TAM Software

Troubleshooter

Version	Date	Editor	Comment
003	2013-01-09	chm	
004	2013-04-22	chm	
005	2013-05-31	ab, chm	
006	2013-10-14	ab, chm	6 new entries
007	2013-12-02	chm	4 new entries
008	2013-03-26	chm	3 new entries, one extended
009	2014-11-27	chm	1 new entry
010	2015-06-05	chm	1 new entry
011	2016-07-07	chm	entries caused by dirty PCI pins
012	2016-12-14	chm	3 new entries
013	2017-12-06	chm	installer issue
014	2019-05-15	chm	bluescreen issue on Windows 7 32bit
015	2020-07-22	chm	Error Code 10 with Tria-Link PCI adapters. Prune Windows 7 specifics
016	2020-08-20	chm	Incorrect TwinCat shutdown or bad cables causing major malfunction
017	2021-03-22	chm	Open context menus on TAM configuration launches unexpected version

Document   SWNET_Troubleshooter_EP
Version   022
Source   Q:\doc\Software\SWNET
Destination   T:\doc\Software
Owner   chm

Disclaimer

For old versions of the TAM Software, prefer the troubleshooter delivered with the software.
This also holds for old firmware on legacy drives.

Category	Problem	Cause	Solution
Installer / Launcher	Application has failed to start because framedyn.dll was not found	Operating system is misconfigured	See http://support.microsoft.com/default.aspx?kbid=319114
	A file that is required cannot be installed because the cabinet file (...)tam.cab has an invalid digital signature. This may indicate that the cabinet file is corrupt. Error 0x800b010a: Failed to get certificate chain for authenticode certificate.	The root certificates of the PC are outdated	Download required certificates as noted on the download page under "Offline Support". Change extension from .pem to .cer. Choose "Install Certificate" from the file context menu. Choose Local Machine Certificate Store. Choose Trusted Root Certification Authorities Store for the first and Intermediate Certification Authorities Store for the latter.
	Open or Open Simulated doesn't launch the expected version of the TAM System Explorer	You're using TAM Software < 7.15.0. These versions have known issues.	Use more recent versions of the TAM Software
		The configuration is saved within a Triamec workspace	Open the workspace once with the desired Tam System Explorer. This version is persisted in the workspace.
		User has set a standard app for the .TAMcfg file extension	Use the **Open With** context menu and choose TamLauncher
Hardware	Tria-Link adapter not recognized by the operating system, not visible in the Device Manager	Soiled PCI pins	Abrade the soiling
		Hardware or BIOS issue with the PCI slots	Choose different slot; Update BIOS; Change computer
	Tria-Link PCI adapter shows "This device cannot start. (Code 10)", Problem Status: "An I/O adapter hardware error has occurred." (C00000C2) in Device Manager	The BIOS has troubles with the PCI hardware setup, often in conjunction with an external graphics card	Change the PCI slot Update BIOS Change computer
	Issues with file system and network when Tria-Link adapter is installed.	BIOS starts up faster than the adapter	Check if BIOS can be configured to boot slower, or change the computer
		The PCI slot is disabled in the BIOS	Enable the PCI slot in the BIOS
	Device Manager shows "An I/O adapter hardware error has occurred."	Soiled PCI pins	Abrade the soiling
Boot	Tria-Link adapter visible in the operating system device manager, but not recognized by the TAM SDK.	Soiled PCI pins causing SUBSYS FFFFFFFF instead of 00000000	
	The Tria-Link is not ready. Check cabling. …	Tria-Link not closed	Close Tria-Link, check cables Attention with TLC201 and old TL100 boards: Choose the two left connectors. If this does not help, replace the card
	The Tria-Link is not ready. Ensure there is a master, and check cabling. …	No master in ring or Tria-Link not closed	Switch card to master, or see above
	Reset of subscriptions failed for <x> stations.	Bad reset after firmware update of TLC card	Power cycle computer
	No stations found, despite fast start	TAM System Explorer < TAM SDK 7.4.0 closed in unfortunate moment during boot, so loopback is set. Test: Orange LED on Ethernet lights up even if cable is pulled out.	Power cycle computer
	Station(s) not visible, stations not always responsive in axis monitor. Health monitor shows increasing Rx-Err counts.	Beckhoff TwinCAT not correctly shut down	Power cycle computer
		Ethernet cables not screened	Use screened cables
	Unable to add device for station of type X. No assembly found providing a register layout library for rlid Y.	Register Layout Dynamic Link Library (dll) not found	Correct Build or Deployment so that the dll RegisterLayout.Y.dll is in the same directory as the application
	Unable to add device for station of type X. No assembly found providing a register layout library for rlid 0.	Register Layout ID 0 is reported back	Reprogram firmware
	Link: Initialize failed. Could not communicate with the adapter	Application not closed during Hybernate.	Restart the application.
		If permanent: interrupt problem?	Set the IrqDisabled workspace setting to True. Note that this causes longer delays. If this fix succeeds, try the other solutions, too, and revert the setting in case of success there.
		Motherboard incompatibility	Change slots Upgrade Motherboard-BIOS
	Fifo is empty. Tria-Link endpoint listener	TwinCAT is running on the same computer.	Stop TwinCAT
All	A communication timeout occurred.	Tria-Link not closed anymore	Close Tria-Link

