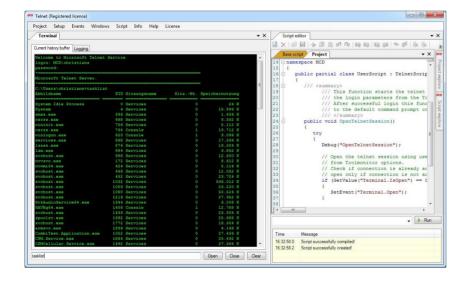
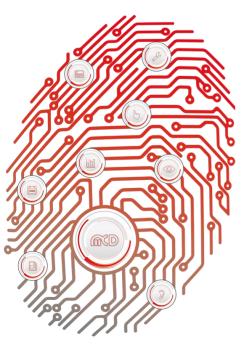
# Manual

# **Toolmonitor Telnet**









Softline — Modline — Online —

Application -

#### MCD Elektronik GmbH

Template version: 5.4 / 2018-04-09 V1.2 2018-08-24CS (TS)

# Table of Contents

1.	G	ENERAL	.3
2.	IN	ISTALLATION OF SOFTWARE	.4
	2.1.	REQUIREMENTS	.4
	2.2.	LICENSE	.4
	2.3.	Register COM Server	.6
	2.4.	STARTING OF THE INSTALLED SOFTWARE	.6
3.	BI	RIEF INTRODUCTION TO OPERATION	.7
4.	so	OFTWARE MANUAL	.8
	4.1.	GENERAL	.8
	4.2.	TERMINAL	.8
	4.3.	Options	.9
	4.4.	Events1	10
5.	PF	ROGRAMMING1	1
	5.1.		
	5.2.	READVALUES	1
	5.3.	WriteValues1	1

# 1. General

This Toolmonitor can be used for the automatic control of Telnet sessions and the evaluation of results.

The connection can be established either manually or automatically depending on configuration. Arbitrary commands can be executed. Their results are returned and displayed. This permits the simple integration of auxiliary systems (such as Unix<sup>®</sup>, Linux<sup>®</sup>, Windows<sup>®</sup> etc.) for asynchronous measurement and control tasks without additional programming.

The following functions are available in the MCD Toolmonitor Telnet:

- Automatic or manual opening of Telnet sessions
- Reading of responses with a previously configured trigger character
- Evaluation of responses by user defined script functions
- Simultaneous use of the standard console

roject Setup Events Windov	vs Script Info Help	License				
Terminal			•	× Script	editor	-
Current history buffer Logging						100 100 20 100 100 100 100 100 100 100 1
elcome to Nicrosoft Telpet				Base se	cript Project	• X
Velcome to Microsoft Telnet	Service		^ _	14 E nam	espace MCD	
password:				15 {		<b>^</b>
(icrosoft Telnet Server					public partial class UserScri	lpt : TelnetScrip
sicrosoft leinet server.				17	(	
C:\Users\christians>tasklist				18 白	/// <summary></summary>	
Ubbildname	PID Sitzungsname	Sitz -Nr	Speichernutzung	19	/// This function st	
				20	/// the login parame	eters from the Tc
ystem Idle Process	0 Services		24 K	21	/// After successful	L login this func
ystem	4 Services		15.996 K	22	/// to the default of	command prompt cc
mss.exe	396 Services		1.436 K	23	///	
srss.exe	668 Services		6.332 K	24 1	public void OpenTelnetSes	tion ()
ininit.exe	756 Services		5.112 K	25	public void openicinecoes.	51011()
srss.exe	764 Console		19.712 K		1	
inlogon.exe	820 Console		9.096 K	26	try	E
ervices.exe	868 Services		17.336 K	27	(	
sass.exe	876 Services		19.304 K	28	Debug("OpenTelnetSea	ssion");
lsm.exe	884 Services		6.852 K	29		
svchost.exe	988 Services		12.600 K	30	// Open the telnet a	session using use
wvsvc.exe	172 Services		8.612 K	31	// from Toolmonitor	options
nvwmi64.exe	424 Services		5.116 K	32	// Check if connect:	
vchost.exe	648 Services		12.052 K	33	// open only if con	
svchost.exe	452 Services		23.724 K			
wchost.exe	1032 Services		336.012 K	34	if (GetValue("Termin	nal.IsOpen") == C
wchost.exe	1056 Services		24.220 K	35	{	
wchost.exe	1080 Services		50.524 K	36	SetEvent ("Termina	al.Open");
wchost.exe	1216 Services		27.952 K	37	3	
RtkAudioService64.exe	1344 Services		6.008 K	38		-
UAVBg64.exe	1408 Console		12.788 K			
wchost.exe	1436 Services		23.304 K	LI		,
spoolsv.exe	1692 Services		25.688 K			- → Run
wchost.exe	1772 Services		18.304 K			+ [P ridit
zmsvc.exe	1896 Services		4.148 K	1		
CombiTest.Application.exe	1052 Services		27.436 K	Time	Message	
IPM.Service.exe	1884 Services		25.492 K	16:32:58.0	Script successfully compiled!	
CPMCellular.Service.exe	1492 Services	0	27.364 K	16:32:58.2		
				10:32:58.2	outipe successiony created!	

