



Elektrobit

# EB tresos<sup>®</sup> AutoCore Generic 8 SystemCreatorCore documentation

Module release 0.0.149



Elektrobit Automotive GmbH  
Am Wolfsmantel 46  
91058 Erlangen, Germany  
Phone: +49 9131 7701 0  
Fax: +49 9131 7701 6333  
Email: [info.automotive@elektrobit.com](mailto:info.automotive@elektrobit.com)

## Technical support

<https://www.elektrobit.com/support>

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# 1. Overview

Welcome to the SystemCreatorCore product release notes and documentation.

This document provides:

- ▶ [Chapter 2, “SystemCreatorCore module release notes”](#): details of changes and new features in the current release
- ▶ [Chapter 3, “SystemCreatorCore user's guide”](#): concept information and configuration instructions
- ▶ [Chapter 4, “SystemCreatorCore module references”](#): configuration parameters and the application programming interface

## 2. SystemCreatorCore module release notes

- ▶ Module version: 0.0.149.B567464
- ▶ Supplier: Elektrobit Automotive GmbH

### 2.1. Change log

This chapter lists the changes between different versions.

#### Module version 0.0.120

2021-09-30

#### Module version 0.0.66

2020-03-12

- ▶ Inclusion of documentation.

#### Module version 0.0.65

2020-02-28

#### Module version 0.0.64

2020-02-04

### 2.2. New features

## 2.3. Elektrobit-specific enhancements

This module is not part of the AUTOSAR specification.

## 2.4. Deviations

This module is not part of the AUTOSAR specification.

## 2.5. Limitations

This chapter lists the limitations of the module. Refer to the module references chapter *Integration notes*, subsection *Integration requirements* for requirements on integrating this module.

## 2.6. Open-source software

Open-source software information is not available for this module.

## 3. SystemCreatorCore user's guide

### 3.1. Overview

The `SystemCreatorCore` tool converts various input files to corresponding ARXML files and merges them into a given arxml. If an input describes an already existing channel, the channel will be extended. Similar if a single tool run gets multiple input files. They can also contribute to the same channel.

Available conversions depend on the installed contributor extensions. About what these conversions can do, please see the individual extension documentations.

About how to call the tool itself, define arxmls, arguments, ... please check the `ArtopCmd` documentation.

### 3.2. Argument details

Additional to the `ArtopCmd` defined arguments, the following arguments can be used to configure the `SystemCreatorCore` execution

For conversion specific arguments please check the related contributors documentation

► **LoadExistingNetworks** (Boolean)

Enables the import of existing networks. This is necessary to for example to add Gateway routings to existing PDUs/Signals

Default : false

► **ScaleInitValues** (Boolean)

Defines if the compumethod should be applied to the init values. Depends if the the input files specifies physical or raw values as init values.

Default : false

► **UseDefaultAutosarTypes** (Boolean)

Defines if the the conversion should use the Autosar default types

Default : true

► **SortSignalMappingsByPosition** (Boolean)

If true, all signal to pdu mappings will be sorted in the order of start position instead of order in the input file.

Default : false

► **ForceSignalGroups** (Boolean)

If true, all signals will be put into a single signalgroup per pdu.

Default : false

► **GenerateToplevelComposition** (Boolean)

If true, a toplevel composition with delegation ports and signal mappings for all signals.

Default : false

► **GenerateCompumethods** (Boolean)

If true, compumethods will be generated based on the input.

Default : false

► **UseCompumethods** (Boolean)

If true, the compumethods will be generated in a way that the Rte uses them for automatic scaling

Default : true

► **GeneratePduGroups** (Boolean)

If true, all pdus will be put to pdu groups based on channel and direction.

Default : false

► **FrameNamePattern** (String)

Argument to specify the naming pattern for frames. All '{token}' will be replaced with their corresponding value.

Tokens: network, frame

Default : "{frame}"

► **PduNamePattern** (String)

Argument to specify the naming pattern for pdus. All '{token}' will be replaced with their corresponding value.

