Schneider Electric Altivar Machine ATV340 DTM Library V3.5.5
- Release Notes -

This document contains important information about the Altivar Machine ATV340 DTM Library software component and Release Content.

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1. Package Content

Software Component Name	Version
Altivar Machine ATV340 DTM Library	V3.5.5
Altivar Machine ATV340	V3.5.5.0

2. Features

2.0 What's New in V3.5.5

2.0.1 Evolutions

>> **267616**: Support of CIP (Common Industrial Protocol) Safety with ATV340 V1.6IE82_B17 firmware and VW3A3809 CIP Safety Module.

>> **225145**: Implementation of CIP Safety display tab.

2.1 What's New in V3.5.2

2.1.1 Evolutions

>> **233996**: Support of a new firmware V3.5IE29_B10.

2.1 What's New in V3.5.2

2.1.1 Evolutions

>> **233996**: Support of a new firmware V3.5IE29_B10.

>> **206318**: Support of Service Tab Nodes : Diagnostic Parameters, Device Counter, Diagnostics, Maintenance Report, Log Files, Service Comments, Service Parameter Access, Device Script Generator, Standard Startup Report.

2.1.2 Bugs Fixes

>> **207450,249552** : The motor configurations must not be lost during modify topology and multi motor configuration.

>> **241838**: Modbus TCP IO scanner table is exchanged with the PLC, instead of Eth/IP IO scanner table.

>> **250985**: Cannot Modify Topology when FR language selected

>> **199638**: The parameter AEMC is changed to Yes after a transfer of configuration N-1 --> N

2.2 Features V3.4.3

2.1.1 Evolutions

>> **214489**: Support of a new firmware V3.4IE28_B03.

>> **214788**: 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.

>> **146289**: All parameters, including internal parameters are added as part of channel parameters in the Scope tab.

2.1.2 Bugs Fixes

>> **173946**: SoMove - ATV340 DTM - Resolver excitation frequency REFQ

>> **198976**: Multi-Configuration Display Issue

2.3 Features V3.3.0

>> Support for new firmware V3.3IE27_B05

>> Safety message updates

>> Bug Fixes

2.4 Features V3.2.3

>> Bug Fixes

2.5 Features V3.2.0

>> 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

>> V3.2IE26_B02 **->** Support the User authentication for California Law compliance purposes

>> Bug Fixes

>> Updated help and programming manuals

2.6 Features V3.1.0

>> Support for ATV340 firmware version V3.1IE24_B40

>> Bug Fixes

2.7 Features V2.1.4

>> Support for Safety related ATV340 firmware version V1.6IE81_B01 and Safety module firmware version V1.1IE02_B01

>> Bug Fixes

2.8 Features V2.1.3

>> Bug Fixes

2.9 Features V2.1.2

>> Support for Functional Safety in Direct Safety Logic Mode with additional tabs in the DTM : Safety Display and Safety Conf

>> Support for Safety related ATV340 firmware version V1.6IE80_B06 and Safety module firmware version V1.1IE01_B01

>> Bug Fixes

2.10 Features V2.1.0

> Support of ATV340 Firmware V2.1IE17_B13

> Bug Fixes

2.11 Features V1.9.0

> Support of ATV340 Firmware V1.7IE15_B10 & V1.9IE16_B20

> Bug Fixes

2.12 Features V1.7.0

> Support for FW compatibility

> Multi Configuration/ Multi Motor support

> Bug Fixes

2.13 Features V1.6.3

> Fix for FMK Version incompatibility
> Bug Fixes

2.14 Features V1.6.1

> Support of ATV340 Firmware V1.6IE11_B11
> Bug Fixes.

2.15 Features V1.3.3

> Support of ATV340 Firmware V1.5IE10_B06.
> Bug Fixes.

2.16 Features V1.2.7

> Support of ATV340 Firmware V1.4IE09_B04.
> Bug Fixes.

2.17 Features V1.2.4

> Support for Sercos references.

2.18 Features V1.2.3

> Cyber Security Fixes

2.19 Features V1.2.2

> Create/Modify Topology bug fixes .

