



# OPC UA SDK for .NET

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Book - The whole Manual as eBook

# Development Guides

[Client Development Guide](#) [Server Development Guide](#) [Use Cases](#) [FAQs](#)

## Download

The OPC UA .NET SDK comes with an **evaluation license which can be used unlimited for each application run for 30 minutes**. If this restriction limits your evaluation options, you can request **another evaluation license** from us **for free**. Just ask our support (via [support@traeger.de](mailto:support@traeger.de)) or let us consult you directly and clarify open questions with our developers!

### OPC UA .NET SDK for Clients – Evaluation Package<sup>1)</sup>

[Download ZIP Archive of Opc.UaFx.Client](#) (Version: 2.41.1.0 – 2024-01-18)

[Download NuGet Package of Opc.UaFx.Client](#) (Version: 2.41.1.0 – 2024-01-18)

### OPC UA .NET SDK for Clients and Servers – Evaluation Package<sup>2)</sup>

[Download ZIP Archive of Opc.UaFx.Advanced](#) (Version: 2.41.1.0 – 2024-01-18)

[Download NuGet Package of Opc.UaFx.Advanced](#) (Version: 2.41.1.0 – 2024-01-18)

### OPC UA .NET SDK for LabVIEW Clients – Evaluation Package<sup>3)</sup>

[Download ZIP Archive of Opc.UaFx.Client.LabView](#) (Version: 1.1.2.0 – 2022-03-28)

### OPC UA .NET SDK for Unity Clients – Evaluation Package<sup>4)</sup>

[Download Unity Package of Opc.UaFx.Client](#) (Version: 2.26.0.0 – 2022-04-13)

### OPC UA .NET SDK for .NET Framework 3.5 Clients and Server – Evaluation Package<sup>5)</sup>

[Download ZIP Archive of Opc.UaFx.Advanced](#) (Version: 2.0.1.1 – 2017-06-07)

[Download NuGet Package of Opc.UaFx.Advanced](#) (Version: 2.0.1.1 – 2017-06-07)

[OPC Watch](#) (Version: 2.41.1.0 – 2024-01-18)

A free and simple but professional OPC UA Client to access OPC UA Servers.

[Version History](#) - The list of improvements in each version

## Preview Download

### OPC UA .NET SDK for Clients – PREV1 for OPC UA v1.04<sup>6)</sup>

[Download ZIP Archive of Opc.UaFx.Client](#) (Version: 3.0.0.0 **preview1210917** – 2021-09-17)

[Download NuGet Package of Opc.UaFx.Client](#) (Version: 3.0.0.0 **preview1210917** – 2021-09-17)

### OPC UA .NET SDK for Clients and Servers – PREV1 for OPC UA v1.04<sup>7)</sup>

[Download ZIP Archive of Opc.UaFx.Advanced](#) (Version: 3.0.0.0 **preview1210917** – 2021-09-17)

[Download NuGet Package of Opc.UaFx.Advanced](#) (Version: 3.0.0.0 **preview1210917** – 2021-09-17)

# Runtime Download

To connect to **OPC Classic** Servers in 64 bit applications and to enumerate (= discover) local OPC Classic Servers, the Core Components of the OPC Foundation must be installed on the target system. You can find these on the [website of the OPC Foundation](#) or here:

## OPC Core Components Redistributables<sup>8)</sup>

📄 [Download ZIP Archive of OPC Core Components](#) (Version: 3.00.107 – 2018-01-30)

📄 [Download ZIP Archive of OPC Core Components](#) (Version: 3.00.108 – 2019-12-20)

# OPC UA Client

[OPC UA Client Development Guide](#)

## Example Code: OPC UA Client

- C#
- VB

```
namespace Client
{
    using System;
    using System.Threading;

    using Opc.UaFx.Client;

    public class Program
    {
        public static void Main()
        {
            using (var client = new OpcClient("opc.tcp://localhost:4840")) {
                client.Connect();

                while (true) {
                    var temperature = client.ReadNode("ns=2;s=Temperature");
                    Console.WriteLine("Current Temperature is {0} °C", temperature);

                    Thread.Sleep(1000);
                }
            }
        }
    }
}
```

```
Imports System
Imports System.Threading

Imports Opc.UaFx.Client

Namespace Client
    Public Class Program
        Public Shared Sub Main()
            Using client = New OpcClient("opc.tcp://localhost:4840")
                client.Connect()

                While True
                    Dim temperature = client.ReadNode("ns=2;s=Temperature")
                    Console.WriteLine("Current Temperature is {0} °C", temperature)

                    Thread.Sleep(1000)
                End While
            End Using
        End Sub
    End Class
End Namespace
```

# OPC UA Server

## OPC UA Server Development Guide

### Example Code: OPC UA Server

- C#
- VB

```
namespace Server
{
    using System.Threading;

    using Opc.UaFx;
    using Opc.UaFx.Server;

    public class Program
    {
        public static void Main()
        {
            var temperatureNode = new OpcDataVariableNode<double>("Temperature", 100.0);

            using (var server = new OpcServer("opc.tcp://localhost:4840/", temperatureNode))
            {
                server.Start();

                while (true) {
                    if (temperatureNode.Value == 110)
                        temperatureNode.Value = 100;
                    else
                        temperatureNode.Value++;

                    temperatureNode.ApplyChanges(server.SystemContext);
                    Thread.Sleep(1000);
                }
            }
        }
    }
}
```

```
Imports System.Threading

Imports Opc.UaFx
Imports Opc.UaFx.Server

Namespace Server
    Public Class Program
        Public Shared Sub Main()
            Dim temperatureNode = New OpcDataVariableNode(Of Double)("Temperature", 100.0)

            Using server = New OpcServer("opc.tcp://localhost:4840/", temperatureNode)
                server.Start()

                While True
                    If (temperatureNode.Value = 110) Then
                        temperatureNode.Value = 100
                    Else
                        temperatureNode.Value += 1
                    End If

                    temperatureNode.ApplyChanges(server.SystemContext)
                    Thread.Sleep(1000)
                End While
            End Using
        End Sub
    End Class
End Namespace
```

- <sup>1)</sup> , <sup>2)</sup> , <sup>3)</sup> , <sup>4)</sup> , <sup>5)</sup> Your “License Code” turns the package into a productive full version.  
<sup>6)</sup> , <sup>7)</sup> Not recommended for productive use.  
<sup>8)</sup> Provided by the OPC Foundation

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