

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. It covers PROFInergy, too.

The specification and test tool for GSDML, the ART/ETS 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, Release Candidate (RC) 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, Release Candidate or weekly build.

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

There is no certification test for CC-D / TSN / RSI / APL / PA V4 available with this bundle. These functionalities are only available for TRIAL purposes / development support.

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.

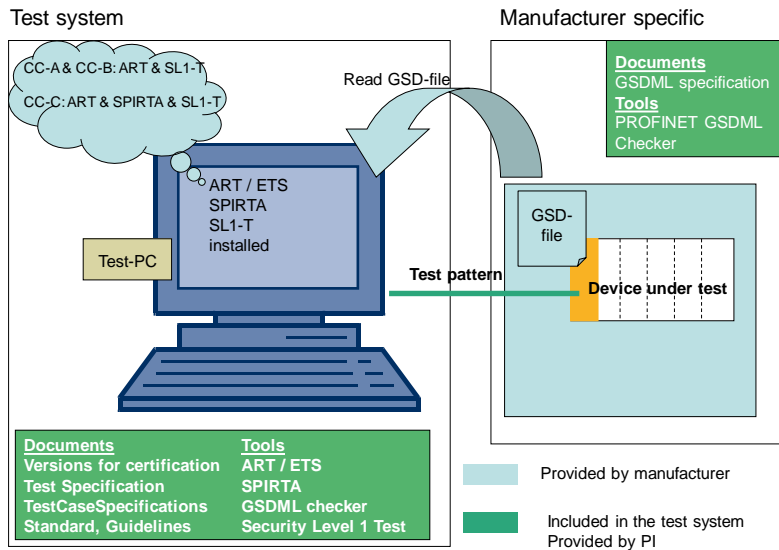
To obtain an application contract please contact the test lab (PITL). The actual list of PITLs with the internet addresses is available on

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
V2.43 Feb. 2022	included in Test bundle July 2022	RT, IRT, device & controller	ETS/ART V2.43.1.2 Spirta V2.43.1.0002	V2.4 MU3	PNIO_Version V2.41, V2.42, V2.43 <u>CC-D & RSI not tested, no IRT controller tests no APL test, no PA V4 test</u>	mostly automated, some manual tests/checks	2022-08-17	2023-08-31	2024-02-28	V2.41 / V2.42 / V2.43
		Net Load SL 1 T	Installer test system V2.43.0.0 and TIA V17 engineering	Netload Robustness (Security Level 1) V2.0	NetLoadClass I, II and III					
		energy saving	integrated in ETS/ART	PROFenergy V1.3 MU1	PROFenergy V1.2, V1.3 MU1					
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 <u>CC-D & RSI not tested, no IRT controller tests</u>	mostly automated, some manual tests/checks	2021-07-30	2022-09-30	2023-03-31	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					

Overview test strategy:



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.

Numbering Ranges of Test Case Specifications

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.

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

Version / Name of main folder	Information
Beta 2.42.2	internal version
2021-09-30	<p>new or updated files and documents: Added Guideline PN-Time-Sync Added PADataDML Added folder with APL specific test descriptions Added APL_Port_Profile_Spec_2662 Updated Guideline PN-TSN_7252 Updated ART with “add_ons”</p> <p>removed files and documents -no-</p>
V 2.42.2	internal version
2021-10-28	<p>new or updated files and documents: restructured README file Added APL_Engineering_Guideline Updated TCS_00000019_AR-ASE Updated TCS_00008192_Addressing_Mapping_PA Updated TCS_00008195_Startup_PA Updated TCS_00008198_Analog_Input_FB_PA Updated TCS_00008199_Totalizer_FB_PA Updated ART with “add_ons”</p> <p>removed files and documents -no-</p>
Beta 2.42.3	internal version
2021-12-09	<p>new or updated files and documents: Added ETS_HW_manual Added document PROFINET_PA_Trial-TestBundle Added zipped PA profile GSDML files Added file for GSDML install info Added document Controller_Engineering Added TCS_00000043_VLAN-fw Added TCS_00008210_Binary_Output_FB_PA Added TCS_00008211_Enumerated_Output_FB_PA Added TCS_00008214_Binary_Input_FB_PA Added TCS_00008215_Enumerated_Input_FB_PA Updated PE-Profile-Spec. Updated TCS_00000023_VLAN Updated TCS_00000026_MRP_Pdev Updated TCS_00000101_PE Updated TCS_00004126_MRP_Pdev_ctrl_not_automated Updated SPIRTA Updated ART/ETS tester including OSS sources and files and updated “add_ons”</p> <p>removed files and documents -no-</p>
V 2.42.3	internal version
2022-01-27	<p>new or updated files and documents: Updated How-to-get-PN-certificate_2922n Updated TCS_00000100_Hardware New TCS_00000040_SecClass1 New TCS_00000041_MC-Pruning All PA TCS updated Updated SPIRTA Updated ART/ETS tester including updated “add_ons” Updated GSDML-V2.4-CT-Device-20211220 Updated GSDML-V2.41-CT-Device-20211220</p>