> DPI issue fixes.

2.20 Features V1.2.1

> Bug Fixes

2.21 Features V1.2.0

> Bug Fixes.

2.22 Features V1.1

> A new Simple Altivar Machine ATV340 drive reference selection .

> Support of ATV340 Firmware V1.1IE01B06 and Ethernet Firmware A1.8IE12B25.

> Parameter graphical sketch views for Analog Encoder, Resolver and Digital Encoder (SSI configuration)

> Support for EtherCAT option card Support of PROFINET option card.

> FDR screen & action status.

> Offline FDR transfer in Schneider Electric's Unity FDT container.

> Parameters can now be added into the IO scanner list via entering the logical address.

> Detailed Error Diagnostics by including error sub-codes.

> Updates in the ATV340 help file.

> Light weight DTM with reduced size before and after Installation.

> More informative My device tab.

> My Dashboard section to configure and monitor drive parameters in a single screen.

> parameter layout tab to configure drive parameters in a graphical and user guided interface.

> Diagnostic tab for error and warning monitoring

> Diagnostic Tab - Improved layout of error data with historic errors

> Diagnostic Tab - Warnings can be assigned to 5 groups

> Diagnostic Tab - A summary screen for better drive health statistics.

> The Display tab to show energy consumed by the drive in hourly, daily, monthly and yearly basis.

> The Display tab - Display drive & motor parameters monitoring in graphical widgets

> Display tab - Torque/Speed Curve.

> Display tab - Data logging for loading logged in the device.

> Unit Customization Feature to personalize parameter Units.

> Warning and Error status information section in tool bar.

> New motor control Panel to test the motor running conditions. .

> Import/Export of device configuration from device to pc and vice versa.

> Standard Protection,Factory Setting,HMI Personalization Feature.

> Field bus manuals for option boards can be opened from My Device tab.

> Creation and modification of QR-code through HMI Personalization screen.

> Device Configuration can be restored completely or partial.

> New Print feature to select printable data like Option board parameters etc.

> Additional parameters are displayed in the Display tab.

> Reboot drive command in the Device menu.

> Save/Restore configuration from the drive through the device menu.

> Support of Advanced Ethernet DID in DIO ring.

> Autotune the device for the motor with Erase options.

> Support of only English is available in the first version of this software .

3. System Requirement

3.1 Supported operating systems

This software can be installed on the following operating systems:

> Microsoft Windows 10 32/64-bit .

> Microsoft Windows 7 32/64-bit .

> Microsoft Windows 8.1 32/64-bit .

3.2 Minimum PC Requirements

Equipment	Minimum
Processor	Pentium 4 or equivalent (Core 2 Duo recommended)
RAM	1 GB
Free Hard Disk Space	1 GB of free disk space Must be available
Display	Resolution: 1024 x 768 pixels with 32 bit colors DPI: 96 (100%)

3.3 Recommended PC Requirements

Equipment	Recommended
Processor	Pentium 4 or equivalent (Core 2 Duo recommended)
RAM	2 GB
Free Hard Disk Space	2 GB
Display	Resolution: 1920 x 1080 pixels with 32 bit colors DPI: 96 (100%)

4. Some restrictions which we are working on

> DTM is not in synchronized state after doing factory reset, a "Refresh" or "Load from Device" is requested.

> Sometimes parameter values cannot be edited in parameter grid inside parameter list tab .Use F2 key to edit parameter values.

> Only English is available in the first version of this software.

> 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.

> Visibility or disabling of a parameter depending on other parameter(s) are not managed at the moment in the parameter grid.

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

Software does not respond after you try to select all parameters in the parameter tab using Ctrl + A.

> Import of configuration stored in the Keypad HMI from SoMove homepage is not yet available.

> MultiMotor switching sketchview is not yet available.

> RSTP evolution , If the user is connected with the device and changes the ST0C from the Keypad, we will get the updated states for ST0V, ST0S. But the ST0A and ST0C will not show the updated value unless the user has restarted the device. Also the synchronized state will still show no change in the device dataset as the signature/ counters are not updated.

