Schneider Electric Altivar Process ATV6xx DTM Library V4.6.1

- Release Notes -

This document contains important information about the Altivar Process ATV6xx DTM Library software component and Release Content.

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1. Package Content

Software Component Name	Version
Altivar Process ATV6xx DTM Library	V4.6.1
Altivar Process ATV6xx	V4.6.1.0

2. Features

2.0 Features of V4.6.1

2.0.1 Evolutions

>> **396760**: Support of ATV6xx V4.6IE47 firmware.

>> **332223**: A System Use Notification window will now appear before the user authentication screen.

>> The default value of the BSP parameter has been changed to "Standard at 0%" in the firmware V4.6, which may affect Load from Device and Store to Device operations; refer to DTM V4.6.1 limitations for details.

2.0.2 Bug Fixes

>> **387234**: Run command can be executed over Ethernet even when the product is not configured for Ethernet control.

>> **387287**: Customer information is not being validated during APM registration.

>> **392313**: With a standard APM using 6 power modules, the serial number of the 6th power module is not displayed.

>> **389415**: ATV6XX DTM – Scope View Shows Empty Content for Modified Selected Parameter.

2.1 Features of V4.5.1

2.1.1 Evolutions

>> **375515**: Support of ATV6xx V4.5IE46 firmware.

>> **371117**: Support of dPAC module VW3A3530D (The SNTP, Protocol & Drive Profiles sub-node is in disabled mode. Please use EcoStruxure Automation Expert to configure it.)

>> **373641**: Update of APM Drive registration.

>> **370410**: Cyber security Improvements.

2.1.2 Bugs Fixes

>> **372294** ATV6XX DTM- Active Front End node is not visible in offline project created.

>> **360629** ATV6XX DTM- Parameters APxx and ENxx is no more accessible from My Dashboard.

>> **363676** ATV6XX DTM- INXP stays blocked for firmware version 4.2.

>> **369053** ATV6XX DTM- APM - Power Board Mismatch.

>> **375927** ATV6XX DTM- Parameters Layout > PID section,the PER parameter is mistakenly listed in the table insted of RIG (PID controller integral gain).

2.2 Features of V4.3.1

2.2.1 Evolutions

>> **356740**: Support of ATV6xx V4.3IE45 firmware.

>> **299178**: Support of Hybrid Parameter user interface firmware.

2.3 Features of V4.2.0

2.3.1 Evolutions

>> **352619**: Support of ATV6xx V4.2IE44B06 firmware.

>> **308960**: Cyber security Improvements.

2.3.2 Bugs Fixes

>> **347584**: ATV6xx - APML device registration status showing wrong in DTM home page project.

2.4 Features of V4.1.0

2.4.1 Evolutions

>> **336088**: Support of ATV6xx V4.1IE43B07 firmware.

>> **308560**: Cyber security Improvements.

2.4.2 Bugs Fixes

>> **332314**: Parameters Layout mistake.

>> **340457**: Drive power expressed in HP does not comply with official documents.

>> **342557**: Kernel error on Control Expert project.

2.5 Features of V3.8.4

2.5.1 Bugs Fixes

>> **180402**: SoMove - ATV6xx DTM - customized unit is not saved correctly on .PSX.

>> **224378**: Scope Configuration Error.

>> **124203**: SoMove - impossible to install the latest FR lang.packs for ATV6xx and for ATV9xx.

>> **255570**: Wrong STP, BFR values/descriptors in German.

>> **213591**: ATV6xx DTM - Parameters Layout- Pump Functions/Monitoring the activation icons might be missing.

>> **307544**: In some cases, unhandled exception can happen when connecting to unknown device.

>> **325563**: ATV6xx: Wrong result in Power Supplies test (Services only).

2.6 Features of V3.8.3

2.6.1 Evolutions

>> **295803**: Support of profinet V2 module VW3A3647.

>> **296211**: Support secured handshake between the DTM and the VSD through Profinet V2 module.

>> **295803**: Integration of VW3A3647 module UI under fieldbus node.

>> **301481**: Support of ATV6xx V3.8IE42 firmware.

>> **311021**: Latest help manual integration on the DTM.