Category	Problem	Cause	Solution
		Function not supported by hardware or firmware	Use another function or call Triamec support for clarification
		Too fast power cycle, e.g. after firmware update of the device	Perform logic power cycle 5s
		Computer overloaded	Close other applications, do not plot so much
		packet loss for unknown reason, not reproducible	Try again if possible, implement error handling
Configuration / Persistence	A matching module with type Axis could not be found.	ModulePath setting on subfolders without corresponding privatePath probing	At the end of app.config, introduce a runtime section similar to TamSystemExplorer.exe.config.
		Wrong ModulePath application setting	Correct setting. If the ModuleCatalog.dll is in the working directory, set the setting to "ModuleCatalog.dll".
	Match failure - Parameter X has wrong value type Y. Excpected type Y	Module dll exists several times in the module path	1. correct build or deployment so that the dll is only present once 2. reduce the number of paths in the ModulePath application setting.
Explorer	A relative URI cannot be created because the 'uriString' parameter represents an absolute URI	":" in the name of a TAM node	Do not use ":", "/", "?", "#", "="
	TAM Module Manager is empty. The log contains entries of the form: The file or assembly (…)ModuleCatalog.dll or a dependency on it was not found. The operation is not supported. (Exception of HRESULT: 0x80131515) An attempt was made to load an assembly from a network address…	Application brought onto the machine by means of a zip file from the internet.	Unblock the zip file prior unpackaging. In the Windows Explorer, use context menu > Properties and check the Unblock check box.
	Could not load file or assembly 'netstandard, Version=2.0.0.0,...' The system cannot find the file specified, with menu **File > Preferences**	Incomplete installation of .NET 4.8 on a Windows 10 Enterprise 2016 LTSB, where C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\netstandard\v4.0_2.0.0.0__cc7b13ffcd2ddd51 is empty	Get a copy of netstandard.dll and put it into the program directory or into the directory mentioned before. If this doesn't work, put the DLL beneath the executable.
	Could not load file or assembly 'NationalInstruments.UI, Version=9.0.35.292,...' The system cannot find the file specified.	msiexec was called with /quiet, /qb or /qn	call msiexec with /qr or /qf
	Cannot terminate the application via task manager	Application crash after operating via USB connection of the TL card	Remove the respective USB cable for a short time
Firmware Upgrade	Firmware download prohibited: Periphery ..\Bridge-Monitor not present	Safe Torque Off active	Close or short-circuit Safe Torque Off lines. Perform Power Cycle 5s
	Download is slower than usual	Some devices are indeed slower to update than other devices	None
	Interrupted Download in case of Downgrade from Build with FF1240 and higher to a Build with FF lower than FF1240	Incompatibility caused by switching of CRC-mode in the SPI channel (FPGA <-> Monitors)	power cycle drive, boot and restart Firmware downgrade again
Electronics	Cannot enable axis control.	Encoder wiring wrong, mixed up or not connected at all	Correct cabling
		Drive not or incorrectly configured	Configure drive
Scope / Acquisition	The maximum number of subscriptions was exceeded in the publishing station.	Module or application already using subscriptions	Remove module or record fewer signals
		In MATLAB, recordings were aborted with Ctrl-C and tried again	Reinitialize link or disconnect logic on device
	Nothing is plotted	Unfavorable trigger condition	Adjust trigger condition
		Device is operated with local clock	In the startup settings of the device, change to global Tria-Link clock, save and restart the device.
	Internal Error OutOfMemoryException	Too much data plotted	- Decrease "refresh frequency", available in the category "sophisticated behavior". - Made all plots invisible during plotting using the Visible property in the Appearance category of the plot properties (Before saving, make the plots visible again)
		A realtime system, such as TwinCAT, is running on the same machine	- Decrease data rate. - Use different machines for realtime and data acquisition tasks
		Bad inference with some National Instruments software (the scope is implemented using Measurement Studio)	Use another machine w/o NI software or uninstall some of the NI software
	Gaps	Known issue with USB observers (p.e. TLO100)	Work around: acquire some more data at once, such that two subscriptions are set up.
	User interface elements are no longer updated	Too much data to display (NI/GDI+ not performant)	- Decrease data rate. - Decrease "refresh frequency", available in the category "sophisticated behavior".

Category	Problem	Cause	Solution
	Zooming is abnormally slow	Unknown	Work around: move the mouse cursor out of the scope. Please contact us if you observe this issue.
	needles not visible on printout	Printer undercuts hairlines	- Configure printer driver to enhance hairlines. - Enlarge line thickness in scope