Figure 1: Toolmonitor Telnet with Script Editor

The program interface can largely be freely laid out and adapted to user requirements. Once created, configurations can be stored in **Project Files** and loaded again when needed. The installation files include example projects.

An integrated **Script Engine** can be used to carry out all measurements and settings automatically. In combination with the **Visualization module**, custom user interfaces can also be created.

For third - party software, the Toolmonitor Telnet can be fully remote controlled. The interface can be either COM / DCOM or a .Net assembly. This allows the Toolmonitor to be integrated into many different applications (Microsoft Visual Studio<sup>®</sup> (C#, C++, Visual Basic), Microsoft Office<sup>®</sup> (for example Excel<sup>®</sup>), Open Office<sup>®</sup>, LabVIEW<sup>®</sup>, MCD TestManager CE, standard Windows DLL).

Order number: # 118954

# 2. Installation of Software

#### 2.1. Requirements

- Operating system: Windows XP<sup>®</sup> Windows 8.1<sup>®</sup>
- Architecture: 32 bit or 64 bit
- .Net framework: Version 3.0

To install the MCD Toolmonitor Telnet, it is sufficient simply to copy *TelnetMonitor.exe* file into any directory on the target system.

#### 2.2. License

To protect the software from unauthorized use, it is required to license the Toolmonitor after installation.

For purposes of demonstrations and testing the Toolmonitor can also be operated for 30 minutes at a time without a license. Some program functions are disabled. A 24 - hour temporary license can also be activated while waiting for permanent activation (for example on a weekend).

To activate the Toolmonitor, please open the License administration dialog from the menu item License  $\rightarrow$  Register.

License	
Register	

Figure 2: Calling up the Registration Dialog

1.) The Current licensing dialog shows the status of your current license:

Actual License License Rei Operation mode	quest   Short Time License
and the second se	no interface access
Informationen	
Victor:	not found
MCD License Server:	V2.1.6 Build 0
Licensed based on:	-/-

Figure 3: Retrieving License Status

2.) To request a permanent license for your software, please proceed as follows:

- Select the *Request license* dialog
- Specify the number of licenses needed (for your PC) in the Number of licenses" field
- Click the Generate request file button
- Another window then opens to ask you to save the MCD Licenser Request file (\*.mlr)
- Please save this file and send it by email to <u>info@mcd-elektronik.de</u>. Please specify an order number or project number to simplify allocation
- You will then receive an email from MCD Elektronik with your license file (*MCD License Key \*.mlk*) attached
- Finally, save this file either under C:\Windows or into the folder where the .exe file for your software was installed
- After the next start of your software, it will then be available with its full functional scope

ctual License License	Request Short Time License	
License data		1.2474
Hardware code:	GJLU-18GA-XAFL-WV4P	α
Software code:	TMCE	
Number of licenses:	1 - +	
nformation		
questing a license, give ie machine where the lic		
Crea	te license request file	

Figure 4: Requesting a Permanent License

3.) To activate a temporary license (24 hours), please select the **Temporary license** tab. Then enter the sequences of digits from the left window into the right window. If you cannot interpret the numbers, please click the *New number* button to receive a new number. Once you have correctly entered the number, you can activate the temporary license using the *Activate license* button. Please note that the temporary license will expire as soon as you stop the software. However, you can activate the temporary license as often as you like.