	<p>Updated GSDML-V2.42-CT-Device-20211220 Updated controller engineering</p> <p>removed files and documents Document PROFINET_PA_Trial-TestBundle TCS_00008205_Analyzer_TB_PA TCS_00008206_Actuator_Output_FB_PA TCS_00008207_Actuator_TB_PA TCS_00008209_Discrete_Output_TB_PA TCS_00008213_Discrete_Input_TB_PA Engineering Siemens_CPU1516_X1 und X2 als IDevice_V16 OSS files and sources moved to ART/ETS-zip</p>
Beta 2.43.0 2022-03-24	<p>internal version</p> <p>new or updated files and documents: Restructuring of the bundle Added TCS_00001000_APL Updated Guideline IsoM_7192 Updated APL_Engineering_Guideline_8122 Updated PA_profile_GSDML Updated SL1T incl. documentation and engineering Updated TCS_00008195_Startup_PA Updated TCS_00008198_Analog_Input_FB_PA Updated TCS_00008199_Totalizer_FB_PA Updated TCS_00008214_Binary_Input_FB_PA Updated TCS_00008215_Enumerated_Input_FB_PA Updated SPIRTA Updated ART/ETS tester including updated "add_ons"</p> <p>removed files and documents ETS_HW_manual, as it is now located in ART/ETS-zip</p>
2022-03-28	<p>new or updated files and documents: Updated ART/ETS tester including updated "add_ons"</p> <p>removed files and documents - no -</p>
V 2.43.0 2022-04-28	<p>internal version</p> <p>new or updated files and documents: Updated PA Profile documents Updated TCS_00000001_DiffAccessWays Updated TCS_00000005_Pdev_Check_onePort Updated TCS_00000006_Diagnosis Updated TCS_00000012_Alarm Updated TCS_00000014_DHt Updated TCS_00000016_DCP Updated TCS_00000018_Pdev_Records Updated TCS_00000020_IP_UDP_RPC_I&M_EPM Updated TCS_00000021_Behavior Updated TCS_00000022_RTC Updated TCS_00000023_VLAN Updated Ethernet-APL Port Profile Specification Updated Ethernet-APL DATA Test Specification Updated Ethernet-APL EMC Test Specification Updated Ethernet-APL Power Test Specification New Ethernet-APL Data Tests Method of Implementation New Ethernet-APL Installation Drawing - Device End Users New Ethernet-APL Installation Drawing - Device Vendors New Ethernet-APL Power CTS Method of Instruction New Ethernet-APL Test Equipment Updated CDML description Updated SPIRTA Updated ART/ETS tester including updated "add_ons"</p>

