



Manual

TF6000 TC3 ADS Comm Lib

TwinCAT

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BECKHOFF

Inhaltsverzeichnis

1 Foreword	5
1.1 Notes on the documentation.....	5
1.2 Safety instructions	6
2 Overview.....	7

1 Foreword

1.1 Notes on the documentation

This description is only intended for the use of trained specialists in control and automation engineering who are familiar with applicable national standards.

It is essential that the documentation and the following notes and explanations are followed when installing and commissioning the components.

It is the duty of the technical personnel to use the documentation published at the respective time of each installation and commissioning.

The responsible staff must ensure that the application or use of the products described satisfy all the requirements for safety, including all the relevant laws, regulations, guidelines and standards.

Disclaimer

The documentation has been prepared with care. The products described are, however, constantly under development.

We reserve the right to revise and change the documentation at any time and without prior announcement. No claims for the modification of products that have already been supplied may be made on the basis of the data, diagrams and descriptions in this documentation.

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Patent Pending

The EtherCAT Technology is covered, including but not limited to the following patent applications and patents:

EP1590927, EP1789857, EP1456722, EP2137893, DE102015105702
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1.2 Safety instructions

Safety regulations

Please note the following safety instructions and explanations!
Product-specific safety instructions can be found on following pages or in the areas mounting, wiring, commissioning etc.

Exclusion of liability

All the components are supplied in particular hardware and software configurations appropriate for the application. Modifications to hardware or software configurations other than those described in the documentation are not permitted, and nullify the liability of Beckhoff Automation GmbH & Co. KG.

Personnel qualification

This description is only intended for trained specialists in control, automation and drive engineering who are familiar with the applicable national standards.

Description of symbols

In this documentation the following symbols are used with an accompanying safety instruction or note. The safety instructions must be read carefully and followed without fail!

DANGER

Serious risk of injury!

Failure to follow the safety instructions associated with this symbol directly endangers the life and health of persons.

WARNING

Risk of injury!

Failure to follow the safety instructions associated with this symbol endangers the life and health of persons.

CAUTION

Personal injuries!

Failure to follow the safety instructions associated with this symbol can lead to injuries to persons.

NOTE

Damage to the environment or devices

Failure to follow the instructions associated with this symbol can lead to damage to the environment or equipment.



Tip or pointer

This symbol indicates information that contributes to better understanding.

2 Overview

The "TF6000 TC3 ADS Communication Library" is delivered with the TwinCAT installation. It enables you to develop applications of your own (e.g. visualizations, measured value acquisition) that can communicate with TwinCAT devices (e.g. PLC, NC or IO devices).

Alternatively, our free **TC1000 | TC3 ADS** setup provides you with the libraries and the ADS router if you only require ADS functions.

Components of the "TwinCAT ADS API"

Following successful installation the components can be found in the directory "..\TwinCAT\AdsApi".

ADS libraries are available for the following target systems and technologies:

Windows (32-bit/64-bit)

Windows CE

WebServices

Windows (32-bit/64-bit)

Name	Programming language / technology	Operating system	Description	Path	Reference	Samples
TwinCAT.Ads.dll	.NET (C#, VB .Net)	Windows XP, Vista, 7, 8, 10	ADS.NET components for the different versions of the .NET framework (1.0 / 1.1 / 2.0 / 4.0)	Nuget or ..\TwinCAT\AdsApi\. NET	Link	C#
TwinCAT.Ads Reactive Extensions	.NET (C#, VB .Net)	Windows XP, Vista, 7, 8, 10	.Net Framework >= .NET 4.6	Nuget or ..\TwinCAT\AdsApi\. NET		
TcAdsDll	C/C++	Windows XP, Vista, 7, 8, 10	The ADS components (DLL / Header / Library) for creating C/C++ applications	..\TwinCAT\AdsApi\ TcAdsDll	Link	C++
AdsOcx	VB, VBA, COM	Windows XP, Vista, 7, 8, 10	The ADS-OCX is implemented as an ActiveX control element, and is based on Microsoft's COM technology.	..\TwinCAT\AdsApi\ AdsOcx		
AdsToJava	Java	Windows XP, Vista, 7, 8, 10	TcJavaToAds.jar library, which uses the AdsToJava.dll-Wrapper for x86 and x64 systems.	..\TwinCAT\AdsApi\ AdsToJava		
TwinCAT ADS Management (TcXaeMgmt) module	Powershell	Windows 7, 8, 10		..\TwinCAT\AdsApi\ Powershell		

Windows CE

Name	Programming language / technology	Operating system	Description	Path	Reference	Samples
TwinCAT.Ads.dll	.NET Windows CE	Windows CE	ADS.NET components for the different versions of the .NET <i>Compact</i> framework (1.0 / 2.0) for Windows CE	..\TwinCAT \AdsApi\ .NET CompactFramework	Link	
TcAdsDIICe	C/C++	Windows CE	CE-based ADS installations (cab files) for use in CE with the headers and libraries for the different CE platforms	..\TwinCAT \AdsApi \TcAdsDIICe	Link	

WebServices

Name	Programming language / technology	Operating system	Description	Path	Reference	Samples
TcAdsWcf	.NET, HTML, JavaScript	Windows XP, Vista, 7, 8	Windows Communications Foundation (WCF) - web service that is part of the .NET Framework.	..\TwinCAT \AdsApi \TcAdsWcf	Link	C#
TcAdsWebService	HTML, JavaScript	Windows XP, Vista, 7, 8, CE	Extension for the Internet Information Server (IIS)	..\TwinCAT \AdsApi \TcAdsWebService	Link	JavaScript

Further information:

[ADS introduction](#)

[ADS specification](#)