2.7 Features of V3.7.7

2.7.1 Evolutions

>> Cyber security improvements

>> Windows 11 support

2.7.2 Bugs Fixes

>> **277944**: OCC assignment issue with DTM ATV6xx.

>> **265295**: ATV6xx Ethernet /MAC address and Frames display issue.

>> **229964**: ATV6xx - Print preview, export to PDF/ Text/ Excel gives error message when it is done after disconnecting the DTM.

>> **292074,211841**: ATV6xx DTM stores the project to the wrong IP address.

>> **250137**: ATV6xx – Profinet – wrong Security presentation.

>> **276823**: ATV6xx DTM - Not possible to modify some parameters when using extended IO module.

>> **231120**: "Load from device " causes EcoStruxure Control Expert freezing.

>> **144172**: SoMove - Misleading messages when connecting to drives.

>> **192473**: ATV6xx DTM - Value not taken into account in parameter switching function.

>> **298868**: ATV6xx DTM - IO profile image NOT correct.

>> **252693**: ATV6xx DTM - Error after IO scanner modification.

>> **132606**: Scope trace Export/Import issue.

>> **299376**: HMI Personalization - Issue with QR code creation.

2.8 Features of V3.7.3

2.8.1 Bugs Fixes

>> **281129**: Fix for V2.6 firmware configuration download use case.

>> **271967**: Some parameters are unexpectedly modified when importing a configuration to EcoStruxure Control Expert.

>> **277089**: Download to drive fails when having restricted permission to folder.

2.9 Features of V3.7.2

2.9.1 Evolutions

>> **279450**: Support of VW3A3530D Distributed Programmable Automation Controller (dPAC) module.

>> **280187**: Support of a new custom I/O profile named “Ecostruxure Automation Expert dPAC”, available in both ModbusTCP & EthernetIP protocols.

2.9.2 Bug Fixes

>> **273959**: APM registration exception issue (Index was out of range).

2.10 Features of V3.7.1

2.10.1 Evolutions

>> **269177**: Support of a new firmware V3.7IE40_B02.

>> **268738**: Adjustable filter on torque data addition of TPFV parameter.

>> **273332**: Management of the second source of IGBT for size 7 Product PWVU.

2.10.2 Bugs Fixes

>> **210165**: Ethernet/IP connection parameters are missing in NOC4XX legacy master.

>> **274088**: DTM shows Error 2001 when connecting to ATV630 (version 2.6).

>> **275195**: Changing IO scanner content in online mode affects command & reference parameters.

2.11 Features of V3.6.1

2.11.1 Evolutions

>> **242160**: Support for MxPro substitution.

>> **234016**: Support of a new firmware V3.6IE38_B10.

>> **235830**: Latest help manual integration on the DTM.

>> **240118**: Support for Altivar Process Modular additional references.

>> **242017**: Support for new variant of drive reaction on 4-20 mA input loss.

>> **261681**: DTM updated with latest definition of Safety messages.

>> **242295**: Vortex control functionality support

>> **245961**: Altivar Process Modular(APM) server migration from Schneider Data Hub(SDH) to Asset LifeCycle Manager(ALM).

2.11.2 Bugs Fixes

>> **257629** : ATV6xx DTM errors on Control Expert, after R-Click or copy-paste actions

>> **192933** : SoMove Error History display issue

>> **245814** : FDR issues - Device name, SPFC

>> **180402** : Customized unit is not saved correctly on .PSX

>> **253135** : Modbus TCP IO scanner table is exchanged with the PLC, instead of Eth/IP IO scanner table.

>> **213083** : Dateline Standard time

2.12 Features of V3.5.0

2.12.1 Evolutions

>> **214784**: Support of a new firmware V3.5IE36_B03.

>> **216911**: Support of a new user interface to manage the Rapid Spanning Tree Protocol (RSTP) settings from the DTM and as well as the graphical display terminal.

