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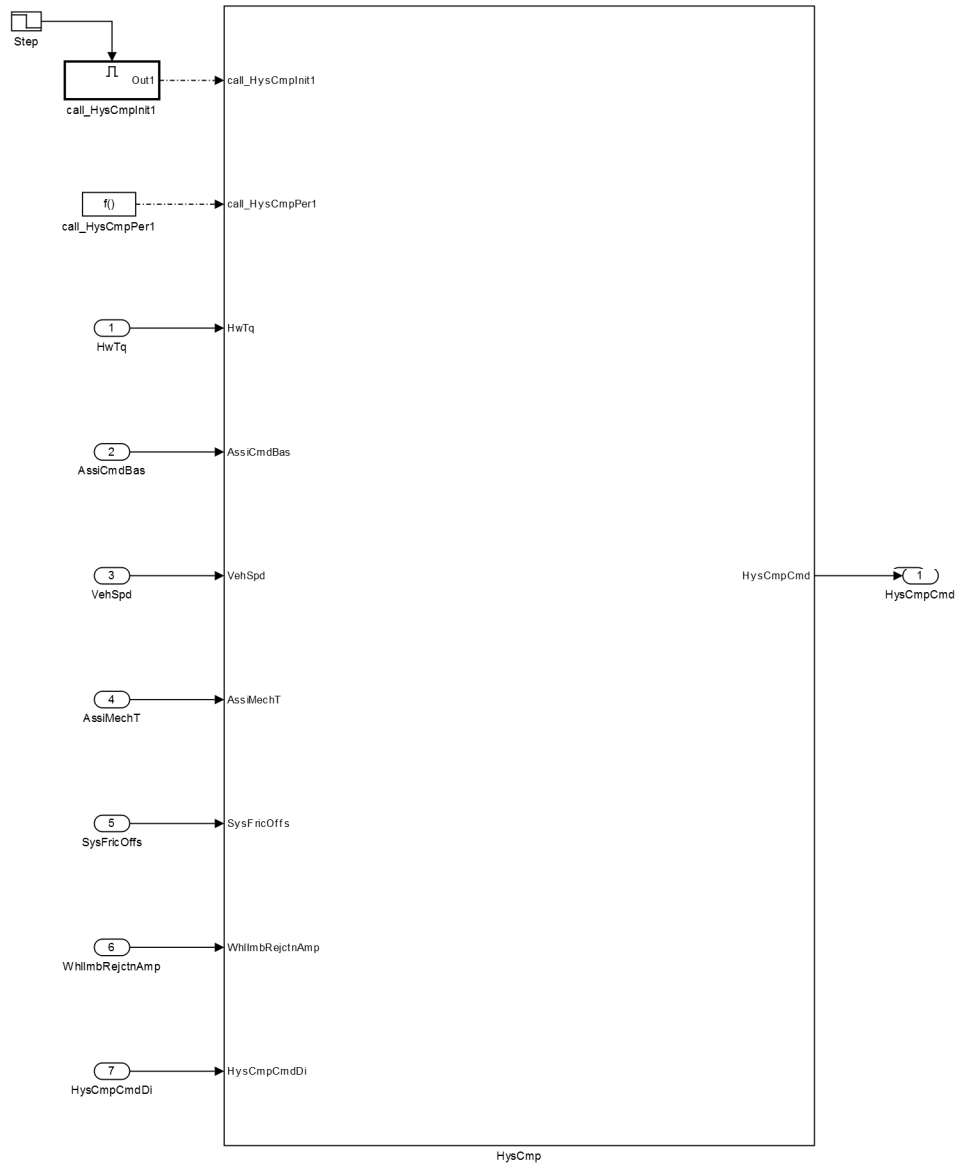
File Dependencies:

Model_Config v1.2.0
Nexteer_Uilities v4.3.1
Data_Management v2.14.0

Requirements Baseline: NA

Change Log:

v1.0.0
Date: 08-Jul-2015
Change Control #: EA4#943
Author: Sudeep Shankar

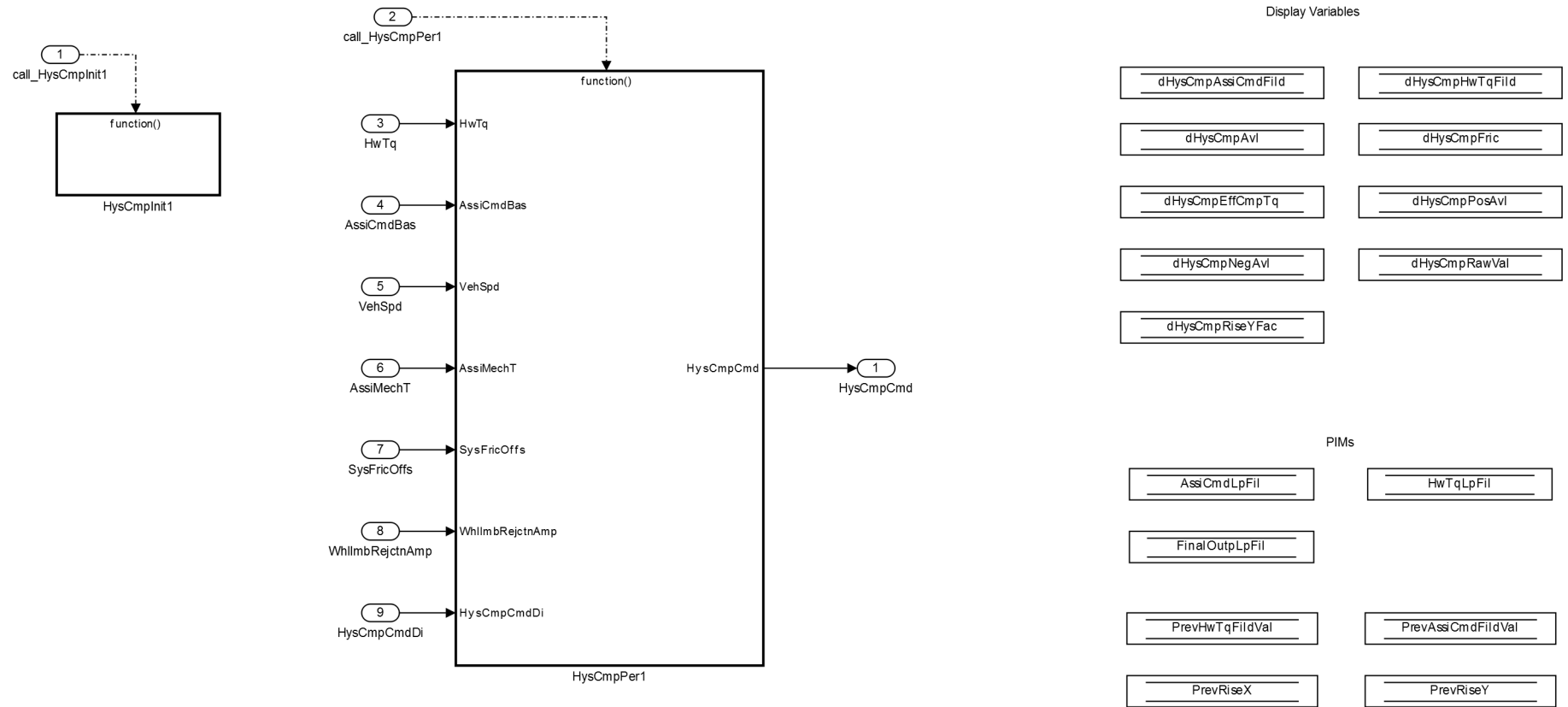


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SF012A Hysterisis Compensation Version: 1.0.0

Date: Jul 8, 2015

This function improves steering precision and feel by compensating for physical friction and efficiency losses. Due to the vibratory nature of a vehicle, the calibrations associated with these physical attributes are allowed to vary according to vehicle speed and the magnitude of Wheel Imbalance Rejection function command. The function includes a feature to deal with changing physical system properties over temperature operating range. It also incorporates calibration tables used to modify how the compensation is applied during transitions between operating quadrants and during periods of near-zero handwheel torque. Finally the function may be disabled for purposes of bench testing



f()

function

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FillpInit

lc: 0

Ts: ARCHGLBPRM_2MILLISEC_SEC_F32

Freq: HysCmpAssiCmdLpFilFrq

StVar: AssiCmdLpFil

HysCmpAssiCmdLpFillnit

FillpInit

lc: 0

Ts: ARCHGLBPRM_2MILLISEC_SEC_F32

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StVar: HwTqLpFil

HysCmpHwTqLpFillnit

FillpInit

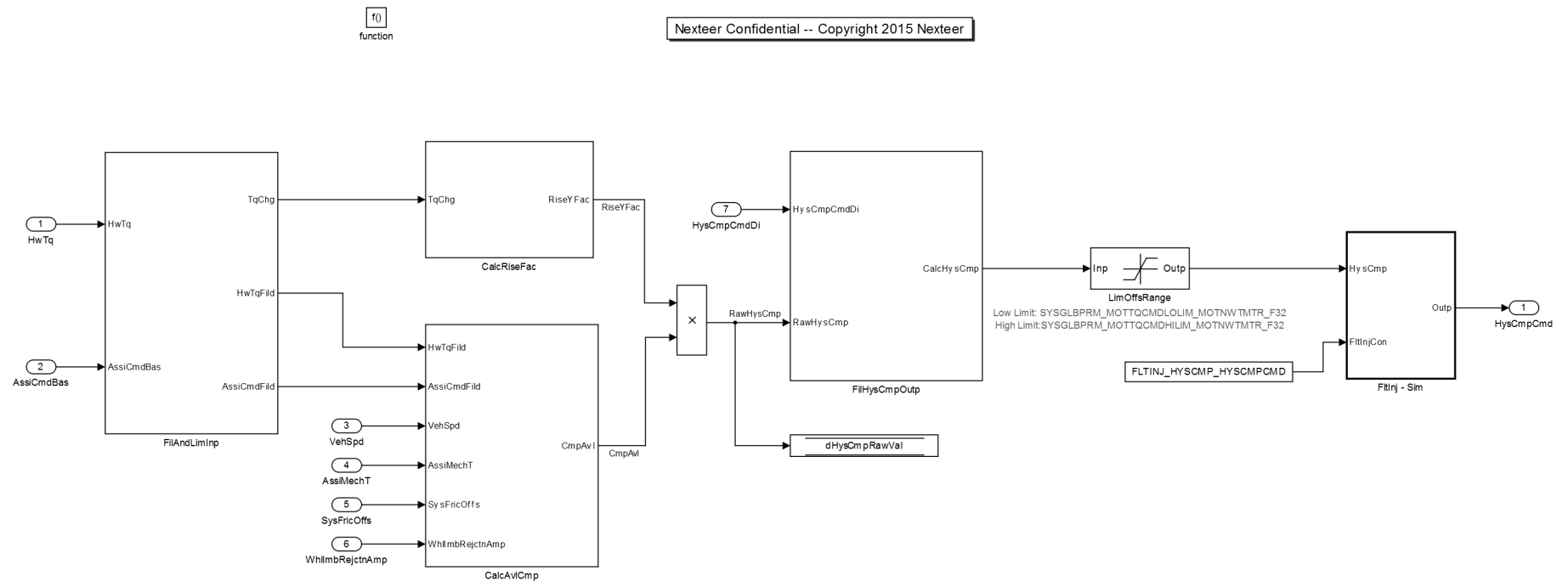
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Ts: ARCHGLBPRM_2MILLISEC_SEC_F32