Tokens: network, frame, pdu

Default : "{pdu}"

► **SystemSignalNamePattern** (String)

Argument to specify the naming pattern for system signals. All '{token}' will be replaced with their corresponding value.

Tokens: network, frame, pdu, signal

Default : "{signal}"

► **SystemSignalPackage** (ArPath)

Argument to specify the package path for system signals. If the same system signal appears on two channels, the same will be used for both.

All '{token}' will be replaced with their corresponding value.

Tokens: network

Default : "{network}/Signal"

► **SystemSignalGroupPackage** (ArPath)



Argument to specify the package path for system signals. If the same system signal appears on two channels, the same will be used for both.

All '{token}' will be replaced with their corresponding value.

Tokens: network

Default : "{network}/SignalGroup"

► **ISignalNamePattern** (String)

Argument to specify the naming pattern for isignals. All '{token}' will be replaced with their corresponding value.

Tokens: network, frame, pdu, signal

Default : "{signal}"

► **PortInterfaceNamePattern** (String)

Argument to specify the naming pattern for interfaces. All '{token}' will be replaced with their corresponding value.

Tokens: network, frame, pdu, signal

Default : "IF\_{signal}"

► **DataElementNamePattern** (String)

Argument to specify the naming pattern for data elements inside interfaces. All '{token}' will be replaced with their corresponding value.

Tokens: network, frame, pdu, signal

Default : "{signal}"

► **DataTypeNamePattern** (String)

Argument to specify the naming pattern for data types. All '{token}' will be replaced with their corresponding value.

Tokens: network, frame, pdu, signal

Default : "DT\_{signal}"

► **InitConstantNamePattern** (String)

Argument to specify the naming pattern for init constants. All '{token}' will be replaced with their corresponding value.

Tokens: network, frame, pdu, signal

Default : "Init\_{signal}"

► **CompuLiteralNamePattern** (String)

Argument to specify the naming pattern for CompuLiterals. All '{token}' will be replaced with their corresponding value.

Tokens: network, frame, pdu, signal, literal

Default : "{literal}"

► **CommunicationArPackage** (String)

Root package for the generated communication parts (cluster, pdu, signal, ...

Default : ""

► **GlobalTimeOut** (Boolean)

Argument to set time-out value globally for all the channels in seconds.

► **ReceiveFullPdu** (Boolean)

If true, always all signals of a pdu will be flagged as ecu relevant, even if the input files only does not.

Default : false

► **IgnoreInitValues** (Boolean)

If true, all init values of the input file will be ignored.

Default : false

► **TpMessages** (List)

List of Tp Messages. By default the type and channel will be autodetected on the message name. But if an autodetection is not possible, they can be listed here explicitly

► **TpMessage** (Record)

► **MessageID** (Integer)

► **Type** (Enum)

► **ConnectionName** (String)

► **MergeMode** (Enum)

Default : "Direct"

► **Conversions** (List)

List of conversions to be executed. Exact list of available conversions depends on the installed contributor extensions.

► **EcuMappings** (List)

List of to map/replace ecu names in the inputs. all occurrence of "Source" will be replaced with "Dest" during the conversion.

Used to align Ecu names if they differ in different input files.

► **EcuMapping** (Record)

► **Source** (String)

► **Dest** (String)

► **PackageMappings** (List)

List of Package mappings used in arxml merge feature.

► **PackageMapping** (Record)

► **Source** (String)

► **Dest** (String)

► **EcuName** (String)

Single ecu to generate for

► **EcuFilters** (List)

Argument to filter the given ECU instance from the available ECU instances in the input files for the further processes.

► **EcuFilter** (Record)

► **Name** (String)

► **Accept** (Boolean)

Default : true

## 3.3. Appendix. Third party license

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## 4. SystemCreatorCore module references

SystemCreatorCore configuration parameter reference is not available.

SystemCreatorCore API reference is not available.

### 4.1. Integration notes

#### 4.1.1.1. SystemCreatorCore dependencies

The usage of the module depends on the following other modules

- ▶ ArtopLib
- ▶ ArtopCmd