

CANopen

Communication Device Type Manager (DTM) User Guide

05/2012

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All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

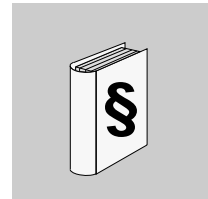
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Safety Information



Important Information

NOTICE

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a Danger safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **will result in death or serious injury.**

WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **can result in death or serious injury.**

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **can result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

PLEASE NOTE

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

BEFORE YOU BEGIN

Do not use this product on machinery lacking effective point-of-operation guarding. Lack of effective point-of-operation guarding on a machine can result in serious injury to the operator of that machine.

⚠ WARNING

UNGUARDED MACHINERY CAN CAUSE SERIOUS INJURY

- Do not use this software and related automation equipment on equipment which does not have point-of-operation protection.
- Do not reach into machinery during operation.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

This automation equipment and related software is used to control a variety of industrial processes. The type or model of automation equipment suitable for each application will vary depending on factors such as the control function required, degree of protection required, production methods, unusual conditions, government regulations, etc. In some applications, more than one processor may be required, as when backup redundancy is needed.

Only the user can be aware of all the conditions and factors present during setup, operation, and maintenance of the machine; therefore, only the user can determine the automation equipment and the related safeties and interlocks which can be properly used. When selecting automation and control equipment and related software for a particular application, the user should refer to the applicable local and national standards and regulations. The National Safety Council's Accident Prevention Manual (nationally recognized in the United States of America) also provides much useful information.

In some applications, such as packaging machinery, additional operator protection such as point-of-operation guarding must be provided. This is necessary if the operator's hands and other parts of the body are free to enter the pinch points or other hazardous areas and serious injury can occur. Software products alone cannot protect an operator from injury. For this reason the software cannot be substituted for or take the place of point-of-operation protection.

Ensure that appropriate safeties and mechanical/electrical interlocks related to point-of-operation protection have been installed and are operational before placing the equipment into service. All interlocks and safeties related to point-of-operation protection must be coordinated with the related automation equipment and software programming.

NOTE: Coordination of safeties and mechanical/electrical interlocks for point-of-operation protection is outside the scope of the Function Block Library, System User Guide, or other implementation referenced in this documentation.

START-UP AND TEST

Before using electrical control and automation equipment for regular operation after installation, the system should be given a start-up test by qualified personnel to verify correct operation of the equipment. It is important that arrangements for such a check be made and that enough time is allowed to perform complete and satisfactory testing.

CAUTION

EQUIPMENT OPERATION HAZARD

- Verify that all installation and set up procedures have been completed.
- Before operational tests are performed, remove all blocks or other temporary holding means used for shipment from all component devices.
- Remove tools, meters, and debris from equipment.

Failure to follow these instructions can result in injury or equipment damage.

Follow all start-up tests recommended in the equipment documentation. Store all equipment documentation for future references.

Software testing must be done in both simulated and real environments.

Verify that the completed system is free from all short circuits and grounds, except those grounds installed according to local regulations (according to the National Electrical Code in the U.S.A, for instance). If high-potential voltage testing is necessary, follow recommendations in equipment documentation to prevent accidental equipment damage.

Before energizing equipment:

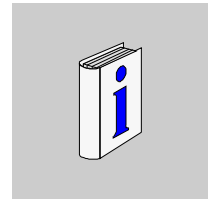
- Remove tools, meters, and debris from equipment.
- Close the equipment enclosure door.
- Remove ground from incoming power lines.
- Perform all start-up tests recommended by the manufacturer.

OPERATION AND ADJUSTMENTS

The following precautions are from the NEMA Standards Publication ICS 7.1-1995 (English version prevails):

- Regardless of the care exercised in the design and manufacture of equipment or in the selection and ratings of components, there are hazards that can be encountered if such equipment is improperly operated.
- It is sometimes possible to misadjust the equipment and thus produce unsatisfactory or unsafe operation. Always use the manufacturer's instructions as a guide for functional adjustments. Personnel who have access to these adjustments should be familiar with the equipment manufacturer's instructions and the machinery used with the electrical equipment.
- Only those operational adjustments actually required by the operator should be accessible to the operator. Access to other controls should be restricted to prevent unauthorized changes in operating characteristics.

About the Book



At a Glance

Document Scope

This user guide is intended to describe the use of the Communication Device Type Manager for CANopen.

Validity Note

This documentation is valid for the CANopen Comm DTM 1.1.

Product Related Information

WARNING

LOSS OF CONTROL

- The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and overtravel stop, power outage and restart.
- Separate or redundant control paths must be provided for critical control functions.
- System control paths may include communication links. Consideration must be given to the implications of unanticipated transmission delays or failures of the link.
- Observe all accident prevention regulations and local safety guidelines.¹
- Each implementation of this equipment must be individually and thoroughly tested for proper operation before being placed into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

¹ For additional information, refer to NEMA ICS 1.1 (latest edition), "Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control" and to NEMA ICS 7.1 (latest edition), "Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable-Speed Drive Systems" or their equivalent governing your particular location.

 WARNING

INVALID DEVICE STATE INFORMATION

Do not use the CANopen Comm DTM for time critical controlling or monitoring tasks because the transferred data may not reflect the actual device state. The FDT technology is not designed for this purpose.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

User Comments

We welcome your comments about this document. You can reach us by e-mail at techcomm@schneider-electric.com.

Hardware and Software Requirements

1

Introduction

The CANopen Comm DTM is designed to run on various Windows-based operating systems. This chapter describes the computer system requirements and provides instructions for installing and removing the software.

What Is in This Chapter?

This chapter contains the following topics:

Topic	Page
System Requirements	12
Compatibility	13
Installing and Removing the CANopen Comm DTM	14

System Requirements

Introduction

This section lists the hardware and software requirements of the CANopen Comm DTM.