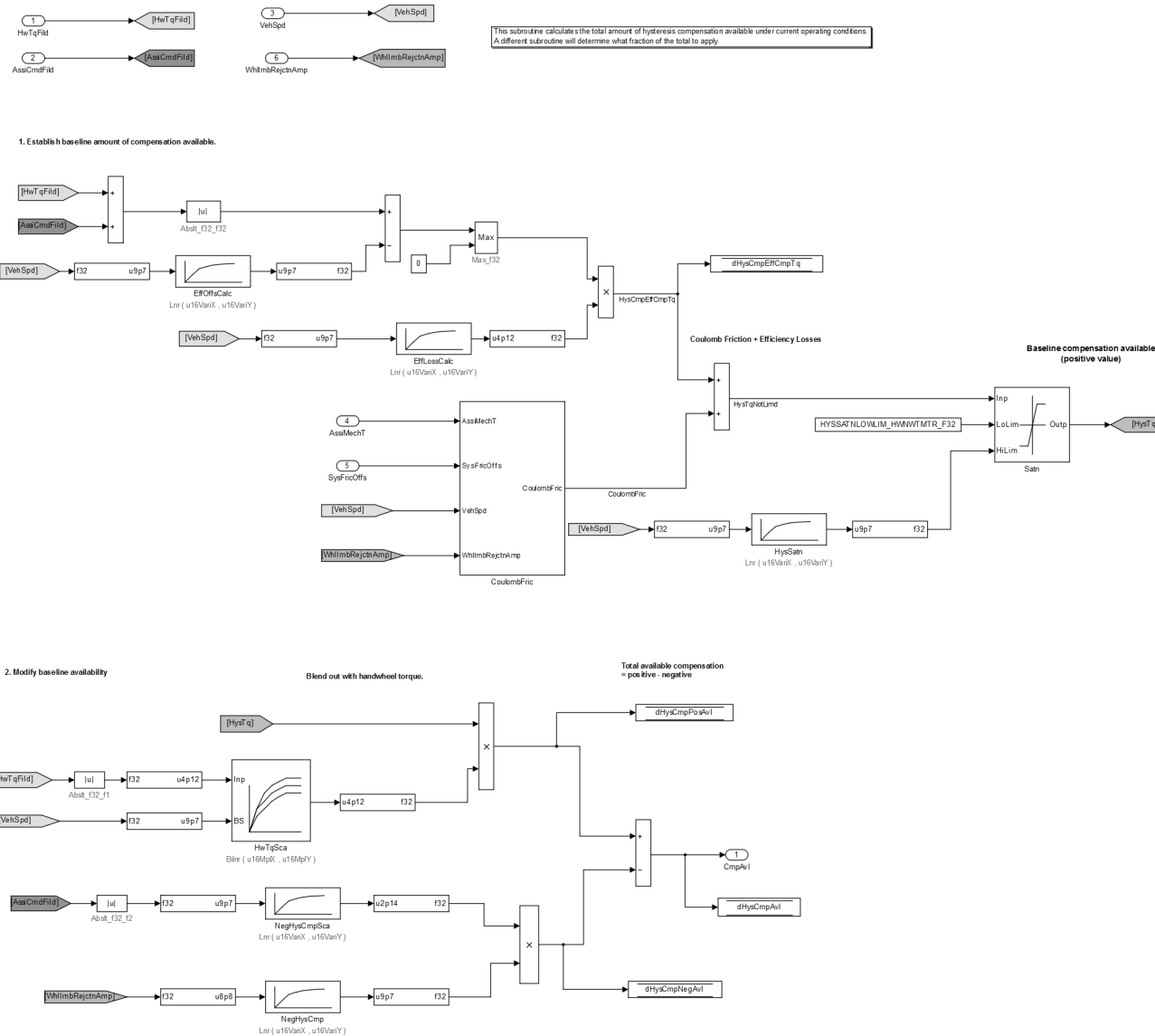
Freq: HysCmpFinalOutpLpFilFrq

StVar: FinalOutpLpFil

HysCmpFinalOutpLpFil



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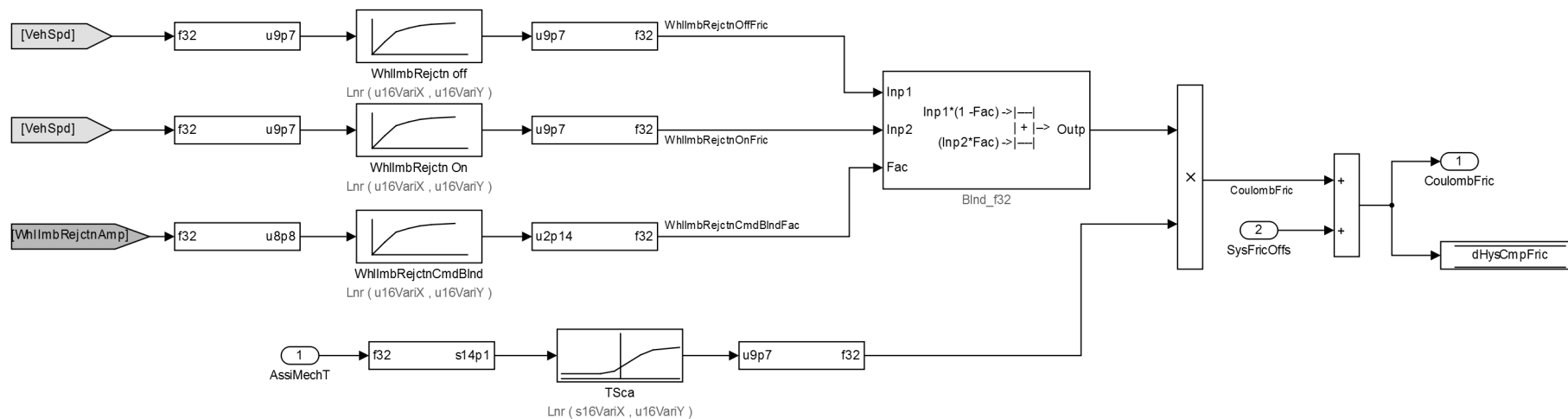