2.12.2 Bugs Fixes

>> **217730** : ATV6xx : Device results in EPF1 fault after applying the IO scanner configuration from the dtm

>> **200208**: ATV6xx : DTM error while opening saved projects in ECE(14.1) "Kernel error when initializing / root element missing"

>> **192933**: SoMove Error History display issue

2.13 Features of V3.4.3

>> Support for APM liquid cooled 400-480V references

>> **Bug Fixes**

2.14 Features of V3.4.0

>> Supports of ATV6xx V3.4IE35#5 firmware release

>> Safety message updates

>> **Bug Fixes**

2.15 Features of V3.3.1

>> As part of the California CS Law compliance (IEC-62443-4-2 CR 1-1 Human user identification and authentication), the DTM comes with a new set of features meant to provide a more secured connection to the device over Modbus TCP (only applies to Ethernet and PROFINET fieldbuses)

>> In a few words:

>> User authentication will be required at every attempt to connect to the device. **Note**: this mechanism is by default enabled but the user can still disable it if required.

>> A default password is provided by the factory setting (available in the Keypad), however the user will be requested at each authentication attempt, to define a different and secured password (according to a customizable password policy). It remains possible to keep the default password temporarily, but the same reminder will pop up over again during next connection attempts

>> The User authentication can be enabled/disabled and the Password policy can be modified from the Security node (Parameters List tab) of the considered fieldbus

Note: For legacy option card (Modbus TCP/PROFINET), User authentication and Password Policy configuration will be deactivated since they are not supported by these version of cards.

>> Support for new firmware versions

>> V3.2IE32B03 **->** Support new APM LC Family 690V references

>> V3.3IE34B01 **->** Support the User authentication for California Law compliance purposes

>> Bug Fixes

>> Updated help and programming manuals

2.16 Features of V2.6.5

> IFW API migration to the new Apigee enterprise service

2.17 Features of V2.6.1

> Bug Fixes

2.18 Features of V2.6.0

> Support for New FW V2.6IE29_B11

> Bug Fixes

2.19 Features of V2.5.4

> APM-S6 reference filtering fix

2.20 Features of V2.5.3

> Introduction of APM SE tab

> Bug Fixes

2.21 Features of V2.5.2

> Support for APM 400V References

> Bug Fixes

2.22 Features of V2.5.1

> Support for New FW V2.5IE27_B03

> Support for FW compatibility

> Bug Fixes

2.23 Features of V2.4.3

> Fix for FMK Version incompatibility

> Tab Style change as per Schneider guideline

> Bug Fixes

2.24 Features of V2.4.2

> Support for ATV6xx firmware version V2.4IE26_B11

> CR Fixes

2.25 Features of V2.3.0

> Support for ATV6xx firmware version V2.3IE25_B06p

> Safety message updates (TUN, AUT, APPT, SLPM, PST)

> CR Fixes

2.26 Features of V2.2.1

> Support for ATV6xx firmware version V2.2IE24_B07

> Improved SNTP section with Support for Daylight saving time

> Support for Powerlink option board

> CR Fixes

2.27 Features of V2.1.2

> Introducing APM Partner Tab

> CR Fixes.

2.28 Features of V2.1.0

> Support for ATV6xx Firmware version V2.2IE24

> CR Fixes.

3. Restrictions which we are working on

> IO Scanning profile change takes more than 5 seconds to update screen

> Offline compare feature is limited to DTM version 2.5 and above

> Empty file is created or the existing psx file is overwritten when Save option is canceled by the user or when it is restricted by the DTM while the motor is running.

> When FLO is assigned and activated and the Control Panel is enabled, the "Local Stop" message will not be displayed

> Connection Interruption in Unity FDT Container if there are multiple instances of DTM

> DPI Restriction : DTM hangs in 120 DPI when you visit Protocol and Drive Profiles section in the ParametersList tab for the first time.

You need to wait for some minutes for DTM to get back to normal state.

> Local Stop Message will not be displayed,if Local Stop button is pressed momentarily or quickly.The button has to be pressed firmly for 4-5 Sec.

> Parameter dependency is not well handled in the software. ie, visibility or disabling of parameters depending on other parameter values are not managed at the moment .

> We observed that for some drive references, the CLI (Current Limitation) parameter does not reset after a factory setting.

> Firmware compatibility - The drive is tripping to CFI2 (Invalid configuration) error if you create a new drive configuration (V1.3 or V1.2) in SoMove and download to an older drive version (V1.1).

> Parameter LCFB is not visible in parameter layout tab.This parameter can be accessed from parameter grid.

