

Readme for PROFINET Tests

The goal of this test bundle is to have all the necessary documents and test systems for RT and IRT, device and controller and Security Level 1 (Net Load) combined in one bundle with all the electronic test cases to be performed during a certification test.

The specification and test tool for GSDML, the ART tester, test description and tester for net load / security level 1 and also the PI Guidelines shall be used for all versions of the test.

The name of the folder in which the test case specification can be found shall be interpreted in the following way.

- **automated:** here the tests are described that are fully automated within the test system.
- **not automated:** here the test case specifications can be found that have to be executed and checked manually. These manual tests shall be done in the following way:
you use the log file or the network recordings and check it according to the standard, the TCS, the relevant guidelines and the GSD entries.
- **future:** here the test case specifications can be found that will get automated in a future test system and needs not to be tested with this version of the test system.

Certification test in a PITL shall be done with an official released version of the test bundle (see "Versions for Certification"). If there is found a problem in the test system and a Beta or a weekly build has solved this problem, you do the (re-)test of the **affected test cases (and only the affected ones!)** with the new Beta or weekly build.

This bundle is intended to be used for development support. It does not substitute a certification test and a certificate!

Important Hints:

For preparation of a certification test please read the document "How to get a PN certificate".

The usage of software and/or documentation of this bundle implies the agreement to the license conditions (see "Disclaimer PN Test Bundle.pdf").

Support and Bug Report:

If you have any question, please contact the test lab (PITL) where you intend to perform the certification test or the supplier of the PROFINET ASIC/stack you are using. If you are still faced with severe problems of the installation and execution of the test tools out of the test system, please send an e-mail to:

PN-TS-Support@oth-aw.de

How to apply for the Certification Test:

Please read the test specification for applying a certification test.

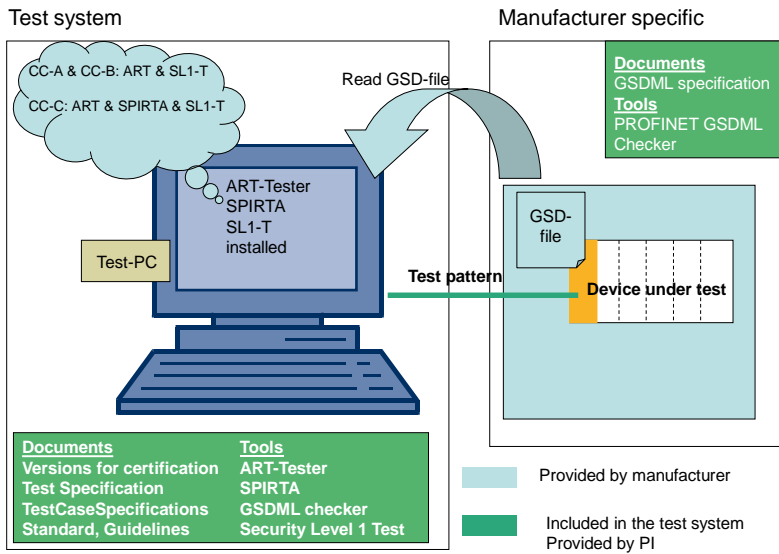
To obtain an application contract please contact the test lab (PITL). The actual list of PITLs with the internet addresses is available on