Hardware Requirements

Your PC needs to meet the following hardware requirements to run the CANopen Comm DTM:

Hardware Component	Minimum	Recommended
Computer	Pentium 4 or equivalent	Core 2 Duo
RAM	1 GB	2 GB
System Drive: Free Hard Drive Space	30 MB	
Installation Drive: Free Hard Drive Space	30 MB	
Swap File	256 MB	512 MB
Monitor Display	256 color SVGA 800 x 600 resolution	true color XGA 1024 x 768 resolution

Software Requirements

The CANopen Comm DTM runs on the following operating systems:

Operating System	Edition / Service Pack	Special Considerations
Windows XP Professional	128 MB / SP3	You need administrator access rights to install the CANopen Comm DTM.
Windows 7 32-Bit	–	
Windows 7 64-Bit	–	
Windows Vista 32-Bit	SP2	
Windows Vista 64-Bit	SP2	

The CANopen Comm DTM requires the following software installed on the PC:

Software	Edition	Special Considerations
Microsoft.NET Framework	V2.0	–
FDT Frame Application	FDT 1.2.1	The CANopen Comm DTM requires an FDT Frame Application compliant with the FDT standard. The FDT Frame Application must support the Microsoft.NET Framework 2.0.

Compatibility

FDT Compatibility

The CANopen Comm DTM is compliant with the FDT Specification V1.2.1. It is based on the Annex CANopen V1.0.

For further information on FDT, see the website www.fdtgroup.org.

CANopen Compatibility

The CANopen Comm DTM is compliant with the CiA Draft Standard Proposal 301.

Installing and Removing the CANopen Comm DTM

General Information

You need administrator access rights to your computer to install or remove the CANopen Comm DTM.

Installation

To install the CANopen Comm DTM on your computer, double-click the *setup.exe* file and follow the instructions given on screen.

Removal

To remove the CANopen Comm DTM from your computer, choose **Start** → **Settings** → **Control Panel** → **Add / Remove Programs**.

Functional Description

2

What Is in This Chapter?

This chapter contains the following sections:

Section	Topic	Page
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2.2	Hardware Interfaces	18
2.3	Communication Models	23

2.1 Functional Description

Functional Description

Overview

The CANopen Comm DTM allows you to establish a CANopen connection between the following parties:

- a computer running the CANopen Comm DTM in a standard FDT Frame Application (compliant with the FDT Specification V1.2.1)
- any device which is delivered with a Device DTM (Device Type Manager) and which supports the CANopen protocol

Types of CANopen Connections

You can establish the CANopen connection in different ways:

- Using the USB-to-CAN compact interface by IXXAT or the PCAN-USB interface by PEAK-System to establish a physical connection directly to a CANopen device (*see page 23*) or to a CANopen bus, respectively to those CANopen slave devices that are connected to this bus (*see page 24*).
- Establishing an Ethernet connection to a gateway device (for example an Advantys island or an M340 controller) and, thus, to those CANopen slave devices that are connected to this gateway device (*see page 25*).

In combination with the CANopen Comm DTM 1.1 the IXXAT USB-to-CAN compact interface or the PEAK-System PCAN-USB interface acts as a CANopen master (for example by using SDO services). Based on the CANopen standard it is not allowed that 2 CANopen masters run on the same bus at the same time.

The primary CANopen master can be, for example, a running controller or a running HMI device.

WARNING

UNINTENDED EQUIPMENT OPERATION

If a communication shall be established by the CANopen Comm DTM proceed as follows:

- Make sure that no master device is connected to the bus and is in running mode.
- Disconnect all CANopen master devices.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Communication Functions Provided by the CANopen Comm DTM

The CANopen Comm DTM provides the following functions:

- configuring communication parameters (USB CAN interface, transmission rate, remote TCP/IP address)
- logfile creation
- configuration of the scan procedure

Print Function

The CANopen Comm DTM supports the print function according to the FDT Specification V1.2.1.

This means that the following information is printed when the print function is executed for the CANopen Comm DTM within the FDT Frame Application:

- the current values of the communication parameters (transmission rate, timeout etc.)
- DTMs connected to the CANopen Comm DTM including the information that is available in the address table

2.2 Hardware Interfaces

Overview

To establish a physical connection between the computer running the CANopen Comm DTM and a CANopen device or a CANopen bus, the USB-to-CAN compact interface provided by IXXAT or the PCAN-USB interface by PEAK-System is required.

What Is in This Section?

This section contains the following topics:

Topic	Page
IXXAT USB-to-CAN Compact Interface	19
PEAK-System PCAN-USB Interface	21

IXXAT USB-to-CAN Compact Interface

Introduction

This section only lists the technical data of this interface. For further information refer to the IXXAT website www.ixxat.com/index_en.html.

The following illustration shows an IXXAT USB-to-CAN compact interface:



Master - Slave Configuration

In combination with the CANopen Comm DTM 1.1, the IXXAT USB-to-CAN compact interface will act as CANopen master (for example, by using SDO services). Due to the CANopen standard it is not allowed to run 2 CANopen masters on the same bus at the same time. For this reason, it is required that no master device is connected to the bus in running mode, if a communication shall be established by the CANopen Comm DTM.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

Disconnect all CANopen master devices before a communication will be established with the CANopen Comm DTM via the USB-to-CAN compact interface.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Technical Data

Technical data of the IXXAT USB-to-CAN compact interface

Item	Specification
PC Bus Interface	USB 2.0 (full speed)
PC Address Range	plug & play
Interrupts	plug & play
Microcontroller	Infineon C161U, 24 MHz
Memory Extension	128 kbyte RAM, 512 kbyte Flash
CAN Controller	Philips SJA 1000, 10 kBit/s...1 MBit/s
CAN Bus Interface	ISO 11898-2 Sub D9 connector or RJ45 connector according to DS 102, galvanically decoupled as an option
Power Supply	provided by USB port, 250 mA typ.
Temperature Range	0...+50° C (+32...+122° F)
Certification	CE, FCC, CSA/UL
Size	80 x 45 x 20 mm (3.15 x 1.77 x 0.79 in.)
Firmware Version	1.5

Driver

NOTE: In order to use the IXXAT USB-to-CAN compact interface, you must install the respective driver beforehand. The CANopen Comm DTM was tested with IXXAT USB-to-CAN compact driver version V3.4.1.3080.

