

# Requirements Report for Vehicle\_Speedometer\_Module

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## Chapter 1. Model Information for "Vehicle\_Speedometer\_Module"

Table 1.1. Vehicle\_Speedometer\_Module

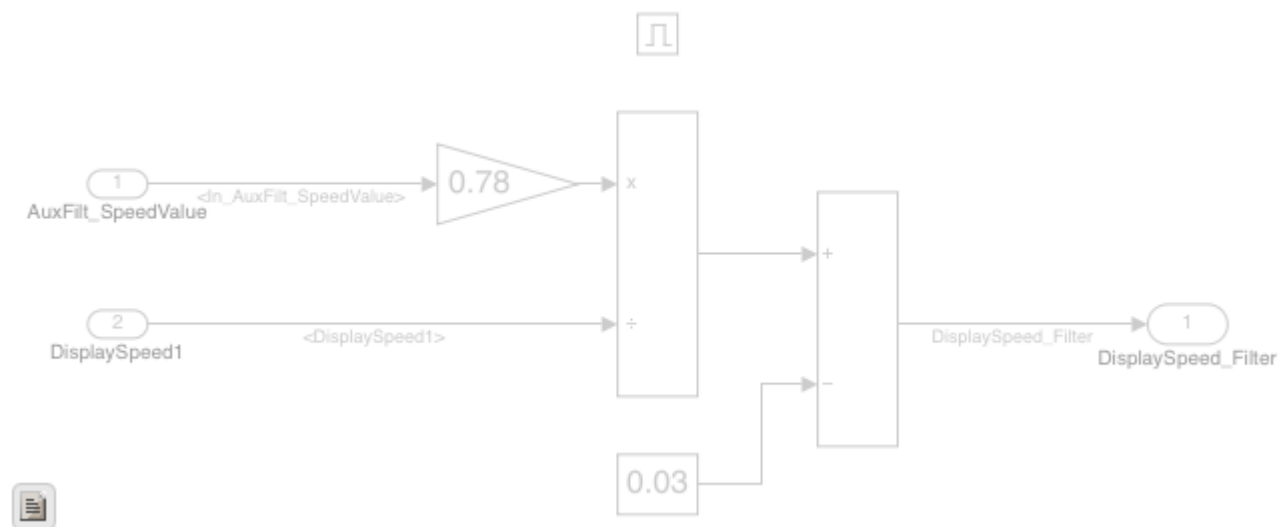
<i>ModelVersion</i>	1.20	<i>ConfigurationManager</i>	N/A
<i>Created</i>	Tue Mar 14 11:14:26 2023	<i>Creator</i>	jamesbond
<i>LastModifiedDate</i>	Sat Mar 18 17:12:43 2023	<i>LastModifiedBy</i>	jamesbond

## Chapter 2. Traceability Summary for "Vehicle\_Speedometer\_Module"

Table 2.1. Artifacts linked in model

ID	Artifact names stored by RMI	Last modified	# links
DOC1	<a href="#">TFT_Cluster_Speedometer_Req.slreqx</a>	Sat Mar 18 17:08:51 2023	4

## Chapter 3. System - Auxilliary\_Data\_Filtering



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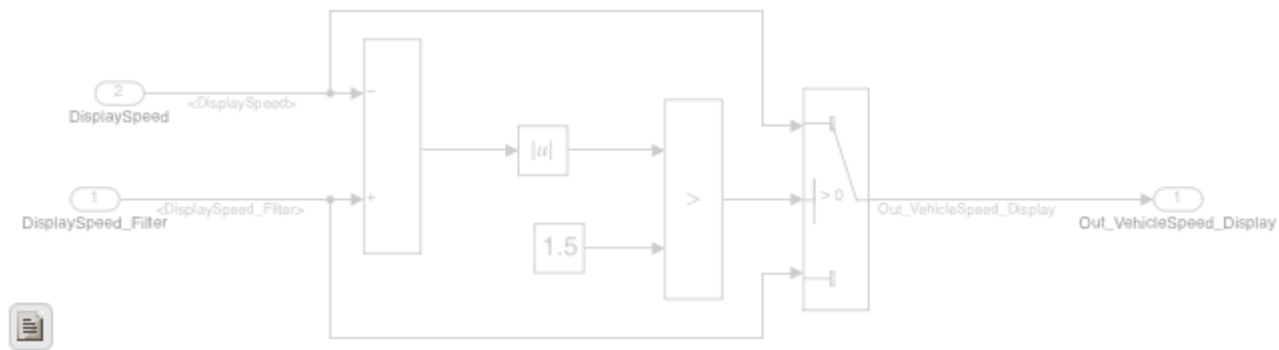
**Table 3.1. Vehicle\_Speedometer\_Module/Speedometer\_Module/Auxilliary\_Data\_Filtering Requirements Data**