www.profinet.com

Versions for Certification

Version Testspec	Version Testcases	tested area	Tester electronic TCs	Version Standard/ Guideline (PNO/PI)	tested functionality	Status	BOT (first day for "application for certification test")	EOT (last day for "application for certification test")	EOT + 6 month (real stop for certification)	GSD-Version
V2.42 Jan. 2021	included in Test bundle July 2021	RT, IRT, device & controller	ART V2.42.1.2 Spirta V2.42.0.0001	V2.4 MU2	PNIO_Version V2.4, V2.41, V2.42 CC-D & RSI not tested, no IRT controller tests	mostly automated, some manual tests/checks	2021-07-30	2022-08-31	2023-02-28	V2.4 / V2.41 / V2.42
		Net Load SL 1 T	Installer test system V2.41.2.1 and TIA V15 / V15.1 engineering	Security Level 1 V1.2.1.1 Feb. 2017	NetLoadClass I, II and III					
		energy saving	integrated in ART	PROFenergy V1.3 Sep. 2019	PROFenergy V 1.1, V 1.2					
V2.41 Jan. 2020	included in Test bundle May 2020	RT, IRT, device & controller	ART V2.41.0.2 and Spirta V2.41.0.0002 included in PNTB	V2.4 MU1	PNIO_Version V2.35, V2.4, V2.41 CC-D & RSI not tested, no IRT controller tests	mostly automated, some manual tests/checks	2020-05-13	2021-09-30	2022-03-31	V2.35 / V2.4 / V2.41
		Net Load SL 1 T	Installer test system V2.41.0.1 and TIA V15 / V15.1 engineering	Security Level 1 V1.2.1.1 Feb. 2017	NetLoadClass I, II and III					
		energy saving	integrated in ART	PROFenergy V1.3 Sep. 2019	PROFenergy V 1.1, V 1.2					

Overview test strategy:



Log of the test bundle (to last official release):

Version / Name of main folder	Information
Beta 2.41.1 2020-06-25	<p>internal version</p> <p>new or updated files and documents:</p> <ul style="list-style-type: none"> Updated format of the Readme "Versions for certifications" integrated into Readme Updated Testspecification Updated Topology Guideline Updated TCS_00000101_PE Updated TCS_00004097_DHT_Ctrl Updated TCS_00004098_Behavior_Ctrl Updated TCS_00004099_Error_Checks Updated TCS_00004106_Topology_Read Updated TCS_00004107_FSU_Ctrl New TCS_00003073_SyncSlave New TCS_00008192_Addresssing_Mapping_PA New TCS_00008193_Parameter_Attributes_PA New TCS_00008194_Diagnosis_PA New TCS_00008195_Startup_PA New TCS_00008196_Physical_Block_PA Updated AutomatedRtTester (ART) Updated Synaccess dll Updated add TCs Updated GSDML-V2.4-CT-Device Updated engineering for controller test <p>removed files and documents</p> <p>-no-</p>
V 2.41.1 2020-07-30	<p>internal version</p> <p>new or updated files and documents:</p> <ul style="list-style-type: none"> GSDML-Spec and GSDML Upgrade Tool are part of new 7z Updated ART-C_TFPC Added Interop files for Controller test Updated MIBs Updated Spirta Updated AutomatedRtTester (ART)

	<p>Updated Synaccess dll Updated add TCs Updated PNIO_Test_Execution_Reference_Guide Updated GSDML file V2.35 of ART for controller test Updated controller engineerings for controller test</p> <p>removed files and documents "Versions for certifications" as integrated in Readme GSDML-Spec and GSDML Upgrade Tool are part of new 7z</p>
Beta 2.41.2 2020-09-24	<p>internal version new or updated files and documents: Updated GSDML checker including New ReadmeOSS and OpenSourceSoftware GSDML-Spec & GSDML Upgrade Tool: 7z now parted into two zip files Updated TCS_0000020_IP_UDP_RPC_I&M_EPM Updated TCS_0000120_PS Updated TCS_00003073_SyncSlave Updated TCS_00004096_Interop_Ctrl Updated TCS_00004098_Behavior_Ctrl Updated TCS_00004099_Error_Checks Updated TCS_00004100_GSD_Handling Updated TCS_00004104_RPC_IP_UDP_EPM Updated TCS_00004200_Devicelist Updated Spirta Updated AutomatedRtTester (ART) Updated Synaccess dll Updated add TCs Updated GSDMLs for controller test and added V2.41 file Updated controller engineerings for controller test Updated SL1-Tester</p> <p>removed files and documents -no-</p>
V 2.41.2 2020-10-29	<p>internal version new or updated files and documents: Added Guideline PN_Sec_Class1_7312 Added Guideline PN-TSN_7252 Added draft of Test Specification d2.42 in PI review Updated AutomatedRtTester (ART) Updated Synaccess dll Updated add TCs</p> <p>removed files and documents -no-</p>
Beta 2.41.3 2020-12-10	<p>Internal version new or updated files and documents: Added configuration files for NON-PROFINET switches Moved TCS_00001072_SyncSignalCheck to not_automated Updated TCS_0000016_DCP Updated TCS_0000100_Hardware Updated TCS_00002048_TEDcheck Updated TCS_00008192_Addresssing_Mapping_PA Updated TCS_00008193_Parameter_Attributes_PA Updated TCS_00008194_Diagnosis_PA Updated TCS_00008195_Startup_PA Updated TCS_00008196_Physical_Block_PA Updated PNIO_Test_Execution_Reference_Guide Updated GSDML checker Updated AutomatedRtTester (ART)</p>