> Drive will result in CFF error if you change NSPS (Nominal synchronous motor speed) parameter and store to device.

> DI5 and DI6 Frequency Signal value is not available in My Dashboard - IO Terminal section.

> SoMove hangs after I select all parameter in parameter tab Ctrl + A.

> Sometime when toplogy is created with option board ,automatic switching between different representation is not working properly.

> When connected through Modbus TCP channel of Profinet option board, the IO terminals section in My Dashboard will not display the input/output status

> DTM goes to connection lost while saving Unity project for the first time.

> AIV1, AIV2 & AIV3 Assignment data and Values are missing in Dashboard

> Embedded Ethernet port IP details are not correct in SoMove after inserting Advance Ethernet Option Card

> DTM File Export to PDF sometimes shows out of memory exception

> RTH Parameter Value displayed in DDT variable Animation table is not correct

> Setting Device name not possible when device is running

> The device menu will not be accessible sometime when we open the saved SoMove project file and modifying the topology.Activate the control panel and try accessing device menu.

> Motor brand and type value from Motor Page will be filled in the standard startup report (Service Tab), Only when we first fill the text box and later select the checkbox.

> FDT M&M: Unexpected Danger message is displayed after the warning message when parameters are modified.

> DTM disconnects after store to device and connect is done from a new project for the first time.

Limitations for DTM version V4.6.1

When there is a firmware mismatch

	Load from device	Store to device
Device ver. ＞ DTM ver.	YES/NO, ①③	YES, ④
Device ver. ＜ DTM ver.	YES, ②	YES/NO, ⑤

① When device firmware version is higher than the DTM (firmware version) project and trying to do load from device, following message is shown.

"You are trying to load from a device a newer version of the configuration file. Parameters that are not supported will not be loaded from the device."

② When DTM is of higher firmware version than device and any parameter, that leads to firmware incompatibility, is modified in the DTM and loading from device, the following message is shown.

"The configuration file activates some behaviour that are not known by the device. The related parameters will be reset to factory setting."

For ex: DTM (firmware version)project is 3.6 and Device firmware version is 3.5 and when TQNC(new parameter) in the DTM is modified, load from device operation will reset TQNC to its default value in the DTM.

③ . When the device firmware version is higher than the DTM version, a Load from Device operation may fail due to firmware incompatibility in the following cases:

1. A new list value (unknown to the older DTM) is assigned to an existing parameter on the device.

Example: If the device firmware is V4.6 and the DTM project version is <= V4.5, the load operation is blocked because the new default value of the BSP parameter is not recognized by the DTM.

Solution: Assign BSP parameter value to **"Standard ref template"** in the device before performing the load operation.

2. A new parameter (not supported by the older DTM) has been modified on the device.

Example: If the device firmware is V3.6 and the DTM project version is V3.5, modifying the new parameter TQNC will prevent the load operation since it does not exist in the DTM.

In both cases, the following message is displayed:

"This configuration of the device cannot be loaded because it activates at least one behaviour that is not available."

④ When the device firmware version is higher than the DTM version, performing a Store to Device operation may result in compatibility issues. In this case, the following message is displayed:

"You are trying to download an older version of the configuration file to a newer version device. Some parameters in the newer version device may be inconsistent with the older version configuration file. This may lead to disconnection."

1. A new list value (unknown to the older DTM) is assigned to an existing parameter on the device.

Example: If the device firmware is V4.6 and the DTM project version is <= V4.5, the store operation is blocked because the new default value of the BSP parameter is not recognized by the DTM.

Solution: Assign BSP parameter value to **"Standard ref template"** in the device before performing the store operation.

2. A new parameter (not supported by the older DTM) has been modified on the device.

Example: If the DTM project firmware version is V3.5 and the device firmware version is V3.6, the store operation may complete successfully. However, after reconnecting to the device, modifying a new parameter such as TQNC (available only in firmware V3.6)
will cause the DTM to disconnect, as the older DTM cannot interpret the newer parameter.

⑤ The following message appears during the Store to Device operation when the DTM version is higher than the device firmware version and unsupported configuration changes are detected:

"This configuration file cannot be stored to device because it activates atleast one behaviour that is not available in the device."

