

RTCA, Inc.
1828 L Street, NW, Suite 805
Washington, D.C. 20036-5133 USA

**Minimum Aviation System Performance
Standards (MASPS) for Enhanced Vision
Systems, Synthetic Vision Systems, Combined
Vision Systems and Enhanced Flight
Vision Systems**

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Prepared by: SC-213
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RTCA, Inc.

Telephone: 202-833-9339

Facsimile: 202-833-9434

Internet: www.rtca.org

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FOREWORD

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- Developing consensus on the application of pertinent technology to fulfill user and provider requirements, including development of minimum operational performance standards for electronic systems and equipment that support aviation.
- Assisting in developing the appropriate technical material upon which positions for the International Civil Aviation Organization, the International Telecommunication Union, and other appropriate international organizations can be based.

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TABLE OF CONTENTS

1	PURPOSE AND SCOPE	1
1.1	Introduction.....	1
1.1.1	EVS/SVS/CVS Introduction.....	2
1.1.2	EFVS Introduction.....	3
1.1.3	SVS for Lower than Standard (LTS) Minima Operations: Introduction	3
1.2	EVS/SVS/CVS	4
1.2.1	EVS/SVS/CVS Overview.....	4
1.2.2	EVS/SVS/CVS General Operation.....	7
1.2.3	EVS/SVS/CVS Intended Function	7
1.2.4	EVS/SVS/CVS Assumptions.....	7
1.3	EFVS	7
1.3.1	EFVS Overview	7
1.3.2	EFVS Operational Application.....	10
1.3.3	EFVS General Operation	10
1.3.4	EFVS Intended Function	18
1.3.5	EFVS Assumptions.....	19
1.4	SVS for Lower than Standard Minima.....	19
1.4.1	SVS for Lower than Standard Minima Operations Overview	19
1.4.2	SVS for Lower than Standard Minima Operational Application.....	19
1.4.3	SVS for Lower than Standard Minima Intended Function	21
1.4.4	SVS for Lower than Standard Minima Assumptions.....	21
1.5	Verification Procedures.....	22
1.6	Reference Documents	23
2.	SYSTEM PERFORMANCE REQUIREMENTS	23
2.1	Enhanced Vision Systems (EVS) / Synthetic Vision Systems (SVS) / Combined Vision Systems (CVS).....	25
2.1.1	EVS/SVS/CVS General Requirements.....	25
2.1.2	EVS/SVS/CVS System Requirements.....	27
2.2	EFVS	30
2.2.1	EFVS General Requirements.....	30
2.2.2	EFVS System Performance - Standard Operation Conditions.....	31
2.2.3	EFVS System Requirements.....	34
2.3	Synthetic Vision System for Lower than Standard Minima	36
2.3.1	SVS for Lower than Standard Minima General Requirements.....	36
2.3.2	SVS for Lower than Standard Minima System Performance - Standard Operation Conditions.....	38
2.3.3	SVS for Lower than Standard Minima System Requirements	39

3.	DETAILED SYSTEM REQUIREMENTS.....	40
3.1	EVS/SVS/CVS	41
3.1.1	EVS/SVS/CVS Detailed System Requirements	41
3.1.2	EVS/SVS/CVS Major Components.....	41
3.1.3	EVS/SVS/CVS Minimum System Performance.....	41
3.1.4	EVS/SVS/CVS Aircraft Interface.....	43
3.1.5	EVS/SVS/CVS Display	44
3.1.6	EVS/SVS/CVS Preventive Maintenance Requirements.....	44
3.1.7	EVS/SVS/CVS Built in Test (BIT).....	44
3.1.8	EVS/SVS/CVS System Safety Design Criteria	44
3.1.9	EVS/SVS/CVS Required Safety Level.....	44
3.1.10	EVS/SVS/CVS Fail Safe Features.....	46
3.1.11	EVS/SVS/CVS Environmental Specifications	46
3.2	EFVS	46
3.2.1	EFVS Detailed System Requirements	46
3.2.2	EFVS Major Components.....	47
3.2.3	EFVS Minimum System Performance.....	47
3.2.4	EFVS Aircraft Interface.....	49
3.2.5	EFVS Display	50
3.2.6	EFVS Preventive Maintenance Requirements.....	51
3.2.7	EFVS Built in Test (BIT).....	51
3.2.8	EFVS System Safety Design Criteria	51
3.2.9	EFVS Required Safety Level.....	51
3.2.11	EFVS Fail Safe Features.....	54
3.2.12	EFVS Environmental Specifications	54
3.3	Synthetic Vision System for Lower than Standard Minima.....	54
3.3.1	SVS for Lower than Standard Minima Detailed System Requirements	54
3.3.2	SVS for Lower than Standard Minima Minimum System Performance	55
3.3.3	SVS for Lower than Standard Minima Displays	57
3.3.4	SVS for Lower than Standard Minima Preventive Maintenance Requirements.....	57
3.3.5	SVS for Lower than Standard Minima Built In Test (BIT)	57
3.3.6	SVS for Lower than Standard Minima Safety Design Criteria.....	58
3.3.7	SVS for Lower than Standard Minima Fail Safe Features.....	59
3.3.8	SVS for Lower than Standard Minima Environmental Specifications	59
3.3.9	Requirements Summary Table.....	59
4.	PERFORMANCE EVALUATION	61
4.1	Performance Demonstration for EVS/SVS/CVS and EFVS Approved to 100 feet Above Threshold Elevation (THRE).....	61
4.2	Performance Demonstration for EFVS Approved for Landing and Rollout in visibility as low as 1000ft (or 300M if applicable) RVR.....	62
4.3	Performance Demonstration for SVS for Lower than Standard Minima Operations	63
4.4	Environmental Qualification.....	65
4.5	Design Assurance.....	65
	MEMBERSHIP.....	67