	<p>removed files and documents</p> <p>-no-</p>
Beta 2.43.1 2022-06-22	<p>internal version</p> <p>new or updated files and documents:</p> <p>Updated Testspec-PN_2572</p> <p>Updated GSDML specification documents</p> <p>Updated CDML description and example</p> <p>Updated TCS_00000001_DiffAccessWays</p> <p>Updated TCS_00000012_Alarms_SysRed_AddOn</p> <p>Updated TCS_00000013_Interop_SysRed_AddOn</p> <p>Updated TCS_00000019_AR-ASE</p> <p>Updated TCS_00000021_Behavior</p> <p>Updated TCS_00000040_SecClass1</p> <p>Updated TCS_00000041_MC-Pruning</p> <p>Updated TCS_00001000_APL</p> <p>Updated TCS_00002048_TEDcheck</p> <p>Updated TCS_00003073_TimeSyncSlave</p> <p>Updated TCS_00008192_Addresssing_Mapping_PA</p> <p>Updated TCS_00008193_Parameter_Attributes_PA</p> <p>Updated TCS_00008194_Diagnosis_PA</p> <p>Updated TCS_00008195_Startup_PA</p> <p>Updated TCS_00008196_Physical_Block_PA</p> <p>Updated TCS_00008198_Analog_Input_FB_PA</p> <p>Updated TCS_00008199_Totalizer_FB_PA</p> <p>Updated TCS_00008200_Analog_Output_FB_PA</p> <p>Updated TCS_00008201_Temperature_TB_PA</p> <p>Updated TCS_00008202_Pressure_TB_PA</p> <p>Updated TCS_00008203_Flow_TB_PA</p> <p>Updated TCS_00008204_Level_TB_PA</p> <p>Updated TCS_00008210_Binary_Output_FB_PA</p> <p>Updated TCS_00008211_Enumerated_Output_FB_PA</p> <p>Updated TCS_00008214_Binary_Input_FB_PA</p> <p>Updated TCS_00008215_Enumerated_Input_FB_PA</p> <p>New TCS_00003074_StreamEstablishment</p> <p>New TCS_00003075_StreamForwarding</p> <p>New TCS_00003076_Preemption</p> <p>New TCS_00003077_Boundary</p> <p>New TCS_00008197_Manual_PA</p> <p>New TCS_00008205_Analyzer_TB_PA</p> <p>New TCS_00008206_Actuator_Output_FB_PA</p> <p>New TCS_00008207_Actuator_TB_PA</p> <p>New TCS_00008208_Discrete_Output_FB_PA</p> <p>New TCS_00008209_Discrete_Output_TB_PA</p> <p>New TCS_00008212_Discrete_Input_FB_PA</p> <p>New TCS_00008213_Discrete_Input_TB_PA</p> <p>Updated SPIRTA</p> <p>Updated ART/ETS tester including updated "add_ons"</p> <p>removed files and documents</p> <p>-no-</p>
V 2.43.1 2022-07-28	<p>Release version</p> <p>new or updated files and documents:</p> <p>Updated PROFINET Standard documents</p> <p>Updated PROFINET_GSD_Checker</p> <p>New TS-CRs_2022-08-17</p> <p>New pn_upgrade_gsdml_V2.43_Readme</p> <p>New PN_Netload_Robustness_for_Security_7302_V20_May22</p> <p>Updated PN_Sec_Class1_7312_V10_Aug20</p> <p>Updated TCS_00000013_Interop</p> <p>Updated TCS_00000016_DCP</p> <p>Updated TCS_00001024_CMDEV</p>