PEAK-System PCAN-USB Interface

Introduction

This section only lists the technical data of this interface. For further information refer to the PEAK-System website www.peak-system.com.

The following illustration shows a PEAK-System PCAN-USB interface:



Master - Slave Configuration

In combination with the CANopen Comm DTM 1.1, the PEAK-System PCAN-USB interface will act as CANopen master (for example, by using SDO services). Due to the CANopen standard it is not allowed to run 2 CANopen masters on the same bus at the same time. For this reason, it is required that no master device is connected to the bus in running mode, if a communication shall be established by the CANopen Comm DTM.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

Disconnect all CANopen master devices before a communication will be established with the CANopen Comm DTM via the PCAN-USB interface.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Technical Data

Technical data of the PEAK-System PCAN-USB interface

Item	Specification
PC Bus Interface	USB 1.1, compatible with USB 2.0
PC Address Range	plug & play
Interrupts	plug & play
CAN Controller	NXPSJA1000 CAN controller, 16 MHz clock frequency, bit rates up to 1 Mbit/s
CAN Bus Interface	CAN bus connection via D-Sub, 9-pin (in accordance with CiA® 102), galvanically decoupled as an option
Power Supply	USB voltage supply
Temperature Range	-40...+85° C (-40...+185° F)

Driver

NOTE: In order to use the PEAK-System PCAN-USB interface you must install the respective driver beforehand. The CANopen Comm DTM was tested with PEAK-System PCAN-USB package version V3.8.2.10146.

2.3 Communication Models

Communication Models

Introduction

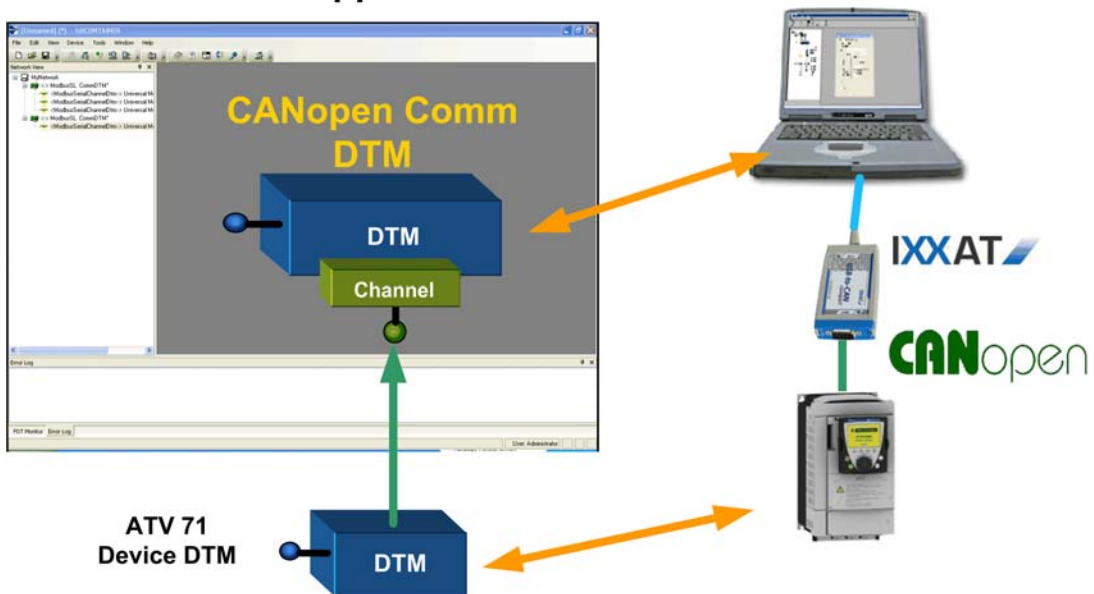
This chapter describes the different communication models supported by the CANopen Comm DTM.

Direct Connection

The CANopen Comm DTM can be used to establish a direct CANopen connection between the PC and the CANopen slave device. To establish this physical connection, a USB CAN interface is required. It acts as CANopen master.

The direct connection scenario is displayed in the figure below:

FDT Frame Application

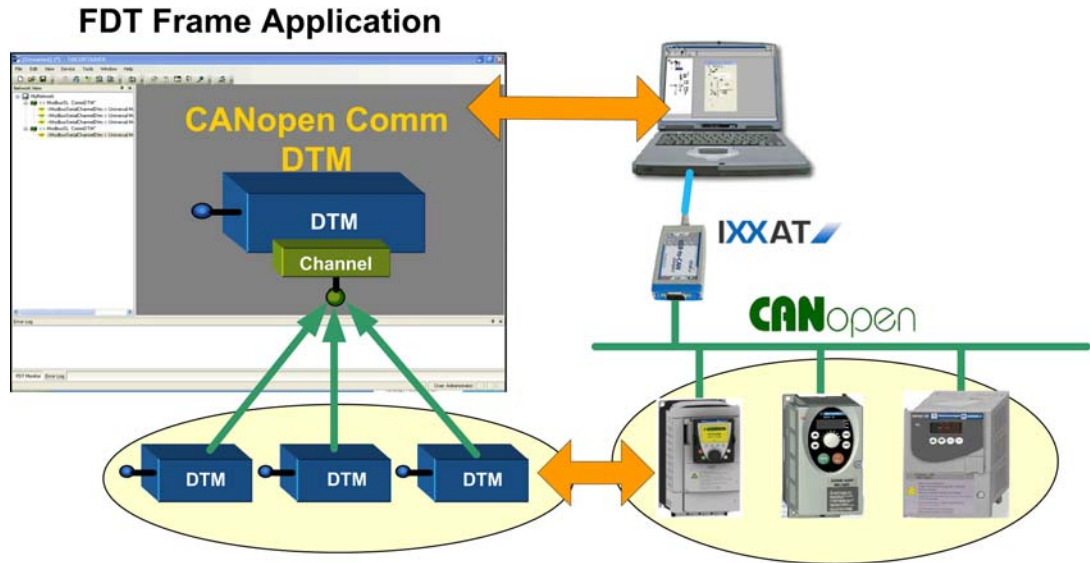


Bus Connection

The CANopen Comm DTM can be used to establish a CANopen connection between the PC and a CANopen bus. Connections can then be established to each CANopen slave device connected to this bus.