APPENDIX A: Acronyms and Definitions	A-1
APPENDIX B: Technical References.....	B-1
APPENDIX C: System Safety Requirements Logic	C-1
C.1 EFVS Approved to 100 feet Above THREE.....	C-1
C.2 EFVS Approved for landing and rollout in visibility not less than 1000ft (or 300M if applicable) RVR.....	C-5
APPENDIX D: EFVS Minimum System Performance Standard Rationale.....	D-1
D.1 System Requirements Rationale	D-1
D.1.1 Latency.....	D-1
D.1.2 EFVS Field of Regard (FOR)	D-1
D.1.3 Off-Axis Rejection.....	D-2
D.1.5 Flicker	D-2
D.1.6 Image Artifacts	D-3
D.1.7 Image Conformality	D-3
D.2 Sensor/Sensor Processor.....	D-4
D.2.1 Dynamic Range.....	D-4
D.2.2 Sensor Image Calibration.....	D-4
D.2.3 Sensor Resolution	D-4
D.2.4 Passive Sensor Optical Distortion.....	D-4
D.2.5 Sensor Sensitivity	D-5
D.2.6 Failure Messages.....	D-5
D.2.7 Blooming	D-5
D.2.8 Image Persistence	D-5
D.2.9 Dead Pixels	D-6
D.3 Aircraft Interface	D-6
D.3.1 Pilot Controls	D-6
D.3.2 Annunciations - EFVS	D-7
D.4 Display.....	D-7
D.4.1 Display Resolution of the HUD	D-7
D.4.2 Imagery and Symbology Display.....	D-7
APPENDIX E: EVS/SVS/CSV Minimum System Performance Standard Rationale.....	E-1
E.1 System Requirements Rationale	E-1
E.1.1 EVS Image Characteristics	E-1
E.1.2 Data Refresh Rate	E-1
E.1.3 Image Latency.....	E-1
E.1.4 SVS Image Characteristics	E-1
E.1.5 Scene Range.....	E-2
E.1.6 SVS Obstacle Database	E-2
E.1.7 CVS Fusion of EVS and SVS Images	E-2

APPENDIX F: SVS for Lower than Standard Minima Minimum System Performance Standard
Rationale F-1

F.1 SVS for Lower than Standard Minima Detailed System Requirements F-1

- F.1.1 Probability of Hazardously Misleading Information F-1
- F.1.2 Runway Database F-1
- F.1.3 System Alerts F-1
- F.1.4 SVS for Lower than Standard Minima Pilot Controls F-1

F.2 SVS for Lower than Standard Minima Minimum System Performance F-2

- F.2.1 SVS for Lower than Standard Minima Navigation and Positioning Sensor Performance F-2
- F.2.2 SVS for Lower than Standard Minima Monitor Alert Thresholds F-3
- F.2.3 SVS for Lower than Standard Minima Required SVS Image Elements F-4
- F.2.4 Image Accuracy F-4
- F.2.5 SVS for Lower than Standard Minima Displays (Reference: 3.3.3) F-5
- F.2.6 SVS for Lower than Standard Minima: Minimum Display Size (PFD) F-5
- F.2.7 SVS for Lower than Standard Minima – Size of FPV Symbol (HDD and HUD) F-6
- F.2.8 SVS for Lower than Standard Minima Minification Factor, Head Down Display F-6
- F.2.9 SVS for Lower than Standard Minima Built In Test (BIT) (Reference: 3.3.5) F-7
- F.2.10 SVS for Lower than Standard Minima Safety Design Criteria (Reference: 3.3.6) F-7
- F.2.11 SVS for Lower than Standard Minima Required Safety Level F-7

APPENDIX G: Sample EFVS Flight Test Plan for EFVS Approved to 100 feet Height Above
Threshold Elevation (THRE) G-1

- G.1 Objectives G-1
- G.2 Pilot Monitoring (PM) Monitor G-3
- G.3 Failure Cases G-4
- G.5 Evaluation Matrix G-4

APPENDIX H: Sample EFVS Flight Test Plan for EFVS Approved for Landing and Rollout in
visibility as low as 1000ft (or 300M if applicable) RVR visibility H-1