> RSTP Configuration (ST0C) will not be updated when factory settings is applied.

Limitations for DTM version V3.5.5

When there is a firmware mismatch

	Load from device	Store to device
Device ver. **>** DTM ver.	YES/NO, ① ③	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 3.5 and Device firmware version is 3.4 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 is of higher firmware version than DTM (firmware version) and any parameter, that leads to firmware incompatibility, is modified in the device and loading from device, the following message is shown.

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

For ex: Device firmware version is 3.5 and DTM (firmware version)project is 3.4 and when TQNC(new parameter) in the Device is modified, load from device operation is not allowed as the new parameter is not available in the DTM.

④ When device firmware version is higher than the DTM (firmware version) and storing to device, the following message is shown.

"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."

For ex: DTM (firmware version)project is 3.4 and Device firmware version is 3.5 and after successful store and connect to the device, when TQNC(new parameter) in the Device is modified, DTM will be disconnected from the Device.

⑤ When any newly added parameter modified in the DTM with higher firmware version than the device and trying to store to device, following message is shown.

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

For ex: DTM (firmware version)project is 3.5 and Device firmware version is 3.4 and when TQNC(new parameter) in the DTM is modified, store to device operation is not allowed as the new parameter in the DTM is modified which is not available in the device.

<u>Workaround for</u> 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."

<u>Workaround:</u> 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."

When there is a mismatch observed due to introduction of security node

When store to device is performed on V1.6IE11 or V1.6IE81_B01 for ATV340, operation is blocked and DTM cannot go online.

<u>Workaround:</u> California Law security has to be disabled before performing the action.

Steps to disable california law:

1) Open <Parameters List> tab.

2) Click on submenu Fieldbus > Port - Modbus TCP/EthernetIP > Security.

3) In the section <Security>, Switch the parameter <User Authentication> to Disable.

5. Container Supported

> SoMove V2.0 onwards (California CS Law compliance support from SoMove V2.8.4 onwards)

> ESME V2.1

> M&M FDT Container V4.6.19323.2

> EcoStruxure Control Expert V15.2

6. Altivar Machine DTM in ESME

6.1 Versions Provided & Compatibility

Activity	Version
Altivar Machine ATV340 DTM	V3.5.5.0
Altivar Machine ATV340 Firmware	V1.1IE02, V1.4IE09, V1.5IE10, V1.6IE11, V1.6IE81_B01, V1.6IE82_B17, V1.7IE15, V1.9IE16, V2.1IE17, V3.1IE24, V3.2IE25, V3.2IE26, V3.3IE27, V3.4IE28,V3.5IE29_B10
Safety Module	V1.1IE02_B01
ESME	V2.1

7. Altivar Machine DTM in Control Expert

7.1 Versions Provided & Compatibility

Activity	Version
Altivar Machine ATV340 DTM	V3.5.5.0
Altivar Machine ATV340 Firmware	V1.1IE02, V1.4IE09, V1.5IE10, V1.6IE11 ,V1.6IE81_B01, V1.6IE82_B17, V1.7IE15, V1.9IE16, V2.1IE17, V3.1IE24, V3.2IE25, V3.2IE26, V3.3IE27, V3.4IE28 , V3.5IE29_B10
Safety Module	V1.1IE02_B01
CIP Safety Module	B11IE03_B15
Control Expert	V15.2
EcoStruxure Control Expert PSx DTM Library	V3.16.22
M580 CPU RUN boot	V4.0
M580 BME CPU	V4.0

7.2 Known issues or Observations:

> DTM libraries cannot be installed on some computers due to access restriction of certain folder. => **See troubleshooting sections 8.1**

> Pencil Icon (data set changed) that enables the Apply button appears when there is preset conf settings configuration is exported and imported back

> Sometimes while performing load from device, resetting, open of .sft file, Safety Message pop up appears when SC08 is set to Level / Auto without entering the SC08 control

> Labels that are too long are cropped in the Safety Display tab

> While performing store to device using Modbus TCP with multi config feature, increase Global Time out to 5000ms in the SoMove container Modbus TCP scan - advanced settings.