4 → [WhlImbRejctnAmp]

3 → [VehSpd]

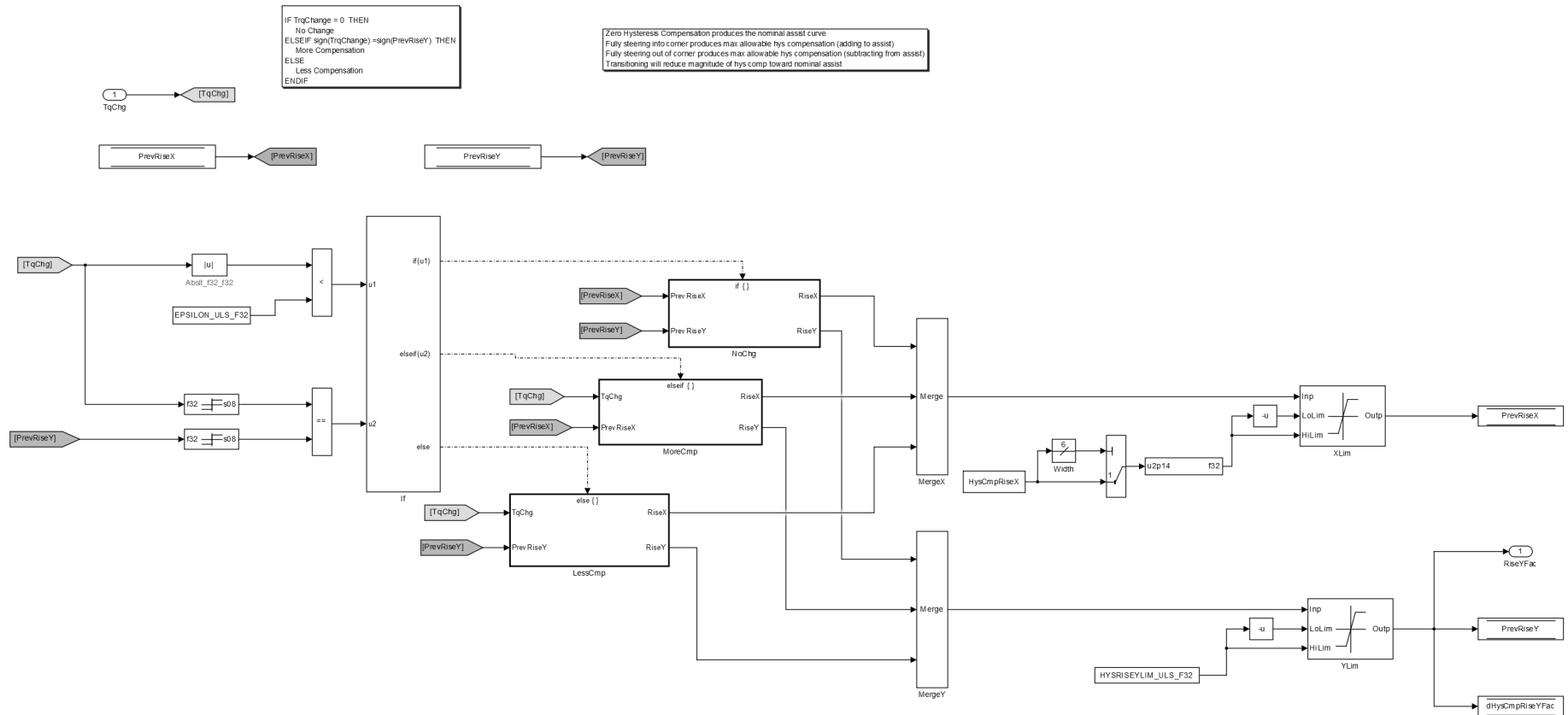
For a given vehicle speed, find the constant friction value, then blend between them according to "CoulFricWIRBlnd" table".