In order to establish the connection between the PC and the CANopen bus, a USB CAN interface is required. It acts as CANopen master.

The bus connection scenario is displayed in the figure below:

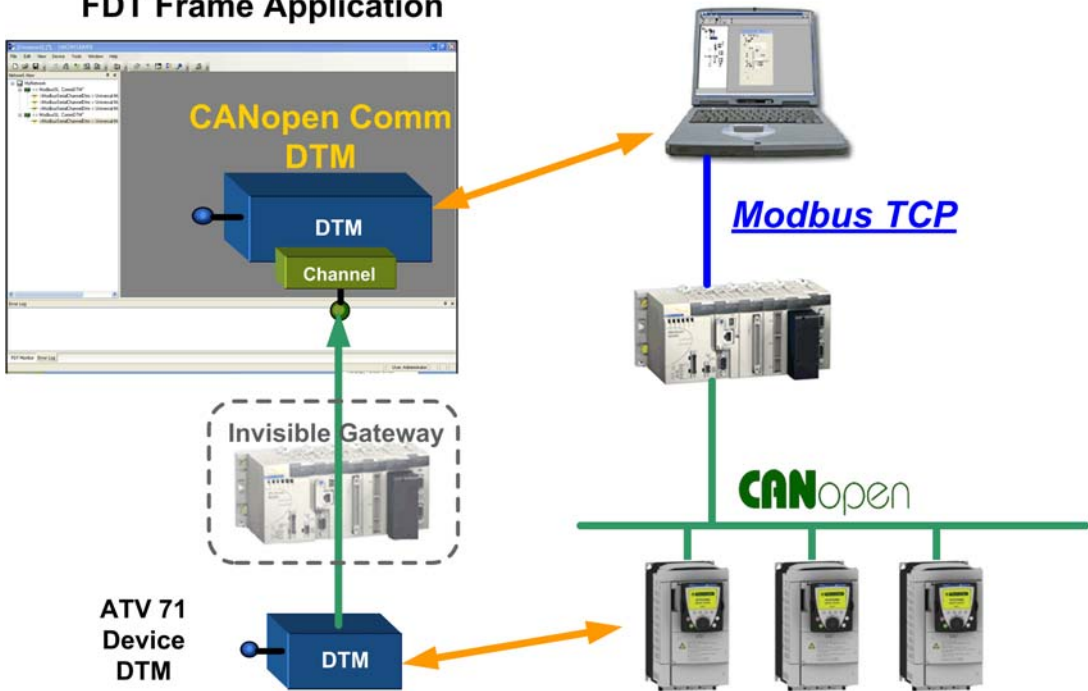


Remote Gateway Connection

The CANopen Comm DTM can be used to establish a connection over Ethernet / Modbus TCP to CANopen slave devices via a gateway device. The gateway devices (for example, an Advantys island or an M340 controller) act as a gateway between Ethernet (especially Modbus TCP) and CANopen.

The remote gateway connection scenario is displayed in the figure below:

FDT Frame Application



Configuration



3

What Is in This Chapter?

This chapter contains the following topics:

Topic	Page
Configuration Tab	28
USB-to-CAN Configuration	30
Remote Gateway Configuration	32
Address Table	34
Scan Configuration	37
Runtime Tab	39
Logging Tab	41

Configuration Tab

Introduction

Use the **Configuration** tab of the CANopen Comm DTM to select the connection type and to configure general communication parameters.

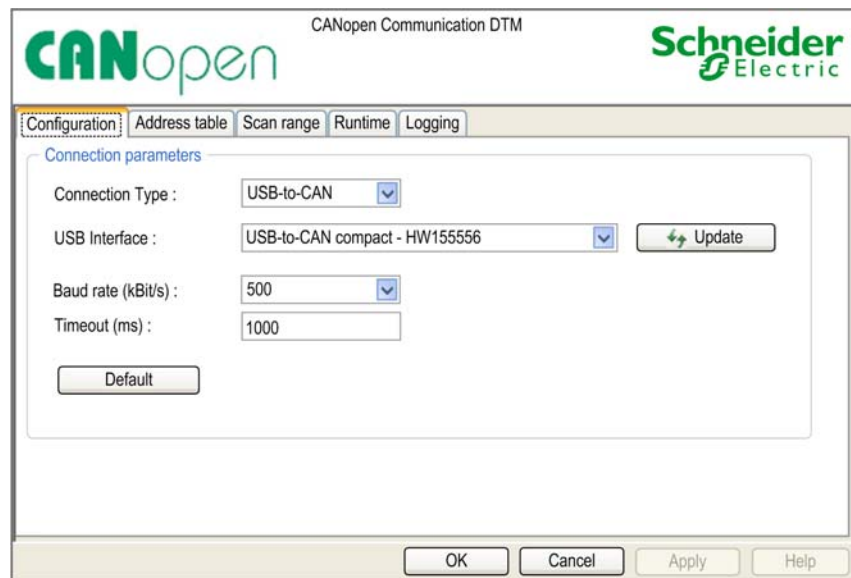
NOTE: Disconnect the CANopen Comm DTM before modifying the communication parameters.

Configuration Tab

You have several possibilities to access the **Configuration** tab of the CANopen Comm DTM:

- In the network view of your FDT Frame Application, double-click the CANopen Comm DTM icon.
- In the network view of your FDT Frame Application, right-click the CANopen Comm DTM icon and select the **Configuration** command.

The following figure shows the **Configuration** tab of the CANopen Comm DTM dialog box with **USB-to-CAN** selected as **Connection Type**:



Connection Type

The **Connection Type** list box allows you to select the type of CANopen connection that will be established with the CANopen Comm DTM.

The following **Connection Types** are available:

Connection Type	Description
USB-to-CAN	Select this value to establish a direct CANopen connection to a CANopen device (<i>see page 23</i>) or a CANopen bus (<i>see page 24</i>). This connection type is only available for selection if a USB CAN interface is connected and the respective driver is installed on your PC.
Remote gateway	Select this value to establish a remote connection via Ethernet by using a gateway device (<i>see page 25</i>).