	<p>Updated Synaccess dll Updated add TCs Updated CDML specification Updated CDML example</p> <p>removed files and documents -no-</p>
V 2.41.3 2021-01-28	<p>Internal version new or updated files and documents: Updated PA profile specification Updated TCS_00004105_Legacy_Ctrl Updated PNIO_Test_Execution_Reference_Guide Updated AutomatedRtTester (ART) Updated Synaccess dll Updated add TCs Updated CDML specification</p> <p>removed files and documents -no-</p>
Beta 2.42.0 2021-03-19	<p>Internal version new or updated files and documents: Updated "Versions for Certification" Updated Testspec-PN_2572 (release version) Specification POF-PCF_2432 added Draft of GSDML specification 2.42 (in PI review) added Updated PNIO_Test_Execution_Reference_Guide Updated TCS_00000110_SL1 Updated TCS_00004099_Error_Checks Updated TCS_00008194_Diagnosis_PA Updated TCS_00008195_Startup_PA New TCS_00008198_Analog_Input_FB_PA New TCS_00008199_Totalizer_FB_PA New TCS_00008203_Flow_TB_PA Updated CDML (as draft) and CDML-example Updated and new controller engineering for controller test Updated Spirta Updated AutomatedRtTester (ART) Updated Synaccess dll Updated add TCs</p> <p>removed files and documents -no-</p>

<p>V 2.42.0 2021-04-29</p>	<p>Internal version</p> <p>new or updated files and documents: New TCS_00003100_CIM Updated "Versions for Certification" Updated How to install and to run the security level 1 tester Updated PNIO_Test_Execution_Reference_Guide Updated TCS_00000110_SL1 Updated TCS_00002048_TEDcheck Updated TCS_00004099_Error_Checks Updated TCS_00004101_Read_Write Updated TCS_00008196_Physical_Block_PA Updated CDML and CDML-example Updated non-pn switch configurations Updated AutomatedRtTester (ART) Updated Synaccess dll Updated add TCs Updated GSDML files for controller test Updated Controller engineering files for controller test</p> <p>removed files and documents -no-</p>
<p>Beta 2.42.1 2021-06-24</p>	<p>Internal version</p> <p>new or updated files and documents: Updated PROFINET standard Updated GSDML-Spec Updated TCS_00000026_MRP_Pdev moved to "Common" Updated TCS_00000120_PS Updated TCS_00000201_RSI Updated TCS_00002048_TEDcheck New TCS_00008201_Temperature_TB_PA New TCS_00008202_Pressure_TB_PA New TCS_00008204_Level_TB_PA New TCS_00008205_Analyzer_TB_PA New TCS_00008209_Discrete_Output_TB_PA New TCS_00008213_Discrete_Input_TB_PA Updated AutomatedRtTester (ART) Updated Synaccess dll Updated add TCs Updated Controller engineering file for controller test</p> <p>removed files and documents Removed PNIO_Test_Execution_Reference_Guide Removed TCS_00004108_IRT_Ctrl (no content) Removed TCS_00004109_MRP_Ctrl (only reference to MRP_Pdev) Removed GSDML-V2.35-CT-Device-20200902.xml</p>
<p>V 2.42.1 2021-07-29</p>	<p>Release version</p> <p>new or updated files and documents: Updated How-to-get-PN-certificate Updated GSDML checker Updated GSDML Upgrade Tool Updated Spirta documentation in the zip Updated outlook of "Versions for Certification" Updated PN-Cabling-Guide_2252_V50 New TCS_00004126_MRP_Pdev_ctrl_not_automated Updated TCS_00008192_Addresssing_Mapping_PA Updated TCS_00008193_Parameter_Attributes_PA Updated TCS_00008194_Diagnosis_PA Updated TCS_00008195_Startup_PA Updated TCS_00008196_Physical_Block_PA New TCS_00008200_Analog_Output_FB_PA</p>