Updated TCS_00001025_CMDEV_Legacy
Updated TCS_00001026_COD_CYCLIC
Updated TCS_00001027_COD_LLDP
Updated TCS_00001028_COD_PTCP
Updated TCS_00001029_COD_RPC
Updated TCS_00001030_CPM
Updated TCS_00001031_Delay01
Updated TCS_00001032_Delay02
Updated TCS_00001033_Delay03
Updated TCS_00001034_DHT
Updated TCS_00001035_RedRelay01
Updated TCS_00001036_MUXDEMUXScheduler01
Updated TCS_00001037_MUXDEMUXScheduler02
Updated TCS_00001038_MUXDEMUXScheduler03
Updated TCS_00001039_RedRelay02
Updated TCS_00001040_RedRelay03
Updated TCS_00001041_RedRelay04
Updated TCS_00001043_Syncslave01
Updated TCS_00001044_Syncslave02
Updated TCS_00001045_Syncslave03
Updated TCS_00001046_Syncslave04
Updated TCS_00001047_Syncslave05
Updated TCS_00001048_Syncslave06
Updated TCS_00001049_PerformanceIndicatorCheck01
Updated TCS_00001050_PerformanceIndicatorCheck02
Updated TCS_00001051_PerformanceIndicatorCheck03
Updated TCS_00001052_NRTFramePrioritization
Updated TCS_00001053_NRTStorageCapacity
Updated TCS_00001054_PermanentData
Updated TCS_00001055_PPM
Updated TCS_00001056_PTCPTimeoutFactor
Updated TCS_00001057_ReductionRatio
Updated TCS_00001058_MRPD01
Updated TCS_00001059_MRPD02
Updated TCS_00001060_MRPD03_PerformanceClient
Updated TCS_00001061_MRPD03_PerformanceManager
Updated TCS_00001062_MRPD04
Updated TCS_00001063_MRPD05
Updated TCS_00001064_Fragmentation01
Updated TCS_00001065_Fragmentation02
Updated TCS_00001066_Fragmentation03
Updated TCS_00001068_PreambleShortening
Updated TCS_00001069_DFP_NonShortening
Updated TCS_00001070_DFP_Shortening
Updated TCS_00001071_ShortCycles
Updated TCS_00001072_SyncSignalCheck
Updated TCS_00002048_TEDcheck
New TCS_00001067_FastForwarding01
New TCS_00001073_FastForwarding02
New TCS_00000400_Netload_Robustness_for_Security
New TCS_00000800_Converter-Test
Updated 2022-07-04_Phoenix_Controller Test.pcwex
Updated SPIRTA
Updated ART/ETS tester including updated "add_ons"

removed files and documents

Removed PNIO-Security-Level-1-Guideline_7302_V1211_Feb17
Removed zipped PA profile GSDML files
Removed 2021-08-24___GSDML-Checker-V2.42--Problem-XML-Parser-not-found.pdf
Removed TCS_00001067_FastForwarding_V2.33.3.1
Removed 2020-04-21_Siemens_CPU1516_X1 und X2 als IDevice_V17.7z

File Structure of this Bundle:

Main Folder: 2022-07-28_PN-test

File: Disclaimer PN Test Bundle.pdf

File: Framework-for-testing_2912_V25_Jun19.pdf

File: How-to-get-PN-certificate_2922n_V110_Dec21.pdf

File: Readme_V2.43.1.pdf (this file)

File: Testspec-PN_2572_V243_Feb22.pdf

File: TS-CRs_2022-08-17.pdf

Folder: Guidelines

Folder: PA-Profile

File: PA-Profile-LabelDefinition_20220404.xlsx

File: Profile-PA-Devices_3042_V402MU1_Mar22.pdf

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: APL_Engineering_Guideline_8122_V111_Dec21.pdf

File: Ethernet-APL Port Profile Specification v1.1.pdf

File: IsoM_7192_V13_Jan22.pdf

File: PE_3802_V13Mu1_Oct21.pdf

File: PN_Netload_Robustness_for_Security_7302_V20_May22.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-Time-Sync_7232_V10_Nov20.pdf