The settings to be made for the different connection types are described in the following chapters of this document.

Buttons

The following table contains a description of the general configuration buttons that are included in the **Configuration** tab, independent of the selected **Connection Type**:

Button	Description
OK	The parameter settings will be saved and the CANopen Comm DTM dialog box will be closed. The new parameter settings will be applied at the next connection.
Cancel	The parameter modifications are canceled and the CANopen Comm DTM dialog box will be closed without saving. The original values will be applied at the next connection.
Apply	The parameter settings will be saved but the CANopen Comm DTM dialog box remains open. The new parameter settings will be applied at the next connection.
Help	The context sensitive online help opens.
Default	The parameters are reset to their default values.

USB-to-CAN Configuration

Overview

This chapter describes the parameters of the CANopen Comm DTM for direct connections to a CANopen device or a CANopen bus by using a USB CAN interface.

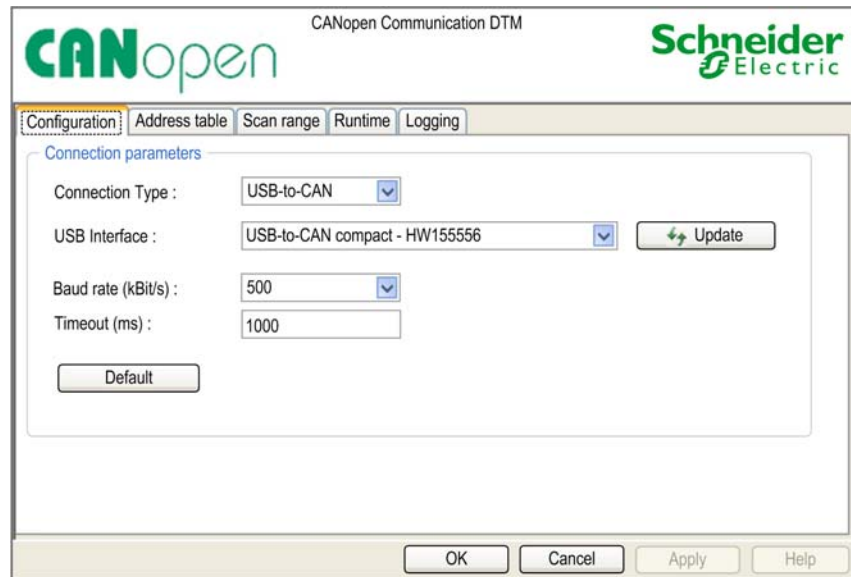
Prerequisites

For this connection type, the following prerequisites must be fulfilled:

- a USB CAN interface is connected to your PC
- the driver of the USB CAN interface is installed on your PC
- the parameter **Connection Type** is set to the value **USB-to-CAN**

Configuration Tab for Direct Connections

The figure below shows the **Configuration** tab with the parameter **Connection Type** set to **USB-to-CAN**:



Parameters for Direct Connections

The following table contains a description of the communication parameters for a direct connection:

Parameter	Description	Default Value
Connection Type	For direct connections, select the value USB-to-CAN .	This parameter is by default set to the value USB-to-CAN if a USB CAN interface is connected to your PC and the respective driver is installed. Otherwise the value Remote gateway is selected by default.
USB Interface	This list includes those USB CAN interfaces that are connected to your PC, differentiated by the device ID. This device ID is indicated on the label attached to the device.	–
Baud rate (kBit/s)	Select the CANopen network transmission rate suitable for the connected slave device(s) from the list (10, 20, 50, 125, 250, 500, 800, 1000 kBit/s).	500 kBit/s
Timeout (ms)	Select a value for the maximum time the CANopen Comm DTM should wait for a response from the CANopen slave device.	1000 ms

Button for Direct Connections

The **Configuration** tab for direct connections includes the **Update** button. Click this button to update the **USB Interface** list with the currently connected USB CAN interfaces.

Remote Gateway Configuration

Overview

This chapter describes the parameters of the CANopen Comm DTM for remote connections via Ethernet by using a gateway device (*see page 25*).

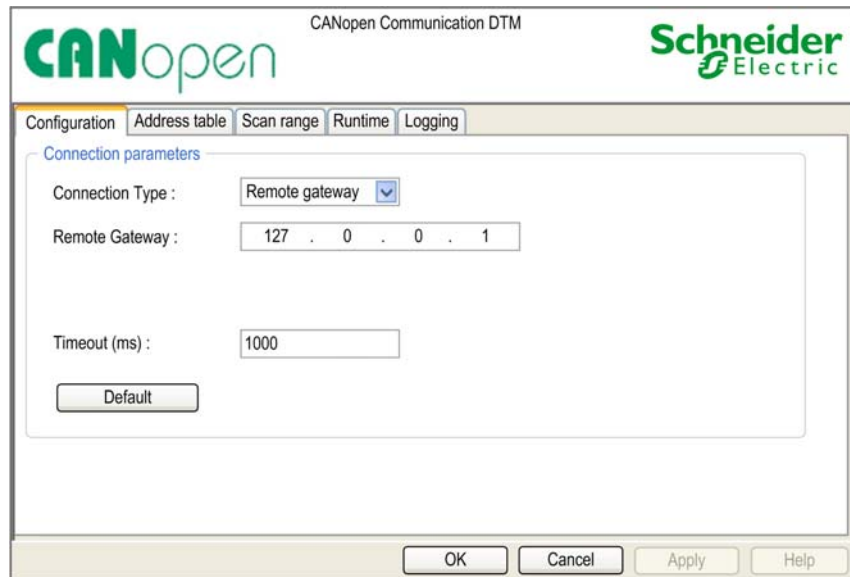
Gateway Devices

The CANopen Comm DTM has been tested successfully with the following gateway devices:

Gateway Device	Firmware Version
STB NIP2311	V3.02(2)
M340	V2.4

Configuration Tab for Remote Connections

The figure below shows the **Configuration** tab with the parameter **Connection Type** set to **Remote gateway**:



Parameters for Remote Connections

The following table contains a description of the communication parameters for a remote connection:

Parameter	Description	Default Value
Connection Type	For remote connections, select the value Remote gateway .	This parameter is by default set to the value Remote gateway if no USB CAN interface is connected to your PC.
Remote Gateway	Enter the IP address of the device that is used as gateway device (for example, an Advantys island or an M340 controller).	127.0.0.1
Timeout (ms)	Select a value for the maximum time the CANopen Comm DTM should wait for a response from the CANopen slave device.	1000 ms

Address Table

Overview

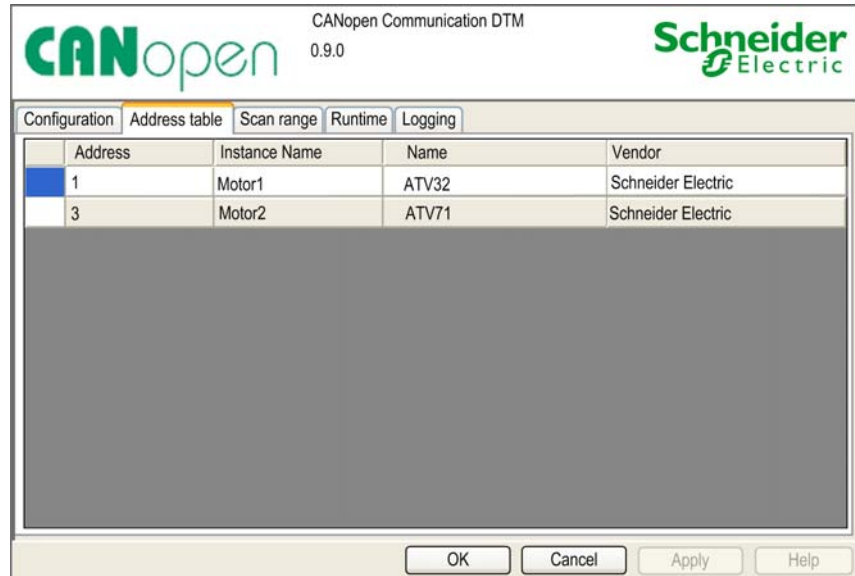
This chapter describes the **Address table** tab of the CANopen Comm DTM that is used to modify the slave addresses of the connected Device DTMs.

Address Table

Open the **Address table** tab as follows:

- In the network view of your FDT Frame Application, double-click the CANopen Comm DTM icon and select the **Address table** tab,
- or right-click the CANopen Comm DTM icon in the network view of your FDT Frame Application, execute the **Configuration** command, and select the **Address table** tab.

The following figure shows the CANopen Comm DTM **Address table** tab:



The CANopen Comm DTM **Address table** tab provides the following information:

Parameter	Description
Address	target address of the hardware device that shall be configured with the connected DTM
Instance Name	name of the DTM instance
Name	name of the DTM
Vendor	name of the DTM's vendor

Modifying Slave Addresses

To modify a slave address, proceed as follows:


Step	Action
1	Click in the Address field of the respective slave device to make it editable.
2	Enter the new address number you want to assign to this slave device.
3	Click the OK or Apply button to save your changes and assign the modified addresses to the Device DTMs.

Buttons

The following table contains a description of the buttons that are included in the **Address table** tab:

Button	Description
OK	The modified address(es) will be saved and assigned to the Device DTMs. The CANopen Comm DTM dialog box will be closed.
Cancel	The address modifications are canceled and the CANopen Comm DTM dialog box will be closed without saving.
Apply	The modified address(es) will be saved and assigned to the Device DTMs but the CANopen Comm DTM dialog box remains open.
Help	The context sensitive online help opens.

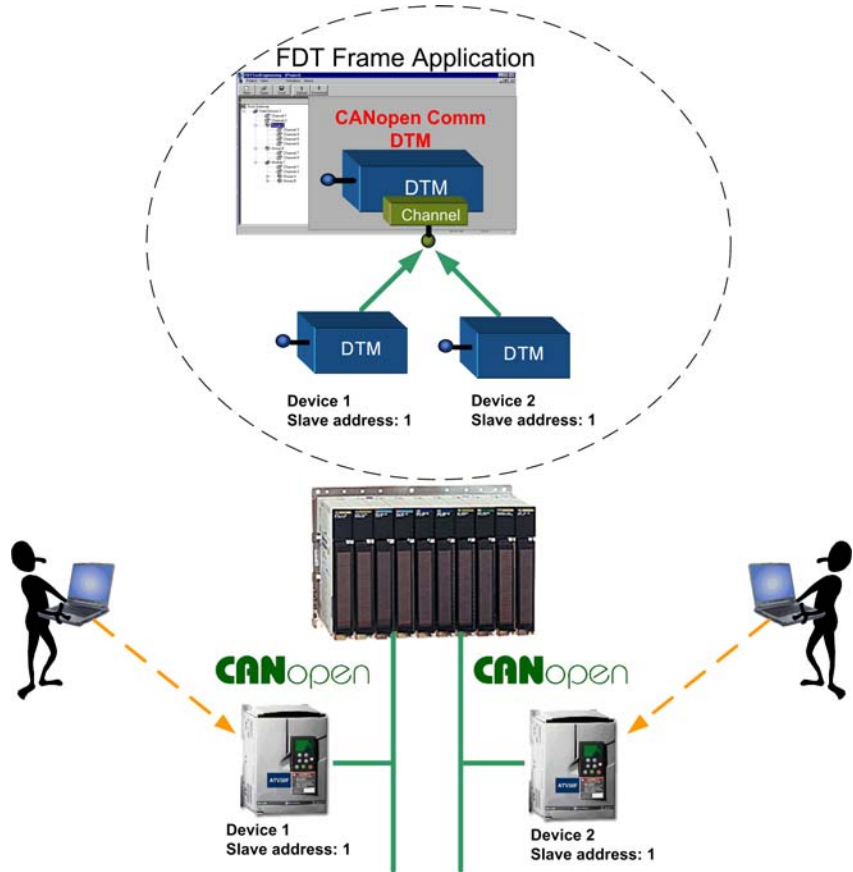
In most FDT Frame Applications it is possible to maintain the configuration of several devices in parallel.