This occurs in the following cases:

1. A newly added parameter in the newer DTM version has been modified, but this parameter does not exist in the older device firmware.

2. A parameter defined in the newer DTM version is assigned a list value that is not recognized by the older device firmware.

Example:

1. If the DTM project version is V3.6 and the device firmware version is V3.5, modifying the new parameter TQNC in the DTM prevents the Store to Device operation. The parameter is not supported by the device firmware, which triggers the incompatibility message.

2.If the device firmware is <= V4.5 and the DTM project version is V4.6, the store operation is blocked because the new default value of the BSP parameter is not recognized by the device.

Solution: Assign BSP parameter value to **"Standard ref template"** in the DTM before performing the store operation.

Workaround for ①,②,③,④ & ⑤ : Use the modify topology feature to change the topology options like reference, family, option board details in the DTM to match the details in the device and then retry the operation

When there is a topology mismatch

1. If there is a mismatch between the device and the DTM topology, following message is show

"The device topology (hardware configuration) does not match the DTM configuration, it could be due to:
>Mismatch in the device reference and power rating (refer to device nameplate)
>Mismatch in the option module inserted in the device."

Workaround: Use the modify topology feature to change the topology options like reference, family, option board details in the DTM to match the details in the device and then retry the operation.

2. **CFI2 error occurs while performing store to device operation if multi configuration is enabled and active configuration is other than conf0.**

3. In FDT containers other than SoMove, in case of inconsistency between DTM and device configurations following message is shown

Device Inconsistency: "Cannot continue with the current operation because the device configuration has activated atleast one behavior that is not compatible with the DTM configuration."

DTM Inconsistency: "Cannot continue with the current operation because the DTM configuration activates atleast one behavior that is not compatible with the device configuration."

4. Altivar Process DTM in EcoStruxure Machine Expert

4.1 Versions Provided & Compatibility

Activity	Version
Altivar Process DTM	V4.6.1.0
Altivar Process Firmware	V1.1IE02 V1.1IE03 V1.2IE05 V1.2IE06 V1.2IE09 V1.3IE07 V1.4IE10 V1.5IE11 V1.6IE12B10 V1.7IE16B05 V1.8IE21B01 V1.9IE19B07 V2.1IE22B05 V2.2IE24B05 V2.3IE25B06 V2.4IE26B11 V2.5IE27B03 V2.6IE29B11 V3.2IE32B03 V3.3IE34B01 V3.4IE35B05 V3.5IE36B03 V3.6IE38B10 V3.7IE40B02 V3.8IE42B05 V4.1IE43B07 V4.2IE44B06 V4.3IE45 V4.5IE46 V4.6IE47
EcoStruxure Machine Expert	Ecostruxure Machine expert V2.2.1

5. Altivar Process DTM in Control Expert

5.1 Versions Provided & Compatibility

Activity	Version
Altivar Process DTM	V4.6.1.0
Altivar Process Firmware	V1.1IE02 V1.1IE03 V1.2IE05 V1.2IE06 V1.2IE09 V1.3IE07 V1.4IE10 V1.5IE11 V1.6IE12B10 V1.7IE16B05 V1.8IE21B01 V1.9IE19B07 V2.1IE22B05 V2.2IE24B05 V2.3IE25B06 V2.4IE26B11 V2.5IE27B03 V2.6IE29B11 V3.2IE32B03 V3.3IE34B01 V3.4IE35B05 V3.5IE36B03 V3.6IE38B10 V3.7IE40B02 V3.8IE42B05 V4.1IE43B07 V4.2IE44B06 V4.3IE45 V4.5IE46 V4.6IE47
Control Expert	ControlExpert V16.2
EcoStruxure Control Expert PSx DTM Library	V3.21.25142.02
M580 CPU RUN boot	V4.0
M580 BME CPU	V4.0
Profinet Option Card	V3.1IE10

6. Features

> CHM for Unity online help.pan lang=EN-IN style='mso-ansi-language:EN-IN'> > Embedded ethernet card manual link: http://www.schneider-electric.com/ww/en/download/document/EAV64327

7. Known issues or Observations

> Downloading a configuration with a version anterior to V3.3IEXX will automatically and inevitably enable the User authentication feature .