	<p>New TCS_00008206_Actuator_Output_FB_PA New TCS_00008207_Actuator_TB_PA Updated most PA-TCS Updated AutomatedRtTester (ART) Updated Synaccess dll Updated add TCs Updated GSDML files and engineering files for controller test</p> <p><i>removed files and documents</i> -no-</p>
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File Structure of the actual Bundle:

Main Folder: 2021-07-29_PN-test

File: Disclaimer PN Test Bundle.pdf

File: Framework-for-testing_2912_V25_Jun19.pdf

File: How-to-get-PN-certificate_2922n_V19_Jun21.pdf

File: Readme_V2.42.1.pdf (this file)

File: Testspec-PN_2572_V242_Jan21.pdf

Folder: Guidelines

Folder: PN-Media-Red

File: IEC-62439-2-MGMT-MIB-20140509.mib

File: IEC-62439-2-MON-MIB-20140509.mib

File: PN-Media-Red-7212-V103-Apr18.pdf

File: IsoM_7192_v10_Jun16.pdf

File: PE_3802_V13_Sep19.pdf

File: PN_Sec_Class1_7312_V10_Aug20.pdf

File: PN-Cabling-Guide_2252_V50_May21.pdf

File: PN-Diagnosis_7142_V15_Feb20.pdf

File: PN-High-Availability-7242-V12-Feb20.pdf

File: PN-IRT-Engineering_7172_V135_Feb17.pdf

File: PN-SoE_7222_v10_Sep17.pdf

File: PN-Topology_7182_V21_Jun20.pdf

File: PN-TSN_7252_V121_Jun20.pdf

File: PNIO-Security-Level-1-Guideline_7302_V1211_Feb17.pdf

File: POF-PCF_2432_V10_Jan08.pdf

File: Profile-Guideline-I_M_3502_V21_May16.pdf

File: Profile-PA-Devices_3042_V401_Nov20.pdf

File: PROFINET_Field_Devices_eng_2018.pdf

File: PROFIsafe_3192_V26MU1_Aug18.pdf

Folder: CDML

File: CDML_2.42.0_example.xml

File: CDML-Spec_V2.42.0.pdf

Folder: GSDML

File: GSDML-Spec_2352_V242_May21.zip

File: PROFINET_GSD_Checker_V2.42.zip

File: pn_upgrade_gsdml_V2.42.zip

Folder: PN-Spec

File: MIBs.7z

File: Overview-for-PI-specs_2702_V23_Oct10.pdf

File: PN-AL-protocol_2722_V24MU2_Apr21.pdf

File: PN-AL-services_2712_V24MU2_Apr21.pdf

File: PN-Profiles_2742_V24MU2_Apr21.pdf

File: LLDP-EXT-IEC61158-TYPE10-MIB.mib

Folder: PN-Test

Folder: add_on_NON-PN-configuration-files

File: non-pn switch configurations.zip

Folder: engineering

Folder: controller_test

Folder: Interop

File: Cpu319-iDevice.zip

File: et200mp_im155-5.zip
File: et200sp_im155-6.zip
File: GSDML_V225_V234_SINAMICS_S_CU3x0-20181115.zip
File: GSDML-V2.25-#Siemens-PreConf_R0S2.3-20160429.zip
File: GSDML-V2.31-wago-series750_753-20150831.zip
File: 2020-04-21_Siemens_CPU1516_X1 und X2 als IDevice_V16.7z
File: 2020-06-04_Siemens_Controller Test_V16_ManualDHT.7z
File: 2020-06-10_BoschRexroth_Controller Test Manual-DHT.xiwp
File: 2020-09-21_Phoenix_Controller Test Manual-DHT.pcwex
File: 2020-12-17_Siemens_Controller Test_V16_ManualTestcases.7z
File: 2021-07-21_Siemens_Controller Test_V16.7z
File: 2021-07-21_Siemens_Controller Test_V16_TopologyRead.7z
File: 2021-07-23_BoschRexroth_Controller Test.xiwp
File: 2021-07-23_Phoenix_Controller Test.pcwex
File: GSDML-V2.4-CT-Device-20210716.xml
File: GSDML-V2.41-CT-Device-20210716.xml
File: GSDML-V2.42-CT-Device-20210716.xml
File: GSDML-V3.9-CT-EngineeringTest-20200511.xml