 WARNING
<p>UNINTENDED EQUIPMENT OPERATION</p> <ul style="list-style-type: none"> • During the address assignment in the address table of the CANopen Comm DTM, you must assure that you assign the correct address of the intended target device. • Before executing any commissioning tasks with a device DTM, perform operational tests to make sure that you are connected to the intended device. <p>Failure to follow these instructions can result in death, serious injury, or equipment damage.</p>

Using the Same Slave Address for Different Device DTMs

It is possible to configure the same slave address for different Device DTMs that are connected to the same instance of the CANopen Comm DTM. This way you can manage direct connections to several devices that are physically located on different networks in one project. But, of course, you cannot establish simultaneous connections to devices with the same slave address.

The figure below illustrates the scenario of assigning the same slave address to different Device DTMs:



Scan Configuration

Introduction

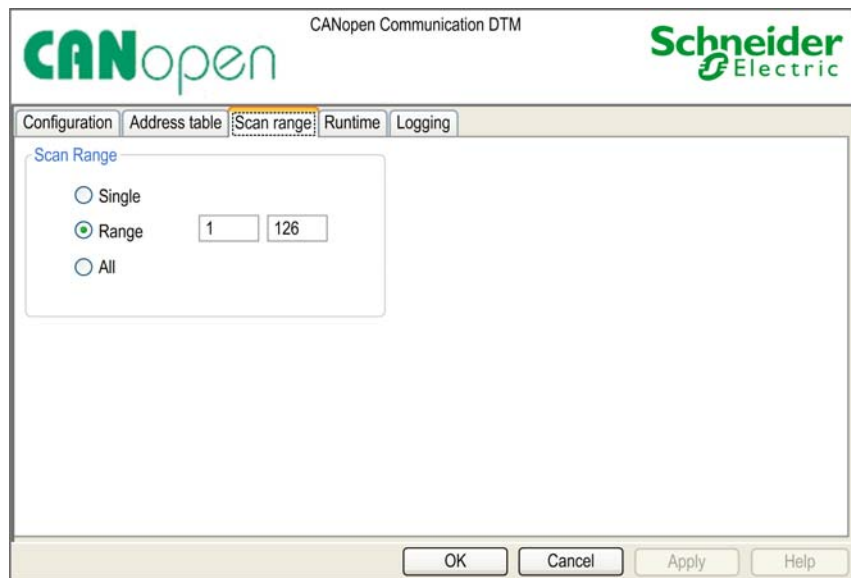
The CANopen Comm DTM allows you to specify the range of the scanned CANopen slave addresses. The scan function is compliant with the FDT Specification V1.2.1. This chapter describes the parameters provided by the **Scan range** tab.

Scan Range Tab

Open the **Scan range** tab as follows:

- In the network view of your FDT Frame Application, double-click the CANopen Comm DTM icon and select the **Scan range** tab
- or right-click the CANopen Comm DTM icon in the network view of your FDT Frame Application, execute the **Configuration** command, and select the **Scan range** tab.

The following figure shows the CANopen Comm DTM **Scan range** tab:



Scan Parameters

The following table contains a description of the scan parameters:

Scan Range	Description	Default Value
Single	Enter one slave address to scan for one specific slave device.	1
Range	Enter a range of slave addresses that will be scanned for slave devices.	1-126
All	The complete address range (1-126) is scanned for slave devices.	–

Buttons

The following table contains a description of the buttons that are included in the **Scan range** tab:

Button	Description
OK	The modifications will be saved and applied to the next scan procedure. The CANopen Comm DTM dialog box will be closed.
Cancel	The modifications are canceled and the CANopen Comm DTM dialog box will be closed without saving.
Apply	The modifications will be saved and applied to the next scan procedure but the CANopen Comm DTM dialog box remains open.
Help	The context sensitive online help opens.

Runtime Tab

Overview

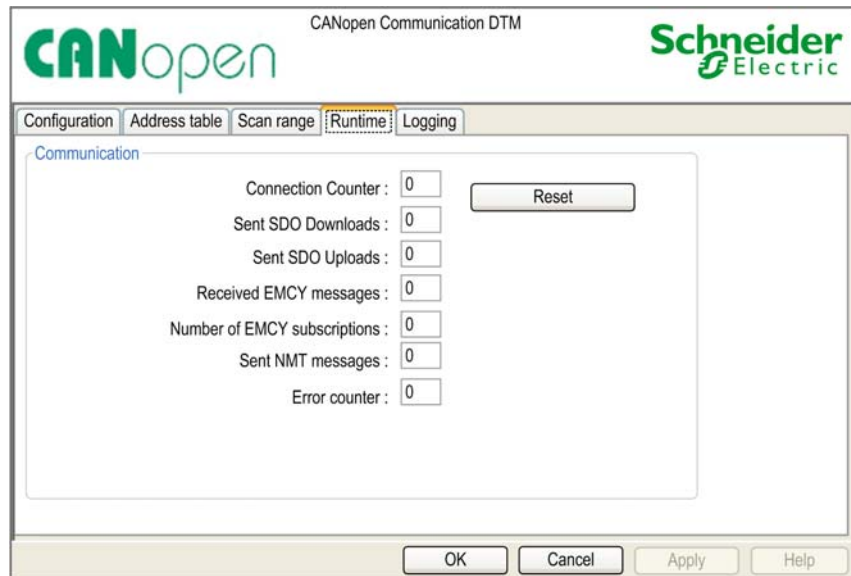
This chapter describes the **Runtime** tab of the CANopen Comm DTM that provides different types of diagnostic information on the established connections.

Runtime Tab

Open the **Runtime** tab as follows:

- In the network view of your FDT Frame Application, double-click the CANopen Comm DTM icon and select the **Runtime** tab,
- or right-click the CANopen Comm DTM icon in the network view of your FDT Frame Application, execute the **Configuration** command, and select the **Runtime** tab.