Actual License	License Request	Short Time License
A Sh	ort Time License will g full program fund	
Enter th	ne number shown left i	n the box on the right.
	<b>50</b> •	0907
	number	Activate

Figure 5: Requesting a Temporary License

# 2.3. Register COM Server

This command registers the Toolmonitor as a COM server. This is required if the Toolmonitor will be remote controlled by other programs, such as the MCD TestManager.

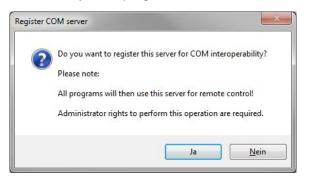


Figure 6: Register COM Server

# 2.4. Starting of the Installed Software

The Toolmonitor Telnet is started by executing *TelnetMonitor.exe*.

# 3. Brief Introduction to Operation

1.) Starting the Toolmonitor Telnet.

2.) Edit the setup with the desired hostnames / login data (activate "Auto open" to perform logins automatically).

Categories		Communication
General Logger Script Status light Remoting User settings Tools Visualization Communication	Remote host User Password	localhost usemame  V Auto open
Communication		OK Cancel

Figure 7: View of Options for Telnet Communication

3.) Once the connection is established and the user is logged in, commands can be entered into the text box on the **Windows**  $\rightarrow$  **Terminal** window, then execute by pressing the enter key.

# 4. Software Manual

#### 4.1. General

The main sections of this documentation are the **Functions and Programming** sections. The **Functions** section provides descriptions of the individual modules of the software. The *Programming* section provides a tabular list of the interfaces provided to users of this software. The interface documents the functions for access to the Toolmonitor and the different modules specify the valid parameter values for those functions.

# 4.2. Terminal

In the **Terminal window** of the Toolmonitor Telnet, the *Open* and *Close* buttons can be used to start and stop the Telnet session using the connection data from the *Options*. The **History display** can be cleared by clicking the *Clear* button.

The *History display* only has a limited number of lines available; this can be adjusted for long commands or responses using the programming interface (*Command HistoryBufferSize*).

Commands can be entered into the text box and sent with the enter key.

All commands in the programming interface work in the *History view*. If this is cleared with the *Clear* button or the *Clear* command, this data will no longer be available.

Current history buffer Logging					-
C:\Users\christians>task] Abbildname		Sitzungsname	SitzNr.	Speichernutzung	
System Idle Process	0	Services	0	24 K	
System		Services		15.992 K	
smss.exe	396	Services		1.436 K	
csrss.exe	668	Services		6.328 K	
wininit.exe	756	Services		5.112 K	
csrss.exe	764	Console		19.460 K	
winlogon.exe	820	Console	1	9.096 K	
services.exe	868	Services		17.344 K	
lsass.exe	876	Services		19.428 K	
lsm.exe	884	Services		6.840 K	
svchost.exe	988	Services		12.608 K	
nvvsvc.exe	172	Services		8.612 K	
nvwmi64.exe	424	Services		5.116 K	
svchost.exe	648	Services		12.044 K	
svchost.exe	452	Services		23.764 K	
svchost.exe	1032	Services		334.452 K	
svchost.exe	1056	Services		23.704 K	
svchost.exe	1080	Services		50.440 K	

Figure 8: Terminal Window with History View

In contrast to the History view, the Log view records the entire communication session.

C:\Users\christians>taskl	list				
Abbildname	PID	Sitzungsname	SitzNr.	Speichernutzung	
System Idle Process		Services	0	24 K	
System fore Flocess	1.0	Services	0	15.992 K	
amaa exe		Services	0	1.436 K	
csrss.exe		Services	0	6.328 K	
wininit.exe		Services	0	5.112 K	
csrss.exe		Console	1	19.612 K	
winlogon.exe		Console	1	9.096 K	
services.exe		Services	0	17.520 K	
lsass.exe		Services	0	19.312 K	
lsm.exe	2 S S S S S S S S S S S S S S S S S S S	Services	0	6.900 K	
sychost exe	1000	Services	0	12.652 K	
nvvsvc.exe	1000	Services	0	8.612 K	
nvvmi64.exe		Services	0	5.116 K	
sychost exe		Services	0	12.080 K	
svchost.exe		Services	0	23.756 K	
sychost.exe		Services	0	334.920 K	
svenost.exe	1032	Services	0	334.320 K	

Figure 9: Terminal Window with Log View

#### 4.3. Options

On the **Communication** options dialog, parameters can be specified for the current application.