Folder: device_test
File: Description_of_SR_Project.pdf
File: SR_Project.zip
File: StandardTestSetupFO_V15.zap15
File: TestProject_V15_IRT.zap15
File: TestProject_V15_manual_MAUType.zap15
File: TestProject_V15_MRP.zap15
File: TestProject_V15_RT.zap15

Folder: add_on_power-outlet
File: NP05B.cs
File: README.txt
File: synaccess.dll

Folder: add_on_Testcases
File: readme.txt
File: ReadOutInformation.cs
File: ReadOutInformation.dll

File: AutomatedRtTester_v2.42.1.1.zip
File: Spirta_V2_42_0_0001.zip

Folder: Security Level 1 Test
Folder: PLC_application
File: normal_d_V2.40.0.zap15
File: normal_d_V2.40.0_V15.1.zap15_1
File: TIA example program for Net Load Test V2.40.0.pdf

Folder: tester
File: How to install and to run the security level 1 tester V2.41.2.1_V1.0.pdf
File: pinetload_2.41.2.1_all.deb

Folder: TestCaseSpec
Folder: common
Folder: automated
File: TCS_00000026_MRP_Pdev_V2.42.1.pdf
File: TCS_00000110_SL1_V2.42.0.pdf

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File: TCS_00000100_Hardware_V2.41.2.pdf
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File: TCS_00000017_DHCP_V2.35.2.pdf
Folder: controller
Folder: automated
File: ART-C_TFPC_V2.41.1.pdf
File: Concept_Controller_Test_V2.35.pdf
File: TCS_00004097_DHT_Ctrl_V2.41.1.pdf
File: TCS_00004098_Behavior_Ctrl_V2.41.2.pdf
File: TCS_00004099_Error_Checks_V2.42.0.2.pdf
File: TCS_00004101_Read_Write_V2.42.0.1.pdf
File: TCS_00004102_RTC_Ctrl_V_2.35.2.pdf
File: TCS_00004103_Alarm_Handling_V2.41.0.pdf
File: TCS_00004104_RPC_IP_UDP_EPM_V2.41.2.pdf
File: TCS_00004105_Legacy_Ctrl_V2.41.3.pdf
File: TCS_00004106_Topology_Read_V2.41.1.pdf
File: TCS_00004107_FSU_Ctrl_V2.41.1.pdf
File: TCS_00004116_DCP-Ctrl_V2.41.0.pdf
Folder: not_automated
File: TCS_00004096_Interop_Ctrl_V2.41.1.pdf
File: TCS_00004100_GSD_Handling_V2.41.1.pdf
File: TCS_00004126_MRP_Pdev_ctrl_not_automated_V2.42.1.pdf
File: TCS_00004200_Devicelist_V2.41.1.pdf
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File: TCS_00001026_COD_CYCLIC_V2.33.3.1.pdf
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File: TCS_00001029_COD_RPC_V2.33.3.1.pdf
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File: TCS_00001039_RedRelay02_V2.33.3.1.pdf
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File: TCS_00001042_RTC3PSM_V2.35.2.pdf
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File: TCS_00001048_Syncslave06_V2.33.3.1.pdf
File: TCS_00001049_PerformanceIndicatorCheck01_V2.33.3.1.pdf
File: TCS_00001050_PerformanceIndicatorCheck02_V2.33.3.1.pdf
File: TCS_00001051_PerformanceIndicatorCheck03_V2.33.3.1.pdf
File: TCS_00001052_NRTFramePrioritization_V2.33.3.1.pdf
File: TCS_00001053_NRTStorageCapacity_V2.33.3.1.pdf
File: TCS_00001054_PermanentData_V2.33.3.1.pdf
File: TCS_00001055_PPM_V2.33.3.1.pdf
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File: TCS_00001057_ReductionRatio_V2.33.3.1.pdf
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File: TCS_00001059_MRPD02_V2.33.3.1.pdf
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File: TCS_00001062_MRPD04_V2.33.3.1.pdf
File: TCS_00001063_MRPD05_V2.33.3.1.pdf
File: TCS_00001064_Fragmentation01_V2.33.3.1.pdf
File: TCS_00001065_Fragmentation02_V2.33.3.1.pdf
File: TCS_00001066_Fragmentation03_V2.33.3.1.pdf
File: TCS_00001067_FastForwarding_V2.33.3.1.pdf
File: TCS_00001068_PreambleShortening_V2.33.3.1.pdf
File: TCS_00001069_DFP_NonShortening_V2.33.3.1.pdf
File: TCS_00001070_DFP_Shortening_V2.33.3.1.pdf
File: TCS_00001071_ShortCycles_V2.33.3.1.pdf
File: TCS_00001524_IRT_General_V2.35.2.pdf