Then scale the whole thing up or down according to the ball nut temperature signal.

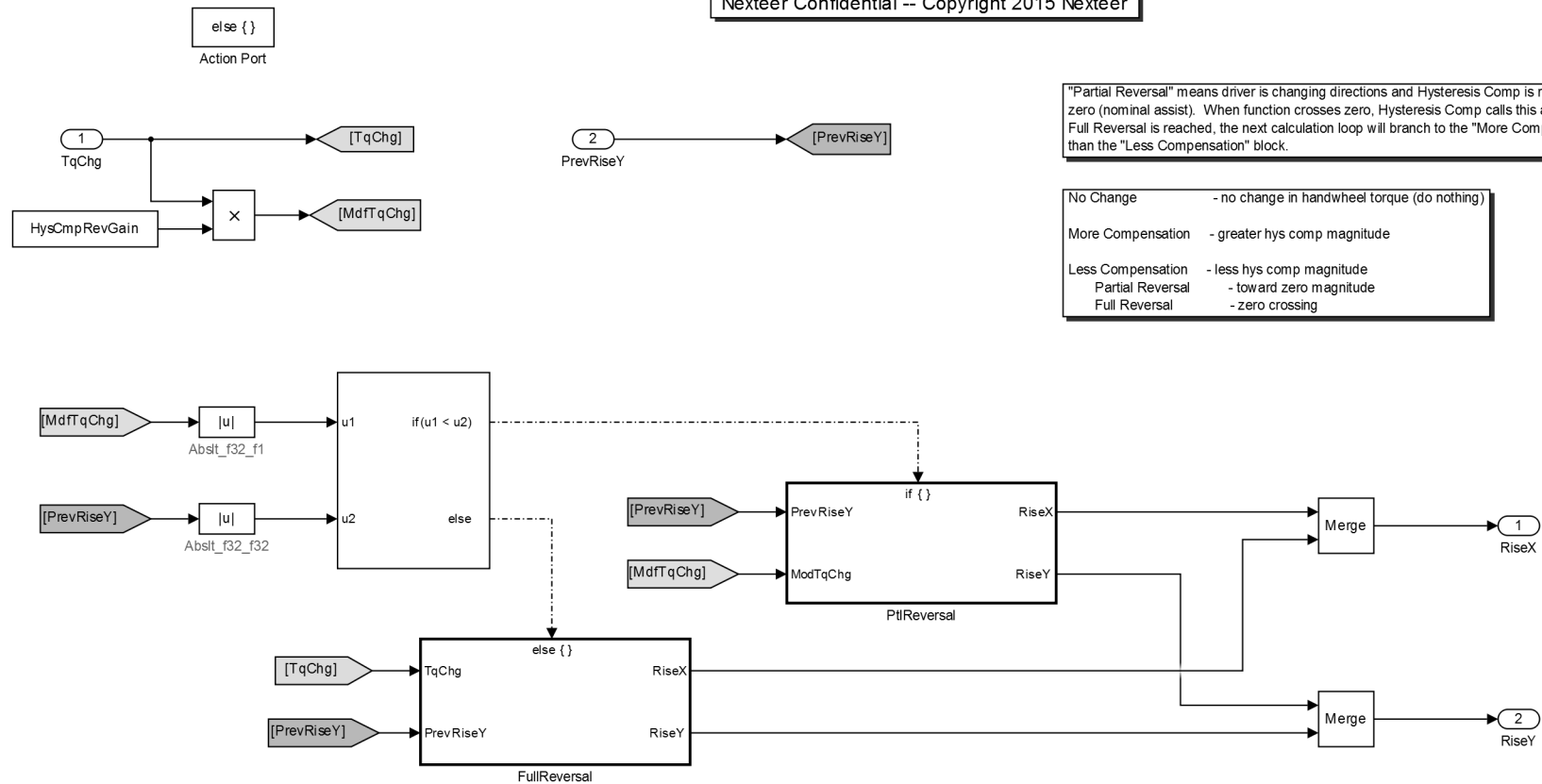
Finally, adjust by the offset value received from SF-07 Average Learned Friction.