- Remote host: The IP address or hostname to which the Telnet connection should be established can be entered here. If a name is used, it must be ensured that a name server is available
- User: The username for logging into the Telnet session
- Password: The password for logging into the Telnet session
- Auto open: If this checkbox is checked, then when the Toolmonitor starts it immediately attempts to establish a telnet connection to the specified host (port 23). If the host is unreachable, the message *"Connection timeout ..."* will be displayed

Categories		Communication
General - Logger - Script - Status light - Remoting - User settings - Tools - Visualization - Communication	Remote host User Password	localhost usemame  V Auto open
Communication		OK Cano

Figure 10: Telnet Options

# 4.4. Events

This can be used to call up the displays for log and trace messages.

- Logging: This menu is used to call up the display of *log messages* for general events, warnings, errors, etc.
- Trace: This menu is used to call up the display of *Trace messages* (messages sent or received)

Events	Serial line
Log	gging
Tra	ice

Figure 11: Events Menu

ogging	ogging								
Date	Time	Modul	Object	Level	Message				
2012.04.25	13:28:28	SerialLine	SerialLineMainForm	Info	SerialLine started				
2012.04.25	13:28:45	SerialLine	MCD.Framework.Forms.FTDI	Info	Port open				
2012.04.25	13:28:46	SerialLine	MCD.Framework.Forms.FTDI	Trace	Write message: 3F				
2012.04.25	13:28:48	SerialLine	MCD.Framework.Forms.FTDI	Trace	Read message: 3F V9.99 Video-Analyser/Generator SD M				
•			m	1					

#### Figure 12: Log Monitor

race		
13:31:15.7> 3	F [Read firmware] F V9.99 Video-Analyser/Generator SD MCD-Elektronik GmbH 2012-03-07 [ 1 00 [Select input FBAS 1]	Re
13:31:15.9> 5	1 00 [Select input FBAS 1] 1 [Select input FBAS 1] 4 [Status und erkannte Eingangsnorm lesen]	
	4 3A [Status und erkannte Eingangsnorm lesen]	
•	W	Þ.

Figure 13: Trace Monitor

# 5. Programming

#### 5.1. ControlEvents

These names are used to start events. Example: SetEvent ("Terminal.Open");

Enumeration values:

- **Open:** Open a Telnet connection with the login data from the *Options*. The hostname can be set in the *Options*, or using the command *"HostName"*
- **Close:** Close a Telnet connection
- Clear: Delete the History in the Terminal window
- **Update History:** Update the *History* in the Terminal window

#### 5.2. ReadValues

These names are used to read out data, settings or parameters. Example: string history = GetValue("Terminal.History");

Enumeration values:

- Read: Read out the characters currently displayed in the History window. The History is then cleared
- **History:** Read out the characters currently displayed in the *History* window. The *History* is preserved, and can be deleted using the command *Clear*
- **HistoryEnd:** This command can be passed a number after a period (" . ") at the end. As a response, the specified number of characters will then be passed at the end of the *History*.
- **CheckHistoryEnd:** This command can be passed a character after a period (" . ") at the end. The response is then either "0" or "1" to denote whether the desired character was found at the end of the *History*
- DataAvailable: Command to check whether data has been received
- BytesAvailable: Command to retrieve the number of bytes received

#### 5.3. WriteValues

These names are used to set values or start actions that require a parameter to be passed.

Example: SetValue("Terminal.Write", "telnet localhost");

Enumeration values:

- Write: Write commands over the Telnet interface
- HostName: Command to dynamically set the host to be used at runtime. This stops the current connection when set
- **HistoryBufferSize:** Set the number of characters that can be printed in the *History*. Important is, if this number is too small, parts of longer responses may be missing