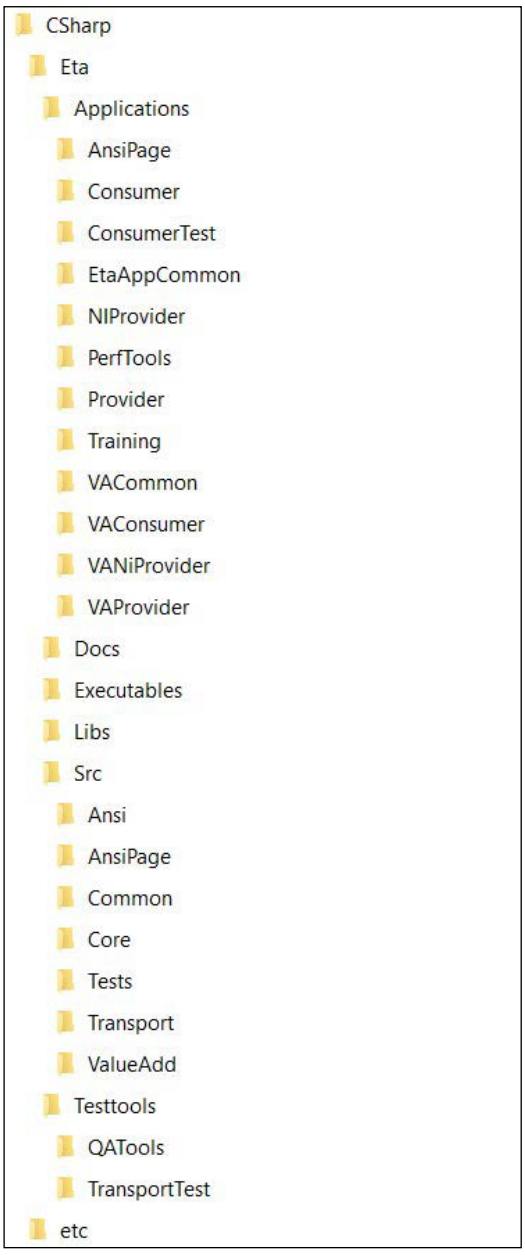
| RTSDK C# 3.0.0.L1 PACKAGE |
| --- |
| The following diagram illustrates the top-level directory structure for the RTSDK C# 3.0.0.L1 release:<br>  <br> |

**Table 1: RTSDK CSharp Package Structure**

# 5 Using the Package

There are two ways to build the sources obtained from GitHub:

- Use the solution file to build libraries and examples: Use appropriate Visual Studio version.
- Use **`dotnet`** command line to build the libraries and/or examples.

## Building Libraries and Examples

1. Use the provided solution (or **sln**) file to build in Visual Studio.
2. Use **`dotnet`** to navigate to **RTSDK/CSharp**.
3. To build all: This command line builds both libraries and examples

```
dotnet build --configuration <Release|Debug> ETA_NET6.0.sln
```

4. To build just libraries:

```
dotnet build --configuration Release Eta/Src/Core/Core_NET6.0.csproj
dotnet build --configuration Release Eta/Src/ValueAdd/ValueAdd_NET6.0.csproj
dotnet build --configuration Release Eta/Src/Ansi/Ansi_NET6.0.csproj
dotnet build --configuration Release Eta/Src/AnsiPage/AnsiPage_NET6.0.csproj
```

5. To build just examples: Each example may be built separately using the individual **csproj** files.
   Sample Command Line:

```
dotnet build --configuration Release Eta/Applications/Consumer/Consumer_NET6.0.csproj
```

**Note:** Building the RTSDK on Linux is the same as building on Windows with the **`dotnet`** tool, however Visual Studio is only for Windows.

## Running Examples

Navigate to the **CSharp** directory in the RTSDK package and issue the appropriate **`dotnet`** command to run various examples using

**`dotnet`** [runtime-options] [path-to-application] [arguments]

- **`dotnet`** Eta/Executables/Consumer/Debug/net6.0/Consumer.dll [arguments]
- **`dotnet`** Eta/Executables/ConsMod1a/Debug/net6.0/ConsMod1a.dll [arguments]

```
dotnet Eta/Applications/VAConsumer/bin/Debug/net6.0/VAConsumer.dll -c localhost:14002
   DIRECT_FEED mp:TRI
```

**Tip:** You can see a list of all possible arguments by passing the command: **`"-?"`**