Folder: not_automated

File: TCS_00001072_SyncSignalCheck_V2.33.3.1.pdf

Folder: device_RT

Folder: automated

File: TCS_00000001_DiffAccessWays_V2.41.0.2.pdf
File: TCS_00000001_DiffAccessWays-SysRed-addOn_V2.4.3.pdf
File: TCS_00000005_Pdev_Check_onePort_V2.4.3.pdf
File: TCS_00000006_Diagnosis_V2.4.3.pdf
File: TCS_00000012_Alarm_V2.34.2.pdf
File: TCS_00000012_Alarms_SysRed_AddOn_V2.4.3.pdf
File: TCS_00000016_DCP_V2.41.3.pdf
File: TCS_00000018_Pdev_Records_V2.4.3.pdf
File: TCS_00000019_AR-ASE_V2.41.0.pdf
File: TCS_00000019_AR-ASE_SysRed_AddOn_V2.4.3.pdf
File: TCS_00000020_IP_UDP_RPC_I&M_EPM_V2.41.2.pdf
File: TCS_00000021_Behavior_V2.4.0.pdf
File: TCS_00000022_RTC_V2.33.3.pdf
File: TCS_00000023_VLAN_V2.33.3.pdf
File: TCS_00000024_SM_Legacy_V2.33.3.pdf
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File: TCS_00000101_PE_V2.41.1

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File: TCS_V2.33_00000099_GSDMLcheck_V_01.00.pdf

Folder: future

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File: TCS_0000026_MRP_Pdev-SysRed-addOn_V2.4.3.pdf

File: TCS_0000032_ReportingSystem_V2.34.2.pdf

File: TCS_00000201_RSI_V2.42.1.pdf

Folder: PA

Folder: automated

File: -no file-

Folder: future

File: TCS_00008192_Addressing_Mapping_PA_V2.42.1.00003.pdf

File: TCS_00008193_Parameter_Attributes_PA_V2.42.1.00003.pdf

File: TCS_00008194_Diagnosis_PA_V2.42.1.00005.pdf

File: TCS_00008195_Startup_PA_V2.42.1.00005.pdf

File: TCS_00008196_Physical_Block_PA_V2.42.1.00004.pdf

File: TCS_00008198_Analog_Input_FB_PA_V2.41.3.0001.pdf

File: TCS_00008199_Totalizer_FB_PA_V2.41.3.00001.pdf

File: TCS_00008200_Analog_Output_FB_PA_V2.42.1.00001.pdf

File: TCS_00008201_Temperature_TB_PA_V2.42.1.00001.pdf

File: TCS_00008202_Pressure_TB_PA_V2.42.1.00001.pdf

File: TCS_00008203_Flow_TB_PA_V2.41.3.00001.pdf

File: TCS_00008204_Level_TB_PA_V2.42.1.00001.pdf

File: TCS_00008205_Analyzer_TB_PA_V2.42.1.00001.pdf

File: TCS_00008206_Actuator_Output_FB_PA_V2.42.1.00001.pdf

File: TCS_00008207_Actuator_TB_PA_V2.42.1.00001.pdf

File: TCS_00008209_Discrete_Output_TB_PA_V2.42.1.00001.pdf

File: TCS_00008213_Discrete_Input_TB_PA_V2.42.1.00001.pdf

Folder: PROFIsafe

Folder: automated

File: TCS_00000120_PS_V2.42.1.pdf

Folder: TSN

Folder: automated

File: -no file-

Folder: future

File: TCS_00003073_SyncSlave_V2.41.0.3.pdf

File: TCS_00003100_CIM_V2.42.0.pdf

Helpful Tools:

PRONETA you can download at: <http://support.automation.siemens.com/WW/view/en/67460624>

Use of the PROFINET trademark, test and certification

PNO is entitled to grant licenses in respect of the trademark "PROFINET" (word formation trademark) applied for in the Federal Republic of Germany and in respect of all corresponding applications and/or registrations outside Germany (referred to hereinafter collectively as "TRADEMARK").

The Member is entitled, following certification of its equipment by PNO, to use the TRADEMARK on such certified equipment, relevant documentation, promotional material etc. In order to obtain such a certificate, the Member must have its equipment put through a certification test at a test laboratory accredited by PNO.

Once the certification test has been passed to the satisfaction of PNO, PNO shall issue certification to the Member.

The Member shall not in any country initiate any applications in respect of the TRADEMARK or any other trademarks that might be mistaken for it.

If the Member is intending to sell his certified products in countries in which PNO has no trademark application or registration, the parties shall agree upon which party shall bear the costs arising from such applications.

It is understood that this agreement does not provide the Member with any right in respect of the Trademark other than that of using the TRADEMARK in accordance with the provisions of this agreement, and that the Member shall not, out of use of the TRADEMARK, derive any claims against PNO.

Versions for Certification

This document is now part of this Readme file and gives you an overview about the current test possibilities. Please read first!

How to get a PN certificate and Framework-for-testing

These documents give you an overview about the certification process.

GSDML Specification

In this area you can find a description how to write the GSDML file for your device. Here also are attached examples and style sheets.

PROFINET GSD Checker

With the help of this software, you can check the correctness of GSDML files. Minimum requirements see included text file.

GSDML Upgrade Tool

Here an upgrade tool for GSDML to the latest version is placed.

ControllerDescription (CDML)

This file shall be used to specify the behavior of a controller for testing. The manufacturer of the controller DUT shall fill out this file so that the PITL has got a reference regarding the test of IOC. For an IOC this file correlates to the GSD file of an IOD. The description of this file is available as CDML-Spec within this test bundle.

PROFINET test

For the requirements, please see the manuals and the Test Specification document. The test setups are described in the Test Specification document.

Test Specification for PROFINET

This document describes which tests have to be done in an authorized PROFINET test laboratory to get a PROFINET certificate for a new developed PROFINET device.

Net Load test / Security Level 1 test

For the simple execution of the security level 1 (Net Load) test according to the guidelines the PNO offers a test environment.

For the Minimum System Requirements, installing and test preparation please read the document "How to install and to run the security level 1 tester".

Guidelines and Specifications

The actual valid PI Guidelines and Specifications describing the requirements, handling and usage of:

- diagnosis
- Topology discovery
- IRT engineering
- High Availability
- I&M
- profile PROFlenergy
- profile PROFIsafe
- profile PA-Devices
- Cabling and Interconnection Technology
- Isochronous Mode
- PROFINET Field Devices, Recommendations for Design and Implementation
- Sequence of Events (SoE)
- Media Redundancy
- Security Level 1 / Net Load
- Security Class 1
- Specification POF / PCF
- PROFINET over TSN

Test Case Specifications

These are the actual valid Test Case Specifications that extend the file "Test Specification PROFINET devices". The documents valid for the particular tests are mentioned in the Test Specification. The numbering within the document name roughly is:

00000001 to 00001023 for RT device testing and common testing, including PE and PS Profile tests.

00001024 to 00002047 for IRT device testing.

00002048 to 00003071 for Topology check.

00003072 to 00004095 for TSN testing.

00004096 to 00005119 for RT controller testing.

00005120 to 00006143 for IRT controller testing.

00006144 to 00007167 for Topology controller testing.

00007168 to 00008191 for TSN controller testing.

00008192 to 00009215 for PA profile testing.

00009216 to 00010239 for additional PA profile testing.

00010240 to 00065535 for later use.