> In EcoStruxure Control Expert and EcoStruxure Machine Expert , the "Return", "Tab", and "Esc" keys are not processed during Login, Change Password, Security panels or any notification dialogs .

> Under M580 EIP protocol, whenever there is a channel policy switched from OFF -> ON either by keypad or by DTM while DTM is ONLINE, it results in connection lost.

The reason is when drive rejects the private request after the policy is ON, Master Comm DTM does not return correct response . Master DTM returns response as a communication error which is not valid in this scenario, the device DTM is not able to do a handshake again and login.

This will be rectified in the upcoming releases of the M580 DTM. Until then the following use cases will be a limitation resulting in a connection lost and the user must reconnect to continue with the operation

1. When DTM is ONLINE and user modify channel policy from OFF -> ON through Keypad.
2. When DTM is ONLINE and user applied channel policy from OFF -> ON through DTM
3. When DTM download a config package where channel policy is ON to device.

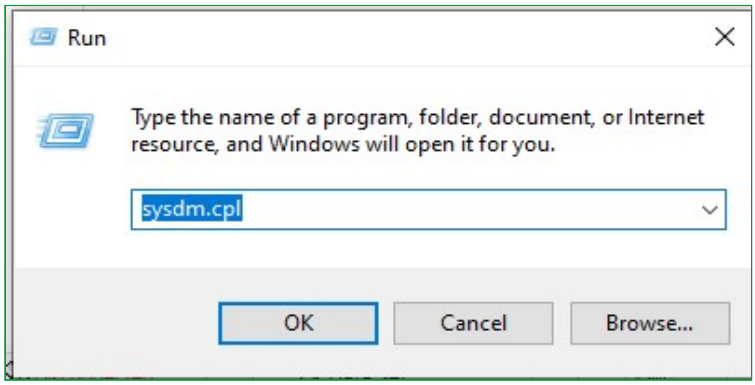
8. Troubleshooting

> Please ensure below troubleshooting steps, failing to comply with these might results in crashes, hangs or other possible commissioning-blocking issues.

8.1 Modify Temp location:

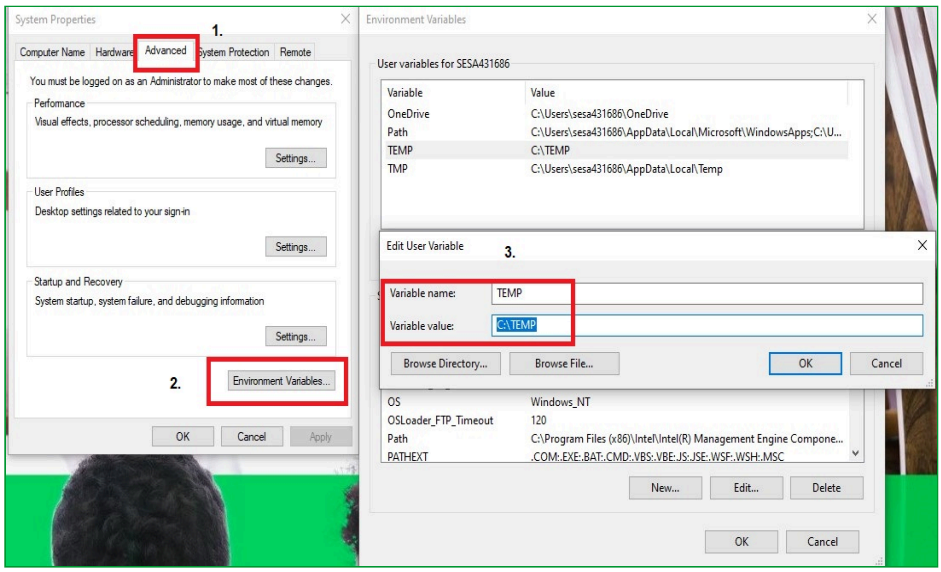
> Press ‘Windows Key’ and ‘R Key’ together, It will open “Run Window”.

> Type “sysdm.cpl” in "Run Window", Click on “OK”



> Navigate to Advanced tab, Click on environment variables button.

> Edit the temp variable entry from "%USERPROFILE%\AppData\Local\Temp" to "C:\Temp".



If the issue still persists, please contact the support team.