

Model Maintainability Report

Date: 02-Sep-2025
Project: SimpleDemo
MATLAB version: 25.1.0.2943329 (R2025a)

Table of Contents

1. AHRS Voter	2
1.1. Artifact Summary	2
1.2. Component Structure	2
1.3. Component Interface	2
1.4. Design Cyclomatic Complexity Breakdown	2
1.4.1. Simulink - Complexity	2
1.4.2. Simulink - Distribution	3
1.4.3. Stateflow - Complexity	3
1.4.4. Stateflow - Distribution	3
1.4.5. MATLAB - Complexity	3
1.4.6. MATLAB - Distribution	3
1.5. Halstead Difficulty Breakdown	3
1.5.1. Simulink - Difficulty	3
1.5.2. Simulink - Distribution	3
1.5.3. Stateflow - Difficulty	3
1.5.4. Stateflow - Distribution	4
1.5.5. MATLAB - Difficulty	4
1.5.6. MATLAB - Distribution	4
1.6. Simulink Architecture	4
1.6.1. Blocks - Count	4
1.6.2. Blocks - Distribution	4
1.6.3. Signal Lines - Count	4
1.6.4. Signal Lines - Distribution	4
1.6.5. Gotos - Count	4
1.6.6. Gotos - Distribution	5
1.7. Stateflow Architecture	5
1.7.1. Transitions - Count	5
1.7.2. Transitions - Distribution	5
1.7.3. States - Count	5
1.7.4. States - Distribution	5
1.8. MATLAB Architecture	5
1.8.1. Lines of Code - Count	5
1.8.2. Lines of Code - Distribution	5

1. AHRS_Voter

1.1. Artifact Summary

Artifact Group	Artifact Type	Number of Artifacts
Design	Block diagram	1
	Data dictionary file	3
	Model file	1
Functional Requirements		
Test Results		
Tests	Harness block diagram	3
	Test harness file	3
	Simulink Test case	3
	Simulink Test file	1
	Simulink Test suite	1

1.2. Component Structure

Complexity: 15

Halstead Difficulty: 19.66

Maximum layer depth of 2

Maximum layer breadth of 4

1.3. Component Interface

3 component input ports

1 component output ports

18 component input signals

1 component output signals

1.4. Design Cyclomatic Complexity Breakdown

1.4.1. Simulink - Complexity

Simulink design cyclomatic complexity of 15

1.4.2. Simulink - Distribution

Decisions	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89
Number of Model Layers	5	0	0	0	0	0	0	0	0	0

1.4.3. Stateflow - Complexity

Stateflow design cyclomatic complexity of 0

1.4.4. Stateflow - Distribution

Decisions	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89
Charts, States, and Truth Tables	0	0	0	0	0	0	0	0	0	0

1.4.5. MATLAB - Complexity

MATLAB code design cyclomatic complexity of 0

1.4.6. MATLAB - Distribution

Decisions	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89
Functions and Methods	0	0	0	0	0	0	0	0	0	0

1.5. Halstead Difficulty Breakdown**1.5.1. Simulink - Difficulty**

Halstead difficulty of 19.66

1.5.2. Simulink - Distribution

Difficulty	[0,5)	[5,10)	[10,15)	[15,20)	[20,25)	[25,30)	[30,35)	[35,40)	[40,45)	≥45
Number of Model Layers	4	1	0	0	0	0	0	0	0	0

1.5.3. Stateflow - Difficulty

Halstead difficulty of 0

1.5.4. Stateflow - Distribution

Difficulty	[0,5)	[5,10)	[10,15)	[15,20)	[20,25)	[25,30)	[30,35)	[35,40)	[40,45)	≥45
Charts, States, and Truth Tables	0	0	0	0	0	0	0	0	0	0

1.5.5. MATLAB - Difficulty

MATLAB Halstead difficulty of 0

1.5.6. MATLAB - Distribution

Difficulty	[0,5)	[5,10)	[10,15)	[15,20)	[20,25)	[25,30)	[30,35)	[35,40)	[40,45)	≥45
Functions and Methods	0	0	0	0	0	0	0	0	0	0

1.6. Simulink Architecture

1.6.1. Blocks - Count

41 Simulink blocks, excluding Inport, Outport, and Goto blocks

1.6.2. Blocks - Distribution

Blocks	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89
Number of Model Layers	4	0	1	0	0	0	0	0	0	0

1.6.3. Signal Lines - Count

113 Simulink signals

1.6.4. Signal Lines - Distribution

Signal Lines	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89
Number of Model Layers	1	3	0	0	0	0	1	0	0	0

1.6.5. Gotos - Count

0 Simulink Goto blocks

1.6.6. Gotos - Distribution

Goto Blocks	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89
Number of Model Layers	5	0	0	0	0	0	0	0	0	0

1.7. Stateflow Architecture

1.7.1. Transitions - Count

0 Stateflow Transitions

1.7.2. Transitions - Distribution

Transitions	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89
Charts	0	0	0	0	0	0	0	0	0	0

1.7.3. States - Count

0 Stateflow States

1.7.4. States - Distribution

States	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89
Charts	0	0	0	0	0	0	0	0	0	0

1.8. MATLAB Architecture

1.8.1. Lines of Code - Count

0 effective lines of code

1.8.2. Lines of Code - Distribution

Lines of Code	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89
Functions and Methods	0	0	0	0	0	0	0	0	0	0