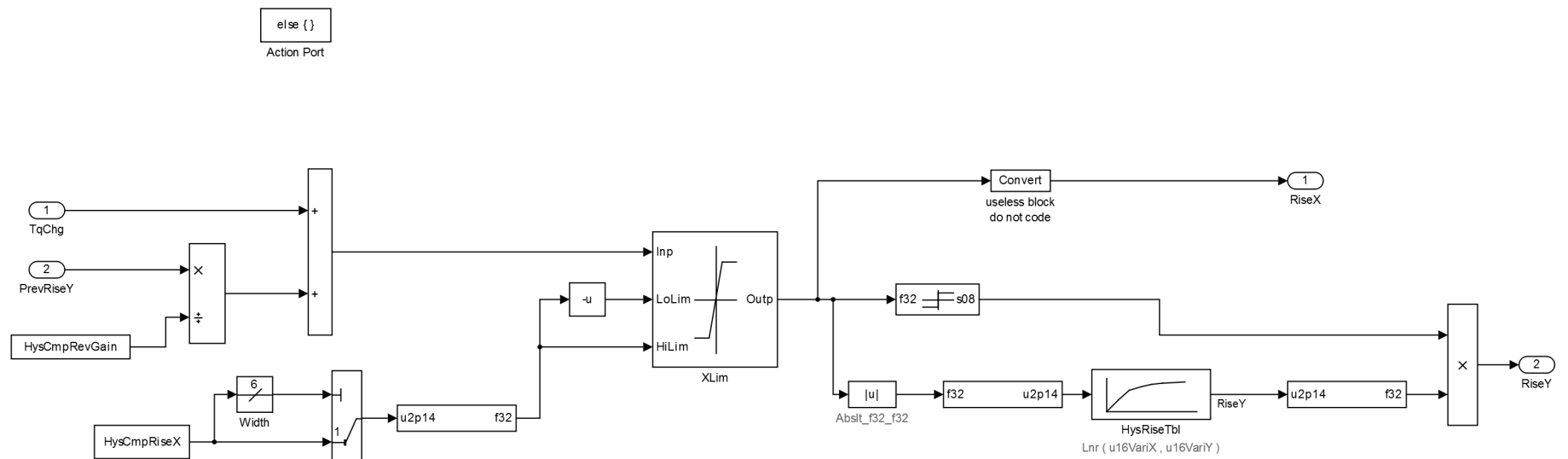


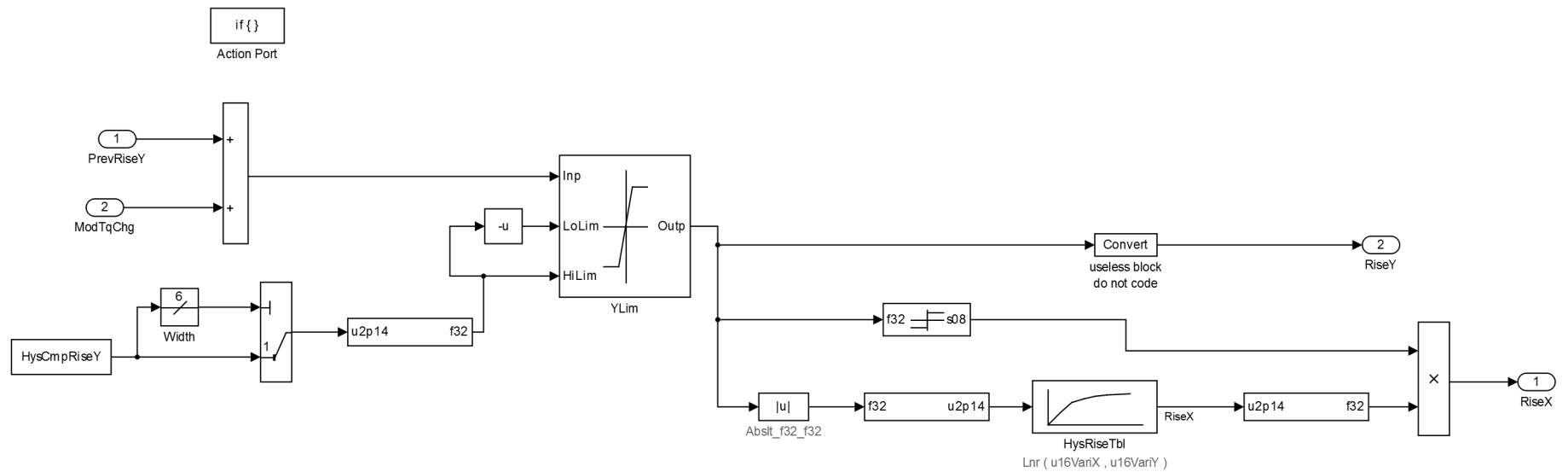
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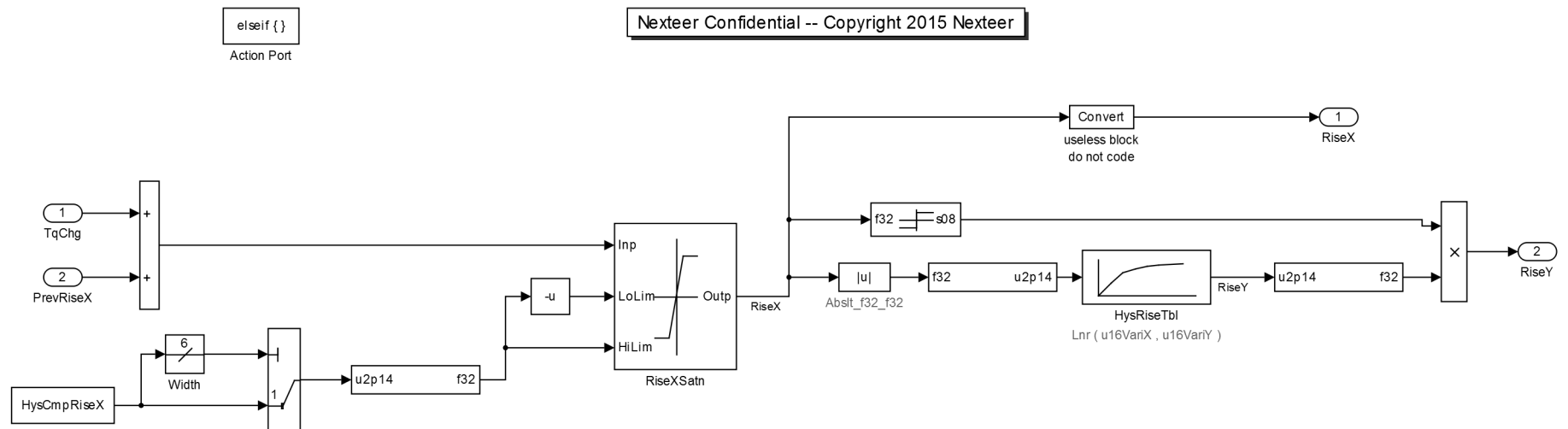