The following figure shows the CANopen Comm DTM **Runtime** tab:



Runtime Information

The **Runtime** tab indicates the following runtime information:

Information	Description
Connection Counter	number of active connections to the CANopen Comm DTM
Sent SDO Downloads	number of SDO (Service Data Object) messages sent by the CANopen Comm DTM without detecting an error
Sent SDO Uploads	number of SDO messages received by the CANopen Comm DTM without detecting an error
Received EMCY messages	number of EMCY (Emergency) messages received by the CANopen Comm DTM without detecting an error
Number of EMCY subscriptions	number of EMCY subscriptions added to the CANopen Comm DTM without detecting an error
Sent NMT messages	number of NMT (Network Management) messages sent by the CANopen Comm DTM without detecting an error
Error counter	number of errors detected by the CANopen Comm DTM

Buttons

The following table contains a description of the buttons that are included in the **Runtime** tab:

Button	Description
Reset	Resets all runtime information displayed in this tab to 0.
OK	The parameter settings will be saved and the CANopen Comm DTM dialog box will be closed. The new parameter settings will be applied at the next connection.
Cancel	The parameter modifications are canceled and the CANopen Comm DTM dialog box will be closed without saving. The original values will be applied at the next connection.
Apply	The parameter settings will be saved but the CANopen Comm DTM dialog box remains open. The new parameter settings will be applied at the next connection.
Help	The context sensitive online help opens.

Logging Tab

Overview

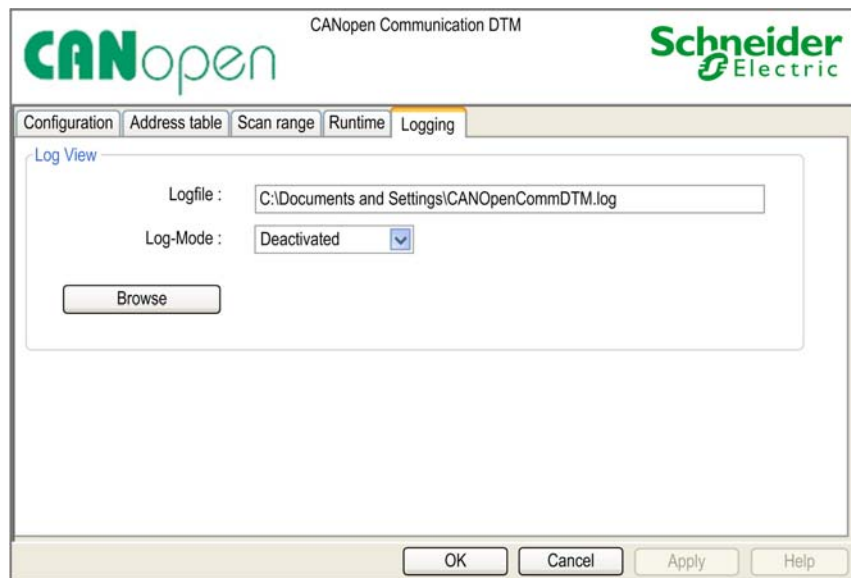
This chapter describes the **Logging** tab of the CANopen Comm DTM that allows you to enable logfile creation and to select the type of information that will be included in the logfile.

Logging Tab

Open the **Logging** tab as follows:

- In the network view of your FDT Frame Application, double-click the CANopen Comm DTM icon and select the **Logging** tab,
- or right-click the CANopen Comm DTM icon in the network view of your FDT Frame Application, execute the **Configuration** command, and select the **Logging** tab.

The following figure shows the CANopen Comm DTM **Logging** tab:



Logging Parameters

The following table contains a description of the logging parameters:

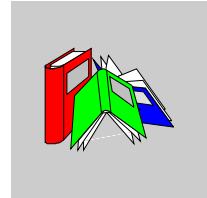
Parameter	Description	Default Value
Logfile	Enter a path to a folder where the logfile will be stored.	<i>C:\Documents and Settings\<username>\my documents\canopencommdtm.log<="" i=""></username>\my></i>
Log-Mode	Specify if a logfile will be created and the type of information it shall contain. <ul style="list-style-type: none"> ● Deactivated: no logfile will be created ● Error logging: information about detected errors (detected timeout errors, CANopen exceptions) will be written into the logfile ● All logging: information about detected errors as well as information about the applied CANopen service will be written into the logfile 	Deactivated

Buttons

The following table contains a description of the buttons that are included in the **Logging** tab:

Button	Description
Browse	Opens a file manager to specify the logfile path.
OK	The parameter settings will be saved and the CANopen Comm DTM dialog box will be closed. The new parameter settings will be applied at the next connection.
Cancel	The parameter modifications are canceled and the CANopen Comm DTM dialog box will be closed without saving. The original values will be applied at the next connection.
Apply	The parameter settings will be saved but the CANopen Comm DTM dialog box remains open. The new parameter settings will be applied at the next connection.
Help	The context sensitive online help opens.

Glossary



C

Communication DTM

As defined in the FDT specification, the Communication DTM represents a communication device that provides communication capabilities via communication channels (in the sense of FDT) to the connected DTMs, but does not require any communication capabilities from a parent DTM.

Based on this definition, the Communication DTM is the DTM type that provides the communication link to a hardware interface on the PC (for example, a COM port) which can be used to access the connected bus and to exchange data between the Device DTMs and their associated hardware devices.

D

Device DTM

A Device DTM enables to perform commissioning, configuration and engineering tasks for a specific device type. The Device DTM represents a normal field device that uses a communication channel to communicate with the related field device.

DTM

A DTM (Device Type Manager) is a kind of device driver, which is provided by the field device vendor. The DTM contains the device specific information and provides a graphical user interface. The DTM can be used to perform monitoring tasks and configuration tasks on the specific device. A DTM is no standalone application. It always requires an FDT Frame Application to run.

E

EMCY

Emergency messages

F

FDT

The FDT (Field Device Tool) technology standardizes the communication interface between field devices and systems (www.fdtgroup.org).

G

gateway

a program or hardware that passes data between networks

N

NMT

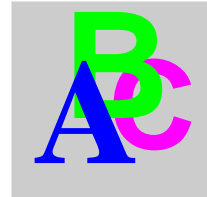
Network Management

S

SDO

Service Data Object

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