Link#	Link Description	Link Target (document name and location ID)
1.	<p>"SwReq_TFT_Cluster_Speedometer_03"</p> <p>----- <a href="#">Details from TFT_Cluster_Speedometer_Req.slreqx: -----</a></p> <p>==</p> <p>Description: Auxilliary Data Filtering Auxilliary data filtering subsystem will be activated for every 10th milliseconds</p> <p>DisplaySpeed_Filter (t)= ((DisplaySpeed1 (t)*0.78)/ auxilliary filter speed value)-0.03</p>	<a href="#">DOC1, at "3"</a>

**Table 3.2. Objects in "Auxilliary\_Data\_Filtering" that are not linked to requirements**

Name	Type
Add	Sum
AuxFilt_SpeedValue	Inport
Constant	Constant
DisplaySpeed1	Inport
DisplaySpeed_Filter	Outport
Divide	Product
Enable	EnablePort
Gain	Gain

## Chapter 4. System - Display\_Speed\_Output



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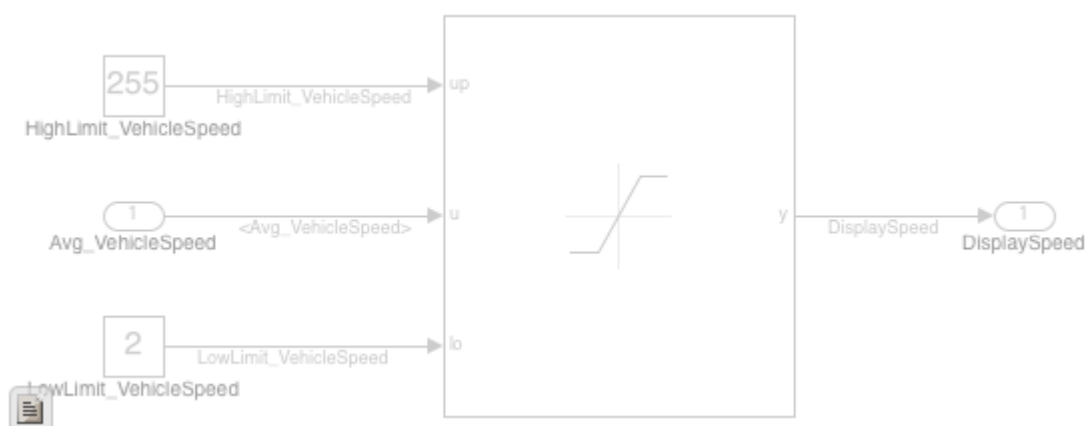
**Table 4.1. Vehicle\_Speedometer\_Module/Speedometer\_Module/Display\_Speed\_Output Requirements Data**

Link#	Link Description	Link Target (document name and location ID)
1.	<p>"SwReq_TFT_Cluster_Speedometer_04"</p> <p>----- <a href="#">Details from TFT_Cluster_Speedometer_Req.slreqx:</a> -----</p> <p>==</p> <p>Description: TFT Speed Output if (DisplaySpeedFilter - DisplaySpeed)  &gt; 1.5 { Vehicle Speed Display = DisplaySpeed } else { Vehicle Speed Display = DisplaySpeed Filter }</p>	<a href="#">DOC1, at "4"</a>

**Table 4.2. Objects in "Display\_Speed\_Output" that are not linked to requirements**

Name	Type
Abs	Abs
Add	Sum
Constant	Constant
DisplaySpeed	Inport
DisplaySpeed_Filter	Inport
Out_VehicleSpeed_Display	Outport
Relational Operator	RelationalOperator
Switch	Switch