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if { }

Action Port

1
PrevRiseX

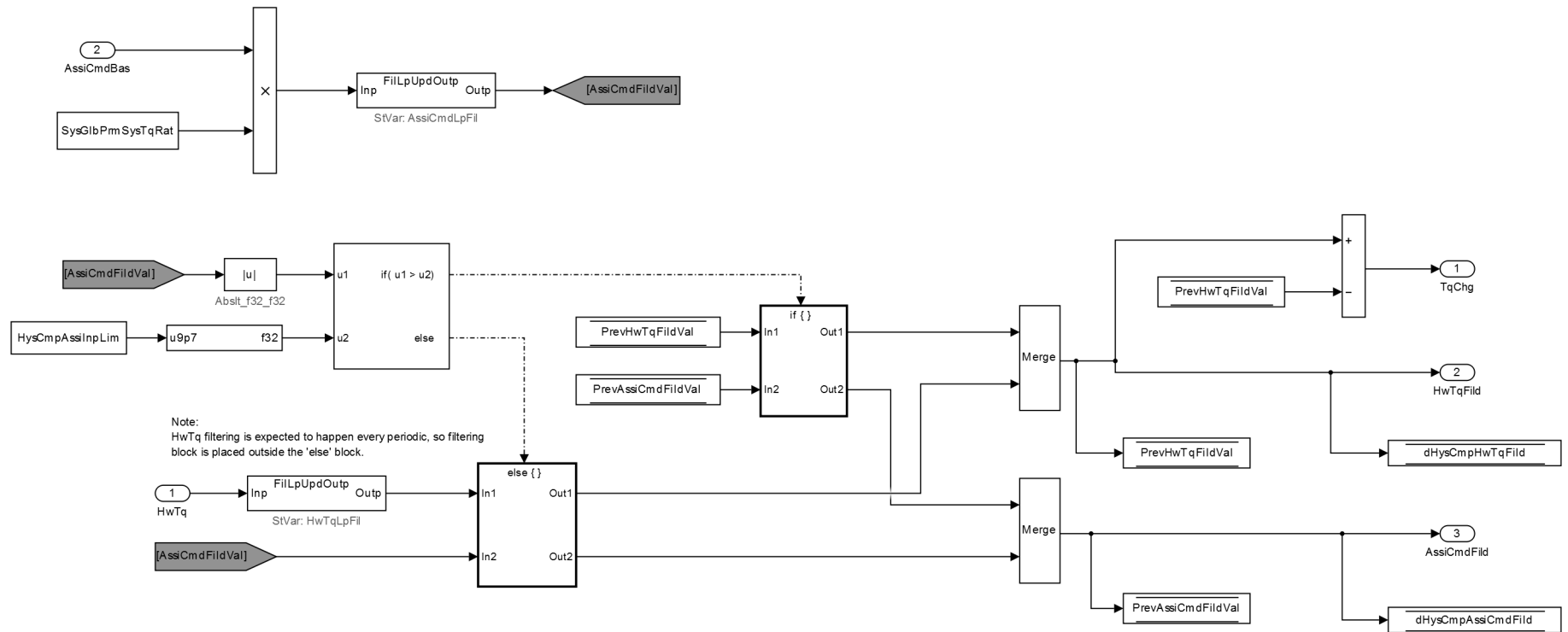
1
RiseX

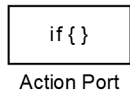
2
PrevRiseY

2
RiseY

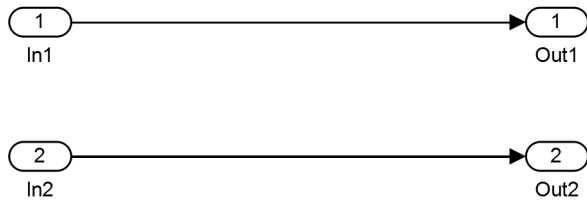
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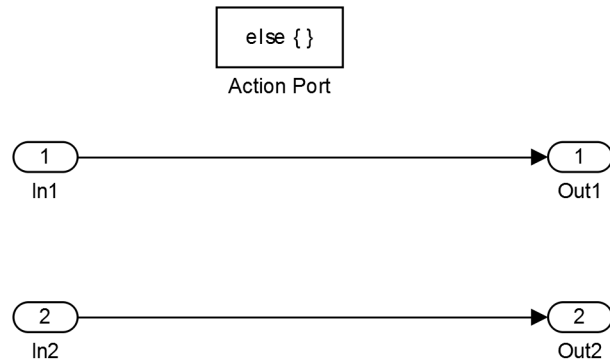
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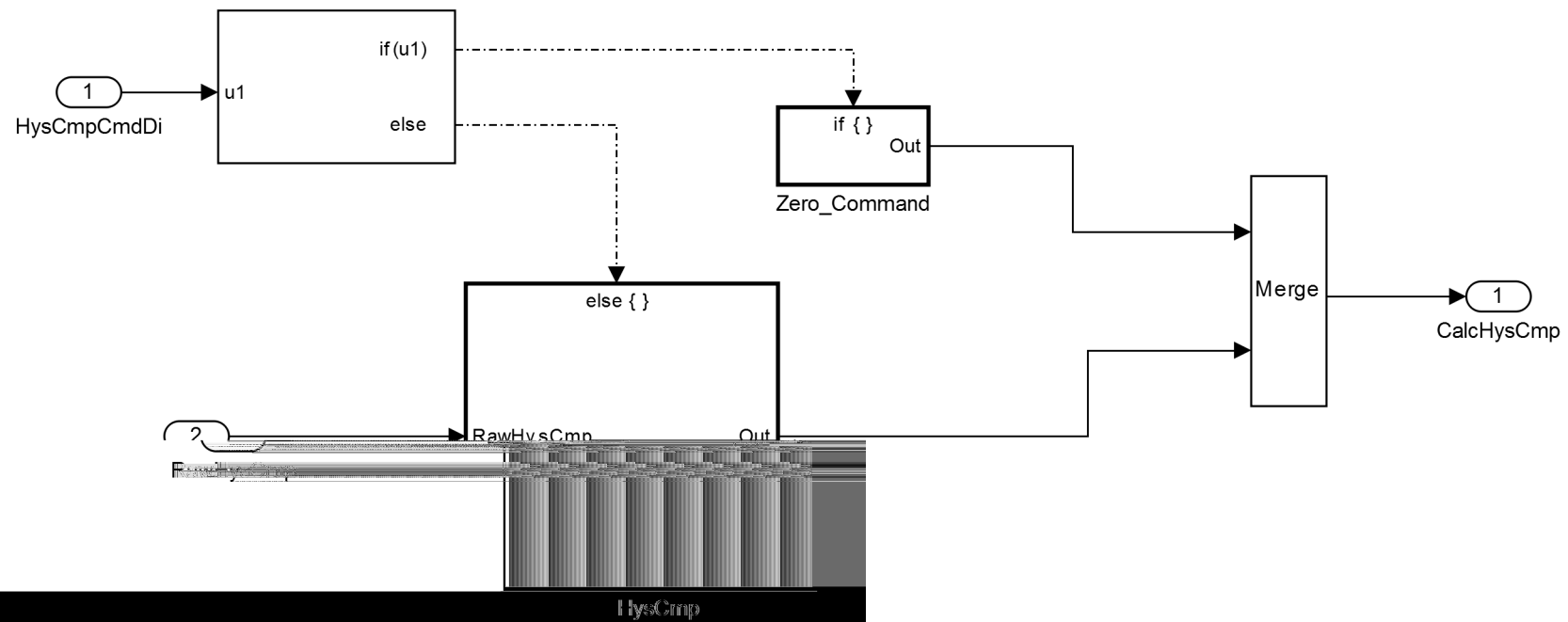