- H.1 Objectives H-1
- H.2 Pilot Monitoring (PM) Display (Required by EU OPS Subpart K 1.630(e)) H-4
- H.3 Failure Cases H-5
- H.4 Ice Protection System Evaluation H-5
- H.5 Evaluation Matrix H-5

APPENDIX I: Sample Flight Test Plan for SVS for Lower than Standard Minima I-1

- I.1 Objectives and Overall Criteria I-1
- I.2 Test Points I-2
- I.3 Cross - Cockpit Monitoring and Crew Resource Management I-4
- I.4 Failure Cases I-4
- I.5 Evaluation Matrix I-4

APPENDIX J: Transport Category Airplanes J-1

- J.1 Vertical Flight Path Guidance J-1

J.2	Flare Guidance	J-1
J.3	Copilot Display / Pilot Monitoring (PM) Display	J-1
J.4	Design Assurance Level	J-1

LIST OF FIGURES

Figure 1 – EVS Diagram.....	5
Figure 2 – SVS Diagram.....	6
Figure 3 – EFVS Diagram	8
Figure 4 – EFVS and Visual Transition Points.....	18
Figure 5 – SVS for Lower than Standard Minima Approach and Landing (Example for SA Cat I operation)	20
Figure 6 – SVS for Lower than Standard Minima system block diagram	21
Figure 7 – Minimum Detection Range	32
Figure 8 – Approach Light System Configurations	34

LIST OF TABLES

Table 1 – Required visual references, 14 CFR §91.175 (c) and (l).....	12
Table 2 – Required visual references, EU OPS Sub-Part E.....	13
Table 3 – 14 CFR §91.175 (l) operating requirements	33
Table 4 – EU-OPS operating requirements.....	33
Table 5 – Generic Functional Hazard Assessments.....	45
Table 6 – SVS for Lower than Standard Minima Requirements Summary Table.....	60
Table B-1 – FAA EFVS FAR Compliance.....	B-2
Table C-1 – Required Level of Safety, Part 25 Aircraft	C-1
Table C-2 – Example EFVS/HUD functional hazard assessment, Part 25 aircraft, ILS approaches to 100 ft height above threshold elevation (THRE), RVR 1200 ft.....	C-2
Table C-3 – Example of EFVS/HUD functional hazard assessment, Part 25 aircraft from DA/DH to Landing and Rollout.....	C-8
Table C-4 – Hazard Level; Definition	C-11
Table G-1 – Evaluation Matrix	G-4
Table H-1 – Evaluation Matrix	H-5
Table I-1 – Evaluation Matrix.....	I-4

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1 PURPOSE AND SCOPE

1.1 Introduction

DO-315 addressed Enhanced Vision Systems (EVS), Synthetic Vision Systems (SVS), and Combined Vision Systems (CVS) technologies. Currently, only EVS technology incorporating an approved Head-Up Display (HUD) is eligible for operational credit under Title 14 US Code of Federal Regulations (CFR) §91.175 with the Federal Aviation Administration (FAA). An approved combination of EVS and HUD is termed an Enhanced Flight Vision System (EFVS) by the FAA. The European Aviation Safety Agency (EASA) uses the term “EVS” as equivalent to the FAA description of EFVS. While further definitions are in Appendix A, it is important to understand this distinction before reading this document. This document adds performance standards for operational credit to touchdown in visibility as low as 1000ft RVR (or 300M if applicable), by use of an approved EFVS. Performance standards for this new operational capability are delineated throughout this document in order to maintain the unique characteristics of DO-315 and DO-315A. Performance standards for EFVS to landing (DO-315A) include performance standards for EFVS approaches to 100 ft height above threshold elevation (THRE), formerly height above touchdown zone elevation (TDZE) (DO-315). See notes below regarding change in terms of reference in DO-315A.

The operational scenarios and concepts discussed in this document are written to describe the intended use of the proposed systems and from this context, associated minimum performance standards are derived. They do not define current or future operational regulations or limitations of these technologies.

Section 1 provides information needed to understand the rationale for system characteristics and requirements. This section also contains typical applications and envisioned operational goals and assumptions necessary to establish a basis for the subsequent sections. It describes typical applications and operational goals, as envisioned by members of RTCA Special Committee 213 and EUROCAE Work Group 79, and establishes the basis for the standards stated in Sections 2 through 4. Definitions and assumptions essential to proper understanding of this document are also provided in this section.

Section 2 describes minimum system performance requirements.

Section 3 contains the minimum performance standards and subsystem/function that is a required element of minimum system performance in Section 2.0. These standards specify the required performance under the standard environmental conditions described.

Section 4 discusses performance evaluations with applicable FAA and EASA regulations, describing the minimum system test procedures to verify system performance compliance (e.g., end-to-end performance verification).

Compliance with these standards is recommended as one means of assuring that the system and each subsystem will perform its intended function(s) satisfactorily under conditions normally encountered in routine aeronautical operations for the environments intended. The Minimum Aviation System Performance Standards (MASPS) may be implemented by one or more regulatory documents and/or advisory documents (e.g., certifications, authorizations, approvals, commissioning, orders, advisory circulars, and