> While modifying the topology with MultiConfiguration configured, Device Reference and Option Card changes are only supported . Firmware Version change is not supported.

> Help feature is not available in this version. It will be updated in the next version once finalized from Technical Publication team.

> If the drive is configured with multi configuration, drive configuration has to be saved in the DTM for configurations 1,2,and 3 before downloading to the drive.

> Multiconfiguration feature with Input and Output Assignments of the Option card is not supported.

> Current version of the DTM has connection issues with Pactware V5.0

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

> Synchronization issues may occur while transferring a project to a protected device in SoMachine

> Creating Topology for more than 8 DTM instances leads to exception in SoMachine

> Continuous opening and closing of device view screen leads to disfigured display .

> Extended Relays are not Good In DashBoard .

> Restore of configuration is not happening for some parameters .

> Cannot import .cfg files for reference ATV340D18N4E created with DTM version V.1.7 and earlier

> Downloading a configuration with a version anterior to V3.2IE25_B07 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.

> Download to device fails when Multi Configuration is active. To workaround this issue, the timeout has to be increased to 5000ms in the communication dtms settings

> 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
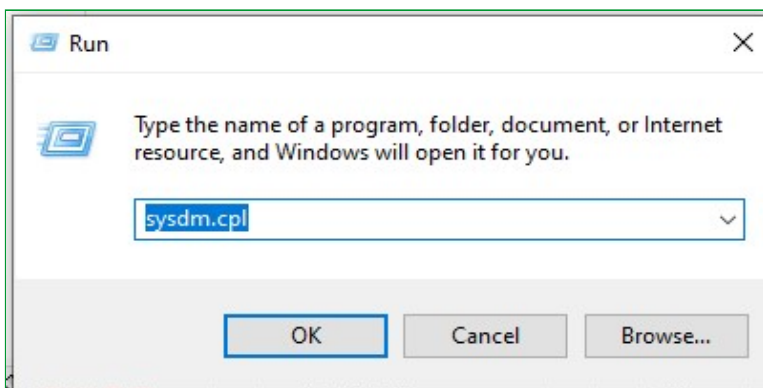
1. When DTM is ONLINE and user modify channel policy from OFF -> ON through Keypad.

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.
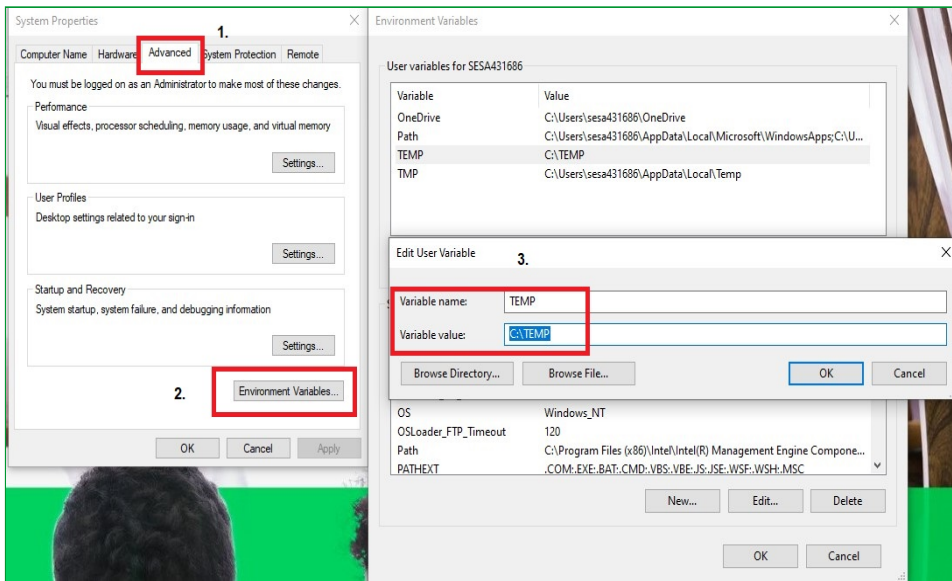
8. Troubleshooting

> 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.