File: PN-Topology_7182_V21_Jun20.pdf

File: PN-TSN_7252_V131_Jul21.pdf

File: POF-PCF_2432_V10_Jan08.pdf

File: Profile-Guideline-I_M_3502_V21_May16.pdf

File: PROFINET_Field_Devices_eng_2018.pdf

File: PROFIsafe_3192_V26MU1_Aug18.pdf

Folder: APL-test-info

File: Ethernet-APL DATA Test Specification v1.4.pdf

File: Ethernet-APL Data Tests Method of Implementation v1.0.4.pdf

File: Ethernet-APL EMC Test Specification v1.1.pdf

File: Ethernet-APL Installation Drawing - Device End Users v1.0.pdf

File: Ethernet-APL Installation Drawing - Device Vendors v1.0.pdf

File: Ethernet-APL Power CTS Method of Instruction v1.1.pdf

File: Ethernet-APL Power Test Specification v1.1.pdf

File: Ethernet-APL Test Equipment v1.1.pdf

Folder: CDML

File: CDML_2.43.1_example.xml

File: CDML-Description_v2.43.1.pdf

Folder: GSDML

File: GSDML-Spec_2352_V243_May22.zip

File: pn_upgrade_gsdml_V2.42.zip

File: pn_upgrade_gsdml_V2.43_Readme.txt

File: PROFINET_GSD_Checker_V2.43.zip
Folder: PADataDML
File: PADataDML-Description_V2.42.2.00002.pdf
Folder: PN-Spec
File: MIBs.7z
File: Overview-for-PI-specs_2702_V23_Oct10.pdf
File: PN-AL-protocol_2722_V24MU3_Jun22.pdf
File: PN-AL-services_2712_V24MU3_Jun22.pdf
File: PN-Profiles_2742_V24MU3_Jun22.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: CT-Device GSDs
File: GSDML-V2.41-CT-Device-20220316.xml
File: GSDML-V2.42-CT-Device-20220316.xml
File: GSDML-V2.43-CT-Device-20220727.xml
File: GSDML-V3.9-CT-EngineeringTest-20200511.xml
Folder: Engineerings
File: 2021-12-20_Siemens_Controller_Test_ManualDHT.7z
File: 2021-12-21_BoschRexroth_Controller Test Manual-DHT.xiwp
File: 2021-12-21_Phoenix_Controller Test Manual-DHT.pcwex
File: 2022-07-04_Phoenix_Controller Test.pcwex
File: 2022-04-26_BoschRexroth_Controller Test.xiwp
File: 2022-04-28_Siemens_Controller_Test.7z
File: 2022-04-28_Siemens_Controller_Test_ManualTestcases.7z
File: 2022-04-28_Siemens_Controller_Test_TopologyRead.7z
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
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: SecurityLevel1-Test
File: normal_d_V2.43.0_V17_IRT_CU.zap17
File: normal_d_V2.43.0_V17_IRT_POF.zap17
File: normal_d_V2.43.0_V17_RT_CU_POF.zap17
File: TIA example program for Net Load Test V2.43.0.pdf
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
Folder: SecurityLevel1-Tester
File: How to install and to run the security level 1 tester V2.43.0.0_V1.0.pdf
File: pinetload_2.43.0.0_all.deb
File: Controller_Engineering_V2.42.2.pdf
File: AutomatedRtTester_v2.43.1.1.zip
File: Spirta_V2_43_1_0002.zip
Folder: TestCaseSpec
Folder: common
Folder: automated
File: TCS_00000026_MRP_Pdev_V2.42.3.pdf
File: TCS_00000040_SecClass1_V2.43.1.1.pdf
File: TCS_00000041_MC-Pruning_V2.43.1.pdf
File: TCS_00000110_SL1_V2.42.0.pdf
File: TCS_00002048_TEDcheck_V2.43.1.00001.pdf
Folder: not_automated
File: TCS_00000100_Hardware_V2.42.3.pdf
Folder: future
File: TCS_00000017_DHCP_V2.35.2.pdf
File: TCS_00000043_VLAN-fwd_V2.42.3.pdf
File: TCS_00000800_Converter-Test_V2.43.1.pdf
File: TCS_00003100_CIM_V2.42.0.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_V2.42.3.pdf
File: TCS_00004200_Devicelist_V2.41.1.pdf
Folder: future
File: TCS_00004201_RSI-Ctrl_V2.41.0.pdf
Folder: device_IRT
Folder: automated

File: TCS_00001024_CMDEV_V2.34.2.2.pdf
File: TCS_00001025_CMDEV_Legacy_V2.34.2.2.pdf
File: TCS_00001026_COD_CYCLIC_V2.34.2.2.pdf
File: TCS_00001027_COD_LLDP_V2.34.2.2.pdf
File: TCS_00001028_COD_PTCP_V2.34.2.2.pdf
File: TCS_00001029_COD_RPC_V2.34.2.2.pdf
File: TCS_00001030_CPM_V2.34.2.2.pdf
File: TCS_00001031_Delay01_V2.35.0.2.pdf
File: TCS_00001032_Delay02_V2.34.2.2.pdf
File: TCS_00001033_Delay03_V2.35.0.2.pdf
File: TCS_00001034_DHT_V2.34.2.2.pdf
File: TCS_00001035_RedRelay01_V2.34.2.2.pdf
File: TCS_00001036_MUXDEMUXScheduler01_V2.34.2.2.pdf
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