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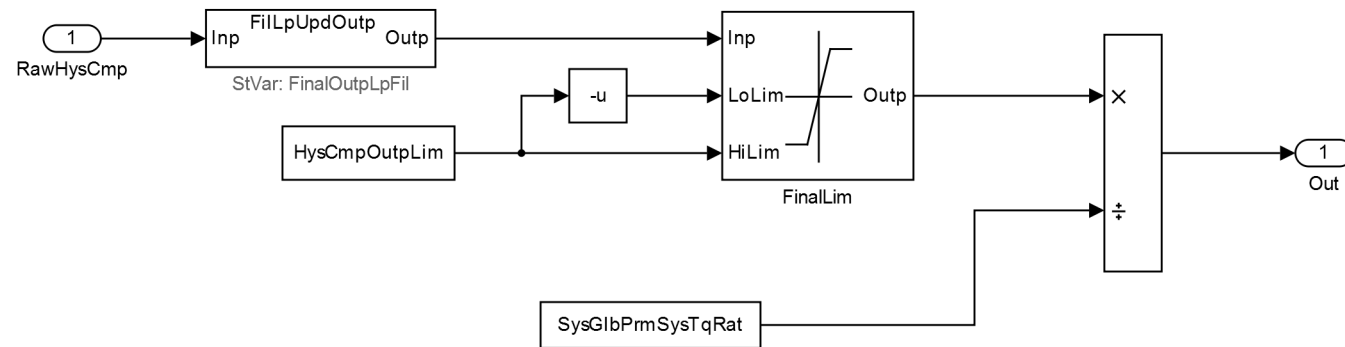
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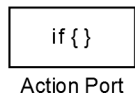
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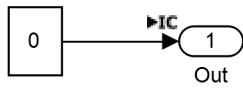
else { }
Action Port


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Enable