## Chapter 5. System - Input\_Processing



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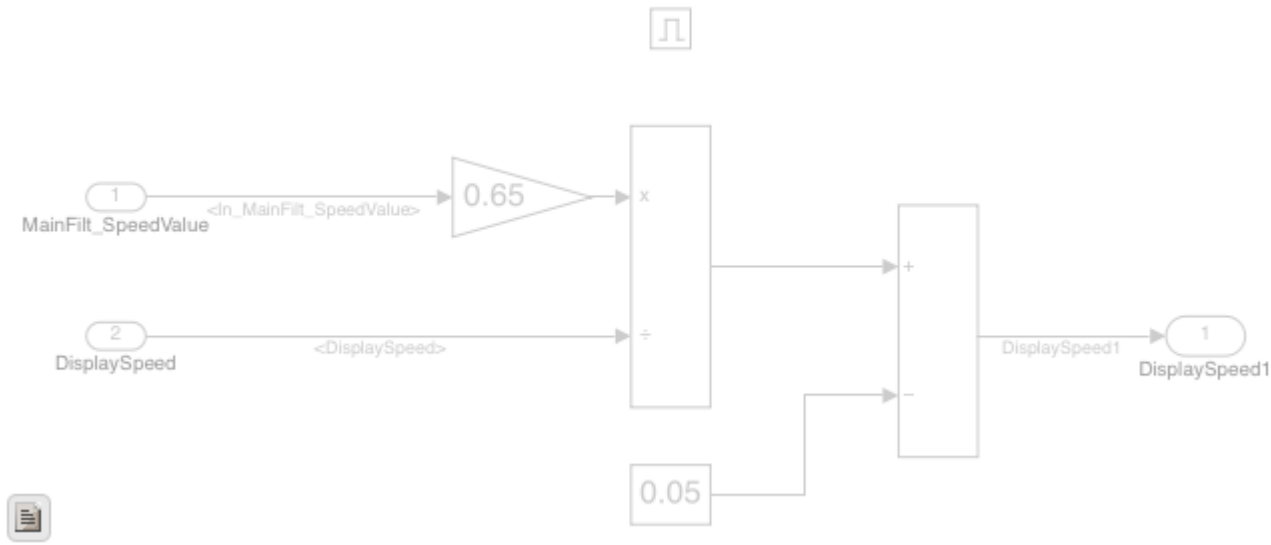
Table 5.1. Vehicle\_Speedometer\_Module/Speedometer\_Module/Input\_Processing Requirements Data

Link#	Link Description	Link Target (document name and location ID)
1.	"SwReq_TFT_Cluster_Speedometer_01" ----- <a href="#">Details from TFT_Cluster_Speedometer_Req.slreqx: -----</a> == Description: Calculating TFT Display Speed Average vehicle speed would be displaying if its between 2 kmph to 250 kmph. Any value outside this range will be discarded by upper and lower limits. When Average Vehicle speed is between 2 kmph & 250 kmph, Display Speed= Average Vehicle Speed. When Average vehicle speed >250 kmph, Display speed= 250 kmph	<a href="#">DOC1.</a> at "1"

Table 5.2. Objects in "Input\_Processing" that are not linked to requirements

Name	Type
Avg_VehicleSpeed	Inport
DisplaySpeed	Outport
HighLimit_VehicleSpeed	Constant
LowLimit_VehicleSpeed	Constant

Chapter 6. System - Main\_Data\_Filtering



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Table 6.1. Vehicle\_Speedometer\_Module/Speedometer\_Module/Main\_Data\_Filtering Requirements Data

Link#	Link Description	Link Target (document name and location ID)

Link#	Link Description	Link Target (document name and location ID)
1.	<p>"SwReq_TFT_Cluster_Speedometer_02"</p> <p><a href="#">----- Details from TFT_Cluster_Speedometer_Req.sreqx: -----</a></p> <p>==</p> <p>Description: Main Data Filtering Main data filtering subsystem will be activated for every 10th milliseconds DisplaySpeed1 (t)= ((DisplaySpeed (t)*0.65)/ Main Filter Speed value)- 0.05</p>	<a href="#">DOC1.at "2"</a>

**Table 6.2. Objects in "Main\_Data\_Filtering" that are not linked to requirements**

Name	Type
Add	Sum
Constant	Constant
DisplaySpeed	Inport
DisplaySpeed1	Outport
Divide	Product
Enable	EnablePort
Gain	Gain
MainFilt_SpeedValue	Inport

## Chapter 7. Systems in "Vehicle\_Speedometer\_Module" that have no links to requirements

**Table 7.1. Systems and subsystem blocks in "Vehicle\_Speedometer\_Module" that have no links to requirements**

Model or subsystem block	Children with links
Vehicle_Speedometer_Module	None
Vehicle_Speedometer_Module/Speedometer_Module	4 out of 12
Vehicle_Speedometer_Module/Speedometer_Module/Compare To Zero	None
Vehicle_Speedometer_Module/Speedometer_Module/Input_Processing/Saturation Dynamic	None